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INDIANA UNIVERSITY OF PENNSYLVANIA IS ACCREDITED BY THE NATIONAL COUNCIL FOR ACCREDITATION OF TEACHER EDUCATION, THE MIDDLE STATES ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS AND THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.

INDIANA UNIVERSITY OF PENNSYLVANIA IS COMMITTED TO AFFIRMATIVE ACTION TO ASSURE EQUAL OPPORTUNITY FOR ALL PERSONS, REGARDLESS OF RACE, COLOR, RELIGION, NATIONAL ORIGIN, ANCESTRY OR SEX AND WELCOMES QUALIFIED STUDENTS, FACULTY AND STAFF FROM ALL SUCH GROUPS.

Indiana University of Pennsylvania Bulletin

1974-1976 Undergraduate Catalog

INDIANA UNIVERSITY OF PENNSYLVANIA
INDIANA, PENNSYLVANIA 15701

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University Calendar

FALL SEMESTER — 1974

Registration	Wed. — Fri.	Sept. 4—6
Classes begin	Sat.	Sept. 7
Election Day — no classes	Tue.	Nov. 5
Thanksgiving recess begins at close of classes	Tue.	Nov. 26
Classes resume at 8:00 a.m.	Tue.	Dec. 3
Final examinations	Sat. — Fri.	Dec. 14—20

SPRING SEMESTER — 1975

Registration	Wed. — Fri.	Jan. 15—17
Classes begin	Sat.	Jan. 18
Spring—Easter vacation begins at close of classes	Tue.	Mar. 18
Classes resume at 8:00 a.m.	Tue.	April 8
Final examinations	Sat. — Fri.	May 10—16
Alumni Day	Sat.	May 17
Commencement	Sun.	May 18

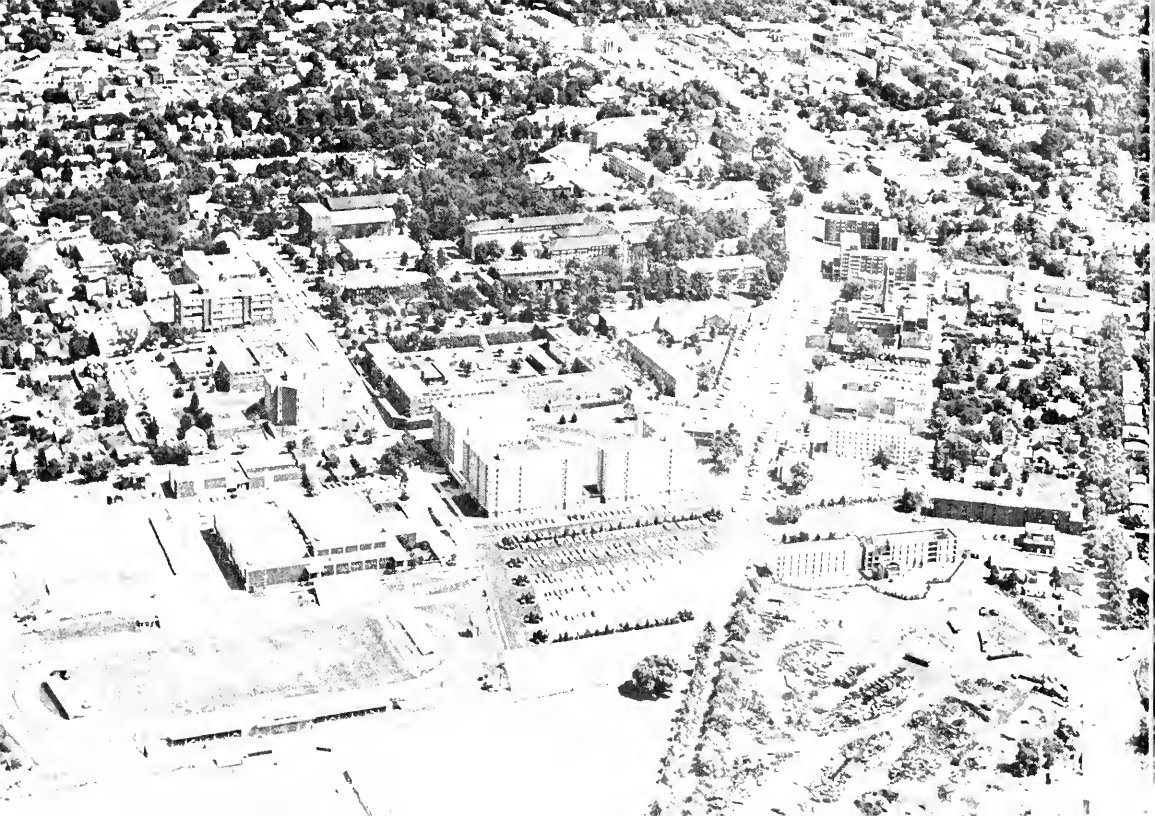
PROPOSED:

FALL SEMESTER — 1975

Registration	Wed. — Fri.	Sept. 3—5
Classes begin	Sat.	Sept. 6
Election Day — no classes	Tue.	Nov. 4
Thanksgiving recess begins at close of classes	Tue.	Nov. 25
Classes resume at 8:00 a.m.	Tue.	Dec. 2
Final examinations	Sat. — Fri.	Dec. 13—19

SPRING SEMESTER — 1976

Registration	Wed. — Fri.	Jan. 14—16
Classes begin	Sat.	Jan. 17
Spring—Easter vacation begins at close of classes	Tuesday	Apr. 6
Classes resume at 8:00 a.m.	Tue.	Apr. 27
Final examinations	Sat. — Fri.	May 8—14
Alumni Day	Sat.	May 15
Commencement	Sun.	May 16



The University

PURPOSES OF THE UNIVERSITY

As a multi-purpose institution, Indiana University of Pennsylvania encompasses the Schools of Arts and Sciences, Business, Continuing and Non-Resident Education, Education, Health Services, Home Economics, Fine Arts and the Graduate School. Indiana University of Pennsylvania endeavors to fulfill the primary purposes of education as stated by Alfred North Whitehead, namely, "To stimulate and guide student self-development" so the student learns how to make a living and how to live.

As Emerson noted in his Journal over a hundred years ago, "The things taught in schools and colleges are not an education but the means of education." At Indiana University of Pennsylvania, these "means of education" comprise a variety of factors. First, there is a pervasive, intellectual climate designed to stimulate the student's imagination, stretch his mind, and extend his tolerance as he rubs minds with new ideas, teachers, and associates in the classroom, laboratory, and library. These intellectual contacts also tend to develop critical independent judgments, mental discipline, and the ability to make mature decisions.

The various curricula provide the student with a broad perspective enabling him to appreciate his cultural heritage and affording him the opportunity to pursue in considerable depth his particular sphere of interest. Such a comprehensive program inevitably includes some knowledge that is worth

having, not for any material gain, but simply because it enriches one's existence.

Undergirding the entire academic program is the philosophy that in the final analysis there is no education except self-education. Consequently, the faculty strive to whet intellectual appetites and to inculcate the problem-solving approach, so that the student will acquire both the desire and the ability to teach himself. In this way, Commencement truly will become the beginning of "life-long learning."

In addition to enabling students to acquire professional skills and enrich their cultural existence, the University endeavors to instill in each student a social consciousness, which will make him a contributive and substantive member of society, for as de Tocqueville emphasized, we cannot have a strong democratic society without a good quality of citizenship. This attribute of good citizenship accrues partly from academic study and partly as a result of the social mores and associations which one encounters and experiences in college.

Intertwined with the goal to increase the student's social awareness and consideration for his fellow men is the development of moral fibre. General Omar N. Bradley is duly disturbed by the fact that "ours is a world of nuclear giants and ethical infants." Indiana University of Pennsylvania firmly believes that no education, regardless of its academic excellence, can fulfill its true potential unless

students are inspired and guided by spiritual values and moral considerations.

Admittedly the University cannot succeed in realizing all of these goals; however, even this is part of the dynamic educational process of becoming rather than attaining.

This University welcomes qualified students, faculty, and staff from all racial, religious, ethnic, and socio-economic backgrounds.

HISTORY OF THE UNIVERSITY

Throughout the entire history of the University at Indiana, great emphasis has been placed on maintaining high academic standards and providing adequate facilities conducive to individual and group growth. The present record and reputation enjoyed by the University have evolved during a century's history. Growing out of the need for a teacher training institution in Western Pennsylvania, the General Assembly passed an act in the legislative session of 1871 granting aid for the establishment of a Normal School in the Ninth District, at Indiana.

The first building, named John Sutton Hall in honor of the first president of the Board of Trustees, was completed and opened for students on May 17, 1875.

The steady growth of the institution has caused a continuous expansion in its building program and many new buildings

have followed John Sutton Hall. The size and natural beauty of the University campus offer ample opportunity for recreation in an environment conducive to personal enjoyment. The main campus of the University, originally consisting of 23 acres with one building, is now composed of 95 acres on which are located 58 principal halls, 20 other buildings, and seven athletic fields. The University Lodge, located a few miles from Indiana and surrounded by 280 acres of wooded hillside, offers opportunity for nature study and numerous University activities.

In April, 1920, control and ownership of the school passed to the Commonwealth of Pennsylvania. In May, 1927, by authority of the General Assembly, the State Normal School became a college, with the right to grant degrees. The name was then changed to the State Teachers College at Indiana, Pennsylvania. In 1950 the ROTC Program was established. The name of the institution was changed again, in 1960, to Indiana State College, setting the stage for a liberal arts program which graduated its first students in January, 1964.

In December, 1965, Indiana was redesignated the Indiana University of Pennsylvania and given the right to expand its curricula offerings and to grant degrees at the master's level, as well as in a number of additional areas at the doctoral level.

Since the founding of the University in 1875, Indiana has graduated over 35,000 students, and since the University became a degree-conferring institution in 1927, over 26,000 degrees have been granted. Many of the graduates are

organized into a strong Alumni Association, with units active in many sections of Pennsylvania, as well as in New York, Michigan, and the District of Columbia. The Alumni Association cooperates with the University in many projects designed to better the institution and for the welfare of the students.

ACCREDITATION

The Indiana University of Pennsylvania is a state-owned and state-controlled institution for higher education. It is a multi-purpose institution, composed of eight schools.

The University is an approved and fully accredited member of the Middle States Association of Colleges and Secondary Schools, the American Association of University Women, the National Council for the Accreditation of Teacher Education and the American Chemical Society. The fact that this University is a member of these organizations is of immediate personal importance to the individual student in two ways: first, the student may transfer college credits from one approved institution to another without loss in case he finds it necessary to change colleges; and second, the student who is a graduate of an approved institution is eligible for a better position.

LOCATION

Located in Indiana Borough, Indiana County seat, in the foothills of the Alleghenies at an elevation of about 1,300

feet, the Indiana University of Pennsylvania is ideally situated for cleanliness and beauty. The University is easily accessible by automobile over excellent state highway routes coming from all sections of the state. These leading routes are Route 422 east and west, Route 286 northeast and southwest, and Route 119 north and south. Bus passenger services operate on frequent schedules to and from Indiana and all nearby cities and towns, including Pittsburgh, Altoona, Johnstown, Butler, Punxsutawney, Kittanning, DuBois, Ridgway, New Castle and others. Indiana is also served by bus connections with the main line of the Pennsylvania Railroad at Johnstown and Pittsburgh.

BUILDINGS AND GROUNDS

The campus at Indiana is frequently described as one of the most beautiful in the state. Located in the borough of Indiana, the main campus contains approximately 95 acres and includes 78 major buildings. In the center of the campus is the historic Oak Grove, about which are grouped many of the main buildings, forming three sides of a quadrangle.

STABLEY LIBRARY

The Rhodes R. Stabley Library was completed in the spring of 1961. The three story, air-conditioned building provides study room for about 550 students. Together with annex facilities in other campus buildings, it houses 475,000 volumes.

An instructional program in the use of library tools and reference books is presented by the staff to develop skills in library use. The well-organized general holding is enhanced by the reference collection, 2800 current magazines, extensive files of bound magazines, 630,000 units of microforms, 6,400 filmstrips and 3,400 recordings.

Most materials are available by the "open stack" system which encourages the habit of using books freely.

COMPUTER CENTER

The Computer Center, established in July, 1963, is located in the heart of Indiana's main campus. The Center provides computational support for undergraduate and graduate courses, faculty and student research, and the administrative requirements of the University. The computing capacity of the Center is provided by a large-scale disk oriented central processor which supports both time-sharing and batch processing services for the university community. Typewriter terminals, located both in the Computer Center and in various departments on campus, permit the use of the computer on a time-sharing basis. Key punching facilities and a full complement of tabulating equipment are available in the Computer Center for student use. Additional keypunching facilities are also available in many departments on campus. Aid in the use of the computer and facilities may be obtained from user assistants on duty at the Computer Center, and from the Center's professional staff.

Indiana's Computer Center plays an active part in the daily

functioning of the University. It is the principle laboratory facility for computer-oriented courses and is used as a teaching aid in many classes involving statistical and numerical analyses and computer simulations. The staff at the Center is actively involved in continuing work aimed at making computers a more effective and readily accessible tool for both the academic and administrative segments of the university community.



Admission and Registration

ADMISSIONS POLICY

Any graduate of an accredited four-year high school or holder of GED equivalency diploma is qualified to apply for admission to IUP. Prospective students who have completed the third year of high school may file an application beginning the following July 1. Applications filed before completion of the junior year will be returned to the sender.

Requests for application papers and catalogs should be addressed to:

The Admissions Office
Indiana University of Pennsylvania
Indiana, Pennsylvania 15701

Applicants are approved on the basis of an examination of high school records, recommendations of high school principals and guidance counselors and scores made on the College Board Aptitude tests. A University Admissions Committee establishes policy and approves or rejects applications.

Although the University does not require a specific number of high school credits in certain subject matter fields, it does strongly urge all applicants to take the usual college preparatory program in high school. Applicants should also take all available work offered in the field in which they plan to major.

Applicants are expected to name their major field upon application, but a change in major can be made during the

freshman year without loss of credit. A change of major after the freshman year usually entails a loss of credit and results in a program of more than 4 years to satisfy graduation requirements.

APPLICATION FEE

A CHECK or MONEY ORDER (cash will not be accepted) for \$10.00, payable to the Indiana University of Pennsylvania must accompany each application. This fee is non-refundable and will be used to meet the cost of filing and processing applications.

The application form, the \$10 application fee and the high school transcript must be mailed to: The Business Office, Indiana University of Pennsylvania, Indiana, Pennsylvania 15701.

FRESHMAN APPLICANTS

The Scholastic Aptitude Test

All persons expecting to apply for admission as a freshman student should plan to take the Scholastic Aptitude Test ("College Boards") on or before the November test date of the senior year of high school. The Admissions Committee recommends that the applicant first take the test in the spring of the junior year because the application, if com-

plete, may receive early consideration in the fall of the senior year. If applicant has an excellent high school record and strong College Boards scores, the application for admission may be approved by November 1 of the senior year.

Whether or not the applicant takes the College Boards in the junior year, it is recommended that the College Boards also be taken no later than the November testing date of the senior year. The Admissions Committee gives the applicant the benefit of the highest total Board scores from all test dates. It is, therefore, in many instances, to the applicant's advantage to take the Boards in the senior year. However, the Committee will use the Boards completed in the junior year if the senior Boards are not available at the time Admissions decisions are being made.

The applicant should arrange to take the College Boards through the high school principal or guidance counselor, or, by writing to the College Entrance Examination Board, Box 592, Princeton, New Jersey 08540 for an information pamphlet and test application.

When the applicant receives the information and test application, he/she should fill out the test application and designate Indiana University of Pennsylvania as one of the schools he/she desires to receive a copy of the test scores. The test application is to be returned to the Princeton, New Jersey, address.

The University will accept the test battery of the American College Testing Program (ACT) in lieu of College Boards (SAT).

The Admission Application

Applications for admission will be available after June 1 following the student's junior year of high school.

The applicant may fill out and submit the application and accompanying forms to the guidance counselor after July 1 of the summer following completion of the junior year. The deadline for applications for early consideration is October 1. These deadlines apply for both semesters of the subsequent year. Limited housing and classroom facilities make the above closure date necessary.

The applicant should give the completed application form and the \$10 application fee to his/her high school principal or guidance counselor for completion of the high school record portion of the application. The principal or counselor must then mail the complete packet of admissions materials to the Business Office, Indiana University of Pennsylvania, Indiana, Pennsylvania 15701.

The student's application is complete when the Admissions Committee receives the Junior College Board and/or Senior College Board or ACT test results, the high school record, the completed application form, and the application fee. In some cases the Committee may request additional information, such as a list of senior year subjects or a senior grade report.

Processing the Application

(1) The Admissions Committee reviews, with care and understanding, each of the several thousand applications that are submitted each year.

(2) Those persons who, in the Committee's judgment, satisfy the standards for early admission will receive notification by November 1 of their senior year. Decisions on most applications are deferred until later in the year. Final action on a completed application takes from 8 to 16 weeks, depending on the number of applications that must be processed. This delay is necessary if each application is to be examined carefully. Applicants who are not given early admission can expect a decision by February 15 of their senior year.

(3) The applicant who is admitted to an entering class is required to visit the campus on an appointed date to discuss his/her academic and career plans with the School Dean and other advisors. Choosing a major and possible career is an important problem for young men and women. It is hoped that early consultation with knowledgeable advisors will help the applicant make these crucial decisions. The date of this appointment for the orientation interview accompanies the notice of acceptance.

(4) A medical examination form is mailed to every applicant at the time admission is confirmed. This form is to be completed by the applicant's family physician.

(5) Attendance at the orientation interview and payment of the \$15 orientation fee signifies the applicant's interest, but NOT commitment, to attend Indiana University of Pennsylvania.

(6) Around April 15 a \$100 advance payment is required of all incoming Freshmen. This advance payment will be credited to the applicant's housing charges and basic fees. Fifty percent of the \$100 is refundable if applicant cancels admission before

July 1. Exceptions to refund policy may be made by application to Admissions Committee in cases of unusual circumstances.

TRANSFER STUDENTS

A student who has been attending another college or University and wishes to transfer to Indiana University of Pennsylvania must submit an official transcript of all college work and a statement from his/her Dean certifying that he/she is in good academic standing and entitled to honorable separation from that institution. High School transcripts and college boards and/or ACT scores should also be submitted. All of these items should be mailed to the Dean of Admissions, Room 216E, Pratt Hall. Only students with good academic records will be considered. A student who has been dismissed from another institution for other than academic reasons may petition the Dean of Admissions for acceptance to the University

The application deadlines for transfer students is January 15 for the academic year.

PART-TIME STUDY

Any high school graduate is eligible for part-time study.

Students who plan to participate in the part-time study must obtain an application from the Admissions Office.

Applications and official transcripts from high school and other institutions attended must be submitted to the Admissions Office forty-eight (48) hours prior to the first day of registration.

At the end of 15 credit hours of course work taken at IUP,

a part-time student must have a 1.8 cumulative quality point to continue. At the end of 30 credit hours taken at IUP, a part-time student must have a cumulative quality point average of 2.0 to continue.

A part-time student MAY apply for degree candidacy after completion of 15 credit hours of work in academic subjects and maintenance of a cumulative quality point average of 2.0 or better. A part-time student MUST apply and be approved for degree candidacy by the time he has earned 30 credit hours. **STUDENTS WHO HAVE NOT BEEN APPROVED FOR DEGREE CANDIDACY AT THE END OF 30 CREDIT HOURS OF PART-TIME WILL NOT BE PERMITTED TO CONTINUE AT THE UNIVERSITY.**

The appropriate forms for application for degree candidacy are available in Room 216, Pratt Hall. It should be specified on the forms whether full-time or part-time degree candidacy is desired. Part-time degree candidates must submit the part-time form prior to each semester of study and schedule courses with the part-time students. Full-time degree candidates will schedule courses with other full-time students.

Students who are degree candidates, who are in attendance and who plan to continue as part-time students, must file a part-time application with their School Dean each semester prior to the application deadline.

PROGRAM FOR HIGH SCHOOL JUNIORS

Honor students who have completed the junior year of high school with at least a B average in all college entrance

subjects taken in the sophomore and junior years may preview University life and earn regular college credit by enrolling in 2 or 3 lower division courses. Students seeking admission to this program should write to the Registrar for further details.

CERTIFICATION STUDENTS

(Students who graduated with other than B.S. in Education degree)

A student who wishes to be admitted to complete requirements for an Instructional I certificate must submit an application and official transcript of college work showing degree attained. One semester on campus is a prerequisite to Student Teaching

READMISSION POLICY FOR STUDENTS WHO WITHDRAW FROM THE UNIVERSITY VOLUNTARILY

A student who withdrew from the University on a voluntary basis for reasons of health, financial difficulty, etc., and who wishes to re-enter, must notify, in writing, the Dean of the School in which the student was enrolled at the time of his withdrawal AND the Office of the Dean of Students before April 1, if requesting readmission for that year's summer sessions or for the Fall semester (starting in September). Written requests must be made to the above-mentioned offices before November 1, if requesting readmission for the Spring semester starting in January.



PRE-SCHEDULING AND REGISTRATION

Students who are in full-time enrollment status are given the opportunity to pre-schedule for the next semester of attendance. Regularly enrolled students will pre-schedule and pre-register during the middle of the first semester for the second semester, and during the middle of the second semester for the following first semester, and in May for Pre-Summer session.

Prospective freshmen will prepare a program of studies with departmental advisors during interview dates preceding the semester of entrance.

All students will be billed and pay fees by mail for the first and second semesters of each year.

THE SUMMER SESSIONS

The Summer School is an integral part of the year's work. Students from other colleges, teachers in service, and students in regular attendance can secure, in the summer session, credits toward any certificate or toward graduation in any curriculum. The courses are planned primarily for those who are accelerating their work. An effort is made to meet all reasonable requests of teachers who are working toward higher certification or toward graduation.

All courses given in the summer session require the same amount of time and are granted the same credit as if taken during a regular semester. The Summer Bulletin will be mailed to anyone desiring more complete information regarding the courses to be offered.

Three sessions, two of 3 weeks and one of 6 weeks, are generally offered during the summer. The pre-session opens the first week of June. Main session begins the last of June and continues into the first of August. The post-session opens in early August and usually closes a week prior to the end of the month. It is thus possible for a student to secure three to twelve credits by attending summer school.

Address the Registrar for the Summer Sessions Bulletin indicating courses and activities of the Summer Session. Normally, Summer Sessions Bulletins are available after March 1.



BASIC FEES

The basic fee for all full-time in-state students is \$375.00 per semester. This fee covers registration and the keeping of student records, use of the library, student welfare, health services (other than extra nurse and quarantine), and laboratory facilities.

Out-of-state full-time students pay a basic fee of \$750.00 per semester.

The basic fee for part-time in-state students is \$31.00 per semester hour. A part-time student is one taking 11 or fewer semester hours. See the sections on Admission and Registration and on University Policies for further information concerning part-time students.

The basic fee for part-time out-of-state students is \$46.00 per semester hour.

An in-state student is defined as one who is a bona fide resident of and domiciled within the State of Pennsylvania for a reasonable period, not less than one year, immediately preceding his or her registration for a term or semester in any State-supported college or university in the State of Pennsylvania. A minor will generally be presumed to be a resident of the place of his parents' or guardian's domicile.

The establishment of domicile is primarily a matter of continued residence and intention. Generally, Pennsylvania domicile is considered to be established upon the completion

Finances

of at least 12 months of continuous residence within the State at the time of registration for courses. For special cases, the University has a committee to review this matter.

The University reserves the right to change its charges without notice.

OTHER FEES

ADVANCE REGISTRATION FEE – A non-refundable confirmation fee of \$15 must be paid by each student accepted for enrollment. This confirmation fee will be used to cover the cost incurred by the University on the students' behalf during Freshman Orientation Day on campus and Fall Freshman Orientation.

HOUSING FEE – The housing fee for students living in commonwealth residence halls is \$213.00 per semester and the meal fee is \$198.00 per semester; thus students who reside in a commonwealth residence hall and have their meals in one of the University dining halls pay a total of \$411.00 per semester. This includes room, meals in one of the University dining halls, and laundry of sheets and pillow cases. This applies only to full-time students, as part-time students are not permitted to live in University dormitories or residences.

See the section on Housing for details concerning housing policies at the University.

STUDENT ACTIVITY FEE – An activity fee is collected from all students and administered through the Student Cooperative Association under regulations approved by the Board of Trustees. This fee, of \$30.00 per semester, covers the cost of student activities in athletics, lectures, entertainment, student publications, etc., and is payable in one sum for the semester at the time of registration. The Student Activity Fee is \$11.00 for part-time students.

LATE REGISTRATION FEE – Each student registering after the date officially set for registration is required to pay an additional fee of \$1.00 per day until the student is in regular attendance (except when permission for late registration has been secured in advance from the President because of illness or other unavoidable causes), provided that the total amount of the late Registration Fee shall not exceed \$10.00. The same regulation shall apply to approved inter-semester payments.

BAD CHECK CHARGE – Students making checks payable to "Indiana University of Pennsylvania" which are not acceptable to the bank because of insufficient funds will be charged \$10.00 for each bad check.

PRIVATE INSTRUCTION IN MUSIC – the vocal and instrumental fee per semester is \$70.00. This charge is in addition to credit hour costs.

MILITARY FEE – An Activity Fee of \$3.00 is required of ROTC Cadets to cover the cost of Cadet Corps functions. A

uniform deposit fee of \$10.00, which is refundable, is required of all cadets. These fees are payable directly to the Military Science Department.

ESTIMATED EXPENSES PER SEMESTER

	<u>In-State</u>	<u>Out-of-State</u>
Basic Fee	\$375.00	\$ 750.00
Housing Fee	213.00	213.00
Meal Fee	198.00	198.00
Student Activity Fee	30.00	30.00
Books and Supplies (estimated)	<u>75.00</u>	<u>75.00</u>
Total	\$891.00	\$1,266.00

Miscellaneous and travel expenses would be in addition to the above.

SUMMER SESSIONS FEES

BASIC FEE – The basic fee for students enrolled for any of the regular summer sessions is \$31.00 per semester hour. The minimum basic fee per session is \$93.00

The basic fee for students who are not residents of Pennsylvania is \$46.00 per semester hour, and the minimum charge is \$138.00 for each session.

HOUSING FEE – Summer session rates will be calculated based upon the number of weeks within the session. Weekly summer rates are \$14.20 per week for residence hall room (includes laundry of sheets and pillow cases), and \$13.20 per week for meals in one of the University dining halls.

See the section on Housing for housing-policy details at the University.

STUDENT ACTIVITY FEE – For the Main Summer Session, this fee is \$10.50, and for the Pre- and Post-Sessions, \$5.25, payable at time of registration.

SPECIAL FEES

INFIRMARY FEE – After three days in the University Infirmary, the University shall charge students who regularly eat in a University dining room an additional \$1.00 for each day. Students who room at the University but do not eat in a University dining room shall pay \$3.00 per day after the third day. Commuter students admitted to the infirmary shall pay board at the rate of \$3.00 per day from the first day of admission. Service at the infirmary includes the regular nurse and regular medical service but does not include special nurse or special medical service.

DEGREE FEE – A fee of \$5.00 to cover the cost of a diploma must be paid by each candidate for a degree.

TRANSCRIPT FEES – Applications for official transcripts must be made **ONLY IN WRITING** to the Registrar, either by U.S. Mail, or on forms available at the Transcript Window in Clark Hall. Such requests **MUST** include:

(1) Your full name and social security number as of your graduation or termination of enrollment at IUP. (Please note any name changes since graduation);

- (2) Your present address;
- (3) Whether you are requesting a transcript of your undergraduate and/or graduate work;
- (4) Whether you graduated or if not, when you were enrolled;
- (5) The full and clearly stated name(s) and address(es) of person(s) to whom you wish the transcript(s) sent;
- (6) The payment of the transcript fee of one dollar (\$1.00) per transcript. (Checks or money orders should be made out to Indiana University of Pennsylvania). There is no charge for the first transcript requested.

Any requests which are not accompanied by the proper fees or information will be returned to the senders for inclusion of them. No transcript requests will be processed without the payment of transcript fees.

DAMAGE FEE – Students are responsible for damages, breakage, loss, or delayed return of University property.

BILLING AND PAYMENTS

All bills, including basic fee and housing fee, are payable as specified on the bill for at least the first nine weeks. Checks or money orders, in the exact amount of the account, should be made payable to the account designated on the bill. Book Store purchases are on a cash basis.

It is desired that payments for the entire semester be made in August for the first semester and in December for the second semester; however, the half-payment option may be exercised, if necessary.

Delinquent Accounts

Students will not be permitted to enroll for any semester, nor to graduate, until all bills previously incurred have been paid; nor will credit be certified to any other institution or to the Department of Education until all overdue accounts have been paid. A late payment fee of \$1.00 per day will be assessed for each day an account is delinquent up to a maximum of \$10.00.

Undergraduate students desiring to leave school before the close of a semester must report to the Vice President of Student Affairs, and to the Business Office to settle all unpaid accounts. Graduate students report to the Graduate School Dean.

UNIVERSITY REFUND POLICY

The University must engage its faculty, assign Residence Hall space and arrange for meal contracts in advance of each term in accordance with the number of students who expressed their intent to be enrolled. When students withdraw from the University, they create vacancies which cannot be filled and financial commitments for salaries and services by the University must be honored. The refund policy at Indiana

University of Pennsylvania applies to all students enrolled in credit producing programs at the University either full-time or part-time.

WITHDRAWALS FROM THE UNIVERSITY

Undergraduate students withdrawing from the University must process such withdrawal through the Student Affairs Office, Pratt Hall. The official withdrawal date will be established by the Student Affairs Office.

Students totally withdrawing from courses, Residence Halls and/or meal contracts upon receiving approval from the Student Affairs Office will forfeit a portion of the semester charges in accordance with the following schedule:

From the first day of registration to and including the fourteenth (14th) day following the opening of registration. Forfeit one-quarter ($\frac{1}{4}$) of the student's total semester charges or \$50.00 whichever is greater.

From the 15th day following the opening of registration to the end of the sixth week of classes. Forfeit one-half ($\frac{1}{2}$) of the student's total semester charges or \$100.00 whichever is greater.

After the end of the sixth week of classes. No refund will be granted and all semester fees forfeited.

REFUNDS

Refunds for students receiving financial assistance from scholarships and/or grants will be returned to the source of aid in an appropriate proportion, except in those cases in which a full refund to the source is required.

- No refunds will be made for summer session fees.
- No refunds will be granted unless formal withdrawal procedure has been initiated by the student or his family within 60 days of the date of withdrawal.
- No refund will be made for reduced credit loads.
- No refunds will be granted for students suspended or expelled by the University.
- Students who withdraw from the University Students Services (Residence Hall, meal contracts, etc.), but do not totally withdraw from the University will not be granted a refund.

The Student Affairs Office may make exceptions to these policies and grant pro-rated refunds when circumstances justify it. (Example: death, medical reasons, military obligation.)

FINANCIAL AID

The Financial Aid Office, located at 308 Pratt Hall, offers financial information and counseling to all students attending

IUP. The types of financial assistance offered by the Financial Aid Office include student employment, loans, grants, and scholarships. In most cases, a Parents' Confidential Statement is used to determine eligibility for these programs.

EMPLOYMENT provides an opportunity for the student to earn money to help finance his educational expenses. Students may be employed on campus for up to twenty (20) hours per week. The University encourages students to participate in the on-campus student employment program since studies have demonstrated that part-time employment provides a positive stimulus to students in their adjustment to campus life and the maintenance of their academic averages. All campus employment is administered by the Financial Aid Office.

LOANS are a form of aid for which repayment must begin upon termination of the student's University education. Interest rates normally range to 7%.

GRANTS are funds which carry no obligation for repayment. These funds are awarded to the student on the basis of financial need.

SCHOLARSHIPS are funds which carry no obligation for repayment. They are gifts awarded to the student on the basis of ability.

Federal aid administered through the University is available for both the regular academic year and the summer sessions. The application deadline for upperclassmen for these federal aid programs is normally March 15 for the following aca-

demical year. Freshmen may apply for aid upon acceptance to the University. For the summer sessions, the application deadline is May 1.

A brochure containing specific information about financial aid may be obtained at the Financial Aid Office. In addition, the director and assistant director of Financial Aid are available for student consultation from 1:00 to 4:00 p.m. Monday through Friday.

EMPLOYMENT

Campus part-time employment for students is available in the academic offices, residence halls, library, administrative offices, student co-op, and dining halls.

The University operates two student employment programs under which students may be employed:

FEDERAL — To be employed under the federal College Work-Study Program (CWSP), a student must show "financial need" as determined by the Parents' Confidential Statement. Application for this program is made in the Financial Aid Office. A student employed under the federal College Work-Study Program may work up to a maximum of twenty (20) hours per week when classes are in session and forty (40) hours per week when classes are not in session.

STATE — The State University Employment Program (UE) employs students who do not show "financial

need.” Under this program, a student may work up to fifteen (15) hours per week when classes are in session and twenty-five (25) hours per week when classes are not in session. No application is necessary for this program.

The Financial Aid Office offers limited placement assistance to students. In general, students are encouraged to seek out available employment openings on their own. When an employment opening is located, the potential employer indicates his intention of employing the student by giving him an employment assignment card. The student takes this card to the Financial Aid Office and is then placed on the appropriate student payroll. There is no provision to have employment earnings deducted from student accounts. Students are paid directly by check every two weeks.

LOANS

Government-Sponsored Loan Programs

NATIONAL DIRECT STUDENT LOAN PROGRAM – The application for the National Direct Student Loan Program is the University financial aid application. This application is forwarded to freshmen along with their Admissions acceptance letter from the University. Currently enrolled students may secure an application for this program in the Financial Aid Office. The loan is awarded to students on the basis of financial need, as determined by the Parents’ Confidential Statement. It is interest-free and nonrepayable until nine months after termination of education, at which time it becomes repayable at 3% interest with a minimum \$30 payment per month and up to ten years to repay.

GUARANTY STUDENT LOAN PROGRAM – Applications for the Guaranty Student Loan are obtainable from lending institutions. These include banks, savings and loan associations, credit unions, etc. Through this program, students may borrow up to \$2000 per academic year. The loan is interest-free to eligible students until nine months after termination of education, and is then repayable directly to the lending institution at 7% simple interest.

University-Sponsored Loan Programs

The Financial Aid Office administers various loan funds in behalf of the University. Applications for and additional information on these programs are available to students in the Financial Aid Office. These loans are generally not available to students until after they are enrolled in and taking classes at the University. Listed below are various loan programs sponsored through the Financial Aid Office at Indiana University of Pennsylvania:

JENNIE E. ACKERMAN LOAN FUND – By action of the Executive Committee of IUP’s Alumni Association, the Jennie E. Ackerman Loan Fund was established in 1962, by contributions from alumni and friends, in memory of Jennie E. Ackerman, who served as Supervisor of Student Teachers at IUP for many years. Loans are available to sophomores, juniors, and seniors who are maintaining satisfactory academic records at the University. The maximum outstanding amount extended to any one student cannot exceed \$200. Interest is at the rate of 2% payable at maturity of the loan. Notes extended beyond that time will carry a 6% interest charge.

ELLA C. BENDIX LOAN FUND – This fund was established by students and faculty of the School of Home Economics in memory of Ella C. Bendix, who served as dean of the School of Home Economics. Worthy students with financial need enrolled in the School of Home Economics are eligible to receive a \$250 loan for each year of a two-year period. Interest is 2% payable at maturity of the loan. Notes extended beyond that time carry a 6% interest charge. Loan applications are available from the School of Home Economics.

COLETTE CROMER GERSHMAN LOAN FUND – Family and friends of Colette Cromer Gershman have established this fund in memory of Colette Cromer Gershman, a home economics education graduate. Students enrolled in the School of Home Economics are eligible for the loan. Interest is at the rate of 2%, payable at maturity of the loan. Notes extended beyond that time will carry a 6% interest charge. Apply to the Financial Aid Office.

SUZANNE MARSHALL HARTMAN LOAN FUND – A loan fund has been established at IUP by family and friends in memory of Suzanne M. Hartman, a graduate of Indiana in home economics. This fund is used to grant loans to deserving students in their sophomore, junior, and senior years. Interest is at the rate of 2%, payable at the maturity of the loan. Notes extended beyond that time will carry a 6% interest charge.

OLIVER W. HELMRICH MEMORIAL SCHOLARSHIP LOAN FUND – This fund has been established at IUP by

the Helmrich family and friends in memory of Mr. Helmrich, a member of the Indiana faculty at the time of his death. In an effort to continue his desire to help young people in education, loans of up to \$250 are available, according to need, to full-time seniors and graduate students enrolled in the School of Education. Notes are interest-free for one year, and carry a 6% interest charge if repayment is extended.

WILLIAM HENZELMANN MEMORIAL FUND – This loan is available to junior and senior students majoring in the department of German and Russian languages. The maximum loan is \$250. Notes will be interest-free for one year, after which they will carry a 3% interest charge. The total repayment period for the loan will not exceed twenty-four months. This loan has been established in memory of William Henzelmann, a faculty member of the German/Russian languages department at IUP.

MACK LOAN AND SCHOLARSHIP FUND – A loan and scholarship fund has been established by members of the Mack family to be used for making loan and scholarship grants to worthy students with financial need. Preference is given to freshmen and sophomores who can give evidence of academic excellence, financial need, and promise as a future member of the teaching profession. At the present time, the maximum loan available is \$200 per year. Interest is at the rate of 2%, payable at maturity of the loan. Notes extending beyond that time will carry a 6% interest charge.

ALAN P. MEWHA GEOGRAPHY MEMORIAL LOAN FUND – This fund was established in 1959 and is administered by the faculty of the geography department. Juniors and seniors have priority on loans from this fund. Interest rates are 3% per year, and the maximum loan available is \$200 per year.

RUSTY PREISENDEFER MEMORIAL LOAN FUND – This fund was established as a gift from Mrs. Suzanne Preisender Brickner in memory of her husband, who was killed in action in South Viet Nam. Preference in granting loans from this fund shall be given to members of the advanced ROTC and upperclassmen. Loans will be made up to a maximum of \$400 per individual, with the first note carrying a 2% interest charge. Notes extending beyond that time will carry a 6% interest charge.

FLOSSIE WAGNER SANFORD STUDENT LOAN FUND – The Pennsylvania Federation of Women's Clubs has established a student loan fund in honor of Flossie Wagner Sanford, an alumna and former member of the faculty of Indiana. Loans from this fund are made by the Faculty Loan and Scholarship Committee to students who need financial assistance. Interest is at the rate of 2%, payable at the maturity of the loan. Notes extended beyond that time will carry a 6% interest charge.

GRANTS

BASIC EDUCATIONAL OPPORTUNITY GRANTS (BEOG) are available for eligible students entering postsecondary

institutions after April 1, 1973. Applications for and information on deadlines for this program are available from the Financial Aid Office or high school counselors.

PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY GRANTS (PHEAA) are available for both the regular academic year and the summer sessions. Contact the Financial Aid Office to determine the application deadlines for the PHEAA Grant Program.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS (SEOG) are available to eligible students who demonstrate financial need, as based on the Parents' Confidential Statement. The University financial aid application is used for this federally sponsored program.

SCHOLARSHIPS

The Financial Aid Office administers various scholarship programs in behalf of the University. These scholarships have been established by alumni and friends of the University to recognize outstanding students and assist them in financing their educational expenses. Listed below are the University scholarships which are administered through the Financial Aid Office:

AETNA LIFE AND CASUALTY SCHOLARSHIP – A \$100 award is presented each semester to a Safety Management Major under this scholarship established by the Aetna Life and Casualty Insurance Company. The award is to be given for academic excellence with strong consideration for women and

minority students. Applications should be made to the Chairman, Safety Sciences Department.

JEMIMA S. BOYD SCHOLARSHIP – The Jemima S. Boyd Scholarship Fund was established for an American born female student who intends to teach in Pennsylvania. The amount of this annual scholarship will be determined by the yearly interest from the savings account of the late Grace Noble Lacock's estate. It is to be awarded at the discretion of the Financial Aid Committee in the amount felt to be necessary for the student.

BOARD OF TRUSTEES ACADEMIC SCHOLARSHIP – Awarded to the top students of each incoming freshman class, this is a full tuition scholarship for four years, without regard to financial need. Scholastic achievement is established by the computation of high school rank and College Entrance Examination Board scores.

M. VASHTI BURR MEMORIAL AWARD – The sum of \$125 is awarded annually to that student of IUP who is deemed by the faculty to be most deserving, having in mind his or her economic need and the excellence of his or her industry and scholarship. This award is given through the generosity of Mr. William V. Whittington, Washington, D.C.

CLARK SCHOLARSHIP – The Lieutenant Alpheus Bell Clark Memorial Scholarship was established by Mr. and Mrs. Steele Clark, Cherry Tree, Indiana County, in memory of their son. The sum of \$100 is awarded each semester to that

young man or woman, a senior in the University and a resident of Indiana County, who in the opinion of a committee chosen by the President, best qualifies for the honor in terms of academic ability, leadership, and service to the University, with preference going to a veteran, or a son or a daughter of a veteran.

EXTENSION HOMEMAKER SCHOLARSHIP -- Homemakers participating in the Home Economics Extension Program contribute funds annually for scholarships to be given to sophomores, juniors, or seniors who are majoring in home economics in several colleges in the state. Indiana is allotted several each year, to be awarded on the basis of 4-H experience, need, scholarship, and other outstanding characteristics. Each award is for \$200 per year.

THOMAS V. FRAZIER MEMORIAL SCHOLARSHIP – A senior student interested in the theatre arts is the recipient of this award. The student may be a drama student or just active in off-stage roles. Financial need will be a consideration, with Mr. Robert Ensley and members of the Financial Aid Office selecting the recipient.

THE G. G. HILL AWARDS – Two awards of \$50 each are given each spring to a male and to a female in business and distributive education. The recipients are selected on the basis of scholarship, responsibility, participation in community and university activities, personality and leadership. The scholarship is given by the business and distributive education department in honor of Mr. G. G. Hill, founder and former chairman of the department.

PATTI HURLEY SCHOLARSHIP – A four year scholarship of \$150 per year is awarded to a female graduate of Indiana Area High School attending the University, based upon academic achievement, participation in school activities, and economic need. This memorial scholarship was established by the family and friends of Patti Hurley, a 1970 graduate of Indiana Area High School who was killed in an automobile accident two weeks after high school graduation and prior to entering college.

JOHNSTOWN SYMPHONY SCHOLARSHIP – These are scholarships for the study and expense of students studying string instruments. Amounts and number of scholarships are determined by the music department.

DOROTHY MARCY LONG MEMORIAL SCHOLARSHIP – This is a scholarship awarded annually to an entering freshman female on the basis of her high school academic performance and SAT scores. The award is valued at \$200 for the student's first year at IUP. This award was established in memory of Dorothy Marcy Long by her family and members of the Indiana branch of the American Association of University Women.

MORRIS SCHOLARSHIP – The Helen Wood Morris Scholarships were established by Lieutenant-Colonel L. M. Morris of Altoona, in memory of his wife, a graduate of the University. Sums of \$175 each are awarded annually to students selected by a committee named by the University, one award to a sophomore, the other to a junior. Students chosen must be in the highest quarter of their class, must be

in need of financial assistance, and must have demonstrated worthiness in terms of character, personality, leadership, and American citizenship.

MARY MULDOWNEY SCHOLARSHIP – A scholarship in the amount of \$100 for any junior or senior student majoring in music with an emphasis on voice, this award is governed in amount and number of scholarships given, by the music department.

TOM NORMAN SCHOLARSHIP – This money will be available to a soccer player in financial need. All disbursements will be controlled by the soccer coach, in the amounts he feels necessary.

OPERATION FRIENDSHIP SCHOLARSHIP – Two awards of \$25 each and a certificate are given by Dr. Norah E. Zink, professor emeritus of the geography department of IUP, to foreign students who have made a significant contribution to cooperation and good feeling in the University and community during the University year. These awards are given during the spring.

ETHEL V. OXLEY/HELEN C. MERRIMAN SCHOLARSHIP Each year the Home Economics Alumni Association honors two former faculty members by awarding \$100 scholarships to outstanding students in the School. Awards are based on evidence of such characteristics as dependability, initiative in worthwhile professional experiences, accepting responsibility, social sensitivity and sincerity in dealing with people, sense of values, personality and scholarship.

ALBERT PECHAN SCHOLARSHIP – This is a scholarship for a science major. The amount of the award depends on the money available in the scholarship fund. Selection of a recipient is made by the science department faculty.

LENORA PECHAN SCHOLARSHIP – The Lenora Pechan Scholarship was established by the late Dr. Albert R. Pechan, a former member of the Senate of the Commonwealth of Pennsylvania and of the Board of Trustees of IUP, to provide funds for students who are members of the Reserve Officer Training Corps and who have been outstanding students in the ROTC, and whose other academic work is satisfactory. First priority will be given to students from Armstrong County, selected by the officers of the ROTC and the Faculty Scholarship and Loan Committee.

PENNSYLVANIA FEDERATION OF WOMEN'S CLUBS SCHOLARSHIPS – At least four scholarships of \$100 each are offered annually to students in the art education department. These scholarships are provided by voluntary contributions from clubs to "Pennies for Art Fund," by the Pennsylvania Federation of Women's Clubs.

PRESSER FOUNDATION SCHOLARSHIP – The Presser Foundation of Philadelphia awards two scholarships each year to music students at IUP. The amount varies from year to year. Interested music students should apply through the chairman of the music department.

QUOTA CLUB SCHOLARSHIP – The Quota Club of Indiana has established a scholarship of \$100 per year, for

senior girls in speech and hearing. Those interested in applying for this scholarship should contact the Director of Speech and Hearing for information.

SERVICE CLUB SCHOLARSHIP – The Kiwanis, Lions, and Rotary Clubs of Indiana have scholarship programs that provide financial aid for approximately 16 students per year at IUP. These scholarships are administered by the local service clubs, with assistance from the Financial Aid Office at the University.

STUDENT ART SCHOLARSHIP – Students of the department of art and art education contribute art works to be sold. Funds thus received permit awards of \$50 to be made periodically. Applications for these awards are received and screened and awards made by a committee of art students. This award is confined to students of the art department.

STUDENT GOVERNMENT FOREIGN STUDENT SCHOLARSHIP – The Student Government Association grants four full scholarships annually to foreign students who have not previously been in the United States and who can complete their proposed program of study in one academic year. Applications should be submitted to the Foreign Student Advisor no later than March for the following year.

SYNTRON FOUNDATION SCHOLARSHIP – Through the Syntron Foundation of Homer City, four four-year scholarships are awarded annually to freshmen, each worth \$750 per year. Presently, 19 scholarships are in effect each year. Applications must be filed with the Director of Financial Aid by March 2 for the following year. Nine of these

scholarships are identified as C. S. Weyandt Memorial Scholarships and the others are identified as J. A. Metz Memorial Scholarships.

J. M. UHLER MEMORIAL SCHOLARSHIP — In honor of a former President of the University and a past President of the Indiana Kiwanis Club, the Club awards a \$100 per semester scholarship for four years to a recipient showing adequate scholastic progress. These scholarships are available to graduates of high schools within Indiana County. This fund is administered by the J. M. Uhler Scholastic Committee of the Indiana Kiwanis Club.

NORAH E. ZINK FOOTBALL AWARD — Dr. Norah E. Zink, professor emeritus of the geography department of IUP, has established an annual award of \$25 for that member of the varsity football team whose academic average shows the greatest improvement over the fall semester.

VOCATIONAL REHABILITATION ASSISTANCE

Students who have substantial physical or mental handicaps may receive educational benefits through the Bureau of Vocational Rehabilitation Assistance. In order to be eligible, students must satisfy the physical and financial requirements of the Agency. For further information regarding this assistance, the student should contact his local Bureau of Vocational Rehabilitation Assistance office or representative.



Academic Policies

CLASSIFICATION OF STUDENTS

The **FULL-TIME** undergraduate student is defined as a student who is enrolled in courses carrying 12 or more hours of credit in a Fall or Spring semester. Any student carrying less than 12 semester hours in a semester is a **PART-TIME STUDENT**. All part-time students wishing full-time status must apply for and obtain approval of such a change.

All undergraduate summer students are considered to be part-time for the duration of the summer session; this status is technical, however, and does not jeopardize *per se* the student's normal full-time status for Fall or Spring semesters if such status is held for those semesters.

For purposes of designating students by class, the following credit hour classification ranges are used:

Freshmen	28 semester hours or less
Sophomores	29–56 semester hours
Juniors	57–90 semester hours
Seniors	91 semester hours or more

Class designations are based on credits **EARNED**, rather than credits **ATTEMPTED**.

Persons holding a degree and working for a second baccalaureate degree may be classified as seniors.

GRADES AND QUALITY POINTS

GRADING SYSTEM – The following grades are used in

reporting the standing of students at the end of each semester or summer term: A, excellent; B, good; C, average; D, passed; F, failed; I, incomplete; P, pass/fail (option). Regarding the option of pass/fail courses, if a student fails the course, he will be awarded an F and the terms of “failing” a course will prevail.

The grade of I is used to record work which, so far as covered, is of **PASSING GRADE**, but is incomplete because of **PERSONAL ILLNESS** or other **UNAVOIDABLE REASON**. It must be made up within 2 months after the student returns to the University. The grade of W is used to designate that the student has voluntarily withdrawn from a course within a specified period after the beginning of any regular semester. The W grade carries no credits or quality points for the course in which it is reported, but does appear on the student's record.

QUALITY POINTS – Quality points are assigned as follows: Grade A, 4 quality points per semester hour; B, 3 quality points per semester hour; C, 2 quality points per semester hour; D, 1 quality point per semester hour; F, no quality points.

Quality points are not counted on grades from other schools, and a student transferring from another school is held responsible for quality points only on work taken in this University.

CUMULATIVE QUALITY POINT AVERAGE is determined by multiplying the credit hours per course by the grade in

quality points received for that course, repeating this procedure for each course attempted, totaling the credit hour-quality points thus obtained, and dividing by the total number of credit hours attempted.

The semester hours for a course repeated after January 1, 1974, shall be counted only ONCE for all attempts; and it is this number of hours that will be used in quality point average (QPA) computations. (In the case where a course is repeated for a different number of hours of credit than when taken initially, the number of hours corresponding to the highest grade will be used in the QPA computations.)

The total quality points for all attempts of the repeated course will be the number assigned for the highest grade earned.

The QPA for the repeated course will be determined by dividing the number of quality points by the number of semester hours earned. Only courses with a D or F grade may be repeated and then only with the approval of the student's advisor. Only six repeat attempts may be made subsequent to the adoption of this policy during a Baccalaureate Degree Program.

GRADE REPORTS – About a week after each semester or summer session, a full grade report is mailed to each student at his home address. Parents do not receive reports, as it is assumed that University students are sufficiently mature and trustworthy to report the facts to their parents.

DEAN'S LIST – To be eligible for the Dean's List, which is

compiled after each semester, a student must have a quality point average of 3.20, 14 or more semester hours attempted, and no D's or F's in the preceding semester or summer session of work. This list will also include students doing their "Student Teaching" who meet the above requirements.

CRITERIA GOVERNING CONTINUANCE AT IUP

To be in good academic standing, an undergraduate student must maintain a 2.0 cumulative quality point average.

Freshmen entering the University any time after June 1, 1971, must have attained a 1.8 cumulative quality point average upon the completion of their first full-time academic year to remain at the University. A cumulative quality point average of 2.0 is required for an undergraduate's remaining years. To achieve the stipulated average, the Pre and Main Summer Sessions immediately following the year's Spring semester may be used. Students who fail to be in good academic standing at the end of any summer's Main Session will be dismissed from the University for at least one academic year.

All courses taken at IUP become a part of the student's permanent academic record. The record shall show hours attempted, hours earned, and quality points earned.

The academic standing of all students is computed on the basis of courses attempted at this University only. Credit is granted for work completed in other institutions in accord-

ance with the stipulations set forth under “Admission and Registration.”

READMISSION AFTER ACADEMIC DISMISSAL – Students who have been dismissed from the University for academic reasons and who desire to return after the dismissal interval must file a formal application for readmission with the Dean of the School in which they were enrolled at the time of their dismissal.

In addition to filing the formal application, students must improve their academic average to meet the minimum requirements of the University which are 1.8 and 2.0 for freshmen and upperclassmen respectively. For exceptions, refer to Criteria Governing Continuance at the University – see page 28. Filing must be before April 1, if requesting readmission for the following summer sessions or for the Fall semester starting the following September. Filing must be before November 1, if requesting readmission for the following Spring semester.

Academic Violations

The following policies pertain to the processing of academic violations:

Minor Violations.

- Cheating by those who give aid as well as receive aid in course and laboratory, except in a final examination. **SANCTION:** “F” in the course.
- Evasion of University academic policies and procedures. **MAXIMUM SANCTION:** “W” in the course.

Major Violations. Those violations that may warrant action beyond receiving an “F” in the course:

- Cheating on a final course or laboratory examination.
- A second cheating violation.
- Possessing an examination without the teacher’s authority or prior knowledge.
- Plagiarizing in any way.
- Defacing library books or educational instruments or materials.
- Purposeful evasion of University policies and procedures.

MAXIMUM SANCTION: expulsion.

MINOR VIOLATIONS PROCEDURE – A teacher may fail any student for cheating in his course. (The teacher should inform the student and file a report of the violation with the Academic Discipline Subcommittee of the Senate Academic Procedures Committee, and the Vice President of Student Affairs, making the violation a matter of record in the Subcommittee’s files.) The student may request a hearing (an opportunity to be heard) wherein the student and the teacher involved are heard by the chairman of the teacher’s department. The heaviest sanction which can be imposed by the chairman is to uphold the “F” grade. The student may appeal the chairman’s ruling to the Academic Discipline Subcommittee of the University Senate’s Academic Procedures Committee, with officially designated observers given full voting rights and excluding the Academic Vice-President and the Dean of the School in which the violation occurred.

The Academic Discipline Subcommittee is chaired by a student elected by the membership.

The Academic Discipline Subcommittee may accept the report and decision of the department chairman, reverse his decision and return the case to him for further hearings in keeping with suggestions that the Subcommittee may make, or reverse his decision and dismiss the case. It may also accept the decision of the chairman, but reduce the sanction imposed. It may NOT increase the sanction. Returning the case to the chairman is not DOUBLE JEOPARDY, since the first hearing is still not complete.

If the Academic Discipline Subcommittee accepts the report of the department chairman (whether it lowers the sanction or not), the matter is deemed final; except that either party may petition the chairman to reopen the matter upon the discovery of new evidence. The chairman will judge the sufficiency of the new evidence, and no appeal can be taken from his decision.

MAJOR VIOLATIONS PROCEDURE – A major violation is handled similar to a minor violation (in that the teacher should inform the student, and file a report of the violation with the Academic Discipline Subcommittee of the Senate Academic Procedures Committee, and the Vice President of Student Affairs, making the violation a matter of record in the Subcommittee's files), but it proceeds to a hearing directly by the Academic Discipline Subcommittee of the Senate Academic Procedures Committee, whose composition is as previously described. The hearing will follow the

standards of procedure, where the accused should:

- 1) Receive ten (10) days written notice of the charges against him, and the sanctions which may be applied if the charges are proven;
- 2) Receive written notice of the date, time and place of the hearing (this should accompany the charges);
- 3) Be advised of the names of the witnesses who will appear against him and the substance of their testimony;
- 4) Have the right to present a defense and witnesses in his own behalf, and the right to cross-examine witnesses against him (the prosecutor, naturally, has the same right to cross-examine defense witnesses); and
- 5) Have access to a transcript of the proceedings and the findings of the board.

The accused may be assisted by an advisor of his choice, but legal counsel cannot be used on either side of a student-institutional hearing. The hearing may be governed by its own rules as to internal proceedings along lines of "fundamental fairness." The sanction imposed by this hearing board may be appealed to an appeal board consisting of the Vice-President for Academic Affairs, the Dean of the School in which the violation occurred, the Vice Chairman of the Faculty Senate and the President of Student Government. The appeal is governed by the principles previously outlined.

Disciplinary Dismissal Or Suspension

Suspension or dismissals for disciplinary reasons are recom-

mended to the President of the University by the Vice President of Student Affairs upon the recommendation of the University Judicial Board. The Board is composed of the Vice President of Student Affairs, five faculty members, and five student members.

ACADEMIC HONORS

Students with appropriate academic records may be graduated with one of the following distinctions:

Summa cum laude

3.75–4.00 cumulative quality point average

Magna cum laude

3.50–3.74 cumulative quality point average

Cum laude

3.25–3.49 cumulative quality point average

Honors are not granted for subsequent degrees.

CLASS ATTENDANCE

Class attendance and class participation beyond mere physical presence are essential for maximum educational advantage and are strongly encouraged. Responsibility for all course material rests entirely with the student, whether or not he attends each class. Under no circumstances shall class attendance, *per se*, be used as a basis for awarding or altering a grade in a course; this applies to freshman through senior

class levels. Course grade will be based on such factors as class preparation, class participation, skill development, effectiveness of oral presentations and/or written reports, quiz grades, and test and final examination scores. It is the prerogative of the instructor to administer unannounced quizzes as part of the student evaluation process, and to pass judgment on the merits of all cases involving late class submissions and class requirements missed by the students.

All students are required to attend class at the opening of the semester in order to stabilize enrollments and class rosters.

NORMAL SEMESTER HOUR LOADS

A normal semester hour load is 15–17 academic hours. A student who wishes to schedule more than 17 semester hours must obtain approval from the Dean of the School in which he is registered; approval will be predicated upon the student's demonstrated competences.

PASS-FAIL POLICY

A student may take courses on a pass-fail basis to a total of 15 semester hours throughout his University career. The student is limited to one pass-fail course in any given semester during his sophomore, junior, and senior years. All courses in THE STUDENT'S General Education program and in HIS major and minor fields are excluded from this prerogative.

The student may declare his intent to choose pass-fail in a specific course no later than the end of the semester's discrete course withdrawal period. Instructors will NOT be notified of the identity of pass-fail students in their courses; identification will be handled by the Computer Center through an appropriate coded control.

A student shall be given academic credit WITHOUT QUALITY POINTS for a course he has taken pass-fail if he receives a passing mark in the course. The semester hours successfully completed under pass-fail ("passed"), within the overall 15 semester hour limitation, shall be deducted from the graduation requirement of 124 hours minimum and for calculation of the quality point average required for graduation. However, if a student fails a pass/fail course he will receive the "F" grade, and the corresponding quality points will be reflected in the computation of his quality point average.

The summer sessions, collectively or in any combination, shall be considered a unit similar to a spring or fall semester for pass-fail purposes. Hence, a student is permitted to take only one course during the summer on a pass-fail basis.

The purpose of pass-fail is to permit a student to take an elective course in a field of his personal interest where he may be competing with major students in the department in which the course is offered. When scheduled, such a course shall be included in the student's normal course load for the semester.

CHANGES OF CURRICULUM

A student must indicate his desire to change to a new curriculum in the office of the Dean of the School in which the student is registered if the curriculum change desired is from one department to another within the same School (for example, change from a mathematics major to a political science major) or in the office of the Dean of the School to which the student wishes to transfer, if the curriculum change is from one School to another (for example, secondary education major to biology major). In either case, the student will complete an application form that is available in the Dean's office. Before seeking a curriculum change, it is advisable that the student consult with the chairmen of both his old and his "new" departments.

When a student changes Schools, the Dean of the School (or his agent) into which the transfer is sought will evaluate the student's credits before approving the transfer. A copy of the evaluation will be made available to the student and his new advisor if a change in curriculum is effected.

In cases involving veteran students, the Dean of the School into which transfer is sought (or his agent) shall give the veteran a statement of prospective approval and the effective date of the proposed changes. This statement shall also indicate the amount of extended training time the change of curriculum will entail and the amount of credit loss, if any. The veteran shall take this statement to the veteran's counselor at least one month prior to the effective date of the

change. No transfer of curriculum shall be made by veterans until VA approval has been assured.

DISCRETE COURSE WITHDRAWAL POLICY

During the fall and spring semesters, students are permitted to withdraw from a course with a grade of “W” within the first six weeks of the semester. Faculty are required to inform students of their standing in class prior to the end of this six-week period.

Upon the close of the described six-week withdrawal period, a student may withdraw from a course only with the approval of his advisor, department chairman, and School Dean (in that order), for such reasons as illness, accident, or extreme personal problems. Such withdrawal may occur no later than 1 week before the beginning of final examinations.

For all discrete course withdrawals, the student must complete a course withdrawal form, available in department offices. This form must be signed by both the student and the instructor.

If a student fails to complete the requirements for a course but has not formally processed a withdrawal as described above, and if the instructor does not receive a notice of withdrawal from the University, the instructor shall note in his course records the student’s last attendance date and/or other student activity and assign an “F” for the course.

Discrete course withdrawals from summer session classes are subject to the regulations prescribed by the Director of Summer Sessions yearly.

WITHDRAWALS FROM THE UNIVERSITY

An undergraduate student who does not pre-register for the succeeding semester or, having pre-registered, does not appear for registration at the beginning of the succeeding semester, is considered to have withdrawn from the University. Thereafter he must apply for readmission as prescribed under “Admission and Registration.”

Any undergraduate student withdrawing from the University during a semester or a summer session must secure an official Withdrawal Form from the office of the Vice President of Student Affairs, the Dean of Men, or the Dean of Women. The student will clear with the appropriate offices listed on the form, securing their signatures as evidence of clearance. The Withdrawal Form will be returned to the Office of the Vice President of Student Affairs, which will notify the appropriate School Dean of withdrawals approved, and official notification of withdrawal from specific classes will be sent to each instructor by the School Dean. No person shall be considered withdrawn from the University within a semester or summer session unless such notice is received.

ADVISORY PROGRAM

A group of selected faculty members act as freshman advisors for entering freshmen in their departments. In some curricula the advisors continue with the same group of advisees from year to year. In other curricula the freshman advisors remain with their advisee group only for the student's first year; under this program, the student is then assigned an academic advisor for the remaining years through to his degree in his chosen field.

Faculty advisors counsel the students on academic achievement, dropping courses, changing curriculum, student activities, study schedules, and personal problems. The advisor receives a photostat copy of the student's permanent record at the beginning of the academic year, a copy of "D's" and "F's" at mid-term, copies of all letters pertaining to academic achievement sent to the student's home, and a copy of the report of the student's application for Junior standing.

SOPHOMORE SCREENING FOR JUNIOR STATUS APPROVAL

General Policy at Indiana University of Pennsylvania permits each School to determine its own scheme for evaluating the development and progress of its major students. However, each School is expected to employ some effective procedure for such evaluation.

Several of the Schools use a procedure called "Sophomore Screening for Junior Status Approval," with the following required:

All students (in such a School) enrolled in their fourth semester or who will complete 57 semester hours ATTEMPTED by the end of the current semester must apply for Junior Status Approval by filling out an application form by the deadline date designated and announced.

All students should check with their faculty advisors to determine which Schools use "Junior Status" screening procedure and the criteria for Junior Status Approval.

HEALTH AND PHYSICAL EDUCATION SPECIAL REGULATIONS

Credits in health and physical education are required of undergraduate students in the General Education segment of the University curriculum or are part of an option for students in that segment. The University requirement in physical education may be altered after consultation with the department chairperson in health and physical education, who will act upon the recommendation of the University physician and the Dean, School of Health Services.

Physically incapacitated students must obtain a medical waiver from or through the University physician. This procedure should be repeated each semester except in cases of permanent disability. The waiver form should be filed with

the chairman of the health and physical education department involved. Such students may elect to participate in specially arranged adaptive physical education courses or defer the University requirement until such time as the disability dissolves. These regulations do not refer to temporary illness of short duration; such cases are managed by the individual instructor.

RESERVE OFFICERS TRAINING CORPS

The United States Army has a unit of the Reserve Officers Training Corps at the University. In fulfilling the University's General Education requirement, students have the option of taking military science (Reserve Officers Training Corps) for 2 credit hours for two semesters OR of taking a combination of health for 2 credit hours and physical education for two semesters of 1 credit for each semester. The ROTC option can be completed in two semesters, whereas the health and physical education option is not usually completed in less than three semesters. The ROTC option offers the student a 1-D Selective Service Classification for the period of participation. Completion of the 4-credit ROTC option has no effect on future Selective Service classifications, nor does it in any way obligate the student for later military service.

Upon graduation from the regular University course and successful completion of the Advanced Course ROTC Program, the student will receive a Second Lieutenant's commission in the U. S. Army Reserve. To make this program



possible, deferments from the draft are issued to students successfully meeting the University and ROTC requirements. Upon graduation, the former student serves on active duty for a period not to exceed 2 years, if called by the Secretary of the Army. This enables the student to obtain his University degree and then fulfill his obligation to his country.

Under special conditions, deferments to obtain advanced degrees are granted by the Army to ROTC students who wish to do graduate work prior to going on active duty. Additional information on this subject can be obtained at Pierce Hall.

UNIVERSITY SENATE

Purpose

The purpose of the University Senate is to provide a formal means through which the student body, faculty and the

administration, working as a unified group, shall share in the governance of the University through the establishment of University policy.

Nothing relating to the organization and administration of the University Senate shall be construed so as to limit the authority of the Board of Trustees or the President of the University with respect to the administration of the University as prescribed by law.

Composition and Elective Procedures

The University Senate shall consist of a number of faculty double the number of departments of the University, an administrative segment one-third the size of the faculty segment, and a student segment one-half the size of the faculty segment. Faculty and administrative members must hold full-time contracts at the time of election or appointment, and students must be full-time and in good standing.

“Student” refers to both the undergraduate and graduate student bodies. The student segment shall consist of ten times as many undergraduate students as graduate students, each delegation to be elected by its representative student body. Undergraduate students shall be elected under the auspices of the Student Government Association, and graduate students through elections arranged by their comparable body. In both cases, the officiating body shall call for and accept such voluntary nominations for election to the Senate as shall be made to it.

Student members of the University Senate serve on most of the Senate Committees.

COURSE NUMBERS AND ABBREVIATIONS

COURSE NUMBERS – Courses for Freshmen are numbered in the 100’s, for the sophomores in the 200’s, for juniors in the 300’s, and for seniors in the 400’s.

Required courses are numbered from 1 to 50 and elective courses are numbered from 51 to 100, within each 100.

DEPARTMENTAL COURSE ABBREVIATIONS. The following departmental abbreviations are used to identify courses referred to in the Undergraduate Catalog:

AH	Allied Health Professions
AN	Anthropology
AR	Art
AS	Astronomy
BI	Biology
BU	Business
BE	Business Education
BM	Business Management
CH	Chemistry
CI	Chinese
CO	Computer Science
CS	Consumer Services
CE	Counselor Education
CR	Criminology

DE	Distributive Education
EC	Economics
ED	Education
EP	Educational Psychology
EL	Elementary Education
EM	Elementary Math
ES	Elementary Science
EN	English
FL	Foreign Language
FS	Food Service
FE	Foundations of Education
FR	French
GE	Geography
GL	Geology
GS	Geoscience
GM	German
GD	Graduate
GR	Greek
HP	Health & PE
HI	History
HE	Home Economics
HO	Home Economics Education
IS	International Studies
LA	Latin
LR	Learning Resources
LI	Linguistics
MI	Marine Sciences
MA	Mathematics
MS	Military Science
MU	Music

AM	Music – Applied
NU	Nursing
PH	Philosophy
PY	Physics
PS	Political Science
PO	Portuguese
PC	Psychology
PN	Public School Nursing
RU	Russian
SA	Safety Science
SC	Science
SS	Social Science
SO	Sociology
SP	Spanish
SE	Special Education
SH	Speech and Hearing
SR	Special Rehabilitation
ST	Student Personnel Services

STUDENTS' ACADEMIC GRIEVANCES

If a student feels that he has been treated unfairly by any instructor (this will refer principally to grading policy, but very occasionally may include genuine disagreement in class participation), he must try to resolve the problem first with the chairman of the department in question. If the student is not satisfied with the solution offered by the department chairman, he should confer with the Dean of the School in which he is enrolled.



Student Life and Services

The Student Affairs Staff of the University provides those developmental services to students that will support the best learning climate possible. It is the purpose of these student personnel services to guide the student toward optimum personal development. Beginning with the Freshman Week Orientation Program, the student is invited to participate in the activities and the residence life of the University. An attempt is made to provide the student with a maximum opportunity for self-regulation during his years as a citizen of the University community. The Student Affairs Staff, together with student groups and other faculty members, endeavors to create a rich environment which will extend the classroom experience and will involve students in making meaningful decisions.

FRESHMAN ORIENTATION

At the beginning of the fall term preceding registration, an orientation program is conducted for all new incoming undergraduates. Professional personnel and carefully selected and trained upperclassmen introduce new students to the academic and social realities of the campus. Emphasis is placed on academic advisement and program planning. Every attempt is made to fit the new student into the day to day operation of the school as quickly and as smoothly as possible. Topics relevant to students and their new environment are approached through group discussions, movies, plays and speakers.

HOUSING

Housing available to students includes:

- University owned residence halls
- Fraternity houses
- Private apartments and houses
- Privately owned residence halls
- Accommodations at home or with relatives

IT IS THE POLICY OF INDIANA UNIVERSITY OF PENNSYLVANIA'S HOUSING OFFICE TO OFFER FULL, EQUAL AND NON DISCRIMINATORY ASSISTANCE TO ALL STUDENTS WITHOUT REGARD TO THEIR RACE, COLOR, RELIGION, NATIONALITY OR SEX. All facilities listed with the Housing Office must adhere to this commitment. It is the student's responsibility to initiate and to complete the procedures necessary to secure the housing desired. All students are required to complete a local address card at registration each semester. All freshmen are required to live in University owned residence halls unless they are commuting from the home of their parents or legal guardian.

University Residence Halls

Indiana University of Pennsylvania is a heavily residential campus. Its 13 residence halls are divided, on a geographical basis, into four "quads". Each quad is supervised by a full time, professional faculty member with a background in

student personnel or counseling. In addition, each residence hall has a full time Residence Manager to handle the management functions of the building as well as an undergraduate Head Hall Counselor who supervises a team of undergraduate Hall Counselors. Hall Counselors are responsible for counseling students, planning programs, carrying out administrative tasks, and maintaining order among the approximately thirty students living in their individual section of the residence hall.

Since college students spend about 85% of their time outside of the classroom and resident students spend a great deal of this time in residence halls, IUP residence halls are seen as much more than a place to sleep. They are rapidly becoming out of classroom learning environments wherein educational, social, recreational, and community service programs are being planned and conducted with the express purpose of facilitating personal growth on the part of the individual residents.

Because residence hall living is seen as a positive educational experience, freshmen are required to live in residence halls unless they are commuting from home. In an effort to make residence hall living more responsive to individual needs, the University offers three separate life styles: single sex with visitation, single sex with weekend visitation, and co-ed. Students are encouraged to consider these options carefully and to select the one in which they would feel most comfortable.

Generally, the policy of the University is to encourage the development of positive social behavior and good study habits rather than to exercise close supervision of the individual. Residents should have a well-defined personal recognition of their individual responsibility to protect the dignity, rights, and feelings of fellow students. In residence hall living, students are considered to be adults who are responsible for their own behavior. Within the confines of Federal, State and local laws, the faculty and administration delegate much of the governing authority of residence halls to the Residence Hall Association which in turn establishes most of the governing policies for the entire residence hall system. All students are encouraged to become actively involved in RHA.

Student accommodations are based on double occupancy. The housing fee includes the service of drapes and bed linens. One pillow case and two sheets are issued at the beginning of occupancy, each week thereafter one pillowcase and one sheet may be exchanged for laundered items. Furnishings include a single bed, desk, study chair, mirror, dresser, pillow, mattress, mattress cover and telephone. Students should bring their own blankets, bedspreads, towels, study lamps, etc.

All IUP residence halls are recently constructed, modern buildings. Each is equipped with study lounges, recreational equipment, laundry facilities and locked mailboxes. In addition, sewing machines, duplication machines, desk calculators and other specialized equipment are located in each Quad for student use. In order to provide security, all residence

halls are locked at midnight Sunday through Thursday and at 2:00 a.m. Friday and Saturday nights. Each student has a card key for his/her building which provides entry after the closing hour.

New students will be admitted to the residence halls on the day prior to their registration each semester. Food service will be available not later than the evening meal prior to their registration date. Students are not permitted to occupy their rooms earlier than the established date for their arrival on campus. Before students will be issued a room key or meal validation, housing and food service charges must be paid to the Accounts Receivable Office in the Administrative Annex according to the deadlines established for each semester.

Application for Housing

Incoming freshmen, required to live in University residence halls unless commuting from their home, must indicate their housing status on the application for admission. Resident students must submit a \$50 advance housing fee as well as a \$50 advance registration fee. Both are credited toward total University charges.

Housing applications will be available for returning students at pre-registration. These are submitted to Accounts Receivable Office with a \$50 advance deposit prior to room selection. Students wishing to cancel their rental agreement must notify the Housing Office no later than the last day of spring semester finals. If notification of cancellation is

received by this date, \$25 of the deposit will be refunded; otherwise the full amount is forfeited.

Readmitted students and those transferring from other Universities should contact the Housing Office directly for housing applications and/or information.

Dining Room Policy

All students residing in University residence halls must take their meals in University dining halls. Non-resident students may arrange to take their meals in one of the dining halls by making arrangements with the Director of Housing. All such arrangements are on a semester basis. Guests may take meals in any of the dining rooms at the current transient rate.

Insurance For Personal Belongings

Students are encouraged to carry insurance covering the loss or theft of money or property while residing in a residence hall. The Residence Hall Association offers students the option of purchasing this type of individual insurance policy. The insurance is very inexpensive and is recommended for purchase by all students. Complete details will be made available to students when they arrive on campus.

Student Room Refrigerators

Student room refrigerators are rented on a one or two semester basis out of the Dean of Men's office. These refrigerators are UL approved, 21 cubic foot refrigerators

requiring a maximum of .5 amps. Privately owned refrigerators which are in line with these specifications may be used in University residence halls and are assessed a fee of \$1.00 per semester for electricity.

Student Room Telephones

Each student room on campus has a telephone which is part of the University Centrex System. With Centrex telephones, it is possible to dial all telephones on campus, dial direct station to station local and long distance calls, receive directly dialed incoming calls, and transfer incoming calls from one telephone on campus to another. In addition, the Centrex telephone system serves as an important educational tool. Students may dial a specific code given to them by their professor which connects them with the Dial Access Retrieval System in Learning Resources thus enabling them to hear required listening assignments in the comfort of their own residence hall room.

Telephone bills are mailed directly to residence hall rooms each month. Long distance calls and telegram charges only appear on the bill. Both occupants of a room are responsible for all charges made to their telephone. Payment is made directly to the Bell Telephone Company.

AUTOMOBILES

Every student, faculty or staff member who parks an automobile in campus parking areas must register their auto each year with the Director of Housing and have a parking permit

displayed on the left side of the rear bumper. Parking violations are checked daily. Drivers may be fined for illegal parking. These regulations also apply to motor bikes and scooters. Students living in University residence halls are not permitted to keep cars in Indiana unless special permission is given them by the Director of Housing. A LIST OF PARKING RULES AND REGULATIONS MAY BE OBTAINED AT THE HOUSING OFFICE.



FACILITIES FOR COMMUTING STUDENTS

Accommodations for commuting students are provided in John Sutton Hall. Commuting students may obtain lockers in the basement of Whitmyre and John Sutton Halls. Library facilities provide pleasant study conditions for commuter students and several other lounges in John Sutton and the Student Union are always available for commuter student use. Commuter mail is held at the University Post Office window and mail boxes are available for commuter students upon request. Commuter students may purchase lunches in the Foster Dining Hall, the Folger Dining Hall, the Foster Dining Hall Coffee Shop, or the Student Union Coffee Shop. In addition, several private eating establishments are in close proximity to the University campus.

STUDENT PERSONNEL SERVICES

Student Assistance and Information Center

The University Information Office was established in August, 1970, to serve as an information center and communication link for areas of student concern.

AN OPEN DOOR GENERAL HELP AND PROBLEM ASSISTANCE CENTER IS IN PRATT HALL FOR ALL IUP STUDENTS. AN ATTEMPT IS MADE TO HELP STUDENTS WITH THE RANGE OF PROBLEMS THEY MAY ENCOUNTER ON AND OFF CAMPUS. Its goal is to assist students in areas of concern, sometimes by referral to appropriate offices. The Information Office's underlying

theme is to combat problems of bureaucracy and to create an awareness of the individual on the part of the University. The four basic concepts that the office functions under entail investigation, recommendation, general information, and encouragement. Students are invited to use the office, Pratt 203, for any area of concern. Though not always able to give direct answers or correct situations, The Center does have capabilities of finding an answer or of attracting the attention of appropriate segments on campus.

HEALTH SERVICES

Pechan Health Center is a new, completely equipped infirmary located on the corner of Pratt Drive and Maple Street. This two-story structure is thoroughly equipped for all routine work. Registered nurses are on duty 24 hours a day, seven days a week. Medical service is provided by four full-time University physicians. Twenty-seven beds are available where resident students may have three days of free hospitalization. A fee of \$1.00 is charged for each day after that. Commuting students are given free dispensary service and may be admitted to the Infirmary for emergency hospitalization for which a fee of \$3.00 per day from the first day is charged. Free dispensary service is available to students in the Campus Demonstration School. When antibiotics or other special drugs are prescribed, these will be billed to the student by the Health Center. Serious illnesses and accidents are transferred to the local hospital or to hospitals in the students' home town.

SPECIAL CLINICS

Three clinics at the University offer diagnostic testing and remedial or improvement service or instruction in the following areas:

PSYCHOLOGICAL CLINIC – diagnosis of academic and behavior problems and personal, vocational, and educational counseling.

READING CLINIC – diagnosis and remedial instruction for reading and spelling disabilities and instruction for the improvement of present skills.

SPEECH AND HEARING CLINIC – diagnosis of speech problems, hearing tests and evaluations, and a regular program of therapy.

These services are made available without charge to students regularly enrolled at the University in order that they may be given the assistance necessary to remove deficiencies which would interfere with their successful performance and progress in the University and in their future work.

University students who need help in any of the areas suggested above are encouraged to use the facilities provided for them.

University students may of their own initiative come to any clinic for help, or they may be referred by any faculty member or University official.

INSURANCE

The Indiana University of Pennsylvania Board of Trustees instituted mandatory student accident and health insurance at the University effective September, 1963. It is realized, however, that some of the freshmen class students are covered by hospitalization policies of their parents. Where this is the case and additional coverage under the IUP student insurance plan is not desired, a waiver card can be submitted at the time of registration. However, the reasonable premium required for this service makes it highly desirable for every student to participate. Full information concerning this insurance coverage is mailed to enrolled students with their registration material.

CAREER SERVICES

Career services are available to students who are graduating, students who are enrolled to obtain teacher certification, students who have been accepted as candidates for degrees in the Graduate School, and alumni.

A complete set of credentials is prepared for each senior or graduate student who is interested. Alumni may use the services for position changes and up-dating their records. The Office of Career Services makes credentials available to prospective employers, arranges for campus interviews, provides occupational counseling service, prepares a current file of job opportunities, and maintains an extensive library of occupational information. The Office of Career Services also

receives and makes available to graduates and undergraduates information concerning summer employment.

Positions are not guaranteed by the University, but Indiana's record of placement is one of the very best in Pennsylvania.

SELECTIVE SERVICE AND MILITARY AFFAIRS COUNSELOR

The Selective Service Counselor submits all required reports to Selective Service boards for undergraduate men when appropriate. He also serves as a liaison person for military affairs and officer programs.

VETERANS – An individual who served with the Armed Forces for more than 180 days after January 31, 1955, is eligible for the G.I. Bill (PL 89-358), providing he meets certain other requirements. A prospective student should contact the Veterans Counselor and submit to him the Veteran's Application for Program of Education.

Individuals eligible for the G.I. Bill must report to the office of the Veterans Counselor, on their day of registration for a semester or for summer sessions, to be entered or continued in training for Veterans Administration benefits purposes.

No veteran receiving G.I. benefits shall be permitted to change curriculum without clearance from the Veterans Counselor. Arrangements should be made at least one month before the effective date of change, in order to obtain approval of the Veterans Administration (see "Changes of Curriculum").

Any undergraduate receiving benefits from the Veterans Administration must carry at least 12 credit hours during a regular semester in order to be considered a full-time student by the Veterans Administration. The minimum full-time requirement for a graduate student is nine credit hours.

VETERANS' CHILDREN - Children of a deceased veteran whose death was due to service-related causes may be eligible for educational assistance from the Federal Government under Public Law 634 (War Orphans' Educational Assistance Act). Immediately upon acceptance to Indiana, men and women who qualify for such assistance should contact the Veterans Administration to determine their eligibility. They should report to the Veterans Counselor before registering at the University if the Veterans Administration approves their training under Public Law 634.

RULES AND REGULATIONS CONCERNING STUDENT BEHAVIOR

The University has committed itself through a formal vote of the IUP Faculty Senate to the joint statement on Student Rights and Freedoms as the approved guideline for all student rules, regulations, and procedures at Indiana. The purpose of these general regulations are to spell out some of the actions that place the community in jeopardy and may therefore result in a student's suspension or expulsion from the University. In general, these regulations are concerned with conduct on campus but students must recognize that the University exists within a larger community which has its

own laws and standards of behavior, and that membership in the University community confers no exemption from those laws and standards. Whether on or off campus, the student is under the jurisdiction of the city, state, and national governments. Off-campus misconduct will not normally be the basis for disciplinary action by the University; however, when such conduct imperils the integrity and values of the academic community, these actions may also result in disciplinary action on campus.

OFFENSES SUBJECT TO DISCIPLINARY ACTION

The following offenses have historically been and are now subject to disciplinary action by the University:

CHEATING on examinations, plagiarism, and improper acknowledgement of sources and essays and the use of a single essay in more than one course without the permission of the instructor. These violations include laboratory reports as well as all written papers submitted by the student for teacher evaluation in any course.

COERCION AND DISRUPTION – Physical restriction, coercion, or intimidation of any member of the University community. Participation in or encouragement of any effort to disrupt a class or other University function or seize or occupy any University building or part thereof.

MASS DISTURBANCES – Participation in or attendance at riots or mass disturbances by students on the city streets or in any areas of the campus.

DEFIANCE OF AUTHORITY – Defiance or belligerence toward any University staff member, instructional or non-instructional, any University officer or any student in a supervisory capacity. (A legitimate dispute carried on in a polite manner should not be regarded as improper defiance or belligerence.) Students are expected to carry University identification cards at all times and must identify themselves to University officials upon request. It is also understood that University officials or security officers should identify themselves before making such requests.

WEAPONS AND EXPLOSIVES – The possession, storage, or use of explosives, incendiary materials or weapons in University property is absolutely prohibited. Firearms and ammunition for sporting purposes must be registered and deposited with the Campus Security office. Any device which in any way propels a potentially dangerous projectile falls under this category.

ALCOHOL AND DRUGS – Improper use, storage, possession or distribution of illegal drugs is prohibited anywhere on campus. Alcohol is likewise prohibited.

THEFT AND WILLFUL PROPERTY DAMAGE – Vandalism, on or off campus, when committed by students concerns the University. Tampering with fire preventive apparatus is also willful property damage.

PERJURY – The perjury or falsification of University documents.

GAMBLING – Gambling of any kind is prohibited.

The offenses listed on page 46 are considered serious and are subject to disciplinary action by the University through its judicial system.

MAIL

The University Post Office is located in the west wing of Foster Dining Hall, at the corner of Eleventh and Grant Streets. The mail is delivered to offices and residence halls from this location. As it is a branch of the Indiana Post Office, the University Post Office provides most postal facilities, including boxes for commuter students.

SERVICE FACILITIES

Student Union

The Student Union, built by the students through their Activity Fee, offers many facilities for the University family. Students may relax or watch television in the lounge, buy a snack or a complete meal at the coffee shop, listen to their choice of records in the music center, or play cards, billiards, or table tennis.

The Activities Board and the Union Director and Program Director plan an active program of lectures, dances, movies, receptions, exhibits, and other events throughout the year.

Bookstore

The Co-op Bookstore is located near the Student Union Building. The store stocks a complete line of all needed

textbooks, supplies, paper-back books and other requirements for class use. In addition, the shopper will find an extensive selection of records, college wear, stationery, jewelry, sundries and souvenir items.

The store is operated on a competitive retail basis, with all profits from operations reverting to the Student Cooperative Association for use in supporting student activities.

University Lodge

The University Lodge plays an important part in the recreational and instructional life of the University. Owned by students and faculty, this 280 acres of wooded hillside, with its rustic lodge, three picnic shelters, rope ski tow, toboggan run, and nature and hiking trails, not only offers opportunities for classes to study nature and conservation but also is in demand for picnics, meetings, and winter sports. The Lodge itself will accommodate groups of 300 to 400 students.

The Student Cooperative Association is currently planning a major expansion of facilities of the University Lodge. Such plans will include expanded skiing facilities, additional picnic areas, and an eventual complex of buildings for recreational use.

Any student or faculty member is welcome to use the Lodge property, but must be ready to identify himself by presenting an "I" card at the request of the caretaker.

During the winter sports season, ski equipment, sleds, and toboggans may be checked out for use.

STUDENT ORGANIZATIONS AND ACTIVITIES

Opportunity is afforded for participation in many and varied activities. In the main, these activities are student-initiated and planned with faculty counsel. This policy results in the organization of new groups and occasionally the dissolution of others.

Student Government Association

The Student Government Association is composed of student representatives from all areas of the University. The president and vice-president of the Student Government Association are chosen in a campus-wide election. Other members are elected at large at a ratio of one representative for each 200 students.

Student Government Association is active in making recommendations to the Administration for the improvement of student welfare and is also active in promoting the general welfare of the University and good community relationships. The Student Government Association provides an opportunity for discussion of student problems, brings the student body, faculty, and administration closer together through a frank understanding of mutual problems, and promotes the observance of policies that will lead to improvement of University campus life.

STUDENT PARTICIPATION IN UNIVERSITY SENATE – Students also are elected to the University Senate and have full voting rights, together with Faculty and Administrative

members. Most of the Senate Committees include students. The Student Government Association thus plays an active participating role in the University Senate which is the governing body for the institution.

Student Cooperative Association

The Student Cooperative Association plays an extremely broad role in the extracurricular life of the University. All students and faculty members belong to the Association. Almost all campus-wide activities outside of the instructional program are sponsored wholly or in part by the Association.

The Activity Fee is the chief source of income for the Association's activities. The student's "I" card will admit him free of charge to all University social, cultural, and athletic activities. Other income for the Association comes from the Co-op Bookstore profits, athletics income, and income from all other events sponsored by the Association.

Facilities under the governance of the Student Cooperative Association are the Student Union, the Co-op Bookstore, and the University Lodge.

Residence Hall Association

Residence Hall Association (RHA) is made up of all students living in University residence halls. The executive body of RHA is composed of elected representatives from each residence hall. The purpose of RHA is to provide educational, social, and community service programs for residents;

to collect information on various aspects of residence hall life; and to assist in formulating housing policies and procedures.

ARTIST-LECTURE SERIES

The Student Cooperative Association cooperates with the Office of Cultural Affairs to promote a series of dramatic performances, musical concerts, and dance performances at the University every year. Attendance at these programs is free for all students and faculty members. In addition, the music and drama departments present many activities to which the entire University community is invited.

STUDENT PUBLICATIONS

THE INDIANA PENN, the campus newspaper is published three times a week, Monday, Wednesday and Friday, by students who wish to gain writing experience. Interested students are advised to attend the organizational meeting, which is held early each semester.

The positions of editors and news editors are filled by Student Government action upon recommendation of a student-faculty committee. The co-editors select their own staff. There are 10 paid staff positions.

Applications for editor and news editor may be obtained from the PENN advisor. Only those students with at least

one semester experience on the PENN staff are eligible to apply for the two top positions.

THE OAK is the University yearbook, a pictorial and written review of the year's activities. Subscriptions may be purchased during the Fall Semester. The Daily Bulletin will carry notices of the subscription drive.

Applications for staff positions may be obtained from the Oak advisor. From these applications, a committee, composed of students and faculty, selects the staff members. The ten paid positions on the staff are subject to the approval of the Student Government.

A LITERARY MAGAZINE gives undergraduates the opportunity to see their best literary efforts in print. Any student may submit articles, short stories, short plays, poems, and essays for publication. Instructions for submitting manuscripts appear in the Daily Bulletin in November of each year.

Application for the editorial positions on the literary magazine should be made to the advisers, but the final selection is made by the Student Government acting on the recommendation of the committee on publications.

The UNIVERSITY DIRECTORY is distributed early in the fall term to students and faculty. It contains a directory of all properly registered students, or staff, and of University offices.

THE EYE, a student handbook, is distributed annually to all

students, free of charge. It includes rules and regulations, the extra-curricular program, and general information of interest to students.

ATHLETICS

Herman Sledzik, Director; Ruth Podbielski, Coordinator

Men's athletic teams of the University compete under the rules of the National Collegiate Athletic Association and the National Association of Intercollegiate Athletics and hold membership in these organizations as well as Eastern College Athletic Conference and Pennsylvania Conference.

In each season of the academic year, the University sponsors at least three sports simultaneously. A total of eleven varsity sports are offered during the school year.

Sports offered in the fall include cross country, football and soccer. Basketball, wrestling, swimming and rifle take the stage in the winter, and track and field, golf, baseball, and tennis hold the spotlight in the spring.

Along with varsity squads in the respective sports, football, basketball, wrestling and baseball, teams compete on the freshman or junior varsity level.

Women's athletic teams of the University compete under the rules of the National Division of Girl's and Women's Sports and the Association of Intercollegiate Athletics for Women. Varsity teams compete in tennis, volleyball, field hockey,

basketball, gymnastics and fencing.

Intramurals

A well organized and varied program of intramural sports and athletic activities is conducted for men, for women and on a coeducational basis.

In addition to participation in seasonal team and individual sports in organized intramural tournaments, men and women may participate in the Contemporary Dance Performance Group and the IUPiscis, a synchronized swimming group.

Intramural handbooks are available. Contact the Intramural Director, Memorial Field House, for this information.

RELIGIOUS LIFE

The religious life of students is cared for through the activities of some twelve independent organizations. Three of these, the Newman Club, the United Campus Ministry, and the Lutheran Center, maintain private meeting facilities near the campus. Others affiliate with and meet in local churches. For those groups too small to arrange their own needs, the University undertakes to provide limited facilities and faculty advisement.

All students are urged to attend their choice of the many community places of worship and to participate in the area, district, and national conferences which provide opportunity for the study of religious problems.

EXTRACURRICULAR ACTIVITIES

A large number of organizations conduct active programs on the Indiana University of Pennsylvania campus. In order to be recognized as an official University organization, it must be approved by the Student Government Association and the University Senate. Below are listed organizations presently recognized on the Indiana campus.

Clubs and Organizations

Activities Board	Contemporary Dance Performance Group	IUP Fellowship of Christian Athletes	Newman Student Association
American Chemical Society	Criminology Club	IUP Handball Club	Nurses Club
American Guild of Organists	Democratic Club	IUP Home Economics Association	Non-Resident Women's League
Art Club	Economics Club	IUP Ice Hockey Team	Operation Up-lift
Association of Business Systems Analysts	El Circula Espanol	IUP Karate Club	Orthodox Christian Fellowship
Association of the United States Army	Elementary Education Club	IUP Orienteering Club	Panhellenic Association
Basketball Club	English Club	IUP Outing Club	Pershing Rifles
Black Student League	Equestrian Club	IUP Overcomers	Phi Beta Lambda (future business leaders)
Campus Christian Fellowship	Fencing Club – Women	IUPisces	Photojournalism Club
Campus Council on Consumer Affairs	Foreign Student's Club	IUP Pistol Team	Physics Club
Campus Girl Scouts	French Club	IUP Scuba Diving Club	Psychology Club
Campus 4-H	Geographical Society	IUP Thunderbolts Drill Team	Republican Club
Cheerleaders	Geo-Science Club	IUP Veterans Club	Residence Hall Association
Chess Team	Gymnastics Club	Inter-Collegiate Conference on Government	Rifle Team
Chi Alpha	Hillel Foundation	Iota Mu Colony	ROTC Ranger Company
Chi Alpha Sigma	Indiana University Slide Society	I-Uppers	Saltmyne
Chi Beta Phi	Interfraternity Council	Joy Unlimited	Society for the Advancement of Management
Computer Science Club of IUP	International Relations Club	Judo Club	Society for Educational Reconstruction
	IUP Council for Exceptional Children – Chapter 480	Kaydeens	Sociology-Anthropology Club
		L'Esprit de Bleu	Student Accounting Association at IUP
		Lutheran Student Movement	Student Government Association
		Makhno Brigade	Student PSEA-NEA
		Marketing Club (Chapter of AMA)	Student Religious Liberals
		Masquers	Student Welfare Rights Organization
		Mathematics Club	Students for Human Life
		McKeldin Philosophy Society	Unidentified Flying Objects
		Men's Varsity "I"	United Campus Ministry
		Middle Eastern Council on Cultural Affairs	Volleyball Club – Women
		Music Educators Club	
		National Student Speech and Hearing Association	

Volunteer Referral Agency
Women's Club Softball
Women's Intramurals
Women's Liberation

Women's Physical Education
Majors Club
Women's Precision Drill Team
X Athletic Club
Zero Population Growth, Inc.

Fraternities and Sororities

Honorary

Alpha Psi Omega,
honorary dramatic
Chi Beta Phi,
honorary science
Delta Omicron,
honorary music
for women
Delta Phi Delta,
honorary art
Gamma Rho Tau,
honorary
for business men
Gamma Theta Upsilon,
honorary geography
Iota Mu Colony (Student
Affiliate of Sigma Delta
Pi, honorary for Spanish)
Kappa Delta Pi,
honorary educational

Kappa Mu Epsilon
honorary mathematics
Kappa Omicron Phi,
honorary home economics
Lambda Alpha Epsilon,
honorary criminology
Phi Alpha Theta,
honorary history
Phi Mu Alpha Sinfonia, Music
Fraternity of America
(for male music students)
Pi Delta Phi,
honorary foreign language
Pi Gamma Mu,
honorary social science
Pi Omega Pi, honorary business
Psi Chi, honorary psychology

Gamma Sigma Sigma

Social Sororities

Alpha Delta Pi
Alpha Gamma Delta
Alpha Omicron Pi
Alpha Phi
Alpha Sigma Alpha
Alpha Sigma Tau
Alpha Xi Delta

Delta Phi Epsilon
Delta Zeta
Kappa Delta
Phi Mu
Sigma Kappa
Sigma Sigma Sigma
Zeta Tau Alpha

Social Fraternities

Alpha Chi Epsilon
Chi Alpha Sigma
Delta Sigma Phi
Kappa Delta Rho
Kappa Sigma
Lambda Chi Alpha
Phi Kappa Psi

Phi Kappa Theta
Phi Sigma Kappa
Sigma Chi
Sigma Nu
Sigma Tau Gamma
Theta Chi
Theta Xi

Service

Alpha Phi Omega



Requirements For Graduation

requirements; 3) Department requirements. Requirements of the latter two categories may be found under the School and the Department in which the student is pursuing a program of study.

University requirements for graduation in all curricula consist of General Education requirements, residency requirements, and the credit hour and cumulative quality point average requirements.

GENERAL EDUCATION

All students are obligated to fulfill a basic program in General Education consisting of 52 semester credit hours. Different Schools and sometimes Departments within Schools may have specific variations as to how these General Education requirements are to be met.

The primary objective of General Education is to develop those understandings, attitudes, values and social skills that will enable the student to enjoy a life that is satisfying to himself as an individual and that will enable him to play a constructive role in his community and in society, without respect to his professional vocational interest or activity.

The courses in the program will be distributed throughout the 4 years of University study, but the basic or introductory courses should be concentrated in the first 2 years of the student's program.



Undergraduate students at Indiana University of Pennsylvania may pursue programs of study in any one of the six undergraduate schools: the School of Arts and Sciences; the School of Business; the School of Education; the School of Fine Arts; the School of Health Services; or the School of Home Economics. A student may earn the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, or Bachelor of Science in Education. To do so, the student must satisfy all of the degree requirements, which fall into three categories: 1) University requirements; 2) School

REQUIRED COURSES (20 credits)

ALL students (unless exempted) are REQUIRED to have credit for:

English 101, 102, AND 201 – *Eng I, II, and III	10 cr.
Art 101 – Introduction to Art or Music 101 – Introduction to Music or English 103 – Introduction to Theater	3 cr.
Mathematics (any course approved by the student's School Dean)	3 cr.
**Health and Physical Education 101 – (Personal and Community Health)	2 cr.
**Health and Physical Education 110 through 172 (coeducational physical activities unless otherwise noted – elect two courses, one credit EACH.)	2 cr.
OR Military Science 101 AND 102	4 cr.

These 20 credit hours are mandatory. The remaining 32 credit hours to fulfill the General Education requirement must be selected as follows: 6 to 9 credits in Humanities, 8 to 11 credits in Natural Sciences and Mathematics, and 15

*All English majors, in both the School of Arts and Sciences and the School of Education, MUST replace English 201 with English 202.

**Veterans are given four credits towards these requirements. Verification of service must be established.

credits in Social Sciences. A student may take 6 credits in the Humanities if he takes 11 credits in the Natural Sciences and Mathematics, or 9 credits in the Humanities if he takes 8 credits in the Natural Sciences. Elections must be made from the following:

HUMANITIES (6 to 9 credits)

Foreign Language (2 courses)*	6 cr.
AR 115 – Art of Western Man to 1200 AD	3 cr.
AR 116 – Western Art: Ren. to Baroque	3 cr.
EN 371 – The English Bible as Literature	3 cr.
EN 358 – Modern American Fiction	3 cr.
EN 359 – Black American Literature	3 cr.
EN 346 – Contemporary American And British Poetry	3 cr.
HI 101 – History of Civilization I	3 cr.
MU 301 – Music History I	3 cr.
PH 110 – World Religions	3 cr.
PH 120 – Introduction to Philosophy	3 cr.
PH 221 – Logic	3 cr.
PH 222 – Ethics	3 cr.
PH 328 – Aesthetics	3 cr.

*NOTE: Students in the School of Arts and Sciences must take one year of an intermediate-level foreign language. Students in the School of Education may elect one year of a foreign language, any appropriate level, or two courses from the above list.

Exception: English Education majors must take the intermediate level sequence of a foreign language.

NATURAL SCIENCES AND MATHEMATICS**(8 to 11 credits)**

Laboratory science (any sequence from the following):	8 cr.
BI 103-104 General Biology I and II	4 cr. each
CH 111-112 General Chemistry I and II	4 cr. each
CH 113-114 Concepts in Chemistry	4 cr. each
GS 111-112 Solar System and Stellar Astronomy	3 cr. each
GS 121-122 General Geology I and II with accompanying Labs (GS 131-132)	4 cr. each
PY 111-112 Physics I and II with accompanying labs (PY 121-122)	8 cr. total
PY 131-132 Physics I and II - with accompanying labs (PY 141-142)	8 cr. total
SC 105-106 Physical Science I and II	8 cr.

NOTE: Geoscience 111-112 are a 6 semester hour pair which should be taken in the 111-112 sequence. If these are elected for fulfilling the General Education requirement for a Geoscience major, another science course of at least 3 semester hours must also be taken. Science 105-106, Physical Science I and II, may be taken with either course first; one course is in no way prerequisite to the other.

GENERAL ELECTIVES

In addition to the basic courses already listed, general electives in mathematics and the natural sciences may be selected, as advised in the student's major department, from any of the following for which there is no prerequisite or for which the student has taken the prerequisites:

BI 261 - Ornithology	MA 011 - Elementary Functions
BI 262 - Entomology	MA 013-015 - Calculus for the Natural and Social Sciences
BI 271 - Evolution	MA 362 - Probability and Statistics
BI 272 - Conservatism of plant and animal resources	PY 222 - Mechanics I
BI 110 & 120 - Biol-Ecology	PY 231 - Electronics
CO 200 - Intro to Computers	PY 242 - Optics
CO 110 - Intro to Computer Science	PY 342 - Thermal and Statistical Phys.
GS 110 - General Astronomy	PY 472 - Nuclear Phys.
GS 120 - Geology of Pa.	*SC 111 - Science in Modern Civilization
GS 213 - Navigation	**SC 401 - Growth of Science and Its Concepts I
GS 330 - Paleontology	**SC 402 - Growth of Science and Its Concepts II
GS 321 - Mineralogy	
GS 371 - Meteorology I	*Listed under Chemistry
GS 361 - Oceanography I	**Listed under Physics

SOCIAL SCIENCE ELECTIVES (15 cr.)

Each student will elect 5 courses from the following:

AN 110 — Introduction to Anthropology	3 cr.
CR 101 — General Administration of Justice	3 cr.
EC 101 — Basic Economics	3 cr.
GE 101 — World Geography	3 cr.
HI 102 — History of Civilization II	3 cr.
HI 104 — History of U.S. & Pa. II	3 cr.
PS 101 — World Politics	3 cr.
PS 111 — American Politics	3 cr.
PC 101 — General Psychology	3 cr.
SO 151 — Principles of Sociology	3 cr.
SS 101 — Contemporary Social Science	3 cr.

NOTE: School of Education students are required to take History 104 and Psychology 101. The other three courses are up to the student's choice.

RESIDENCY

The last 30 credits in a student's curriculum MUST be earned by enrollment in courses at Indiana University of Pennsylvania.

CREDIT HOUR AND CUMULATIVE QUALITY POINT AVERAGE

Every student must complete a minimum of 124 semester hours to graduate, including 52 hours in General Education

(all on a passing basis), and must have a 2.0 ("C" grade) cumulative quality point average and a 2.0 ("C") average in his major field.*

ADVANCED PLACEMENT AND EXEMPTION EXAMINATIONS

Courses taken by students prior to admission to college under the Advanced Placement Program of the College Entrance Examination Board may be recognized by the award of college credit or by exemption from required subjects. Those who earn a grade of 3, 4, or 5 in the Advanced Placement Examination will be granted exemption from the course and/or credit toward the number of credit hours required for graduation.

For students who have had other unusual opportunities of instruction or have advanced in a given field, an opportunity to gain exemption from a course is afforded through exemption examinations, given at the discretion of each department. Departments offering such options will publicize their availability campus-wide every year. A student who passes an exemption examination will be exempt from taking that course in his academic program.

When a student receives CREDIT for a course by examination, the credit will be applied to his graduation requirements just as though the course had been taken. If a student

*Effective for members of the 1971 Freshman class onward and for transfer students admitted from Spring of 1971 onward.

is granted EXEMPTION ONLY from a course, he will be permitted to take a free elective in place of that course.

This enables the student to further specialize, to correct weaknesses outside his major field, to build his knowledge in an ancillary area, or to introduce himself to an entirely different area.

Courses for which credit and/or exemption are awarded by examination will not be used in the determination of quality point averages.

APPLICATION FOR GRADUATION

It is the student's responsibility to complete an application for graduation form in the office of the Dean of his School, early in the term at the close of which he expects to graduate. Students are responsible for knowing and fulfilling the requirements for graduation in their degree program.

Certification for graduation is not final until approved by the Dean of the School in which the student is enrolled.

Students who expect to graduate at the end of the summer sessions must complete all requirements for graduation by the conclusion of the Main Summer Session, UNLESS PRIOR EXCEPTION be made by the student's School Dean. Diplomas will not be issued until all bills and obligations have been satisfied, including the degree fee.

SECOND BACCALAUREATE DEGREE

In order to receive a second or subsequent baccalaureate

degree, a graduate of Indiana University of Pennsylvania or of another accredited college or university must earn at least 30 additional credits by enrollment in courses at Indiana University of Pennsylvania which are approved by the Department and the School in which the subsequent degree is earned. In addition, the student must meet any other degree requirements of the Department and the School in which the degree is earned.

Honors are not granted for subsequent degrees.

THREE-YEAR DEGREE PROGRAM

There is no special significance to the 4-year baccalaureate program; more or less time could be used effectively in pursuit of the Bachelor's degree. For those who wish to graduate in 3 years, the accelerative features outlined below indicate how this could be accomplished:

Six semesters at 17 credits each	102 cr.
Exemption and credit for English 101	4 cr.
Advanced Placement Examination Program	
College Level Examination Program	
Departmental Examinations for exemption and credit	18 cr.
Summer Session Enrollment(s)	
Minimum requirement for degree	<u>124 cr.</u>

Any student who desires an accelerated program should consult BOTH his advisor AND the Dean of his School concerning the opportunities for credit by examination and the total credit hours and courses required for graduation.



The School of Arts and Sciences

DR. FRANCIS G. MC GOVERN, DEAN; ASSOC. DEANS: DR. CHARLES R. FUGET, DR. RAYMOND L. LEE

The School of Arts and Sciences has as its objective the providing of a liberal education — which Mark VanDoren defines as “nothing less than a complete one” — as the basis of the student’s preparation for a satisfying career. In a dynamic society such as America’s, a broad liberal education accompanying career preparation is virtually a necessity. The School maintains an emphasis upon fundamental understanding and application of the basic principles of our cultural heritage, combined with development of a thorough background of knowledge in the student’s specific area of interest. It seeks to promote in the student critical and objective thinking, analytical skill, and a keen awareness of his responsibilities to society as it prepares him for his chosen field.

DIVISIONS

The School’s programs of study are the product of its departmental faculties, organized in three divisions: Humanities, Natural Sciences and Mathematics, and Social Sciences. It supports service courses available to non-Arts and Sciences students, as well as its own degree and non-degree programs. All Arts and Sciences students must major in a School discipline; double-majors and minors are also available, as are interdisciplinary and pre-professional programs.

Humanities Division

English
French
German
Latin
Russian
Spanish
Speech and Theater
Philosophy

Pre-Professional Programs

Dental School Preparation
Law School Preparation
Medical School Preparation
Theological School
Preparation
Veterinarian School
Preparation

Related Professional Fields:

Preparation for:
Chiropractic
Pharmacy or Pharmacology
Optometry
Osteopathy
Podiatry

Natural Sciences and Mathematics Division

Biology
Chemistry
Computer Science
Geoscience
Geoscience—Geology
Applied Mathematics
Mathematics
Natural Sciences
Physics

Social Sciences Division

Criminology
Economics
Geography
History
International Studies
Government and Public
Service
Political Science
Psychology
Regional Planning
Sociology Anthropology

DEGREES

The departments of biology, chemistry, geoscience, mathematics, and physics offer work leading to either a Bachelor of Science or a Bachelor of Arts degree, depending upon the specific course program pursued. The Bachelor of Science degree is appropriate to the computer science department and to regional planning. All other programs of the School in the departments of criminology, economics, English, geography, history, philosophy, political science, psychology, sociology-anthropology, German-Russian languages, romance and classical languages, and the Center for International Studies lead to the Bachelor of Arts degree.

Several Arts and Sciences departments sponsor Master of Arts or Master of Science degrees in the University's Graduate School, and the English department offers a graduate program leading to the Doctor of Philosophy degree. Information on these programs should be obtained from the Graduate School

Degree Requirements

In addition to the University's General Education requirements, all students seeking a baccalaureate degree in the School of Arts and Sciences must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements, and for minoring in a specific field, appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the School, but should be opted only with adviser approval. As a general

principle, there is considerable latitude in course choice for Arts and Sciences majors; for specifically required courses, substitutions in any program must have the written approval of the student's department chairman or the School Dean. The intermediate series foreign language requirement (a description follows) applies without exception to all Arts and Sciences degrees.

THE FOREIGN LANGUAGE REQUIREMENT. A candidate for a Bachelor of Arts or Bachelor of Science degree must demonstrate a proficiency in a foreign language equivalent to that attained upon completion of 2 years of college instruction in that language. This requirement may be met by:

- a) Successful completion of two semesters at the second-year level in a specific foreign language; or
- b) Successful completion of an exemption or credit examination in lieu of the above, the examination administered by the appropriate Indiana foreign languages department.

Students with strong high school foreign language preparation should schedule the intermediate series sequence directly, for instance, French III. Students with less preparation should schedule the introductory level series, for instance, French I. Students uncertain as to the strength of their preparation should seek the counsel of the appropriate foreign languages department chairman. Because of its sequential nature, all students should begin their foreign language course work early, certainly no later than in the third semester.

The foreign language requirement currently may be met through work in French, German, Greek, Latin, Russian, or Spanish.

Any foreign student, registered as such at Indiana, whose learned native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement for an Arts and Sciences degree, if the department he is majoring in does not require a specific language not thus covered.

SPECIAL CREDIT PROGRAMS

Majors in the School of Arts and Sciences may be interested in specialized learning available through programs administered by consortia such as the Marine Science Consortium or Foreign Tour programs. Credits obtained through such arrangements normally are applicable toward an Arts and Sciences degree. Also of interest are the School's credit-awarding Indiana at Valladolid (Spain) and Indiana at Duisburg (Germany) programs.

Marine Science Consortium

The Marine Science Consortium was established in 1968 for the purpose of promoting teaching and research in the Marine Sciences. The participating institutions include nine Pennsylvania State Colleges, Catholic University, D.C., Pennsylvania State University, West Virginia University, and Indiana University of Pennsylvania.

Although no formal curricula exist in the Marine Sciences, elective courses may be taken and credited toward undergraduate curricula in Biology, Geology, Geography and Earth Science. The Marine Science Consortium offers five 3-week sessions during the summer at the Delaware Bay Marine Science Station, Lewes, Delaware and the NASA-Wallops Island Station, Virginia. Normally, several research cruises are offered each summer.

Students must register for credit and pay credit fees to a participating institution. Room and board fees are paid to the Consortium. Applications for all summer sessions must be submitted to the institutional Director by April 1. Students must be accepted by the Consortium before registering at a participating institution. See page for a listing of Marine Science Consortium courses. For brochure, summer bulletin, and application forms, contact either:

Dr. Gould F. Schrock, Director
Biology Department, or

Prof. Paul Prince
GeoScience Department

India: A Nation in Transition

In this special program two weeks on campus will be devoted to lectures, individual research, group activity, film, and personal experiences designed to acquaint the student with India (as much as is possible in two weeks).

Seven weeks of study will be included in India related to economics, culture, geography, politics, and personal experi-

ence in a non-western culture. It will include living for a week with individual Indian families, industrial development visits, experiences related to non-western religion with visits to a limited number of shrines, examination of contributions of Indian culture and a look at Indian urbanization.



Indiana at Valladolid — For the past 11 years Indiana University, Department of Romance and Classical Languages, has sponsored a semester of study at the University of Valladolid, Spain. For details and brochure, see the program description in the Department of Romance and Classical Languages.

Indiana at Duisburg — The University maintains a two-semester sequence of study abroad for German majors. The program is open to upper level students both in Arts and Sciences and in Education, although future plans call for accommodation of other students having specific interest in a foreign study experience and evidencing sufficient preparation in the German language. The program involves a direct exchange of students with the university in Duisburg. Further information may be secured by contacting the Chairman of the Department of German and Russian Languages. See page 178–179 for listing of additional foreign studies.

ACADEMIC CONCENTRATION IN HOSPITAL AND HEALTH CARE ADMINISTRATION

The hospital administrator's unique contribution to the health of the public is his expertise in the organization of the many components of the health care delivery system in general and the hospital in particular. The hospital is clearly one of the most complex institutions in our society. The hospital administrator occupies a difficult management posi-

tion and an important one if the public is to be properly served.

Today, thirty-eight universities in the United States, Canada and Puerto Rico offer graduate degrees in health and hospital administration. A baccalaureate degree from an accredited college or university is the primary prerequisite for admission. Graduate programs leading to a master's degree in health and hospital administration consist of one or two years of full-time academic study and may include a period of up to one year of administrative residency in a hospital or other health-related organization under the preceptorship of an administrator. Courses in hospital administration remain the foundation of the curricula.

For additional information on the Academic Concentration in preparation for a career in Hospital and Health Care Administration see page 221 under School of Health Services.

PRE-PROFESSIONAL PROGRAMS

The School of Arts and Sciences offers five pre-professional programs that prepare the student for acceptance by a professional school; pre-dental, pre-legal, pre-medical, pre-theological, and pre-veterinary medicine. Each program is grounded in an Arts and Sciences department(s) – pre-dental in Chemistry; pre-legal in Economics, English, History, Philosophy or Political Science; pre-medical and pre-veterinary in Biology; and pre-theological in Philosophy. The programs are so designed that, should work at a professional school not ensue, the student will have earned an Indiana University

baccalaureate degree, provided he has been faithful to faculty advisement. In addition, the School offers a major in the Natural Sciences for those students whose goal is chiropractic, pharmacy or pharmacology, optometry, osteopathy, podiatry, or a similar professional field.

Course work in the pre-legal program is selected from designated offerings within the departments participating in the program. For detailed information, students interested in Pre Law should so identify themselves to the Associate Dean of the Social Sciences Division during their first semester on campus or as soon thereafter as possible.

The pre-dental, pre-medical, and pre-veterinary programs presuppose that the student has an excellent background in the high school sciences and mathematics, or will prove to be an excellent college student. Because admission standards at most professional schools are very high, students desiring pre-professional preparation for any of these fields will find it advantageous to major in the basic department discipline, making known to the department chairman their eventual goal but delaying explicit affiliation with the pre-professional program until they have established themselves academically at the college level. Commitment to any pre-professional program must be made not later than the end of the student's fourth semester.

Students interested in the related health fields (pharmacy, optometry, physical therapy, podiatry, etc.) should so identify themselves to the Associate Dean of the Natural Sci-

ences and Mathematics Division during their first semester of IUP attendance, or as soon thereafter as possible.

INTERNSHIP PROGRAMS

Several departments have established programs under which students engage in supervised work experience for credit. During the past year Indiana students have worked in Harrisburg, Pa. as aides to state legislators, with the Governor's Justice Commission and the Local Government Commission, and with the Investigations Division, Pennsylvania Department of Justice. Others have worked in the state hospitals at Torrance, Woodville and Mayview, at correctional institutions in Pittsburgh, Greensburg, and Warrendale, as child therapists at the Indiana County Guidance Center, as peer group counselors on the local campus, as an assistant to the Pennsylvania State Republican Chairman, as on-site guides at The United Nations, workers on an Israeli kibbutz and student aides for the Department of Education, Puerto Rico. Other students have worked in the Pittsburgh federal probation office. Many students have worked with major political parties and candidates at the local and state level. At the county level, they have been attached to the County Planner the Common Pleas Court, Coroner, Treasurer, Commissioners, and Boro Manager. Students have worked in the Washington office of Pennsylvania Congressmen, and in the Governor's Office.

For more information about specific Internship programs the chairman for the department in which the student is majoring should be consulted.

BIOLOGY DEPARTMENT

FRANCIS W. LIEGEY, CHAIRMAN: ALICO, BAKER, CONWAY, CHARNAGO, DIETRICH, FERRENCE, FORBES, GALLATI, GREAVES, GOLD, HUE, HUMPHREYS, MERRITT, J. H. MILLER, R. N. MOORE, PICKERING, SCHROCK, STAPLETON, STRAW-CUTTER, VALLOWE, WAECHTER, WASKOSKIE, ZENISEK

Degrees offered by the Biology Department are the Bachelor of Science in Biology, the Bachelor of Arts in Biology, and the Bachelor of Science in Education with a Biology major. The first two degree programs are under the School of Arts and Sciences, and the third is under the School of Education. The department also offers a Biology minor.

CURRICULA

The program leading to a B.S. in Biology is a concentrated curriculum designed to give the student adequate preparation for admission to graduate school or professional colleges, such as Medical, Dental and Veterinary Colleges. In addition, with the proper selection of electives, the graduate should be qualified to assume a position in industry or in state and federal agencies requiring well-trained biologists.

The program leading to a B.A. in Biology is a more flexible curriculum, permitting the student to obtain an adequate background in related areas. Students electing this curriculum would be most interested in going into the fringe areas of biology, such as sales, technical services, or management.

Although the training should be sufficient for admission to graduate school or professional colleges, the student would be at a disadvantage compared with students who elect the B.S. program.

The program leading to the B.S. in Education with a Biology major is designed to prepare for Certification in public school teaching.

Core Program

Requirements for ALL Biology majors are 15 credits in Biology, 16 credits in Chemistry, and 4 credits in Mathematics as follows:

Biology (15 credits)

BI 105 – Cell Biology	4 cr.
BI 110 – Plant Biology	5 cr.
BI 120 – Animal Biology	5 cr.
BI 490 – Biology Seminar	1 cr.

Chemistry (12 credits)

CH 111 – Gen Chem I	4 cr.
CH 112 – Gen Chem II	4 cr.
CH 231 – Organic Chem I	4 cr.
CH 351 – Biochemistry	4 cr.

Mathematics (4 credits)

MA 013 – Calc I	4 cr.
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B. S. in Biology

In addition to the Core Program, requirements for the degree

of Bachelor of Science in Biology are 18 more credits in Biology, 4 more credits in Chemistry, 4 more credits in Mathematics, and 8 credits in Physics, as follows:

Biology

BI Electives	18 cr.
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Chemistry

CH 232 – Organic Chem II	4 cr.
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Mathematics

MA 015 – Calc II	4 cr.
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Physics

PY 111 – Physics I	3 cr.
PY 112 – Physics II	3 cr.
PY 121 – Physics I Lab	1 cr.
PY 122 – Physics II Lab	1 cr.

B. A. in Biology

In addition to the Core Program, requirements for the degree of Bachelor of Arts in Biology are 12 more credits in Biology electives.

B. S. in Education – Biology Major

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a Biology major are 13 additional credits in Biology, 8 credits in Physics, 27 credits in Professional Education, and the General Education

requirements of the University as follows:

Core Program (35 credits) – see page 65

Biology (13 credits)

BI 262 – Ecology 3 cr.

BI 263 – Genetics 3 cr.

BI Electives 7 cr.

Physics (8 credits)

Same as for B.S. in Biology – see page 65

Professional Education (27 credits) – see page 182

General Education – see page 53

Minor in Biology, Arts and Science Students

To minor in Biology, a student must gain the permission of the Biology Department Chairman. The minor consists of a minimum of 17 credits and a suggested course sequence is as follows:

BI 103 – Gen Biol I 4 cr. or BI 105 – Cell Biol 4 cr.

BI 140 – Gen Biol II 4 cr. or BI Elective 3 cr.

plus

BI 110 – Plant Biol 5 cr.

BI 120 – Animal Biol 5 cr.

Special Required Courses

The Biology Department provides certain special courses as services for other Schools and Departments.

All students to receive degrees in Elementary Education MUST take BI 311 and EL 312.

All students to receive degrees in Home Economics, Physical Education, and Nursing must take Biology 150, 151, and 241.

COURSE DESCRIPTIONS

A travel fee will be required for all field courses.

General Education Courses

BI 103 GENERAL BIOLOGY I 4 cr.

Introduces the student to the biological components of some of man's major problems. Considerable time spent with information and methodology current in the biological sciences: ecology, energy storage and release, molecular transport, chemical control, and development. Three hours lecture, 2 hours lab per week.

BI 104 GENERAL BIOLOGY II 4 cr.

Prerequisite: BI 103.

Completion of consideration of background information, with study of selected areas of biology, such as genetics, evolution, and behavior. Course culminates with intensive consideration of the impact of biological problems on man's existence. Three hours lecture, 2 hours lab per week.

Biological Science Courses

BI 105 CELL BIOLOGY 4 cr.

Introductory course, designed to increase the depth of the beginning student's understanding of the structural, functional developmental and evolutionary aspects of the cell concept. Three hours lecture, 2 hours lab per week.

- BI 110 PLANT BIOLOGY** 5 cr.
Prerequisite: BI 105 or special permission.
Plant structure, function and development, recognition and grouping, environmental relationships, and economic importance of plants considered. Three hours lecture, 4 hours lab per week.
- BI 112 PLANT DIVERSITY** 3 cr.
Prerequisite: BI 110.
Anatomy and life processes of selected algae, bacteria, fungi, mosses, ferns and their allies. Two hours lecture, 3 hours lab per week.
- BI 120 ANIMAL BIOLOGY** 5 cr.
Prerequisite: BI 105 or special permission.
Morphology, physiology, embryology, ecology, taxonomy, social and economic importance of animals, consideration of principles applicable to a correlation of classical with present zoology. Three hours lecture, 4 hours lab per week.
- BI 251 PLANT TAXONOMY** 3 cr.
Prerequisite: BI 110.
Considers the collection, preservation, and identification and taxonomy of plants of this region. Two hours lecture, 3 hours lab per week.
- BI 252 FIELD ZOOLOGY** 3 cr.
Prerequisite: BI 120
Field study of animals; collection and preservation techniques for utilization in museum and instructional use; student collections and field trips required. Two hours lecture, 3 hours lab per week.
- BI 261 ORNITHOLOGY** 3 cr.
Prerequisite: BI 105 or BI 103 and 104.
A study of birds of the region. Indoor laboratory as well as field trips required. Two hours lecture, 3 hours lab per week.
- BI 262 GENERAL ENTOMOLOGY** 3 cr.
Prerequisite: BI 120.
Morphology, anatomy, ecology, taxonomy, economic and public health importance of insect orders, particularly those of Western Pennsylvania, student collection and field trips required. Two hours lecture, 3 hours lab per week.
- BI 263 GENETICS** 3 cr.
Prerequisites: BI 110 or 120 and CH 231.
Deals with the distribution and function of the hereditary material, special emphasis on microbial, viral, and molecular genetics. Two hours lecture, 3 hours lab per week.
- BI 271 EVOLUTION** 3 cr.
Prerequisite: One year biology.
Historical development of evolutionary thought, evidence for evolution and operational mechanisms involved, origin and phylogenetic relationships of biologic groups. Three hours lecture per week.
- BI 272 CONSERVATION OF PLANT AND ANIMAL RESOURCES** 3 cr.
Prerequisites: BI 105 or BI 103 and 104.
Special attention to study of accepted practices in soil, water, forest and game conservation. Two hours lecture, 3 hours lab per week.
- BI 281 PARASITOLOGY** 3 cr.
Prerequisite: BI 120.
Structure, physiology, ecology, life cycles, pathology and treatment of parasitic protozoa, flatworm and roundworm species of man. Dissection of hosts for parasites. Two hours lecture, 3 hours lab per week.
- BI 285 BIOTECHNIQUE** 3 cr.
Prerequisites: One year biology, one year chemistry.
Production of whole mount, smear, squash, microtome section and serial section microscope slides of both plant and animal organisms. Three combined lecture/laboratories of 2 hours each per week.

- BI 331 ANIMAL DEVELOPMENTAL BIOLOGY 3 cr.
Prerequisite: BI 120.
Aspects of comparative and molecular development of animals. Two hours lecture, 3 hours lab per week.
- BI 332 COMPARATIVE VERTEBRATE ANATOMY 3 cr.
Prerequisite: BI 120.
Discussion of anatomy of representative vertebrates from a comparative point of view. Stress placed on major organizational changes observed in vertebrate history. Two hours lecture, 3 hours lab per week.
- BI 350 CELLULAR PHYSIOLOGY 3 cr.
Prerequisite: CH 231.
Topics considered include nutrition, uptake and preparation of food and oxygen, release of energy, elimination of waste products, and would complement the animal and plant physiology. Two hours lecture, 4 hours lab per week.
- BI 351 PLANT PHYSIOLOGY 3 cr.
Prerequisites: BI 110, CH 231.
Studies physiological processes occurring in plants, considered in relation to the growth and development of the plant. Two hours lecture, 3 hours lab per week.
- BI 352 COMPARATIVE ANIMAL PHYSIOLOGY 3 cr.
Prerequisites: BI 120, CH 351.
Comparative study of homeostatic mechanisms and systems in animals and their relation to fundamental chemical and physical events in cells. Two hours lecture, 3 hours lab per week.
- BI 361 MICROBIOLOGY 3 cr.
Prerequisites: BI 105, CH 351.
Introduction to morphology, physiology, and ecology of prokaryotic organisms. Importance of microorganisms in basic and applied research, economics, infection, and immunology are discussed. Two hours lecture, 3 hours lab per week.
- BI 362 ECOLOGY 3 cr.
Prerequisites: BI 110 and 120.
Study of interrelations and adaptations of organisms; includes consideration of physical and biotic environmental factors. Field trips. Two hours lecture, 3 hours lab per week.
- BI 372 PLANT ANATOMY 3 cr.
Prerequisite: BI 110.
Embryological development and growth and maturation of typical vascular plants; emphasis placed on differentiation and maturation of plant organs of various families. Two hours lecture, 3 hours lab per week.
- BI 381 MYCOLOGY 3 cr.
Prerequisite: BI 110.
Involves the systematics, morphology, and physiology of Mycophycophyta and Eumycophyta, with emphasis on economically important and experimentally useful taxa. Two hours lecture, 3 hours lab per week.
- BI 441 GENERAL PHYSIOLOGY 4 cr.
Prerequisites: BI 350, 351, or 352, CH 351, MA 013 (or permission of instructor).
Molecular approach to quantitative analysis of mechanisms of functional operation and coordination in living organisms. Emphasis directed toward chemical and physical principles operating at primary functional units of organization. Three hours lecture and 3 hours lab per week.
- BI 446 DENDROLOGY 3 cr.
Prerequisites: BI 110 or 112, or by permission of instructor.
Study of woody plants as to their identification, distribution, ecology, culture, anatomy, physiology, mensuration and utilization. Two hours lecture, 3 hours lab per week.
- BI 472 RADIATION BIOLOGY 3 cr.
Prerequisites: Two years Biology, one year Physics, and General, Organic, and Biochemistry.

Aspects of nuclear physics and radioactive isotopes, uses, effects, detection and measurement of radioactive nuclides used in biology. Two hours lecture, 3 hours lab per week.

BI 489 LITERATURE OF BIOLOGY 2 cr.
Designed for student who wishes to acquaint himself with some of the useful sources of reference in biology. Given only in the

BI 490 BIOLOGY SEMINAR 1 cr.
Discussion of recent trends in biological thought and research. Students report on assigned readings and/or personal research.

BI 498 PROBLEMS IN BIOLOGY 1–3 cr.
Student investigates independently any field of biology in which interested. Work supervised by a faculty member but does not involve regular class or laboratory hours. Enrollment by permission only.

BI 499 RESEARCH BIOLOGY 1–3 cr.
Designed to acquaint student with techniques of modern research by actively engaging in a program of biological experimentation and/or research with a faculty member (or members). No formal lectures or laboratories. Enrollment by permission only.

BI 575 MAMMALOLOGY 3 s.h.
A general consideration of the major radiations of mammals beginning with the history of the order and continuing with a discussion of some current mammalian research topics. Emphasis placed on comparative morphology and structural and functional evolution. A research paper is required. Two hours lecture and 3 hours laboratory per week.

Course Required of Secondary Education Majors

ED 451 TEACHING SCIENCE IN THE SECONDARY SCHOOL 3 cr.
Background to help science majors meet the problems of teaching

science. Various inquiry approaches useful in meeting objectives of a contemporary science class are taught and exemplified. Two hours lecture, 2 hours lab per week.

Courses Required for Students in Elementary Education

BI 311 ENVIRONMENTAL BIOLOGY 4 cr.
Laboratory and field course providing basic knowledge in biology and its practical implications. Physical and biological aspects of the environment are studied. Three hours lecture, 3 hours lab per week.

ES 312 TEACHING OF ELEMENTARY SCIENCE 3 cr.
Emphasis placed upon science as it relates to the child and the curriculum, planning for teaching science, and recent innovations in science teaching. (Course offered on the block only.)

Courses Required For Students in Home Economics, Physical Education and Nursing

BI 150 VERTEBRATE ANATOMY 3 cr.
Study of the systematic anatomy of the vertebrate's body. The course deals almost entirely with the mammal. The cat is used for dissection in the lab. Two hours lecture, 3 hours lab per week.

BI 151 HUMAN PHYSIOLOGY 3 cr.
Functions of the various organ systems of humans. Recommended for non-majors, not open to majors. Two hours lecture and one lecture-demonstration per week.

BI 241 GENERAL MICROBIOLOGY 3 cr.
Study of microorganisms, and the role that they play in water, soil, food, and infection. Standard methods and techniques are emphasized in the laboratory. Two hours lecture, 3 hours laboratory per week. (Non-majors only.)

NOTE: See Marine Science Consortium Section for additional course listings.

CHEMISTRY DEPARTMENT

STANFORD L. TACKETT, CHAIRMAN; BORDAS, CHRISTODOULEAS, COLEMAN, COSTA, FAZIO, HARTLINE, HEARD, KOLACZKOWSKI, MARKS, D. R. McKELVEY, NELSON, PATSIGA, SCROXTON, SYTY, WUNZ, ZAMBOTTI, ZIMMERMAN.

Degrees offered by the Chemistry Department are the Bachelor of Science in Chemistry, the Bachelor of Arts in Chemistry and the Bachelor of Science in Education with a Chemistry major. The first two degree programs are under the School of Arts and Sciences, and the third is under the School of Education. The department also offers a Chemistry minor.

CURRICULA

The B.S. in Chemistry is a professional degree and is accredited by the American Chemical Society. The student completing this major should be qualified to assume a position in industry or government as a chemist or to apply for admission to graduate school to pursue advanced studies leading to an M.S. or Ph.D. degree. The student considering going to a professional school should also be qualified upon completion of this degree. Those students who are particularly interested in biochemistry should elect a few selected biology courses.

The curriculum leading to the B.A. in Chemistry is designed to allow for the workable union of nonscience areas with chemistry in such a way as to retain the fundamental science

and mathematics requirements needed for a career in chemistry. A cognizant selection of electives will qualify the student for entrance into many fields in which there is an acute need for educated people and, at the same time, satisfy the entrance requirements of various professional and graduate schools.

Some possible and useful combinations between chemistry and other disciplines would include chemistry-business administration, chemistry-criminology, chemistry-government, chemistry-predental, chemistry-prelaw, chemistry-premedicine, chemistry-prepharmacy, and chemistry-English (technical writing). The student must arrange a practical sequence of non-chemistry courses in consort with his advisor and the Department Chairman concerned.

The curriculum leading to the B.S. in Education with a Chemistry major is designed to prepare the student to teach chemistry at the secondary school level. Upon completion of the specified course work, the graduate is eligible for Certification as a chemistry teacher by the Pennsylvania Department of Education.

General Requirement

Concepts in Chemistry I and II (Chem 113-114 – 8 credits) meet the University's General Education requirement for a laboratory science and are prerequisite for the remaining chemistry courses for all chemistry degrees.

Core Program

Requirements for ALL Chemistry majors, beyond the Gen-

eral Education Requirements, are 21 credits in Chemistry and 8 credits in Mathematics, as follows:

Chemistry

CH 231-232	Org Chem I and II	8 cr.
CH 321	Quant Anal	4 cr.
CH 322	Instrumental Anal	4 cr.
CH 341	Phys Chem I	4 cr.
CH 343	Phys Chem Lab I	1 cr.

Mathematics

MA 017-019	Calc I and II for Physics	8 cr.
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B.S. in Chemistry

In addition to the General Requirement and the Core Program, requirements for the degree of Bachelor of Science in Chemistry are 14–15 more credits in Chemistry, 3 more credits in Mathematics, and 8 credits in Physics. In addition, the Department requires that the foreign language requirement (6 credits) of the School of Arts and Sciences be fulfilled by German or Russian courses. Course numbers are as follows:

Chemistry

CH 301	Chemistry Seminar	1 cr.
CH 342	Phys Chem II	3 cr.
CH 344	Phys Chem Lab II	1 cr.
CH 411	Inorg Chem	3 cr.

Electives from the following (6–7 credits):

CH 331	Org Qual Anal	3 cr.
CH 333	Org Mech and Stereochem	3 cr.
CH 351	Biochem	4 cr.

CH 412	Inorg Preparations	3 cr.
CH 421	Advan Instrum Anal	3 cr.
CH 441	Advan Phys Chem	3 cr.
CH 498	Problems in Chem	1-2 cr.

Mathematics (one of the following)

MA 233	Intro to Linear Algebra	3 cr.
MA 361	Ord Diff Eq	3 cr.
MA 363	Intro to Prob	3 cr.
MA 381	Advan Calc I	3 cr.
CO 110	Introduct to Computer Science	3 cr.

Physics

PY 131-132	Phys I and II	3 cr. each
PY 141-142	Phys Lab I and II	1 cr. each

Foreign Language

GM 251	Ger III and Ger IV or	
GM 256	Sci Ger	3 cr. each
RU 251-252	Russian III and IV	3 cr. each

B.A. in Chemistry

In addition to the General Requirement and the Core Program, requirements for the degree of Bachelor of Arts in Chemistry are 10 more credits in Chemistry, 8 credits in Physics, and 15 credits minimum in a complementary field, including a minimum of 6 credits of advanced work. The foreign language requirement is the same as for the B.S. in Chemistry. Courses are as follows:

Chemistry

Any 10 more credits

Physics

PY 111-112	Phys I and II	3 cr. each
PY 121-122	Phys Lab I and II	1 cr. each

Foreign Language

GM 251 (Ger III) and GM 252 (Ger IV)	or GM 256 (Sci Ger) or	3 cr. each
RU 251-252	Russian III and IV	3 cr. each

B.S. in Education (Chemistry Major)

In addition to the General Requirement and the Core Program, requirements for the degree of Bachelor of Science in Education with a Chemistry major are 8-9 more credits in Chemistry, 4 credits in Biology, 8 credits in Physics, and 3 credits in Education, as follows:

Chemistry

CH 411	Inorg Chem	3 cr.
CH 498	Problems in Chem	2 cr.
CH 342	Phys Chem II	3 cr.
or		
CH 351	Biochem	4 cr.

Biology

BI 105	Cell Biology	4 cr.
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Physics

PY 131-132	Phys I and II	3 cr. each
PY 141-142	Phys Lab I and II	1 cr. each

Education

ED 451	Teaching Science in the Secondary School (see Biology)	3 cr.
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Minor in Chemistry

The minor in Chemistry consists of a minimum of 20 credits, selected as follows:

CH 111-112	Gen Chem I and II	8 cr.
CH 231-232	Org Chem I and II	8 cr.
CH 321	Quant Anal	4 cr.
or		
CH 323	Anal Methods	4 cr.
or		
CH 351	Biochem	4 cr.

Special Courses

The Chemistry Department provides certain special courses as services for other Schools and Departments, such as Chemistry 101 and 102 for Home Economics and Health Professions, Chemistry 103 for Physical Education and Indiana Hospital nurses, Chemistry 305 and 306 for secondary education Chemistry majors, and Chemistry 355 for Home Economics.

COURSE DESCRIPTIONS

For those courses which combine lecture and laboratory, attendance and satisfactory performance in the laboratory are required in order to pass the course.

CH 101-102	CHEMISTRY FOR HOME ECONOMICS AND HEALTH PROFESSIONS I AND II	4 cr. each
	Topics from fields of inorganic, organic and biochemistry that are	

most important to the student of home economics and nursing. Three hours lecture, 2 hours lab per week.

- CH 103 PRINCIPLES OF CHEMISTRY 4 cr.
One-semester course to survey areas of inorganic, organic and biochemistry. Open only to Physical Education majors and Indiana Hospital nurses. Three hours lecture, 2 hours lab per week.
- CH 111-112 GENERAL CHEMISTRY I AND II 4 cr. each
Lecture-discussion of principles of chemistry, including theory and applications. The laboratory illustrates the principles discussed. Three hours lecture, 3 hours lab per week.
- CH 113-114 CONCEPTS IN CHEMISTRY 4 cr. each
These two semesters of general chemistry give the chemistry major an in-depth and quantitative background in areas of physical, inorganic and analytical chemistry. Three hours lecture, 3 hours lab per week.
- CH 231-232 ORGANIC CHEMISTRY I AND II 4 cr. each
Prerequisites: CH 112 or CH 114.
Study of compounds of carbon, with special emphasis on structure and reactions of more important classes of carbon compounds. Laboratory work involves preparation and purification of representative compounds. Three hours lecture, 4 hours lab per week.
- CH 301 CHEMISTRY SEMINAR 1 cr.
Discussion of current technical literature, current research problems of staff, lectures by outside chemists, and student presentations. Open to junior or senior chemistry majors or by permission of the instructor. One hour per week.
- CH 302 INDUSTRIAL CHEMISTRY 3 cr.
Prerequisite: CH 232.
Study of applications of chemistry and science to industries of western Pennsylvania for the science teacher. Consists of lectures,

laboratory work, and field trips to representative industries. Two hours lecture, 3 hours lab per week.

- CH 303 GLASSBLOWING TECHNIQUES 1 cr.
Designed to introduce the science student to techniques necessary for construction and modification of scientific glass apparatus. Limited to junior and senior science majors and others by permission of instructor. Two hours instruction per week, with additional practice at student's convenience.
- CH 305-306 NEW APPROACHES TO TEACHING HIGH SCHOOL CHEMISTRY I AND II 3 cr. each
Prerequisite: at least junior chemistry education major.
Designed to acquaint the teacher and prospective teacher with the Chemical Bond Approach (CBA) curriculum and Chemical Education Material Study (CHEM Study) curriculum. Laboratory work is emphasized. Students should take prior to student teaching.
- CH 321 QUANTITATIVE ANALYSIS 4 cr.
Prerequisite: CH 112 or CH 114.
Theory and practice of quantitative analysis, including gravimetric and volumetric analysis, special emphasis on perfecting student's laboratory technique and application of general chemical knowledge through problem solving. Three hours lecture, 4 hours lab per week.
- CH 322 INSTRUMENTAL ANALYSIS 4 cr.
Prerequisite: CH 321.
Designed to instruct student in modern instrumental methods of chemical analysis. Student learns theory behind the instrument, principles of operation, interpretation of data obtained, and limitations of methods. Three hours lecture, 4 hours lab per week.
- CH 323 ANALYTICAL METHODS 4 cr.
Prerequisite: CH 112 and non-chemistry major.
Principles of precipitation, acid-base, and oxidation-reduction, equilibria are applied to problem solving and to laboratory determinations, instrumental methods of analysis, such as color-

- metry, atomic absorption and flame emission, gas chromatography, etc. Three hours lecture, 4 hours lab per week.
- CH 331 ORGANIC QUALITATIVE ANALYSIS 3 cr.
Prerequisites: CH 231-232 (CH 232 may be taken concurrently).
Designed to give student experience in systematic identification of various classes of organic compounds by both chemical and physical methods. One hour lecture, 6 hours lab per week.
- CH 335 ADVANCED ORGANIC CHEMISTRY 3 cr.
Prerequisites: CH 232 and CH 341.
Selected topics of current interest covered. Possible topics include: reaction mechanisms, molecular spectroscopy, stereochemistry, natural products, heterocyclics, polymer chemistry and organic synthesis.
- CH 341 PHYSICAL CHEMISTRY I 4 cr.
Prerequisites: MA 015, 019, or 113 and PY 112 or 132, CH 112 or 114.
Chemical thermodynamics with applications to solutions, phase and chemical equilibria-kinetic theory. Four hours lecture per week.
- CH 342 PHYSICAL CHEMISTRY II 3 cr.
Prerequisite: CH 341.
Study of solids, liquids, surfaces, chemical kinetics, electrochemistry, atomic and molecular structure. Three hours lecture per week.
- CH 343 PHYSICAL CHEMISTRY LABORATORY I 1 cr.
Prerequisites: CH 321, 341.
Experiments illustrating application of fundamental laws to actual systems. Three hours lab per week.
- CH 344 PHYSICAL CHEMISTRY LABORATORY II 1 cr.
Prerequisite: CH 342, 343.
Extension of Physical Chemistry Laboratory I; experiments related to chemical kinetics, molecular spectroscopy and other topics of physical chemistry. Three hours lab per week.
- CH 351 BIOCHEMISTRY 4 cr.
Prerequisite: CH 231.
Study of chemistry of carbohydrates, liquids, proteins, minerals, vitamins, and hormones and biological functions of each. Four hours lecture per week.
- CH 355 BIOCHEMISTRY AND NUTRITION 3 cr.
Prerequisite: CH 102.
Course designed for Home Economics major; studies chemistry and biological function of biologically active compounds with respect to nutritional requirements. Three hours lecture per week.
- CH 411 INORGANIC CHEMISTRY 3 cr.
Prerequisite: CH 341.
Designed to give student an understanding of advanced theories of atomic structure, chemical bonding, acids and bases, coordination compounds, and selected topics. Three hours lecture per week.
- CH 412 INORGANIC PREPARATIONS 3 cr.
Prerequisites: CH 321 and CH 411.
Lectures include discussion of descriptive chemistry of elements according to their periodicity; laboratory is an investigation of the synthesis, purification, and characterization of inorganic substances. One hour lecture, 6 hours lab per week.
- CH 421 ADVANCED INSTRUMENTAL ANALYSIS 3 cr.
Prerequisite: CH 322.
Study of modern chemical analysis, using advanced instrumental techniques; emphasis on theory, principles of operation, capabilities, and limitations of advanced analytical instruments used. One hour lecture, 6 hours lab per week.
- CH 441 ADVANCED PHYSICAL CHEMISTRY 3 cr.
Prerequisite or Co-requisite: CH 342.
Study of fundamental ideas of quantum and statistical mechanics, molecular structure, and other topics of current interest. Three hours lecture per week.

COMPUTER SCIENCE DEPARTMENT

CH 498 PROBLEMS IN CHEMISTRY 1 to 2 cr

Prerequisite: Permission of Chairman.

Course of independent study on selected problems, including laboratory work, library reading, and conferences with a staff member. A minimum of 4 hours per week required per credit.

SC 105 PHYSICAL SCIENCE I 4 cr

See course description in Physics Department. This course is not a prerequisite for Physical Science II.

SC 106 PHYSICAL SCIENCE II 4 cr

Designed to fulfill the University science requirement for non-science majors. This semester will survey the fields of chemistry and geology. This course may be taken prior to SC 105. Three hours lecture, 2 hours lab per week.

SC 111 SCIENCE IN MODERN CIVILIZATION 3 cr

Designed to acquaint non-science major with some of major discoveries of science and to develop an awareness of how science affects our lives. Three hours lecture per week.

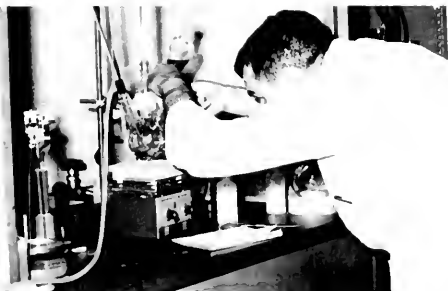
HOWARD E. TOMPKINS, CHAIRMAN; BUTERBAUGH, CHEL-LAPPA, MAPLE

A major in Computer Science leading to the B.A. or B.S. degree and a minor for majors in a variety of disciplines (not restricted to the sciences) are offered.

Computer Science is largely a tool discipline. Most computer use is in connection with some other subject area. Hence students should combine the study of another academic discipline with a major or minor in Computer Science. Students particularly interested in the application of computers to business problems should consider the Systems Analyst major in the Business Management Department as an alternative course of study. Students planning to enter the computer field by way of a college education should set their goals beyond simple programming, for example, in the analysis of problems from their "other" discipline for computer solution, in the design of computer software, or in the evaluation of computer system performance.

Toward such goals, a Computer Science major today should be preparing:

- 1) to program well,
- 2) to analyze real-world problems in preparation for programming, and
- 3) to manage activities that are strongly computer dependent, or



- 4) to improve the tools that programmers and systems analysts use, i.e. to develop
- 4a) better machine systems,
4b) better software systems,
4c) better languages for communicating with machines, or
4d) better methods for solving intractable problems, or
- 5) to teach about computers at college or high school level, or
- 6) to advance the fundamental theory of digital information processors.

CO 480 Seminar on Current Computer Topics, 1 credit each semester of senior year 2 cr.

At least one of the following:

CO 410 Processor Architecture & Microprogramming (3 cr.)

CO 430 Introduction to Systems Programming (3 cr.)

CO 440 Large File Organization & Access (3 cr.) 3 cr.

Additional Computer Science courses to bring the total CO credits to a minimum of 27 (Note 3)

Minimum: 7 cr.

Computer Science course requirement: 27 cr.

Mathematics prerequisite to CO 250:

Math 013-015 or 017-019 or Math 111-113

Calculus (Note 4) 8 cr.

General Education requirement of the School of Arts and Sciences, including Foreign Language. Six credits of the 8 in the Calculus may be applied toward the General Education requirement of 52 credits. CO courses are not accepted as part of the General Education requirement for CO majors. Hence the additional requirement is:

46 cr.

Elective courses, preferably including minor (Note 5), possibly including additional Mathematics and Computer Science courses.

44 cr.

Minimum total for the B.A. or B.S. degree

124 cr.

CURRICULA

The Computer Science Major Program to the B.A. or B.S. Degree

(Note 1)

Computer Science core courses:

CO 110	Introduction to Computer Science (Note 2)	3 cr.
CO 220	Applied Computer Programming Languages	3 cr.
CO 250	Introduction to Numerical Methods	3 cr.
CO 300	Assembler Language Programming	3 cr.
CO 340	Data Structures & Non-numeric Processing	3 cr.

Note 1: If a minor is selected from the Division of Natural Sciences and Mathematics, or from the School of Business, or if an additional 9 credits of Computer Science are taken, including 4 credits of CO 485, then the B.S. degree is awarded. Otherwise the B.A. degree is awarded.

Note 2: An adequately prepared student may be exempted from CO 110, by examination. He must then offer 3 additional Computer Science elective credits as part of the major program.

Note 3: Other Computer Science courses recommended for a major include:

- CO 350 Applied Numerical Methods (3 cr.)
- CO 460 Programming Language Theory (3 cr.)
(Recommended if graduate work is planned.)
- CO 481 Special Topics in Computer Science (3 cr.)
- CO 485 Special Projects in Computer Science (1-4 cr., as arranged)

Note 4: The recommended calculus sequence for students planning to minor in Mathematics is Math 111-113. All others adequately prepared for it should take Math 017-019, which will be accepted in a Mathematics minor for Computer Science majors. Other students should take Math 013-015.

Note 5: Minors are possible in a wide variety of fields. See

Note 1. For specific restrictions on the minor program, see the announcement of the selected minor department in the Undergraduate Bulletin.

Minor in Business for Computer Science Majors

(18 hours minimum for the minor; B.S. degree awarded)

- BU 221 Introduction to Accounting (3 cr.)
- BU 251 Intermediate Accounting (3 cr.)
- BU 439 Business Information Systems (3 cr.)
- Additional general business courses (3 cr. or more)
- Additional data processing and systems analysis courses (3 cr. or more, to total 18 cr.) such as:
 - BM 340 Business Systems Technology (3 cr.)
 - BM 342-442 Business Problem Application (3 cr. each)
 - BM 443-444 Business Systems Analysis (3 cr. each)

Minor in Computer Science for Majors in Other Disciplines

Consists of any 15 credits of Computer Science courses for which the student is qualified, necessarily including CO 220, Applied Computer Programming Languages, and normally excluding CO 200, Introduction to Computers. Typical minors might be as follows:

For a Major in a Social Science Discipline:

- CO 110 Introduction to Computer Science (3 cr.)
(A student who has taken CO 200, and done

well in it, may petition for its acceptance as part of the minor.)

- CO 220 Applied Computer Programming Languages (3 cr.)
 CO 340 Data Structures & Non-numeric Processing (3 cr.)
 CO 481 Special Topics in Computer Science (3 cr.)
 CO 485 Special Projects in Computer Science (3-4 cr.)

For a Major in Physics or Other Natural Science:

- CO 110 Introduction to Computer Science (3 cr.)
 CO 220 Applied Computer Programming Languages (3 cr.)
 CO 250 Introduction to Numerical Methods (3 cr.)
 CO 340 Data Structures and Non-numeric Programming (3 cr.)
 CO 350 Applied Numerical Methods (3 cr.)

For a Major in Mathematics or Applied Mathematics:

- CO 110 Introduction to Computer Science (3 cr.)
 CO 220 Applied Computer Programming Languages (3 cr.)
 CO 250 Introduction to Numerical Methods (3 cr.)
 CO 350 Applied Numerical Methods (3 cr.)
 CO 460 Programming Language Theory (3 cr.)

An undergraduate course in Computer Science for majors in other disciplines who wish to take only one course is: CO 200 Introduction to Computers (3 cr.)

A student who decides to minor in Computer Science after completing CO 200 may petition to have CO 200 accepted in the minor, in place of CO 110. The department's decision may be based on an examination.

COURSE DESCRIPTIONS

- CO 110 INTRODUCTION TO COMPUTER SCIENCE 3 cr.
 Basic structure of modern digital computers; batch processing vs. interactive time-shared on-line computing; problem analysis and computer solution using flowcharting and the Fortran language. Two hours of lecture and 2 hours of programming lab per week. Exemption by examination possible.
- CO 200 INTRODUCTION TO COMPUTERS 3 cr.
 A computer appreciation course for students with an interest in computers and what they can do; survey of computer organization, flowcharting, and programming; exercises in the interactive BASIC language, economic, political, psychological, and technical effects of computers in our society. Three hours of lecture per week.
- CO 220 APPLIED COMPUTER PROGRAMMING LANGUAGES 3 cr.
 Prerequisite: CO 110 or BU 339 or consent of instructor.
 Linguistic concepts basic to programming languages; comparison of the major higher-level procedure-oriented computer languages; introduction to tape and disc files, documentation, testing, and management practices in program development; extensive group project in COBOL. One and one-half hours lecture and 3 hours programming lab per week.
- CO 250 INTRODUCTION TO NUMERICAL METHODS 3 cr.
 Prerequisites: CO 110, and MA 019 or 113.
 Algorithmic methods for finding functional values, roots of equations, solutions to systems of equations; matrix operations, curve

fitting, interpolation, numerical integration and differentiation, errors in computation. Three hours lecture per week.

CO 300 ASSEMBLY LANGUAGE PROGRAMMING 3 cr.

Prerequisites: CO 110 or BU 339 or consent of instructor.

Examination of structure and languages of machines, representation of data, addressing techniques, symbolic coding, assemblers, macros, etc., problem solution using assembly language. Two hours lecture and 2 hours programming lab per week.

CO 340 DATA STRUCTURES AND NON-NUMERIC PROCESSING 3 cr.

Prerequisites: CO 110.

Basic concepts of data, storage systems and structures, lists, arrays, strings, hashing techniques, searching and sorting techniques, data structures in programming languages, string processing. Three hours lecture per week.

CO 350 APPLIED NUMERICAL METHODS 3 cr.

Prerequisites: CO 250, MA 233, and MA 361.

Numerical methods for large linear systems and ordinary differential equations. Three hours lecture per week.

CO 410 PROCESSOR ARCHITECTURE AND MICROPROGRAMMING 3 cr.

Prerequisites: CO 300 and CO 340.

The logical description of computer processor structure (architecture), with emphasis on the microprogramming approach. Focuses on the Microdata 1600 minicomputer. Three hours lecture per week.

CO 430 INTRODUCTION TO SYSTEMS PROGRAMMING 3 cr.

Prerequisites: CO 300 and CO 340.

Concepts and techniques of systems programming with an emphasis on assembly and compilation of user programs. Representation of source language so as to facilitate the needed translation

process. Exercises on the Microdata 1600/30 and Sigma 6. Three hours lecture per week.

CO 440 LARGE FILE ORGANIZATION AND ACCESS 3 cr.

Prerequisites: MA 362 (or equivalent probability and statistics), CO 300, and either CO 220 or both BM 439 and BM 441.

The organization of large computer files for business systems, information systems, and other applications. Use of COBOL and Assembler for efficient file access. Evaluation of file access systems. Three hours lecture per week.

CO 460 PROGRAMMING LANGUAGE THEORY 3 cr.

Prerequisites: CO 340 and MA 231, or consent of instructor.

Formal methods for describing and analyzing programming languages and algorithms, Backus-Naur forms; productions, regular expressions; introduction to automata, Turing machines, recent concepts in algorithm theory.

CO 480 SEMINAR ON CURRENT COMPUTER TOPICS 1 cr.

Prerequisites: 12 credits in Computer Science courses.

Student presentation and discussion of topics from the current Computer Science literature. May be repeated once for a total of 2 credits. One hour seminar per week.

CO 481 SPECIAL TOPICS IN COMPUTER SCIENCE 3 cr.

Prerequisites: 12 credits in Computer Science or consent of instructor.

Seminar in advanced topics of Computer Science, content will vary, depending on interests of instructor and students. May be repeated for additional credit. Three hours lecture per week.

CO 485 SPECIAL PROJECTS IN COMPUTER SCIENCE 1-4 cr.

Prerequisites: Permission of a Computer Science faculty member who agrees to supervise your project.

Arrangements for selection of a specific topic must be made before the end of the prior term. Hours as arranged.

CRIMINOLOGY DEPARTMENT

STANLEY COHEN, ACTING CHAIRMAN; BOGAN, BROWN, KATZMAN, KUPCHELLA, MC GUIRE, MC NABB, SHANE, SWEET, WEGENER

The Department of Criminology offers men and women who seek a career in the Criminology field a professional education program supported by a broad liberal arts education. The degree offered is the Bachelor of Arts degree with a major in Criminology, under the School of Arts and Sciences; also available are a Two-year Academic Diploma and a minor in Criminology.

The program in Criminology has a five-fold objective:

1. The education of students for employment and leadership in the expanding field of criminal justice.
2. The education of presently employed law enforcement and correctional officers who recognize the need for raising their educational level.
3. The instruction of students who wish to acquire an understanding of the processes of criminal justice as a cultural part of their higher education.
4. The instruction of students who wish to prepare for graduate study and research in the administration of justice.
5. A curriculum that provides an excellent foundation for students preparing for a career in law.

Nearly every level of government offers opportunities for professional careers in criminology. Employment opportunities normally exist in more than 50 Federal agencies,

including the Federal Bureau of Investigation, U. S. Secret Service, Bureau of Narcotics, Intelligence Division (IRS), Inspection Service (IRS), Alcohol Tobacco Tax Division (IRS), State Department Security, Atomic Energy Commission, and military investigative branches.

Both men and women will find employment opportunities in parole and probation work for Federal, state, and local governments, institutional careers concerned with the custody and treatment of juveniles and adults at all levels of government. In addition, many police departments have specialized units dealing with juveniles, community relations, training and research. Criminalistic laboratories provide another career area, and there are a wide variety of opportunities in traffic administration, investigative and security activities in the commercial and industrial fields.

Career opportunities are available also in research and teaching at the college and university level and in research divisions of agencies in the field of administration of justice.

CURRICULA

Required Courses:

CR 101	General Administration of Justice	3 cr.
CR 102	Criminology	3 cr.
CR 301	Criminal Law I	3 cr.
CR 302	Criminal Law II	3 cr.
CR 490	Crime in Modern Society	3 cr.

B.A. in Criminology

In addition to the Required Courses, the requirements for the degree of Bachelor of Arts in Criminology are 15 more hours in Criminology, as follows:

CR Electives 15 cr.

Two-Year Academic Diploma in Criminology

For officers and students taking this program in Criminology, requirements in addition to the Required Courses are 18 more credits in Criminology, 6 credits in English, 3 credits in Sociology, 3 credits in Psychology, 3 credits in Political Science, 15 credits of electives in the Social Sciences division, as follows:

Criminology

The following are suggested, but substitutions may be permitted, depending on circumstances:

CR 201	Police Administration I	3 cr.
CR 202	Police Administration II	3 cr.
CR 310	Criminal Investigation	3 cr.
CR 340	Crime Prevention	3 cr.
CR 350	Techniques of Interviewing	3 cr.
CR 415	Supervision in the Administration of Justice	3 cr.

English

EN 101	English I	3 cr.
EN 102	English II	3 cr.

Psychology

PC 201	General Psychology	3 cr.
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Political Science

PS 111	American Politics	3 cr.
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Sociology

SO 151	Introduction to Sociology	3 cr.
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Electives

	Any of the Social Sciences	15 cr.
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Minor in Criminology

The minor in Criminology must be approved by the department and consists of a minimum of 18 credits, consisting of the Required Courses plus the following:

Criminology Electives 3 or more cr.

COURSE DESCRIPTIONS

CR 101 GENERAL ADMINISTRATION OF JUSTICE 3 cr.
Administration of criminal justice in United States. Deals with role of police, courts, and correctional process.

CR 102 CRIMINOLOGY 3 cr.
Prerequisite: CR 101.
General survey of nature and causes of crime and its prevention and treatment.

CR 201 POLICE ADMINISTRATION I 3 cr.
Prerequisite: CR 102.
Analysis of organizational structure, administrative practices, and operating procedures of law enforcement agencies.

- CR 202 POLICE ADMINISTRATION II 3 cr.
Prerequisite: CR 201.
Continuation of Police Administration I, with special emphasis on staff functions, such as records, communications, training, personnel administration, and finance.
- CR 301 CRIMINAL LAW I 3 cr.
Prerequisites: CR 101 and 102.
A study and substantive law analysis of the elements of crimes, with an emphasis on understanding the application of those elements. Attention is given to defenses, uncompleted conduct, conspiracy and parties to crime.
- CR 302 CRIMINAL LAW II 3 cr.
Prerequisite: CR 301.
Laws of arrest, search and seizure, with a discussion of important case law. Analysis of safeguards established for protection of individual liberties, especially as found in application of rules governing the introduction and use of information in formalized legal proceedings.
- CR 310 CRIMINAL INVESTIGATION 3 cr.
Theory and practice of investigation; discussion of various types of information obtainable from persons and things; application of investigative theory to crime and accidents.
- CR 311 CRIMINALISTICS 3 cr.
Prerequisite: CR 310.
Application of scientific crime detection methods; emphasis on collection, preservation, and interpretation of physical evidence found in connection with a crime. Two hours lecture, and 3 hours lab per week.
- CR 320 TRAFFIC ADMINISTRATION I 3 cr.
Origin and growth of traffic problem; emphasis on traffic enforcement and procedures, organization and functions of police traffic division, study of traffic laws and judicial process.
- CR 325 INSTRUMENTAL DETECTION OF DECEPTION 3 cr.
Prerequisite: CR 350.
Devices for measuring emotional responses to verbal stimuli; psychological and physiological aspects of deception; analysis of detection of deception techniques and their application to law enforcement. Two hours lecture, and 3 hours lab per week.
- CR 330 PLANNING AND RESEARCH 3 cr.
Prerequisites: CR 101 and 102.
Role of planning and research in contemporary law enforcement; analysis of planning process and nature of planning with emphasis on planning for special events and situations.
- CR 340 CRIME PREVENTION 3 cr.
Organization and function of crime prevention agencies; problems and techniques in the prevention of crime; community resources in preventing crime.
- CR 350 TECHNIQUES OF INTERVIEWING 3 cr.
Consideration of the nature, methods, and principles of interviewing; emphasis on role playing in interviewing situations.
- CR 360 COMMERCIAL AND INDUSTRIAL SECURITY 3 cr.
Plant protection and industrial security; merchandising safety and security; credit and insurance investigative procedures.
- CR 370 COMMUNITY RELATIONS 3 cr.
Role of law enforcement agencies in modern day society; police-community relations units, human relations resources, civil rights and professionalism in law enforcement.
- CR 410 QUESTIONED DOCUMENT ANALYSIS 3 cr.
Evaluation and identification of questioned documents; admissibility as evidence, preparation and presentation in court. Two hours lecture, and 3 hours lab per week.
- CR 411 ADVANCED CRIMINALISTICS 3 cr.
Prerequisite: CR 311.
Ballistics, serology, narcotics, poisons, firearms identification,

chromatography, alcohol tests, and hair identification. Two hours lecture and 3 hours lab per week.

CR 415 SUPERVISION IN THE ADMINISTRATION OF JUSTICE 3 cr.

Consideration of supervisory problems in field of administration of justice, emphasis on such topics as leadership, motivation, morale, discipline, public relations, communications, decision-making, and the training functions.

CR 420 TRAFFIC REGULATION AND CONTROL 3 cr.

Organization for traffic control, accident investigation, traffic flow pattern, high accident frequency locations, signs, signals, and simple engineering remedial actions. Traffic safety research.

CR 425 ADVANCED INSTRUMENTAL DETECTION OF DECEPTION 3 cr.

Prerequisite: CR 325.

Special techniques in detection of deception, including: Backster techniques, Keeler technique, Modified Backster technique, and the Integrated Control Question technique. Statistical chart interpretation. Polygraph research. Two hours lecture, 3 hours lab per week.

CR 430 COMPARATIVE STUDY OF JUSTICE 3 cr.

Comparison of American system of administration of justice with those of other nations, including developed and underdeveloped countries.

CR 431 ETIOLOGY OF DELINQUENT BEHAVIOR 3 cr.

Analysis of the aberrant behavior of children and youth in terms of modern behavioral sciences, personality and social factors examined with a view toward developing prevention and control procedures.

CR 432 TREATMENT AND CONTROL OF DELINQUENCY 3 cr

Analysis of juvenile court procedures, juvenile probation, juvenile

institutions, and juvenile parole in treatment and control of delinquency.

CR 440 INSTITUTIONAL TREATMENT OF THE OFFENDER 3 cr

Modern philosophy and methods in treatment of adult criminals and juvenile delinquents in correctional institutions.

CR 445 NON-INSTITUTIONAL TREATMENT OF THE OFFENDER 3 cr.

Analysis of principles and practices in probation and parole, case method, techniques of supervision.

CR 460 INDUSTRIAL SECURITY AND SAFETY 3 cr.

Administration of fire and accident prevention programs, government security programs, document control, security clearances, and visitor control; special problems and hazards.

CR 490 CRIME IN MODERN SOCIETY 3 cr.

Analysis of nature and extent of crime at state, national, and international levels of government, consideration of special problems in metropolitan areas, organized crime, the professional criminal and white-collar crime, crime control in a democratic society.

CR 492 CORRECTIONAL ADMINISTRATION 3 cr.

Administration of juvenile and adult probation and parole programs, and correctional institutions, emphasis on special problems encountered in field.

CR 495 SEMINAR IN ADMINISTRATION OF JUSTICE 3 cr.

Study of problems in administration of justice; reports based upon original investigation; reviews of recent books and periodical literature, topics of current interest. Enrollment limited

CR 497 INTERNSHIP 12 cr.

Prerequisite: 18 credits in Criminology.

Practicum designed to broaden educational experience of students through appropriate observational and work assignments with

governmental agencies and private firms. Offered during summer only. By appointment only.

CR 498 SUPERVISED PROFESSIONAL EXPERIENCE 6 cr.

Prerequisite: 18 credits in Criminology.

Practicum designed for full-time police officers who attended the FBI Academy and/or Pennsylvania State Police Academy. By Departmental approval only.

CR 499 SPECIAL PROBLEMS 1-4 cr.

Prerequisite: 15 credits in Criminology.

Individual research under direction of staff. Course may be taken more than once for credit. By appointment only.



ECONOMICS DEPARTMENT

DONALD A. WALKER, CHAIRMAN; CROSS, DAVIS, GARVIN, HOLT, HUFF, MARTEL, RICHARD, STONEBRAKER, WARE.

The Economics Department offers courses to meet the needs of IUP students in three general areas: a program that prepares students majoring in Economics for graduate school or immediate employment; a program that prepares Indiana students to teach Economics on the high school level; and a program that enables students majoring in other Departments to take courses in Economics.

Degrees offered are the Bachelor of Arts in Economics and the Bachelor of Science in Education with a major in Social Sciences, concentrating on Economics.

CURRICULA

The program for Economics majors is designed for those who intend to pursue careers as economists in education, government, industry, finance, or commerce. The economist in today's world occupies an increasingly important position and great opportunity exists for qualified people.

Economics 101, BASIC ECONOMICS, may be taken in partial fulfillment of the Social Sciences segment of the University's General Education requirement. Economics 101 should not be programmed by Economics majors or minors, by students enrolled in the Business School, or by students

in the School of Education who are contemplating teaching social science on the high school level. Instead, Economics 121, PRINCIPLES OF ECONOMICS I, should be substituted, as this course serves as a foundation for many advanced Economics courses and should be programmed by all students who wish to take such courses.

Students majoring in other fields are welcome to choose Economics courses among the upper-division electives. These courses are designed to aid the student in developing sophisticated insight into economic issues and are valuable in many ways, regardless of the student's ultimate vocation.

It is recommended that the Economics major take a minor in one of the other Social Sciences, in Business (Business Management, General Business, Accounting), or in Mathematics. A minor in Mathematics is strongly recommended for those whose future may include graduate work in Economics.

Core Program

Requirements for ALL Economics majors and minors are 6 credits in Economics, as follows:

EC 121	Principles of Economics I	3 cr.
EC 122	Principles of Economics II	3 cr.

B.A. in Economics

In addition to the Core Program, requirements for the degree of Bachelor of Arts in Economics are 21 more credits in Economics, as follows:

EC 421	Macroeconomic Analysis	3 cr.
EC 422	Microeconomic Analysis	3 cr.
	Economics electives	15 cr.

B.S. in Education (Economics Concentrate)

In addition to the Core Program requirements for the degree of Bachelor of Science in Education with a major in Social Sciences, concentrating in Economics, are 9 more credits of Economics electives, excluding Economics 101.

Minor in Economics

To minor in Economics, the student must take 9 credits of Economics electives in addition to the Core Program, excluding Economics 101 as a possible elective.

Concentrations in Economics

The Department of Economics offers several concentrations in particular aspects of Economics. The concentrations are designed to equip students with the education and skills that will enable them to obtain a position in government or private business upon completion of the undergraduate degree. The Department provides verification that students have completed a concentration, and they may also have the information recorded on their transcripts. These concentrations are not restricted to Economics Majors. The concentrations available at present are:

- Competition and Public Policy
- Economics of Government Affairs

survey of monetary theory and policy, mechanism of international payments.

EC 326 MONETARY ECONOMICS II 3 cr.
Prerequisite: EC 325.

Detailed study of monetary theory, tasks of central banking, principal objectives of monetary policy, intensive study of recent monetary experience, complementary and competing aims of monetary and fiscal policy.

EC 330 LABOR ECONOMICS 3 cr.
Prerequisite: EC 122.

History, structure, and operations of trade unions and employer organizations, major Federal labor legislation, collective bargaining theory, wage determination, current labor problems.

EC 331 ECONOMIC ORGANIZATION OF INDUSTRY 3 cr.
Prerequisite: EC 122 or permission of the instructor.

Social effectiveness of industries analyzed through measures of market structure, market conduct, and market performance.

EC 332 GOVERNMENT AND BUSINESS 3 cr.
Prerequisite: EC 122 or permission of the instructor.

Formal and informal methods used to maintain, supplement, and moderate competition as well as regulation as a substitute for competition.

EC 333 REGULATION OF INDUSTRY 3 cr.
Prerequisites: EC 121 and 122.

Examines theory and practice of regulation, emphasizing effects of regulation on economic performance and efficiency in U. S.

EC 334 ECONOMICS OF CORPORATE DECISIONS 3 cr.
Prerequisites: EC 121 and 122.

Applies economic theory to corporate decision making. Topics include corporate objectives, profit maximization, economic measurement and forecasting.

EC 335 PUBLIC FINANCE 3 cr.
Prerequisites: EC 121 and 122.

Taxation and expenditure theory at Federal level, Federal budget and debt considerations; public sector impact upon economy, intergovernmental fiscal relations.

EC 336 STATE AND LOCAL FINANCE 3 cr.
Analysis of character and impact of state and local government revenue sources, expenditures, and fiscal systems.

EC 339 ECONOMIC DEVELOPMENT I 3 cr.
Prerequisite: EC 121.

Theory of growth, theory of economic development of underdeveloped countries.

EC 340 ECONOMIC DEVELOPMENT II 3 cr.
Prerequisite: EC 121.

Application of theory of growth and analysis of economic development of selected economies, empirical and econometric studies of underdeveloped countries and their economic institutions.

EC 341 HISTORY OF THE ECONOMIC DEVELOPMENT OF THE UNITED STATES 3 cr.
Prerequisite: EC 121.

Examination of main patterns of the United States' economic growth since end of eighteenth century, emphasizes economic development as a laboratory for economic analysis.

EC 342 HISTORY OF THE ECONOMIC DEVELOPMENT OF MODERN EUROPE 3 cr.
Prerequisite: EC 121.

Study of dynamic forces which contributed to development of modern Europe, industrial revolution in England, industrialization on the continent, impact of Europe on world economy.

EC 343 ECONOMICS OF HUMAN RESOURCES 3 cr.
Prerequisite: EC 121 or permission of the instructor.

Inquiry into economic, demographic, and related factors affecting growth, structure, and distribution of an economy's population.

- EC 345 INTERNATIONAL ECONOMICS I 3 cr.
Prerequisite: EC 121.
Theory of international trade; analysis of balance of payments; international economic equilibrium; mechanism of international economic and monetary adjustments.
- EC 346 INTERNATIONAL ECONOMICS II 3 cr.
Prerequisite: EC 345.
Application of theory of international trade to empirical data and problems; historical survey and examination of current problems of international trade; the institutional setting of international trade.
- EC 350 COMPARATIVE ECONOMICS SYSTEMS 3 cr.
Prerequisite: EC 121.
Capitalism, socialism, and communism subjected to economic analysis; their principles, practices, institutions and philosophies.
- EC 351 SOVIET ECONOMY 3 cr.
Prerequisite: EC 121 or 122.
Thorough study of operations of Soviet economy. Course will compare and contrast workings of Soviet economy with other Communist countries.
- EC 355 QUANTITATIVE ECONOMICS 3 cr.
Introduction to economic statistics. Material covered regarding empirical frequency distributions, probability, distributions of random variables, and functions of random variables, and tests of economic hypotheses.
- EC 356 INTRODUCTION TO ECONOMETRICS 3 cr.
Prerequisite: EC 355 or its equivalent.
Introduction to econometrics. Interest centers upon linear normal regression models of two or more random variables, special econometric problems, and solutions of simultaneous equations.
- EC 371 ECONOMICS OF LABOR LEGISLATION 3 cr.
Prerequisite: EC 330.
Economic background and effects of governmental regulation of labor relations, with emphasis on a detailed examination of National Labor Relations Act as amended.
- EC 372 ECONOMICS OF WAGES AND EMPLOYMENT 3 cr.
Prerequisite: EC 330.
Analysis of wages and employment under various market structures. Also, analysis of impact of labor market forces on wages, prices, and distributive shares.
- EC 381 REGIONAL ECONOMICS 3 cr.
Prerequisite: Three credit hours in Economics.
Process of regional economic growth, location theory, basic techniques of regional analysis, public and private area development programs.
- EC 382 URBAN ECONOMICS 3 cr.
Prerequisite: Three credit hours in Economics.
Structure of urban economy, goals, processes, problems, and policy in urban economic development.
- EC 421 MACROECONOMIC ANALYSIS 3 cr.
Prerequisites: EC 121 and 122.
Income and employment analysis; national income accounts and theory; classical, Keynesian, and post-Keynesian models; investment, growth, and inflation theory; role of government in our economy.
- EC 422 MICROECONOMIC ANALYSIS 3 cr.
Prerequisites: EC 121 and 122.
Consumer behavior, theory of the firm, market structures, distribution, general equilibrium analysis, applications to current problems of economic policy.
- EC 480 SEMINAR 3 cr.
Prerequisite: Permission of the instructor.
- EC 481 SPECIAL TOPICS 3 cr.
Prerequisite: Permission of the instructor.

- EC 482 INDEPENDENT STUDY 1-6 cr.
Prerequisite: Permission of the instructor.
- EC 483 HONORS IN ECONOMICS 3 cr.
Prerequisite: Permission of the instructor.
Readings, conferences, and reports arranged for students who have demonstrated proficiency in economics. Research work may be directed toward theoretical or applied economic problems.
- EC 488 INTERNSHIP IN ECONOMICS 2-12 cr.
Prerequisite: A student must be an economics major who has completed at least twelve (12) credit hours in economics with a 2.5 grade point average in his major and overall.



ENGLISH DEPARTMENT

CRAIG G. SWAUGER, CHAIRMAN; ANDERSON, BECK, BETTS, J. BRIGHT, L. BRIGHT, BROWN; COMO, COMPTON, COOK, CRAIG, CUREY, J. DAVIS, DAY, DE GEORGE, EISEN, ENSLEY, FORCE, FREUND, FRITZ, FURGIUELE, GOURLEY, GRAY, GRAYBURN, GRUBB, HALDEMAN, HAYWARD, HAZLEY, HEIMER, HULL, L. IANNI, R. G. JOHNSON, KRASZEWSKI, KRUPNIK, LUCKER, C. MAHAN, D. MC CLURE, MCMANMON, L. MILLER, NANIA, NIX, M. OMRANIN, RAY, RIDER, R. ROFFMAN, ROUMM, RUFFNER, SAMSEY, SEACRIST, SEINFELT, R. SHAFER, H. SMITH, SWIGART, R. L. THOMAS, TRUBY, WADDELL, H. WARREN, WATTA, WELDY, WILSON, WOODWORTH, YARUP, YOUNG.

One goal of the English program is to contribute to the general language proficiencies of all its students. These proficiencies include the ability to express oneself comprehensibly and clearly in written language, to speak distinctly, tastefully and meaningfully in oral language, and to appreciate, understand and draw sustenance from both long-recognized and recently produced literary and dramatic achievements in the English language. In its programs, the English Department attempts to prepare its majors for careers in the teaching of English at the secondary school level and for careers of all types where skill in communication and a conviction in favor of humane values are considered an appropriate background for the performance of assigned duties and responsibilities.

Degrees offered by the English Department are the Bachelor of Arts in English or in Speech and Theater and the

Bachelor of Science in Education with an English or Communication major. The first two degree programs are under the School of Arts and Sciences, and the third is under the School of Education. In addition, an English minor is available in the School of Arts and Sciences.

CURRICULA

Special Requirements

In meeting the University's General Education requirements, English majors in both the School of Education and the School of Arts and Sciences are REQUIRED to replace EN 201, English III, with EN 202, Introduction to Literary Analysis. It is recommended that this course be taken during the sophomore year, as early as possible in the major program. Also, ALL English majors, in both the School of Education and the School of Arts and Sciences, MUST complete the intermediate sequence of a foreign language. This may be done in one of three ways: by examination, by earning credit in the third and fourth semesters of a foreign language, or by completing four semesters of a new language. If the last procedure is used, the two beginning foreign language courses may be applied as free electives to the total number of credits needed for graduation.

Speech and Theater majors are required to spend at least one summer in the Summer Theater Workshop.

English majors in the School of Arts and Sciences may not

use professional education courses as free electives toward the 124 hours for graduation.

B. A. in English

The candidate for the degree of Bachelor of Arts in English usually chooses this program because he wishes a broad undergraduate education in liberal studies. He may intend to prepare for graduate study in English for eventual college teaching or for other non-academic professions. This program does not lead to certification in secondary English.

In addition to the General Education requirement for English majors (English 101, 102, and 202), requirements for the degree of Bachelor of Arts in English are 30 more credits in English selected from the list herein. All courses listed give three credits except English 390, which gives three or six credits. The English major also may select a minor of at least 15 hours in any one of several fields, such as history, philosophy, psychology, or foreign languages.

EN 120 – Newspaper Reporting	EN 240 – Classical Literature in Translation
EN 105 – Journalism and the Mass Media	EN 246 – Contemporary Short Fiction
EN 206 – The Nature of Drama	EN 247 – Poetry and Its Forms
EN 208 – The Art of the Film	EN 260 – English Literature to the Restoration
EN 220 – Advanced Composition or	EN 261 – English Literature from the Restoration to 1900
EN 221 – Creative Writing or	EN 305 – Modern Drama
EN 222 – Journalistic Writing	EN 321 – Feature Writing
EN 223 – Photojournalism	EN 323 – Editing and Management
EN 230 – History of the English Language	EN 330 – Structure of English

- EN 331 – Trends in Linguistics
 EN 340 – European Literature From the Renaissance to the Twentieth Century
 EN 341 – Modern European Literature
 EN 345 – Criticism of Contemporary Writing
 EN 346 – Contemporary American and British Poetry
 EN 350 – American Literature to 1865
 EN 351 – American Literature From 1865 to 1915
 EN 352 – American Literature From 1915 to 1945
 EN 358 – Modern American Fiction
 EN 359 – Black American Literature
 EN 360 – Old and Middle English Literature
 EN 361 – Chaucer
 EN 362 – English Drama to the Restoration
 EN 365 – 16th Century Prose and Poetry
 EN 366 – Shakespeare
 EN 369 – 17th Century Prose and Poetry
 EN 370 – Milton
 EN 371 – The English Bible as Literature
 EN 373 – Restoration and 18th Century Drama
 EN 375 – The Augustans
 EN 376 – The Age of Johnson
 EN 377 – The Rise of the English Novel
 EN 379 – The Romantic Movement
 EN 380 – Victorian Literature
 EN 381 – 19th Century English Novel
 EN 383 – The English Novel, Conrad to the Present
 EN 385 – The English Essayists
 EN 390 – Literary Britain Tour
 EN 480 – Seminar Studies in English and American Literature
 EN 481 – Special Topics
 EN 482 – Independent Study
 EN 483 – Field Experience

Journalism Concentration

Students interested in a career in advertising, journalism, or public relations can enroll in this innovative, flexible program. Journalism Concentration combines journalism elective courses, the student's choice of a variety of courses from other University departments, plus field experiences.

The IUP Journalism Concentration is flexible for the individual student, who decides, with an adviser, what directions his or her education will take for a mass communication career.

A student wishing to enter the program becomes an English major in the School of Arts and Sciences, declaring a Journalism Concentration. Then, the student chooses an individual program within a large group of elective journalism courses, plus a much larger group of courses from various other areas of the University.

Faculty have both field experience in various areas of mass communication as well as college-level teaching experience.

A student who completes the program is graduated with a B.A. degree, as an English major with a Journalism Concentration. Various related minor fields of study are open, too.

Because journalism itself covers all areas of life, a journalism program covers many areas of study and preparation. Thus, a number of departments are cooperating to make journalism study at IUP a very broad experience.

Journalism Courses

Journalism and Mass Media
 Newspaper Reporting
 The Art of the Film
 Advanced Composition in Creative Writing
 Journalistic Writing
 Languages of Media
 Management and Editing
 Public Speaking
 Feature Writing
 Photojournalism

Art

Drawing
 Graphic Design

Business

Marketing

Business Management

Advertising
 Consumer Behavior
 Marketing Research
 Personnel Management

Computer Science

Introduction to Computers

Consumer ServicesFamily Finance and
Consumer Economics**Criminology**General Administration of
Justice
Criminology
Community Relations**History**U. S. Urban History
Contemporary U. S. History
Diplomatic History of the
U. S. I and II
History of Women**Learning Resources**Advanced Motion Picture
Production
Advanced Photography
Introduction to Radio
Broadcasting
Photography
Television Production**Minor in English**

To minor in English, 15 credits in English are required beyond the General Education requirement of English 101, English 102, and English 201.

PsychologyDevelopmental Psychology
Personality
Social Psychology
Industrial Psychology**Political Science**American Politics
Comparative Government
News Interpretation
Legislative Process
Public Opinion
Metropolitan Problems
Contemporary Law and
Civil Liberties
Public Administration
Contemporary Political
Problems
State and Local Political
Systems**Sociology**Contemporary Social Problems
Population Problems
Modern Social Institutions
Racial and Cultural Minorities
The Community
Industrial Sociology
Introductions to Social
Research
Social Dynamics
Social and Cultural Change**B.A. in Speech and Theater**

In addition to the General Education requirement for English majors (English 101, 102, and 202), requirements for the degree of Bachelor of Arts in Speech and Theater are 30 more credits in English selected from the following list. All courses listed give 3 credits.

The major in Speech and Theater is required to spend at least one summer in The Summer Theater Workshop during the Pre-Session and Main Session of the summer school. Also, the major in Speech and Theater may elect a minor of at least 15 hours in another field.

EN 205 – The Dramatic Arts
EN 206 – The Nature of Drama
EN 208 – The Art of the Film
EN 211 – History of the Theater
EN 215 – Creative Dramatics
and Storytelling
EN 305 – Modern Drama
EN 310 – Oral Interpretation
EN 311 – Public Speaking
EN 312 – Summer Theater
Workshop
EN 315 – Fundamentals of
Acting

EN 316 – Directing and Play
Production
EN 317 – Costume and Make-Up
EN 318 – Stagecraft
EN 319 – Scenic Design and
Lighting
EN 320 – Advanced Acting
EN 322 – Playwriting
EN 362 – English Drama to
the Restoration
EN 366 – Shakespeare
EN 373 – Restoration and
18th Century Drama

B. S. in Education (English Major)

In addition to the General Education requirements for English majors (English 101, 102, and 202), requirements for the degree of Bachelor of Science in Education with an English major are a minimum of 36 more credits in English, in order to satisfy the requirements for certification. Since

English majors do not take a minor, many of them augment the minimal 36-credit program with courses that will prepare them for graduate study in their profession of secondary English teaching.

Of these 36 credits, nine are in required courses, and the remainder may be selected from those listed as follows, of which a maximum of 12 credits may be in journalism, speech, or dramatics courses. Also required is Education 452. All the English courses give three credits except English 390, which gives three or six credits.

Required:

- EN 220 — Advanced Composition (EN 221 or EN 222 may be substituted)
- EN 230 — History of the English Language
- EN 330 — The Structure of English
- ED 452 — The Teaching of English and Speech (not counted in the 36 hours for the major)

English Electives:

- | | |
|--|--|
| EN 102 — Newspaper Reporting | EN 247 — Poetry and Its Forms |
| EN 105 — Journalism and the Mass Media | EN 260 — English Literature to the Restoration |
| EN 205 — The Dramatic Arts | EN 261 — English Literature from the Restoration to 1900 |
| EN 206 — The Nature of Drama | EN 305 — Modern Drama |
| EN 208 — The Art of the Film | EN 310 — Oral Interpretation |
| EN 223 — Photojournalism | EN 311 — Public Speaking |
| EN 240 — Classical Literature in Translation | EN 321 — Feature Writing |
| EN 245 — Literature for Adolescents | EN 323 — Editing and Management |
| EN 246 — Contemporary Short Fiction | EN 331 — Trends in Linguistics |

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| EN 340 — European Literature From the Renaissance to the Twentieth Century | EN 366 — Shakespeare |
| EN 341 — Modern European Literature | EN 369 — 17th Century Prose and Poetry |
| EN 345 — Criticism of Contemporary Writing | EN 370 — Milton |
| EN 346 — Contemporary American and British Poetry | EN 371 — The English Bible as Literature |
| EN 350 — American Literature to 1865 | EN 373 — Restoration and 18th Century Drama |
| EN 351 — American Literature From 1865 to 1915 | EN 375 — The Augustans |
| EN 352 — American Literature From 1915 to 1945 | EN 376 — The Age of Johnson |
| EN 358 — Modern American Fiction | EN 377 — The Rise of the English Novel |
| EN 359 — Black American Literature | EN 379 — The Romantic Movement |
| EN 360 — Old and Middle English Literature | EN 380 — Victorian Literature |
| EN 361 — Chaucer | EN 381 — 19th Century English Novel |
| EN 362 — English Drama to the Restoration | EN 383 — The English Novel: Conrad to the Present |
| EN 365 — 16th Century Prose and Poetry | EN 385 — The English Essayists |
| | EN 390 — Literary Britain: Tour |
| | EN 480 — Seminar: Studies in English and American Literature |
| | EN 481 — Special Topics |
| | EN 482 — Independent Study |
| | EN 483 — Field Experience |

B. S. in Education (Communication Major)

This major leads to a teaching certificate in communication in the secondary school. The major takes a basic program covering literature, language, composition, speech, theater, and media and selects one or more specialties from the following: literature, linguistic science, writing, speech, theater.

Independent Study, EN 482 and Field Experience, EN 483, are available in all of the specialties. However, such independent activity is usually reserved for students who are at least halfway through their certification requirements. An exception may be made by the department chairman. The nature of the independent activity depends upon the specialty under which it falls.

Independent activity may be defined as that done independently of a rigidly structured course but not necessarily independently of regular faculty direction and consultation.

A student who wishes to engage in an independent activity under the communication program must obtain permission to do so at the time of Pre-Scheduling (October for the Spring Semester, March for the Fall Semester, and May for the Summer Sessions).

The student must present a proposal for the approval of both his adviser and the department chairman. The proposal will outline in detail the student's plan to engage in independent activity. If the proposal is approved by both the adviser and the department chairman, the student then pre-schedules for EN 482 or 483.

Despite the 124-credit minimum for graduation with a baccalaureate degree at Indiana University of Pennsylvania, the Communication program offers a student the opportunity to develop his skills and knowledge beyond the normal restrictions of the classroom and credit hours. Such opportunity comes in part with the flexibility of the independent



activity, described above. Further opportunities lie in the co-curricular areas (campus newspaper, plays, debate, etc.) for which students under many circumstances could be given appropriate specialties credit. Training and experience outside the University and even prior to admission to the University should be considered in the student's development of Specialties. In short, since the Communication program is designed to prepare teachers of the wide area of communication for the secondary schools of the Commonwealth, the Department recognizes that preparation and training of such teachers should be restricted as little as possible by enforcement of required courses and course credits.

- EN 208 THE ART OF THE FILM 3 cr.
Concentrate on the film as an artistic medium. Eight to twelve motion pictures are shown during semester and are analyzed in class discussions.
- EN 211 HISTORY OF THE THEATER 3 cr.
Study of development of theater, with special emphasis on important plays, people, theaters and technical innovations.
- EN 215 CREATIVE DRAMATICS AND STORY TELLING 3 cr.
Through workshop experiences, stresses creative dramatics as a way of teaching for adults, a way of learning for children in both elementary and secondary schools.
- EN 220 ADVANCED COMPOSITION 3 cr.
Primarily seeks to improve writing style, particularly in the more utilitarian forms, such as magazine article and personal essay.
- EN 221 CREATIVE WRITING 3 cr.
Prerequisite is demonstrated ability and interest in creative writing; may be substituted for EN 220. This is a seminar course in which the kinds of writing done are chosen in line with the special interests and abilities of each student.
- EN 222 JOURNALISTIC WRITING 3 cr.
Emphasis on intelligent use of writing ability in a journalistic style, and understanding of the "why" of journalism and mass media. May be substituted for EN 220.
- EN 223 PHOTOJOURNALISM 3 cr.
Introduction to still photography for news media. Includes preparation of portfolio and learning of specialized processing techniques for high-speed work.
- EN 230 THE HISTORY OF THE ENGLISH LANGUAGE 3 cr.
Studies historical development of the English language, as a basis for a better understanding of modern American English.
- EN 235 LANGUAGES OF MEDIA 3 cr.
Introductory course in nature of language and communication. Course heavily grounded in the practice of communication in various media which resources of the university make available to the student.
- EN 240 CLASSICAL LITERATURE IN TRANSLATION 3 cr.
The masterpieces studied range from those of ancient Greece to the Middle Ages. English literature and American literature are excluded.
- EN 245 LITERATURE FOR ADOLESCENTS 3 cr.
Surveys poetry, drama and fiction with which the adolescent is familiar through his school work and his personal reading.
- EN 246 CONTEMPORARY SHORT FICTION 3 cr.
Attention given to form, structure, and art of the modern short story, British, American, and Continental.
- EN 247 POETRY AND ITS FORMS 3 cr.
A study in appreciation of poetry, with special attention to technique of the poet and structure of poetry.
- EN 260 ENGLISH LITERATURE TO THE RESTORATION 3 cr.
A survey of major English authors, major works, and major literary genres written from the beginnings of English literature to the Restoration (1660).
- EN 261 ENGLISH LITERATURE FROM THE RESTORATION TO 1900 3 cr.
A survey of major English authors, major works, and major literary genres written from the Restoration to 1900.
- EN 305 MODERN DRAMA 3 cr.
Reading of plays starts with Ibsen and other Scandinavian dramatists, followed by plays by outstanding Continental, British, and American playwrights.

EN 310	ORAL INTERPRETATION	3 cr.
	Emphasizes understanding and appreciation of literature through developing skill in reading aloud.	
EN 311	PUBLIC SPEAKING	3 cr.
	Fundamental principles of public speaking, audience analysis, interest and attention, selection and organization of speech material.	
EN 312	SUMMER THEATER WORKSHOP	3-6cr.
	A theater practicum offering credit for practical experience in Theater by the Grove, IUP's semi-professional summer repertory theater.	
EN 313	HISTORY OF RHETORICAL THEORY	3 cr.
	Survey of rhetorical theory from Greek and Roman through modern times.	
EN 314	PERSUASION	3 cr.
	Advanced study of problems involved in influencing an audience.	
EN 315	FUNDAMENTALS OF ACTING	3 cr.
	Gives attention to theory and practice in techniques of acting.	
EN 316	DIRECTION AND PLAY PRODUCTION	3 cr.
	Affords each student opportunity to select, cast, rehearse, and produce a one-act play.	
EN 317	COSTUME AND MAKE-UP	3 cr.
	Deals with practical application of straight and character makeup; emphasis on costuming to show how mood and illusion can be created through proper selection of style, color and texture of materials.	
EN 318	STAGECRAFT	3 cr.
	Study and practice in all aspects of backstage technical craft.	
EN 319	SCENIC DESIGN AND LIGHTING	3 cr.
	Prerequisite: At least one course in dramatic literature and some	

experience in stagecraft.
Theories and techniques of designing and lighting stage settings.

EN 320	ADVANCED ACTING	3 cr.
	Prerequisite: EN 315. Involves study and practice in problems of period and style acting.	
EN 321	FEATURE WRITING	3 cr.
	Designed for student who might work in journalism or who might wish to write on a part-time or free-lance basis.	
EN 322	PLAYWRITING	3 cr.
	Prerequisites: One course in dramatic literature, and consent of instructor. A course providing time, place, advice and intelligent criticism for those interested in writing for the stage.	
EN 323	EDITING AND MANAGEMENT	3 cr.
	Focuses on concepts, practices, and techniques of editing writing of others. Attention given to the process of advancement to management positions in journalism.	
EN 324	CREATIVE WRITING II	3 cr.
	Prerequisite: EN 221. A workshop for students who wish to write fiction or poetry under guidance of instructor.	
EN 325	ADVANCED COMPOSITION II	3 cr.
	Workshop and tutorial atmosphere for students who intend to write or to teach writing.	
EN 330	THE STRUCTURE OF ENGLISH	3 cr.
	Training in analysis of American-English Language, with structural and generative approaches to system of grammar emphasized. Course is a prerequisite for Ed 452, Teaching of English and Speech in the Secondary School.	
EN 331	TRENDS IN LINGUISTICS	3 cr.
	Explores recent developments in linguistic theory and research.	

- EN 332 THE DIALECTS OF AMERICAN ENGLISH 3 cr.
Examines relationship of dialectal differences in sounds, structure and vocabulary to geographical and sociological factors.
- EN 333 PSYCHO-LINGUISTICS 3 cr.
An introduction to those aspects of the study of language that bear on relationship of thought and behavior, the ways people move from their perception of reality to verbal and non-verbal communication.
- EN 340 EUROPEAN LITERATURE FROM THE RENAISSANCE TO THE TWENTIETH CENTURY 3 cr.
Selected European works from Renaissance to twentieth century representing all major genres with exception of the epic.
- EN 341 MODERN EUROPEAN LITERATURE 3 cr.
Selected Continental fiction concerned with alienated man and quest for identity in the intellectual climate of pluralism and changing values.
- EN 345 CRITICISM OF CONTEMPORARY WRITING 3 cr.
Covers basic texts of literary criticism and relates development of critical concepts to work of influential literary critics of twentieth century. Not open to freshmen and sophomores.
- EN 346 CONTEMPORARY AMERICAN AND BRITISH POETRY 3 cr.
Study of British and American poetry since World War II.
- EN 350 AMERICAN LITERATURE TO 1865 3 cr.
Provides a study of major American writers from colonial times to the Civil War.
- EN 351 AMERICAN LITERATURE FROM 1865 TO 1915 3 cr.
Emphasis on in-depth study of masterpieces of American literary Realism and Naturalism, in both fiction and poetry.
- EN 352 AMERICAN LITERATURE FROM 1915 TO 1945 3 cr.
A study of major writers and major works in American literature between World War I and World War II.
- EN 358 MODERN AMERICAN FICTION 3 cr.
Major American writers of fiction since 1945 are considered.
- EN 359 BLACK AMERICAN LITERATURE 3 cr.
Analyzes significant Black American literature of a variety of types — autobiography, essay, fiction, poetry.
- EN 360 OLD & MIDDLE ENGLISH LITERATURE 3 cr.
Study of Old English includes a reading of both prose and poetry, whereas the reading in Middle English is limited to major works of poetry, excluding Chaucer's.
- EN 361 CHAUCER 3 cr.
Studies Chaucer, his life, his language, the development of his literary style and his art, with and through his major poetical works.
- EN 362 ENGLISH DRAMA TO THE RESTORATION 3 cr.
Traces development of English drama from 900 A.D. to closing of theaters in 1642, but does not include plays of Shakespeare.
- EN 365 SIXTEENTH-CENTURY PROSE & POETRY 3 cr.
Covers English literature from late Middle Ages to High Renaissance.
- EN 366 SHAKESPEARE 3 cr.
Studies Shakespeare's development as a poetic dramatist against background of Elizabethan stage; examines audience, textual problems, language imagery, and philosophy.
- EN 369 SEVENTEENTH-CENTURY PROSE & POETRY 3 cr.
Covers English Literature from death of Elizabeth to 1660; examines work of such poets as Donne, Jonson, Herbert, and Marvell, and such prose stylists as Bacon, Burton, and Browne.

- EN 370 MILTON 3 cr.
Consists of a close reading of English poems of John Milton, with particular attention to *Paradise Lost* and *Samson Agonistes*.
- EN 371 THE ENGLISH BIBLE AS LITERATURE 3 cr.
Considers literary aspects of English Bible by relating earlier translations to the Authorized Version of 1611 and by tracing some of the major influences of King James Bible upon writers and speakers of modern English.
- EN 373 RESTORATION & 18th CENTURY DRAMA 3 cr.
Emphasizing critical theory and social implication of English drama from 1660-1780, concentrates on great comedies of manners of Etherege, Congreve, Wycherly, and Sheridan.
- EN 375 THE AUGUSTANS 3 cr.
Examines in some detail the major poems of Dryden and Pope, major prose of Swift, Addison and Steele, and selected works of a few minor writers.
- EN 376 THE AGE OF JOHNSON 3 cr.
Emphasizes art and criticism of Samuel Johnson, as revealed in his writings and Boswell's *Life*.
- EN 377 RISE OF THE ENGLISH NOVEL 3 cr.
Surveys development of English novel from its forerunners through fiction of Gothic romanticists and Jane Austen.
- EN 379 THE ROMANTIC MOVEMENT 3 cr.
Examines basic tenets of Romantic philosophy in major writings of period from 1780-1832 – poetry, the essay, and fiction.
- EN 380 VICTORIAN LITERATURE 3 cr.
Examines essays, novels, and poetry of second half of nineteenth century, with special consideration of criticism they offer of political, economic, social, and religious practices and creeds of Victorian England.
- EN 381 NINETEENTH CENTURY ENGLISH NOVEL 3 cr.
Traces historical and technical development of novel from Scott to Hardy.
- EN 383 THE ENGLISH NOVEL CONRAD TO THE PRESENT 3 cr.
Covers important twentieth century novels – including works by Conrad, Lawrence and Joyce – from about 1900 to recent times.
- EN 385 THE ENGLISH ESSAYISTS 3 cr.
Considers major essayists, both as members of and influences on society of their time.
- EN 390 LITERARY TOUR: BRITAIN 3 cr. or 6 cr.
Offered each summer, either for three weeks during Pre-Session or for six weeks during Main Session. Visits London, Stratford, and Cambridge or Oxford, as well as other places important in English literature.
- EN 480 SEMINAR: STUDIES IN ENGLISH & AMERICAN LITERATURE 3 cr.
A seminar in English or American literature, the special topic to be chosen by the instructor. Open to junior and senior English majors.
- EN 481 SPECIAL TOPICS 2 cr.
These courses vary from semester to semester, covering such diverse topics as autobiography, science fiction, folklore, the political novel, black theater, etc.
- EN 482 INDEPENDENT STUDY 1-6 cr.
Opportunities for independent study that goes beyond the usual classroom activities. Approval of department chairman required.
- EN 483 FIELD EXPERIENCE 3-6 cr.
Opportunities to work outside the classroom in such areas as journalism, theater, linguistics, etc.
- ED 452 TEACHING OF ENGLISH & SPEECH IN THE SECONDARY SCHOOL 3 cr.
Prerequisite: EN 330.
This course is in turn a prerequisite to student teaching in English. Introduces student to current professional practices in the teaching of English in high school.



FOREIGN LANGUAGES

Foreign language study is offered by two departments: the Department of German and Russian Languages and the Department of Romance and Classical Languages. Available are majors in French, German, Latin, Russian, and Spanish, as well as elementary and intermediate Greek.

Those who major in one of these languages will acquire an active skill in all phases of that language, will enter more deeply into its history, culture, and literature, and will gain some knowledge of its linguistic development throughout the centuries. Students who specialize in a language are destined for careers in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students who choose the secondary schools for their careers as teachers will find the close supervision and advanced methodology offered by the departments a distinct asset. Students also may elect to do further graduate work in their language, thereby preparing themselves for a career in college teaching or enhancing their high school teaching careers.

Degrees offered are the Bachelor of Arts in the selected language, the Bachelor of Science in Education in the selected language, and the Master of Education and Master of Arts in Spanish. In addition to major concentrations, an 18-credit sequence may be chosen for the area of concentration required for a degree in Elementary Education, or a 21-credit sequence to satisfy the requirements for a minor. Both Arts and Sciences and Education students in Romance and Classical Languages are required to take HI 101-102, History of Civilization I, II.

GENERAL EDUCATION LANGUAGE REQUIREMENTS

Students in the School of Arts and Sciences, who must pass a second year language course (FL 251 and 252) as one of the School's requirements for graduation, may choose any one of the six languages offered. The six credits for these courses are part of the General Education requirement. The student with no previous foreign language study will take FL 151-152 (three credits each) as prerequisites; the credits will not be applicable to any School or department requirements, but may be counted as free electives in the total required for graduation. Generally, the student should program in accordance with previous school or practical background according to the schedule:

- 1 year of high school, or equivalent, equals FL 151
- 2 years of high school, or equivalent, equals FL 152
- 3 years of high school, or equivalent, equals FL 251
- 4 years of high school, or equivalent, equals FL 252

Individual placement may be requested by the student, in which case the pertinent factors regarding preparation will be weighed by the department, with the student's individual requirements and the judgment of classroom instructors also being considered.

CURRICULA

Core Program

Basic requirements for all majors and minors in any foreign language are credits for Foreign Language I and II (FL 151

and 152) and Oral Practice I and II (FL 051 and 052). For students wishing to major in Latin, Greek 151 and 152 are substituted for FL 051 and 052. These credits may be obtained by course work at the University, or by advanced placement owing to previous high school or other work in the language or special examination.

B.A. in the Specified Language

The requirement for the degree of Bachelor of Arts in the specified language is 36 credits in the chosen language above the first year level, as follows:

Foreign Language

FL 251-252 – Language III and IV	6 credits
FL 053-054 – Oral Practice*	4 credits
FL 351-352 – Advanced Language I and II	6 credits
FL 055-056 – Advanced Oral Practice I and II*	2 credits
FL 361-362 – Development of Culture and Literature I and II**	6 credits
FL Electives	12 credits

*Students majoring in Latin will replace FL 053 and 054 with Greek 251 and 252 and omit the FL 055 and 056 requirement.

**Students majoring in Spanish may select the sequence 361-362 or 363-364. Upon completion of either sequence, either course from the other sequence may be selected.

The language major who takes first year courses FL 151-152 should take FL 051-052 concurrently.

B. S. in Education (Foreign Language Major)

The requirement for the degree of Bachelor of Science in

Education with a foreign language major is a minimum of 33 credits in the major language above the first year level and, in addition, three credits in the Teaching of Foreign Language in the Secondary School (ED 453), for a total of 36 credits. Also, a proficiency examination in the major language chosen and a semester of supervised student teaching is necessary before certification is granted.

Foreign Language

FL 251-252 – Language III and IV	6 credits
FL 053-054 – Oral Practice*	4 credits
FL 351-352 – Advanced Language I and II	6 credits
FL 055-056 – Advanced Oral Practice I and II**	2 credits
FL 361-362 – Development of Culture and Literature I and II**	6 credits
FL Electives	9 credits

*Students majoring in Latin will replace FL 053 and 054 with Greek 251 and 252 and omit the FL 055 and 056 requirement.

**Students majoring in Spanish may select the sequence 361-362 or 363-364. Upon completion of either sequence, either course from the other sequence may be selected.

Education

ED 453 – Teaching of Foreign Language in the Secondary School	3 credits
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An Education language major may be certified in a second language, if he wishes, by taking the following sequence:

FL 251-252	6 credits
FL 053-054*	4 credits
FL 351-352	6 credits
FL 055-056*	2 credits

FL 361-362	6 credits
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A student in Elementary Education may elect a concentration of 18 hours of a foreign language, consisting of the following:

FL 251-252	6 credits
FL 053-054*	4 credits
FL 351-352	6 credits
FL 055-056*	2 credits

*Students majoring in Latin will replace FL 053 and 054 with Greek 251 and 252 and omit the FL 055 and 056 requirement.

Minor in Foreign Language

A minor in a foreign language consists of 21 credits, as follows:

FL 251-252	6 credits
FL 053-054*	4 credits
FL 351-352	6 credits
FL 055-056*	2 credits
FL 361	3 credits

*Students majoring in Latin will replace FL 053 and 054 with Greek 251 and 252 and omit the FL 055 and 056 requirement.

DEPARTMENT OF GERMAN AND RUSSIAN LANGUAGES

**KENNETH W. BRODE, CHAIRMAN; FRIES, KUNKLE, OMRCANIN,
ROFFMAN, SOMMER, VOELKER, WILLIAMS**

COURSE DESCRIPTIONS

German and Russian Courses

GM 151-152 GERMAN I AND II 3 cr. each
RU 151-152 RUSSIAN I AND II

Designed for beginning student who will complete a two semester course only. Basic syntax and simple, functional vocabulary stressed, using texts containing reading materials based on culture of language areas involved.

GM 051-052 ORAL PRACTICE I AND II 2 cr. each
RU 051-052 ORAL PRACTICE I AND II

Using lab approach and lab-type class paralleling above courses; stresses pattern drills, phonetics, exact pronunciation, and oral composition.

GM 251-252 GERMAN III AND IV 3 cr. each
RU 251-252 RUSSIAN III AND IV

Designed primarily for students with one year of college or two-three years of high school (or equivalent) background. Course reviews grammar, utilizing texts based on a cultural approach to study of a people and their language.

GM 053-054 ORAL PRACTICE III AND IV 2 cr. each
RU 053-054 ORAL PRACTICE III AND IV

Taken by majors to continue the development of previous skills, these courses parallel 251 and 252.

Elective Courses in German

GM 253 INTERMEDIATE COMPOSITION 3 cr.
AND CONVERSATION

Usually reserved for main summer session, requires a minimum of

one year of college German, represents an intensive approach.

GM 256 SCIENTIFIC GERMAN 3 cr.
Designed to substitute for German 252, will be offered in the second semester. Primarily for science majors, it may be taken as an elective by German majors.

GM 351-352 ADVANCED GERMAN LANGUAGE 3 cr. each
I AND II

Reviews and supplements the skills derived from earlier courses, taught in German using single language texts, hence preparing student for future studies in grammar and stylistics.

GM 055-056 ADVANCED ORAL PRACTICE 1 cr. each
Relatively informal courses, supplementing preceding sequence. Designed to increase speaking ability, the courses involve discussions of cultural differences between countries. The largely unstructured approach permits repeating of these courses.

GM 361-362 DEVELOPMENT OF GERMAN 3 cr. each
CULTURE AND LITERATURE

Examines historical and cultural aspects of countries involved, reviews their characteristic contributions throughout the centuries, and analyzes relationship of each literary movement to age that produced it.

GM 363-364 INTRODUCTION TO GERMAN 3 cr. each
LITERATURE I AND II

Selected readings in German poetry, drama, and fiction, to acquaint student with some techniques for intelligent understanding and formal criticism of works of literature.

GM 367 NINETEENTH CENTURY 3 cr.
GERMAN LITERATURE

GM 368 TWENTIETH CENTURY 3 cr.
GERMAN LITERATURE

GM 369 CONTEMPORARY GERMAN 3 cr.
LITERATURE

GM 370-371	THE AGE OF GOETHE I AND II	3-6 cr.	
GM 381	GERMAN DRAMA IN ENGLISH TRANSLATION	3 cr.	
	Representative works of major dramatists studied in English translation. Primarily intended for students of English literature, comparative literature, and not considered as credit toward a German major.		
GM 480-489	SPECIAL TOPICS IN GERMAN LANGUAGE OR LITERATURE	1-3 cr.	
	Devoted to a special aspect of German language or literature. May be arranged for individual or group study. Permission of Department required.		
GM 391	SPECIAL PROJECTS IN GERMAN LITERATURE	1-3 cr.	
	Devoted to a special aspect or figure of German literature, this semester-type course may be arranged on an individual or group basis.		
ED 453	TEACHING OF FOREIGN LANGUAGE IN THE SECONDARY SCHOOL	3 cr.	
	Prerequisite: Successful completion of the sequence 351-352 and 055-056 in the student's major language; passing a language proficiency examination, or permission of instructor.		
Elective Courses in Russian			
RU 351-352	ADVANCED RUSSIAN LANGUAGE I AND II	3 cr. each	
	Conducted entirely in Russian for students with two years of college Russian, advanced grammar, composition, reading, and oral self-expression on a variety of topics.		
RU 055-056	ADVANCED ORAL PRACTICE I AND II	1 cr. each	
	For students with two years of college Russian, advanced oral expression on readings, current events and more abstract themes.		
RU 361-362	DEVELOPMENT OF RUSSIAN CULTURE AND LITERATURE I AND II	3 cr. each	
	Readings, discussions and lectures in Russian on the course of Russian civilization; open to students with two years of college Russian or equivalent.		
RU 367-368	NINETEENTH CENTURY RUSSIAN LITERATURE I AND II	3-6 cr.	
	Reading selections from masterpieces of 19th century Russian fiction; reports, discussions, compositions, and analysis of language; conducted entirely in Russian.		
RU 369-370	TWENTIETH CENTURY RUSSIAN LITERATURE	3-6 cr.	
	Analysis of contemporary Russian language as used by various Soviet writers in fiction and periodical literature; conducted entirely in Russian. Students will do independent reading of Soviet novels in English.		
RU 371	RUSSIAN POETRY	3 cr.	
	Reading of selected lyric poets of 19th and 20th centuries, with particular emphasis on development of modern Russian; conducted entirely in Russian.		
RU 372	RUSSIAN DRAMA	3 cr.	
	Reading and listening to selected plays of 19th and 20th centuries in an attempt to understand and master the idiom of conversational Russian, conducted entirely in Russian.		
RU 480-489	SPECIAL TOPICS IN RUSSIAN LANGUAGE OR LITERATURE	1-3 cr.	
	Devoted to a special aspect of Russian language or literature. May be arranged for individual or group study. Permission of department required.		

DEPARTMENT OF ROMANCE AND CLASSICAL LANGUAGES

LUDO OP DE BEECK, CHAIRMAN; CARRANZA, DRESCHER,
FAUST, FISEL, A. M. GUARDIOLA, A. P. GUARDIOLA, HENRY,
ISAR, JONES, LANDIS, LISCINSKY, LOZADA, MENDIZABAL,
MILTZ, PHILLIPS, SHIELDS, SORENTO, SPIEKER, WHITMER.

COURSE DESCRIPTIONS

French, Greek, Latin and Spanish Courses

FR 151-152	FRENCH I AND II	3 cr. each
GR 151-152	GREEK I AND II	3 cr. each
LA 151-152	LATIN I AND II	3 cr. each
SP 151-152	SPANISH I AND II	3 cr. each

For beginning student; fulfills requirement for a two-semester course; pronunciation, reading, oral and written communication are objectives. Majors should take 051-052 concurrently with 151 and 152.

FR 051-052	ORAL PRACTICE I AND II	2 cr. each
SP 051-052	ORAL PRACTICE III AND IV	2 cr. each

Stresses pronunciation and automatic response through constant basic drill. Two hours weekly oral practice in small groups.

FR 251-252	FRENCH III AND IV	3 cr. each
GR 251-252	GREEK III AND IV	3 cr. each
LA 251-252	LATIN III AND IV	3 cr. each
SP 251-252	SPANISH III AND IV	3 cr. each

Prerequisite: A 151-152 sequence or the equivalent.

Continues training in basic skills stated above, with addition of study of authors and cultural materials. Majors should take 053-054 concurrently.

FR 053-054	ORAL PRACTICE III AND IV	2 cr. each
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SP 053-054 ORAL PRACTICE III AND IV 2 cr. each
Continuation of 051-052, and carries the oral skills to a higher level. Must be taken concurrently with sequence 251-252.

FR 351-352 ADVANCED FRENCH LANGUAGE 3 cr. each
I AND II

LA 351-352 ADVANCED LATIN LANGUAGE 3 cr. each
I AND II

SP 351-352 ADVANCED SPANISH LANGUAGE 3 cr. each
I AND II

Reviews grammar in depth and presents a systematic analysis of structure of language; frequent original themes required.

FR 055-056 ADVANCED ORAL PRACTICE 1 cr. each
I AND II

SP 055-056 ADVANCED ORAL PRACTICE 1 cr. each
I AND II

Informal advanced conversation courses which the language major must take concurrently with 351-352. Class meets twice weekly.

SP 361-362 DEVELOPMENT OF SPANISH 3 cr. each
CULTURE AND LITERATURE
I AND II

FR 361-362 DEVELOPMENT OF FRENCH 3 cr. each
CULTURE AND LITERATURE
I AND II

SP 363-364 DEVELOPMENT OF SPANISH- 3 cr. each
AMERICAN CULTURE AND
LITERATURE I AND II

Examines historical and cultural aspects of countries involved, reviews their characteristic contributions over the centuries, and analyzes relationship of each literary school to moment which produced it.

Elective Courses in French

FR 253	INTERMEDIATE COMPOSITION AND CONVERSATION	3 cr
	Prerequisite: One year of college French. Given according to demand and staff availability.	
FR 254	COMMERCIAL FRENCH	3 cr.
	Prerequisite: FR 251 or equivalent. Commercial letter writing, use of technical language, survey of special business practices and methods of French-speaking commercial systems and problems of translation are studied.	
FR 363	MEDIEVAL AND RENAISSANCE LITERATURE	3 cr.
FR 365	SEVENTEENTH CENTURY FRENCH LITERATURE	3 cr.
FR 366	EIGHTEENTH CENTURY FRENCH LITERATURE	3 cr.
FR 367	NINETEENTH CENTURY FRENCH LITERATURE	3 cr.
FR 368	TWENTIETH CENTURY FRENCH LITERATURE	3 cr.
	Designed to present general surveys of literature of respective periods, with due consideration to social factors and events behind them.	
FR 371	THE FRENCH NOVEL	3 cr.
	Elective survey of the origin and development of French Novel. A selected list of works representative of major forms are read in their entirety.	
FR 372	STUDIES IN CONTEMPORARY FRENCH LITERATURE	3 cr.
	Content of this course will vary in accordance with needs and interests of those who elect it.	

FR 461	STRUCTURES OF FRENCH AND ENGLISH	3 cr.
	Modern methods of linguistic analysis applied to a study of French syntax; transformational, distributional and traditional models serve to explain mechanisms of the language with a pedagogical intent.	
FR 482	INDEPENDENT STUDY	1-3 cr.

Elective Courses in Latin

LA 361	DEVELOPMENT OF ROMAN CULTURE AND LITERATURE	3 cr.
LA 362	LATIN CONVERSATION AND COMPOSITION	3 cr.
	Aims at the ability to speak Latin on a conversational level and to write grammatically correct Latin prose.	
LA 371-372	SURVEY OF LATIN LITERATURE I AND II	3 cr.
	This course sequence will give a comprehensive view of Latin literature from Ennius to the Middle Ages.	

Elective Courses in Spanish

SP 253	INTERMEDIATE COMPOSITION AND CONVERSATION	3 cr.
	Prerequisite: One year college Spanish. Given according to demand and staff availability.	
SP 254	COMMERCIAL SPANISH	3 cr.
	Prerequisite: SP 251 or equivalent. Practice with letter writing, technical business terms, and methods of translation.	
SP 365	SPANISH LITERATURE BEFORE 1650	3 cr.

- SP 367 NINETEENTH CENTURY SPANISH LITERATURE 3 cr
SP 368 TWENTIETH CENTURY SPANISH LITERATURE 3 cr.

Present general surveys of literature of respective periods, with due consideration to social factors and events behind them.

- SP 370 GOLDEN AGE DRAMA 3 cr
Traces the development of Spanish theater and examines its artistic and spiritual flowering in Baroque period.

- SP 371 THE SPANISH NOVEL 3 cr
After a brief survey of origins and trends of the Spanish novel, major stress is given to the Nineteenth Century Novel and the Generation of 98.

- SP 376 SPANISH-AMERICAN LITERATURE 3 cr
Following a consideration of the salient tendencies of Spanish-American Literature, this course may take the form of a comprehensive survey, or it may concentrate its attention upon the novel of social thesis.

- SP 390 SPANISH IN THE ELEMENTARY SCHOOL 3 cr.
Prerequisite: Spanish 251 252 or equivalent.
The prospective teacher of Spanish on the elementary level is introduced to materials suitable for Grades 1 through 6. Preparation of games, songs, poems, and story telling included.

- SP 480 BUENOS AIRES SEMINAR 3 cr.
SP 481 SPECIAL TOPIC 3 cr.
Designed to meet special needs of a student group.

- SP 482 INDEPENDENT STUDY 1-3 cr.

Linguistics

- FL 421 LANGUAGE AND SOCIETY 3 cr.
The student considers salient facts of language and its role in

society and culture. Language families, linguistic change, and reciprocal influences of culture and language are presented.

Education

- ED 453 TEACHING OF FOREIGN LANGUAGES IN THE SECONDARY SCHOOL 3 cr

Prerequisite: Successful completion of 351-352 and 055-056 in the student's major language, passage of a language proficiency examination or permission of the instructor.

Methods and material for secondary school teaching, current theories and techniques, and illustrative units are studied. One period per week spent in study of the use of the language laboratory.



GEOGRAPHY AND REGIONAL PLANNING DEPARTMENT

**THOMAS G. GAULT, CHAIRMAN; BALLAS, BASILE, CHAMBERS,
HEIDEN, KULKARNI, MILLER, PAYNE, SHIREY, TEPPER,
WEBER, WINSLOW, WOOD, ZACUR.**

The function and purpose of geography is to prepare the future citizen to make rational judgments in his private and public life as it relates to the use of natural and cultural resources. Geography also acts as a meaningful integrator of the many subject-matter areas taken by the student.

Though geography is listed as social science in Arts and Sciences curricula, it is of broader scope. Geography includes physical geography (earth science), cultural geography, economic geography, urban and regional planning, or combines these for a broad understanding of man in his total environment.

Vocational opportunities in Geography and Regional Planning are good. Students will find a wide variety of positions in government service, marketing, urban and regional planning, armed forces map services, editorial positions and business.

Three programs for a major are offered by the department: (1) the Bachelor of Science in Regional Planning, (2) the Bachelor of Arts in Geography (Physical, Regional, Urban, or Cultural-Economic), and (3) the Bachelor of Science in Education with a major in Social Sciences, concentrating on

Geography. The first two degree programs are under the School of Arts and Sciences, and the third is under the School of Education.

CURRICULA

Bachelors Degree Programs in Geography or Regional Planning

A student desiring a Bachelors degree may elect either of two programs: Geography (specializing in Cultural-Economic Geography, Physical Geography, Urban Geography and Planning, or Regional Geography); or Regional Planning.

In either case, requirements for the major are 36 credits of which 15 credits must be taken as follows:

Core Program for Bachelor's Degree (Arts & Sciences)

GE 149 Economic Geography	3 cr.
GE 154 Cultural Geography	3 cr.
GE 240 Climatology I	3 cr.
GE 246 Physiography	3 cr.
GE 491 Geography Thought and Philosophy	3 cr.

Also, all majors are required to make one extended field trip and attend one professional conference. A fee of \$10.00 is charged each semester to apply toward the field trip cost (total \$40.00).

B. A. Degree in Geography

In addition to the 15 Geography credits required in the Core Program, 21 more credits must be elected in Geography, including GE 251 — Geography of United States and Canada.

It is suggested that the student concentrate his electives as grouped for a specialization as shown in the section on Course Descriptions.

B. S. Degree in Regional Planning

This is a professional program for Regional or Urban Planning employment. In addition to the 15 credits required in the Bachelors Core Program, 21 more credits are required, as follows:

GE 255 or 490	Cartography or Map and Photo Interpretation	3 cr.
GE 455	Historical Geography of Cities and City Planning	3 cr.
GE 456	General City Planning	3 cr.
GE 457	Urban Design	3 cr.
GE 458	Urban Planning Basic Studies and Analysis	3 cr.
GE 355	Elective Urban Geography	3 cr.

In addition a 21 s.h. Interdisciplinary minor is required. An optional Internship in Planning for 12 s.h. may be elected with faculty approval.

B. S. in Education (Geography Concentrate)

Requirements for the degree of Bachelor of Science in Education with a major in Social Sciences, concentrating on Geography are a minimum of 15 credits in Geography as follows (department recommends 24 s.h. in the concentration):

GE 101	World Geography	3 cr.
GE 149	Economic Geography	3 cr.
	or	
GE 355	Urban Geography	3 cr.
GE 240	Climatology	3 cr.
	or	
GE 246	Physiography	3 cr.
GE 251	Geography of United States and Canada	3 cr.
	Regional Geography Electives	6 cr.
	Geography Electives	6 cr.

NOTE: GE 101 helps to fulfill the University's General Education requirement. Also, all concentrates are required to make one extended field trip and attend one professional conference. A fee of \$10.00 is charged each semester until the total amount of \$40.00 is paid to cover the field trip cost.

Minor in Geography

A minor consists of 15 credits of Geography course work, including that taken as General Education. Although a

student may elect any combination of the courses listed below, the Department encourages one of the following concentrations: (1) Core Program for Arts and Sciences (suggested for those anticipating graduate work in geography); (2) Physical Geography (suggested for Geo-Science majors); (3) Regional Geography; (4) Cultural-Economic Geography (suggested for Business, Economics, or Sociology majors); or (5) Urban Geography and Urban/Regional Planning (suggested for Sociology, Economics, or Political Science majors).



Minor in Regional Planning

A minor consists of 21 s.h. course work as follows:

GE 255	Cartography OR	
GE 490	Map and Photo Interpretation	3 cr.
GE 355	Urban Geography	3 cr.
GE 455	Historical Geography of Cities and City Planning	3 cr.
GE 456	General City Planning	3 cr.
GE 457	Urban Design	3 cr.
GE 458	Urban Planning Basic Studies and Analysis	3 cr.
GE Elective		3 cr.

Minors having completed 456, 457, and 458 may apply for Internship.

COURSE DESCRIPTIONS

Cultural – Economic Geography

GE 101	WORLD GEOGRAPHY	3 cr.
	Understanding and appreciation of man's interrelationship with the earth, accomplished through study of physical, cultural, economic, and demographic factors.	
GE 149	ECONOMIC GEOGRAPHY	3 cr.
	Designed to promote geographic and economic concepts, methods, and skills pertinent to understanding of spatial variation of production, consumption, and exchange over the earth's surface.	
GE 154	CULTURAL GEOGRAPHY	3 cr.
	May be taken in lieu of GE 101. Course considers relationship of	

various ethnic and racial groups in natural environment. Student is acquainted with theory, philosophy, and literature of cultural geography and related disciplines.

GE 253 GEOGRAPHY AND SOCIETY 3 cr.

Prerequisite: 3 cr. GE
 Designed for elementary and secondary school social studies teachers. Conceptual, analytical, and applied approaches used to help students understand migration, urbanization, biophysical relationships, social inequality, interdependencies, the sociological organization of knowledge.

GE 254 GEOGRAPHIC INFLUENCES IN HISTORY 3 cr.

Prerequisite: 3 cr. GE
 Studies that attempt to identify environmental factors that influence development in different parts of the world. Countries with different environments selected. Study.

GE 251 TRADE AND TRANSPORTATION 3 cr.

Emphasis on analysis, theory, and application techniques. Treatment includes trade patterns, supply and demand, trade cost models, and international trade theory. Includes international trade concepts.

GE 252 POLITICAL GEOGRAPHY 3 cr.

Prerequisites: 6 cr. GE and 6 cr. Social Science or permission. Consideration of political and administrative systems analysis, political geography, international and regional and political geography of the United States.

GE 255 REGIONAL FIELD STUDIES 3 cr.

Prerequisite: 12 cr. GE
 Theoretical, which involves the study of selected geographical phenomena, and fieldwork, which includes arrangements for fieldwork, such as the design of the fieldwork plan.

GE 257 SPECIAL TOPICS IN GEOGRAPHY 3 cr.

Prerequisites: 6 cr. GE and 6 cr. Social Science
 Study of a current geographic problem, of interest to the instructor.

Study will fieldwork, which involves the design of the fieldwork plan, and fieldwork, which includes arrangements for fieldwork, such as the design of the fieldwork plan.

GE 482-483 INDEPENDENT STUDY 3 cr.

Prerequisite: 18 cr. GE and 10 GPA in GE
 Independent research under faculty direction and approval.

GE 491 GEOGRAPHY THOUGHT AND PHILOSOPHY 3 cr.

Prerequisite: 12 cr. GE.
 Seminar, required, limited to junior or senior geography majors. Seminar in faculty of the discipline, dealing with theoretical and unresolved issues.

Physical Geography

GE 153 PHYSICAL GEOGRAPHY 3 cr.

Introduces natural factors of landscape, weather, climate, rocks, minerals, structure of earth's crust, and geomorphology. Includes maps, aerial photographs.

GE 240 CLIMATOLOGY I 3 cr.

Studies elements of weather and climate and their earth understanding and application to earth understanding. Fall or Spring semester only.

GE 241 CLIMATOLOGY II 3 cr.

Prerequisite: GE 240 or Meteorology
 Physical aspects of climate, temperature, humidity, wind, cloud formation, precipitation, and other atmospheric phenomena.

GE 246 HYDROGRAPHY 3 cr.

Study of the hydrological cycle, water resources, and the impact of human activities on the hydrological cycle. Includes fieldwork and laboratory exercises.

GE 252 GEOGRAPHY OF PENNSYLVANIA 2 cr.
Studies internal and external relationships to gain insight into various regions of the state and Pennsylvania's world relationships.

GE 256 GEOGRAPHY OF EUROPE 3 cr.
Investigates relationships underlying land use, dominant international problems, boundary disputes and regional complexes of European continent.

GE 257 GEOGRAPHY OF U.S.S.R. 3 cr.
Special emphasis upon major geographic regions of the Soviet Union; natural resources, cultural patterns, population — both numbers and distribution, strategic areas and related geopolitical problems studied.

GE 261 GEOGRAPHY OF EAST ASIA 3 cr.
Studies Korea, Manchuria, Outer Mongolia, Japan, and China, as well as geographic background for planning solutions for raising standards of living, for wise use and restoration of natural resources, and industrialization.

GE 262 GEOGRAPHY OF SOUTH AND SOUTHEAST ASIA 3 cr.
Studies India, Pakistan, Indochina, Ceylon, Burma, Thailand, and Indonesia with special attention to regional similarities and differences, particularly as they pertain to human adjustment.

GE 263 GEOGRAPHY OF NORTH AFRICA AND SOUTHWEST ASIA 3 cr.
Study of Sahara Desert, Turko-Arabian peninsulas and Afghanistan, emphasizing the critical problems of water supply, land use, over-population, industrialization, resources and relationships of these countries to other countries.

GE 271 GEOGRAPHY OF SOUTH AMERICA 3 cr.
Studies South America, with special emphasis on regional differences and similarities; stresses foreign relations, especially with the United States. The unique problems of South America, with special attention to tropical land use, are considered.

GE 281 GEOGRAPHY OF AFRICA, SOUTH OF SAHARA 3 cr.
A systematic study of the physical, cultural, and historical geography, followed by studies of major regions and nations of Africa, emphasizing political, cultural, and economic factors in the development of that continent.

Education

ED 455 TEACHING OF SOCIAL SCIENCE IN SECONDARY SCHOOLS 3 cr.
Study of modern methods and techniques for teaching Social Science and of current curricula in Social Science.



GEOSCIENCE DEPARTMENT

**WALTER H. GRANATA, JR., CHAIRMAN; CLARK, HALL, PARK,
PRINCE, C. SUTTON**

The Geoscience Department provides curricula in areas of natural science dealing with and related to the earth and its environment by offering courses in astronomy, geology, meteorology, and oceanography.

In addition to on-campus instruction, opportunities exist for summer course work and research in geology and oceanography at the Marine Science Consortium located at Lewes, Delaware, and Wallops Island, Virginia. (See page 124.) Marine Science courses are described on pages 124–125.

Degrees offered by the Geoscience Department are the Bachelor of Science in Geology, the Bachelor of Arts in Geology, the Bachelor of Science in Geoscience, and the Bachelor of Science in Education with a major in Earth and Space Science or with a major in General Science. The first three degree programs are under the School of Arts and Sciences, and the last two are under the School of Education.

CURRICULA

The program leading to the Bachelor of Science degree in Geology is designed for students who are interested in pursuing their education beyond the level of the baccalaureate degree. Many professional careers in geology and associ-

ated geosciences require graduate school training, so the B.S. program in Geology is designed to provide the background necessary for admission to a graduate school.

The program leading to the Bachelor of Arts degree in Geology is designed to equip geology majors with the background necessary for obtaining certain positions as professional geologists, upon graduation. Qualified holders of the B.A. degree in Geology may anticipate careers in urban geology, engineering geology, and certain phases of economic geology, dealing with both the exploration for and the exploitation of natural resources.

The program leading to the Bachelor of Science in Geoscience is offered for the student desiring to pursue graduate work in astronomy, meteorology, or oceanography. The objective of the department is to plan a program that will provide the student with a strong background of mathematics and science courses so that he or she may confidently approach graduate studies in the area of his choice. Each individual program is closely supervised by a faculty member aware of graduate school demands and the student's goal.

The department recognizes as one of its functions the role of serving the field of public education by the preparation of qualified and certified teachers of earth and space science. Also, because of the interdisciplinary nature of both the department and the requirements for preparing general science teachers, the department administers the program designed to lead to general science certification and includes majors of that category as department members.

Minor in Geology

The minor in geology consists of 15 semester hours of geology. General Geology I and II are required. The remaining 7 hours of geology may be selected by the student. It is recognized that the anthropology student minoring in geology would benefit from courses differing in content from those benefiting students who, for example, are majoring in Urban Planning. The department staff members will be happy to consult with students concerning their special needs.

DEGREE PROGRAMS

B. S. in Geology

The departmental requirements for the Degree of Bachelor of Science in Geology are as follows:

Geology	30 cr.
Allied Geoscience	3 cr.
Math	
Calculus I	4 cr.
Calculus II or Probability & Statistics	3-4 cr.
Chemistry and Physics	16 cr.

B. A. in Geology

The departmental requirements for the degree of Bachelor of Arts in Geology are as follows:

Geology	36 cr.*
Math	
Calculus I	4 cr.
Physics and Chemistry	12 cr.

*Includes a summer field course of 5 cr.+

B. S. in Geoscience

The departmental requirements for the degree of Bachelor of Science in Geoscience are as follows:

Geoscience (Selected under advisor's supervision)	37-38 cr.
Math	
Calculus I and II	8 cr.
Biology	8 cr.
Chemistry	8 cr.
Physics	8 cr.

B. S. in Education (Earth and Space Science Major)

The departmental requirements for the degree of Bachelor of Science in Education with a major in Earth and Space Science are as follows, including 33 credits in Geoscience:

Astronomy	7 cr.
Geology	14 cr.
Meteorology	6 cr.
Oceanography	6 cr.
Math	
Calculus I	4 cr.
Biology	4 cr.
Chemistry	8 cr.
Physics	4 cr.

B. S. in Education (General Science Major)

A major in another science department may be certified in General Science if his program includes, or is supplemented with, the prescribed credits, as follows and 13 credits in Geoscience:

Astronomy	3 cr.
Geology	3-4 cr.
Geoscience Field course	3-4 cr.
Meteorology	3 cr.
Math	4 cr.
Biology	8 cr.
Chemistry	8 cr.
Physics	8 cr.
Science Elective	3 cr.

COURSE DESCRIPTIONS

GS 110 GENERAL ASTRONOMY 3 cr.
Specifically designed to introduce students to discipline of astronomy; emphasis placed on study of planets, space program, constellations, and Milky Way. Two hours lecture, one laboratory session or night observation per week. No science or math majors except those completing general science certification requirements.

GS 120 GEOLOGY OF PENNSYLVANIA 3 cr.
A general course dealing with basic geologic principles, using various geologic provinces and features of Pennsylvania as examples. For non-majors only. Two hours lecture, 3 hours lab per week.

GS 121 GENERAL GEOLOGY I 3 cr.
Introduction to science of earth; properties and processes of earth's interior and crust and their interaction with surface processes to shape and modify man's physical environment. Three hours lecture per week.

GS 122 GENERAL GEOLOGY II 3 cr.
Prerequisite: GS 121 or permission of instructor.
Introduction to history of earth, its physical changes and sequences of configuration, and record of biological evolution. Three hours of lecture per week.

GS 131 GENERAL GEOLOGY I LABORATORY 1 cr.
Should be taken concurrently but may follow GS 121.
Identification of common minerals and rocks; introduction to topographic and geologic maps, to land forms, and to geologic structures. Three hours lab per week, including field trips.

GS 132 GENERAL GEOLOGY II LABORATORY 1 cr.
Should be taken concurrently but may follow GS 122.
Selected problems in geologic map interpretation, paleontology, and stratigraphic rock sequences. Three hours lab per week, including field trips.

GS 213 NAVIGATION 3 cr.
Thorough grounding in meanings of terms used in navigation, in purposes and use of navigational instruments and publications and in theory and general methods of piloting, dead reckoning and electronic and celestial navigation. Two hours lecture, 2 hours lab per week.

GS 321 MINERALOGY 3 cr.
Prerequisite: GS 121 or Chem 111.
Concerned with properties of minerals, introduction to crystallography and chemistry of crystals, followed by a determination of minerals and their probable genesis. Two hours lecture, 3 hours lab per week.

- GS 322 PETROLOGY 3 cr
Prerequisite: GS 321.
Concerned with a description of rock character based upon mineral components and physical relationship between mineral components of a rock. Two hours lecture, 3 hours lab per week.
- GS 324 GLACIAL GEOLOGY 3 cr
Prerequisites: GS 121 and GS 122.
Study of origin and development of all features resulting from action of glaciers. Two hours lecture and a laboratory or field trip per week.
- GS 325 STRUCTURAL AND FIELD GEOLOGY I 3 cr
Prerequisite: GS 122.
Analysis of deformation structures and instruction on methods of obtaining and presenting structural information. Includes a geologic field mapping project, work with Brunton compass, aerial photographs, and structure sections. Two hours lecture, 3 hours lab per week.
- GS 326 STRUCTURAL AND FIELD GEOLOGY II 3 cr
Prerequisite: GS 325
Study of deformation structures including foliation, lineation, and causes of deformation (geotectonics). Includes work with stereographic projections, plane table and alidade. Two hours lecture, 3 hours lab per week.
- GS 327 GEOMORPHOLOGY 3 cr
Prerequisites: GS 121 and GS 122.
A study of the origin of the earth's land forms, including relationship of geologic structure to landform types and role of geomorphic processes in landscape development. Two hours lecture, 3 hours lab per week.
- GS 330 PALEONTOLOGY 3 cr
Prerequisite: GS 122 or permission of instructor
Study of the morphology, evolution, geologic significance and paleoecology of invertebrate fossils. Two hours lecture, 3 hours lab per week.
- GS 335 ECONOMIC GEOLOGY 3 cr
Prerequisite: GS 321
Deals with location and probable origin of fossil fuels, iron, the non-metals, and metallic ores, both ferrous and nonferrous. Two hours lecture, 3 hours lab per week.
- GS 341 SOLAR SYSTEM 3 cr
Prerequisite: Math 013 and Phys 111
Fundamentals of astronomy, with emphasis on observational methods, mechanics and origin of the solar system, and spatial relationship of the solar system to the other members of universe. Two hours lecture, 3 hours lab or night observation per week.
- GS 342 STELLAR ASTRONOMY 3 cr
Prerequisite: Math 013 and Phys 111.
Fundamentals of astronomy, with emphasis on stars, galaxies, the sidereal universe and use of spectroscopy for gathering astronomical data. Two hours lecture, 3 hours lab or night observation per week.
- GS 350 OPERATION OF THE PLANETARIUM 1 cr
Prerequisite: GS 341 and GS 342 or permission of instructor
Designed to acquaint the student with methods of operation and repair of a Spitz A-3-P planetarium. Content includes topics suitable for lectures to various age groups. Student will write and present a demonstration lesson.
- GS 361 OCEANOGRAPHY I 3 cr
Prerequisite: Physics I and Calculus I or permission of instructor
Introduction to physical, chemical, geological and biological nature of ocean, topography, submarine geology and bottom deposits. Two hours lecture, 3 hours lab per week.
- GS 362 OCEANOGRAPHY II 3 cr
Prerequisite: GS 361
A continuation of Oceanography I. Emphasis upon marine geology, coastal geomorphology, and structure and sedimentary environments of the continental shelf, slope and near basin.

GS 371 METEOROLOGY I 3 cr.

Prerequisite: One year of Physical Science or Physics.
Introduction to meteorological sciences; composition and structure of the atmosphere; radiation principles; elementary thermodynamics and heat balance. Two hours lecture, 3 hours lab per week.

GS 372 METEOROLOGY II 3 cr.

Prerequisite: GS 371 or permission of instructor.
Introduction to physical, dynamical and theoretical meteorology. Two hours lecture and 3 hours lab per week.

GS 421 SEDIMENTOLOGY AND STRATIGRAPHY I 3 cr.

Prerequisite: GS 321 or permission of instructor.
Study of sedimentary processes and of origin, interpretation, and identification of sedimentary rocks utilizing sieve analysis, hand lens, and petrographic microscope. Two hours lecture, 3 hours lab per week, and field trips.

GS 422 SEDIMENTOLOGY AND STRATIGRAPHY II

Prerequisite: GS 421 or permission of instructor.
Principles and processes involved in development and description of stratified rock sequences, principles and problems of correlation, and selected stratigraphic problems. Two hours lecture, 3 hours lab per week, and field trips.

GS 461 FIELD TECHNIQUE IN GEOSCIENCE 3 cr.

Instruction in methods employed in the field to obtain and interpret geologic information. Two hours lecture, 3 hours lab per week.

GS 480 GEOSCIENCE SEMINAR 1 cr.

For seniors majoring in some aspect of geoscience. The seminar: (1) provides student opportunity to prepare, formally present, and defend a scientific paper based either on his own research or on a topic chosen by him with the approval of instructor, (2) provides opportunity to discuss topics presented by other students, faculty, or guests.

GS 481 SPECIAL TOPICS 1-3 cr.

Prerequisite: Permission of instructor.
It is the department's intention to use this course to schedule extended field trips and for teaching special courses which will utilize the specialities of the geoscience faculty.

GS 488 PROBLEMS IN GEOSCIENCE 1-3 cr.

Selected problems in geoscience, investigated by upper level students. Credit may be determined by nature and scope of work undertaken. Pre-registration approval of instructor is required.

GS 489 RESEARCH IN GEOSCIENCE 1-4 cr.

A method of instituting and giving credit for supervised research on part of upper level students. Pre-registration approval of instructor is required.

NOTE: See Marine Science Consortium section for additional course listings.



HISTORY DEPARTMENT

CLYDE C. GELBACH, CHAIRMAN; CASHDOLLAR, CORD, FERGUSON, FRICKE, GOODRICH, HATFIELD, KADLUBOWSKI, KLEIN, LONDON, LEHMAN, MARCUS, MASTRO, MERVINE, MILLER, MOORE, OLIVER, RIFE, SAHLI, SMITH, VOGEL, WILEY, YACKUBOSKEY.

Programs in history are designed to give both those who major in history in the School of Arts and Sciences, and those who concentrate in history in the School of Education an opportunity to study in some depth the past story of man and his world. Degrees offered by the History Department are the Bachelor of Arts in History and the Bachelor of Science in Education with a major in Social Studies, concentrating in history. The first program is under the School of Arts and Sciences, and the second is under the School of Education.

The history student will find that his program is excellent preparation for government service, for pre-law training, for broad business opportunities, for work in varied fields of journalism, for archival positions, and for teaching. Not only the story of the people of the United States, but also that of other peoples is covered, in the belief that historical understanding is essential for the future of mankind.

CURRICULA

Requirements for the degree of Bachelor of Arts in History are 30 credits in history. Requirements for the degree of Bachelor of Science in Education with a major in Social Studies, concentrating on history, are a minimum of 15

credits in history within the 42 hours required for social science certification. The requirement for a minor in history is 15 credits. For all history programs, courses in history in General Education are applicable. Although there are no prerequisites to history courses, all programs should be planned with an advisor. Every major and concentrate in history will be advised by History Department staff members.

Admission to History 490 and 491, initiation in the local chapters of Phi Alpha Theta and Pi Gamma Mu, participation in study tours and study-abroad programs, and other activities should be investigated by every history student. The department is committed to the idea of a broad education.

COURSE DESCRIPTIONS

- | | | |
|--------|---|-------|
| HI 101 | HISTORY OF CIVILIZATION I | 3 cr. |
| | Survey course, presenting in various forms original and development of Western man's major political, social, economic, religious, and intellectual institutions to approximately 1600 A.D. | |
| HI 102 | HISTORY OF CIVILIZATION II | 3 cr. |
| | Survey of man's development from 1600 A.D. to present, in which economic, political, social, and intellectual trends are discussed, giving particular emphasis to nineteenth and twentieth centuries. | |
| HI 103 | HISTORY OF THE UNITED STATES AND PENNSYLVANIA I | 3 cr. |
| | Survey of American history from colonization to 1865, with attention to Pennsylvania, colonial foundations, emergence of Federal Union, political and social reform, and controversy over sectionalism and slavery. | |

- HI 104 HISTORY OF THE UNITED STATES AND PENNSYLVANIA II 3 cr.
Survey of history of the United States and Pennsylvania since 1865, with emphasis on major economic, political, and social trends and development of American culture. Also considered is role of America in world affairs.
- HI 200 INTRODUCTION TO HISTORY 3 cr.
For history majors, concentrates. Emphasis on philosophy of history, great historians, historical investigation and research. Course work designed to allow student to identify self with historical profession.
- HI 345 COLONIAL AMERICA 3 cr.
Survey of United States history to 1783, with special attention to economic, political, and social trends.
- HI 346 MIDDLE PERIOD OF THE UNITED STATES, 1783–1850 3 cr.
Survey of United States history from 1783 to 1850, with special attention to constitutional, political, economic, and social trends.
- HI 347 CIVIL WAR AND RECONSTRUCTION 3 cr.
Study of failure of American democracy to cope with issues of mid-nineteenth century, followed by political, economic, military, and social developments during War and reconciliation of North and South.
- HI 348 HISTORY OF THE UNITED STATES, 1876–1900 3 cr.
Stresses reaction of various segments of a heterogeneous population to rapid industrialization, urbanization, and corporatization of American life and emergence of U.S. as a world power; special attention to formation of new institutions.
- HI 349 U. S. URBAN HISTORY 3 cr.
A survey of American cities from their beginnings to present emphasizing relationship of urban history to social science theory, and stages and process of city development.
- HI 350 HISTORY OF LATIN AMERICA: COLONIAL PERIOD, 1450–1820 3 cr.
Study of life of people, Indian cultures, conquest by Spaniards and Portuguese, government during Colonial Period, and Wars of Independence.
- HI 351 HISTORY OF LATIN AMERICA: NATIONAL PERIOD, 1820–PRESENT 3 cr.
Study of history of nations which have emerged since independence; emphasis on economic, political, cultural, and social developments of these nations, as well as relationships of these nations to others in the Hemisphere.
- HI 352 HISTORY OF ENGLAND TO 1688 3 cr.
Survey of growth of English nation, with emphasis on political, social, and economic developments leading to 17th century conflict between Crown and Parliament.
- HI 353 HISTORY OF ENGLAND, 1688 TO PRESENT 3 cr.
Survey of growth of England as a democratic constitutional monarchy. Attention directed to industrial revolution, and to imperial expansion and England's role in 20th century world.
- HI 354 HISTORY OF RUSSIA 3 cr.
General survey of Russian history, culture, and institutions. Special consideration given to study of historical forces formative of Revolution of 1917.
- HI 355 HISTORY OF SOVIET RUSSIA 3 cr.
General survey of contemporary Soviet history, culture, and institutions. Special consideration given to study of communist theory and its place in current Russian historiography.
- HI 356 FRENCH REVOLUTION AND NAPOLEON 3 cr.
Brief sketch of medieval France and development of monarchy; concentration on Old Regime, Revolution, and Empire, with emphasis on politics, diplomacy, and economics, Readings and brief papers.

- HI 357 MODERN FRANCE 3 cr.
Investigation of political, cultural, economic, and social developments since 1815. Lectures, discussions, and papers.
- HI 358 HISTORY OF GERMANY TO 1848 3 cr.
Study of evolution of German nation from its prehistoric origins, emphasizing medieval and early modern phases, to 1848.
- HI 359 HISTORY OF GERMANY: 1849–1949 3 cr.
Study of development of modern Germany from Revolution of 1848, including imperial, republican, and totalitarian phases, to post-War formation of partitioned Germany.
- HI 361 CONTEMPORARY UNITED STATES HISTORY 3 cr.
Study of political, economic, and cultural changes in American life since 1929, examines roots of social problems facing us today. Some recent foreign policy trends also studied.
- HI 362 AMERICAN LABOR MOVEMENT 3 cr.
Investigation of growth of American labor movement from eighteenth century to the present; emphasis on the role of Knights of Labor, American Federation of Labor, Industrial Workers of the World and Congress of Industrial Organizations.
- HI 363 HISTORY OF AMERICAN FOREIGN RELATIONS, 1775–1900 3 cr.
Traces Foreign Relations of United States from Independence to emergence as a world power. Topics concentrate on themes of commercial relations, political isolation, expansion, and debate over imperialism.
- HI 364 HISTORY OF AMERICAN FOREIGN RELATIONS, 1900–PRESENT 3 cr.
Treats primarily our 20th century involvement in world affairs and domestic debate over that involvement. Special emphases will be placed on role of interest groups and increasing power of Executive Department over Foreign Affairs.
- HI 365 HISTORY OF PENNSYLVANIA 3 cr.
Emphasizes the cultural, economic, political, and social development of our state in its various periods from colonial to today. Special attention given to diversity of Pennsylvania's people, their institutions, and problems.
- HI 366 HISTORY OF THE ISLAMIC CIVILIZATION 3 cr.
An approach to learning about a non-Western culture: Muhammad, Arabs, Muslims as creators of a great civilization from rise of Islam to 1800; emphasis on cultural institutions and their inter-relationships within Middle East.
- HI 368 HISTORY OF THE UNITED STATES 1900–1929 3 cr.
Emphasis on political, social, economic, and diplomatic developments in American history between 1900 and 1929.
- HI 371 RENAISSANCE AND REFORMATION 3 cr.
History of Europe from c. 1250, rise of commercial city, Kings, and pressures on Christian Church to 1600. Some consideration of technology and voyages.
- HI 372 EARLY MODERN EUROPE 3 cr.
Greatness of France under Louis XIV, Sweden; Thirty Years' War. Emergence of modern society; French Revolution.
- HI 373 HISTORY OF EUROPE: 1815–1914 3 cr.
Study of Europe in nineteenth century, with emphasis on political, diplomatic, military, and economic affairs. Description of major European states in this century; topical consideration of such items as Imperialism, Nationalism, Socialism, and Industrial Revolution.
- HI 374 TWENTIETH CENTURY EUROPE 3 cr.
Political, economic, and diplomatic trends in Europe since 1900, with major emphasis on causes and results of war, and search for security.

- HI 375 HISTORY OF THE FAR EAST 3 cr.
History of China and Japan from ancient times. Buddhism, medieval Japan, Chinese Communism, industrialization. Some consideration of peripheral Asia from 1500.
- HI 376 HISTORY OF THE MODERN MIDDLE EAST 3 cr.
Survey of changes that have taken place in Middle East and in Islam since eighteenth century and of contemporary problems in that region.
- HI 377 HISTORY OF GREECE 3 cr.
Will analyze major political, social, and economic developments in ancient Greek civilization from Bronze Age to death of Alexander.
- HI 378 HISTORY OF ROME 3 cr.
Will trace Roman history from early Republic down to fall of Empire. Roman political theory will be particularly emphasized.
- HI 380 MEDIEVAL EUROPE I, 400—900 3 cr.
History of early Medieval Europe, from decline of Rome to beginnings of High Middle Ages; emphasis on political, social, economic, religious, and intellectual developments.
- HI 381 MEDIEVAL EUROPE II, 900—1350 3 cr.
History of late Medieval Europe, from High Middle Ages to Renaissance period; emphasis on political, social, economic, religious, and intellectual developments.
- HI 389 HISTORY OF WOMEN 3 cr.
Explores religious, legal, and political framework of women in society from ancient to modern times, including Eastern, Western and American experiences.
- HI 390 SOCIAL AND INTELLECTUAL HISTORY 3 cr.
OF THE UNITED STATES TO 1875
Selected topics in early American intellectual and cultural growth, with emphasis on Puritanism, Enlightenment, cultural nationalism, and Romantic Movement.
- HI 391 SOCIAL AND INTELLECTUAL HISTORY 3 cr.
OF THE UNITED STATES SINCE 1875
Selected treatment of historical development of modern American movements in social and political thought, religion, philosophy, fine arts, and literature.
- HI 392 ECONOMIC HISTORY OF THE 3 cr.
UNITED STATES
Historical development of economic institutions in American life since Independence; emphasis on farming, labor, transportation, banking and manufacturing.
- HI 393 HISTORY OF BLACK AMERICA 3 cr.
SINCE EMANCIPATION
Description and analysis of role of blacks in history of United States since the Civil War; emphasis on key leaders, major organizations, leading movements and crucial ideologies of blacks in modern America.
- HI 481 SPECIAL STUDIES IN HISTORY 3-6 cr.
- HI 482 HISTORY HONORS 3 cr.
Prerequisite: a B average in history courses, which must be maintained during honors program. Admission by invitation only, with approval of department chairman.
Independent reading and research for one semester under direction of a department member.
- HI 483 HISTORY HONORS 3 cr.
Extension of History 490; admission by invitation only, with the approval of department chairman.
- ED 455 TEACHING SOCIAL STUDIES 3 cr.
IN THE SECONDARY SCHOOL
Provides opportunity to develop understandings and competencies for teaching "new" social studies. Emphases include: learning objectives, content selection, inquiry-oriented strategies and materials, written plans for teaching, and evaluation of results of learning.

INTERNATIONAL STUDIES

Degree programs in International Studies are offered in both the School of Arts and Sciences (Bachelor of Arts) and the School of Education (Bachelor of Science in Education). Both degrees are interdisciplinary and, consequently, draw upon the faculty and course offerings of many other departments. The course selection is broad enough to prepare the student for any one of a great variety of career opportunities. The Bachelor of Arts program is designed for the specialist who is interested in a professional career; the Bachelor of Science in Education program for majors in Social Sciences is designed to certify the graduate to teach world cultures or any of the social sciences in the public schools.

CURRICULA

B. A. Program

Beyond the General Education courses required of all students in the University, the requirements for the degree of Bachelor of Arts in International Studies are as follows:

1. The student must build an interdisciplinary sequence of 15 hours taking an introductory or comparative international course from each of five social science disciplines. This selection depends upon the goal of the major and should be determined in consultation with his advisor and/or the Director of the Center for International Studies.
2. The student should complete a specialization sequence in

the economic and political systems of another culture which must include a study of language, literature, history and geography of that region. This specialization sequence must include at least 15 semester hours. Currently, three specializations are offered: Soviet Studies, The Far East, and Latin America. However, students interested in Africa or the Middle or Near East may elect interdisciplinary courses focusing on the developing nations. It is also possible to build a program centering on the Atlantic Community of Nations.

Specialization must include work in at least three disciplines. The student is expected to have completed the intermediate language sequence of the appropriate language in the General Education requirements, so that no credit towards specialization is given for language courses numbered below the 300 level.

Minor in International Studies

A minor in International Studies consists of meeting the requirements listed under (1) above. The curriculum of the Center for International Studies is flexible enough that the student can plan a program to match his interests.

B. S. in Education (International Studies Concentrate)

A concentration in International Studies will supplement the student's required courses and leads to Certification in the social science fields for teaching positions in the state of Pennsylvania.

MARINE SCIENCE CONSORTIUM

PAUL PRINCE AND GOULD SCHROCK — I.U.P. DIRECTORS TO THE MARINE SCIENCE CONSORTIUM.

The following course listings are offered through the Marine Science Consortium which operates during the summer at the Delaware Bay Marine Science Station, Lewes, Delaware, and the NASA-Wallops Island Station, Virginia. See page 61 for additional information.

All courses include lecture and field work and meet for morning and afternoon sessions on Monday through Friday.

COURSE DESCRIPTIONS

- MI 110 INTRODUCTION TO OCEANOGRAPHY 3 cr.
Prerequisites: None.
Introduction to physical, chemical, biological and geological aspects of oceans and methods and techniques of oceanography. Lab emphasis placed on at-sea assignments.
- MI 211 FIELD METHODS IN OCEANOGRAPHY 3 cr.
Prerequisites: MI 110 or consent of instructor.
Familiarization with dynamic marine environment involving use and application of oceanographic instruments and sampling devices.
- MI 221 INVERTEBRATE ZOOLOGY 3 cr.
Prerequisites: One year biology or consent of instructor.
Study of marine invertebrates with emphasis on development, reproduction, structure, function, and classification of selected marine organisms.
- MI 241 MARINE BIOLOGY 3 cr.
Prerequisites: Botany and zoology or consent of instructor.

Study of plant and animal life in marine environment with emphasis placed upon physical and chemical factors affecting biota.

- MI 260 MARINE ECOLOGY 3 cr.
Prerequisites: One year of biology or consent of instructor.
A course in ecology of marine organisms.
- MI 270 SCUBA DIVING non credit or 3 cr.
Prerequisites: Swimming ability and good health. (A standard diving physical form will be mailed to students electing the course.)
Students who complete course will receive a National Association of Underwater Instructors Diver Certification.
- MI 331 CHEMICAL OCEANOGRAPHY 3 cr.
Prerequisites: MI 110 and one year of chemistry.
Treatment of oceanic chemical phenomena by sampling and laboratory analysis techniques.
- MI 342 MARINE BOTANY 3 cr.
Prerequisites: One year of biology or one semester of botany.
In-the-field studies and laboratory analysis by instrumentation of marine and marine fringe plants of the Middle Atlantic Coast as exemplified by those found in the Cape Henlopen, Delaware, and Wallops Island, Virginia, areas.
- MI 344 ANATOMY OF MARINE CHORDATES 3 cr.
Prerequisites: Six hours of biology including general Zoology.
Designed to familiarize students with various aspects of marine chordates.
- MI 362 MARINE GEOLOGY 3 cr.
Prerequisites: MI 110 and physical geology or consent of instructor.
Studies of structural and sedimentary environments of continental shelf, slopes, and ocean basins and crustal structure of earth and its relation to sedimentary record and geologic history of oceans.

MI 420 MARINE MICROPALAEONTOLOGY 3 cr.

Prerequisites: One year of geology and biology or consent of instructor.

Deals with modern, living representatives of microorganisms important in fossil record with particular emphasis placed on taxonomy, morphology, evolution and ecologic affinities of representative groups.

MI 500 PROBLEMS IN MARINE SCIENCE 3 cr.

Graduate students or undergraduate students with advanced standing registering for this course may elect either of the following options:

Option A: Take a 200, 300, or 400 level MI course and complete in addition to regular course requirements a project in the area under direction of instructor.

Option B: Complete an independent research project. A research proposal must be approved by the Academic Committee of M.S.C. in advance of the time research is to be pursued.



MATHEMATICS DEPARTMENT

MELVIN R. WOODARD, CHAIRMAN; ANGELO, ARMS, BERTNESS, BROUGHTON, BURIOK, BUSOVICKI, CROOKS, A. DAVIS, DEISHER, DUNCAN, R. GIBSON, HARTMAN, HENNEMANN, HOYT, W. LONG, MADERER, D. MC BRIDE, R. MC BRIDE, MC COY, MORRELL, MUELLER, OAKES, PETERS, REBER, REIGH, RETTIG, D. SHAFER, SHAWER, SHEPLER, E. SMITH, W. SMITH, SPEAKMAN, STILWELL, TROXELL, WESTWOOD, WILLISON, R. WOLFE.

Degrees offered by the Mathematics Department are the Bachelor of Science in Mathematics, the Bachelor of Arts in Mathematics, the Bachelor of Science in Applied Mathematics, the Bachelor of Arts in Applied Mathematics, and the Bachelor of Science in Education with a Mathematics major. The first four degree programs are under the School of Arts and Sciences, and the fifth is under the School of Education. The Department also offers a Mathematics minor.

CURRICULA

The program for a mathematics major in the School of Arts and Sciences is two-phased. A student may pursue a degree in Mathematics or a degree in Applied Mathematics. Those completing a degree in Mathematics will be prepared to continue their studies in mathematics in graduate school though some may enter business, industry, or Government service. Those students receiving a degree in Applied Mathematics will be primarily prepared to enter business, industry,

or Government service in an area where mathematics or computer science is used or to continue their studies in applied mathematics or computer science in graduate school. This student would not be expected to continue graduate studies in pure mathematics.

For either program, the Mathematics major requires 36 credits in mathematics, distributed as described later. In addition to these 36 credits, the student elects at least an additional 26 credits in the Natural Sciences and Mathematics Division, he receives the Bachelor of Science degree. Otherwise he receives the Bachelor of Arts degree.

The program leading to the B.S. in Education with a Mathematics major prepares the student for teaching mathematics in junior or senior high school. Many graduates, however, continue their formal education in mathematics at the graduate level.

Core Program

Requirements for ALL Mathematics majors, beyond the University's General Education requirements, are Computer Science 110 and 18 credits in Mathematics, as follows:

MA 111, 113, 115 – Calculus I, II, and III	12 cr.
MA 231 – Introduction to Algebraic Structures	3 cr.
MA 233 – Introduction to Linear Algebra	3 cr.

B. A. or B. S. in Mathematics

In addition to the Core Program, requirements for both the

B. A. and the B. S. in Mathematics are 18 more credits in Mathematics, as follows:

I. MA 381 – Advanced Calculus I	3 cr.
MA 376 – Abstract Algebra I	3 cr.
II. At least 3 credits in one of the following:	
MA 382 – Advanced Calculus II	3 cr.
MA 377 – Abstract Algebra II	3 cr.
MA 421 – Introduction to Topology	3 cr.
III. At least enough credits in the following courses to meet the minimum requirements of 36 credits total for the major:	
MA 371 – Linear Algebra	3 cr.
MA 355 – Foundations of Geometry I	3 cr.
MA 356 – Foundations of Geometry II	3 cr.
MA 361 – Ordinary Differential Equations	3 cr.
MA 363 – Introduction to Probability	3 cr.
MA 364 – Mathematical Statistics I	3 cr.
MA 365 – Mathematical Statistics II	3 cr.
MA 423 – Complex Variables I	3 cr.
MA 425 – Complex Variables II	3 cr.
MA 341 – Theory of Numbers	3 cr.

It is strongly recommended that the Mathematics major take two of the three courses in Section II, one of the two being Topology. It is further recommended that students who intend to take graduate courses in mathematics check the requirements for entrance to their intended school of graduate study for guidance in choosing courses from Section III.

B. A. or B. S. in Applied Mathematics

In addition to the Core Program, requirements for the B. A. and the B. S. in Applied Mathematics are as follows:

MA 361 – Ordinary Differential Equations	3 cr.
MA 471 – Advanced Calculus for Applications	4 cr.
MA 363 – Probability	3 cr.
MA 364 – Mathematical Statistics I	3 cr.
MA 423 – Complex Variables I	3 cr.
MA 480-489 – Seminar in Mathematics	2 cr.
(This might be optimization, problem solving, partial differential equations, game theory, etc.)	
CO 250 – Introduction to Numerical Methods	3 cr.
CO 350 – Applied Numerical Methods	3 cr.

B. S. in Education (Mathematics Major)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a Mathematics major are credit for Computer Science 110 plus 16 credits in Mathematics, including Education 456, as follows:

I. Required courses:	
MA 355 – Foundations of Geometry	3 cr.
MA 452 – Mathematics Seminar*	1 cr.
ED 465 – Teaching Mathematics in the Secondary Schools	3 cr.

*Seminars in teaching geometry, teaching algebra, and teaching general mathematics will be conducted as part of the seminar offerings. It is strongly recommended that each Mathematics major take one of these seminars. It should be noted that the student may take as many as 3 additional credits in Mathematics Seminars.

II. Two 3-credit courses (total of 6 credits) must be selected from the following five courses:

MA 376 – Abstract Algebra I	3 cr.
MA 381 – Advanced Calculus I	3 cr.
MA 371 – Linear Algebra	3 cr.
MA 363 – Introduction to Probability	3 cr.
MA 341 – Theory of Numbers	3 cr.

III. Mathematics elective (see above) 3 cr.

One of the purposes of the program is to provide maximum flexibility in student course selection. Prior to scheduling for the junior year, all Mathematics Education majors will meet for the purpose of being advised regarding courses they should elect, depending on whether they desire to teach at the junior high level or the senior high level, or to enroll in graduate school.

Minor in Mathematics

The minor in Mathematics consists of 18 credits, made up of Math 111 and Math 113, Calculus I and Calculus II, plus additional credits in Mathematics selected from the courses listed for Mathematics majors. This excludes Math 101, Foundations of Math, and Math 362, Probability and Statistics.

COURSE DESCRIPTIONS

MA 011	ELEMENTARY FUNCTIONS	3 cr.
Designed for students not prepared to begin study of calculus; topics include polynomial, exponential, logarithmic and trigonometric functions and introduction to three-dimensional analytic geometry. Three hours lecture per week.		

- MA 013-015 CALCULUS I AND II FOR THE NATURAL AND SOCIAL SCIENCES** 4 cr. each
 Prerequisite: Two years of high school mathematics.
 Introduces student who is not majoring in mathematics to analytic geometry, elementary functions (which include trig functions), central ideas of the calculus (limit, derivative and integral), applications of these central ideas to social and natural sciences and numerical methods that involve series. Four hours lecture per week.
- MA 017/019 CALCULUS I AND II FOR PHYSICS AND CHEMISTRY** 4 cr. each
 Prerequisite: High school algebra, geometry, and trigonometry.
 Techniques of differentiation and integration, with application to analytic geometry of two and three dimensions by means of vector analysis (algebra and calculus), kinematics, surface integrals, line integrals, infinite series, matrices and simultaneous linear equations, differential equations with numerous applications to physical problems. Four hours lecture per week.
- MA 101 FOUNDATIONS OF MATHEMATICS** 3 cr.
 Designed to familiarize students with some of the ideas underlying development of mathematics. Objective is not to develop computational skills, but to study mathematics in its role as both an art and a science. Topics include: set theory, logic, probability, numeration and number systems. Three hours lecture per week.
- MA 111/113/115 CALCULUS I, II, AND III** 4 cr. each
 Prerequisite: Permission of the Mathematics Department.
 These courses stress the theory of the calculus as well as applications in problem solving. Topics included are: Calculus I: sets and functions, two-dimensional analytic geometry, limits, derivatives with applications; Calculus II: The Riemann integral and its properties, approximation of integrals, applications of the integral, and the development for differentiating and integrating the transcendental functions; Calculus III: polar coordinates, continuity and differentiation of functions of several variables, multiple integrals, line and surface integrals, theory of continuous and differentiable functions and series. Four hours lecture per week.
- MA 231 INTRODUCTION TO ALGEBRAIC STRUCTURES** 3 cr.
 Serves to acquaint student of mathematics with basic ideas of contemporary mathematics. Topics include mathematical logic, algebra of sets, equivalence relations and partitions of sets, functions, and fundamentals of group theory. Methods of proof in area of abstract mathematics is stressed.
- MA 233 INTRODUCTION TO LINEAR ALGEBRA** 3 cr.
 Introduction to vector spaces, linear transformations and matrix theory. Begins concepts studied in a more theoretical setting in Math 371. Three hours lecture per week.
- MA 341 THEORY OF NUMBERS** 3 cr.
 Prerequisite: MA 115.
 Divisibility, congruences, primitive roots, number theoretic functions, diophantine equations, continued fractions, quadratic residues. Three hours lecture per week.
- MA 355 FOUNDATIONS OF GEOMETRY I** 3 cr.
 Prerequisite: MA 231, 233.
 Studies various groups of transformations and geometries associated with these groups in the Euclidean plane. The Euclidean Similarity, Affine and Projective Groups of Transformations are studied. Three hours lecture per week.
- MA 356 FOUNDATIONS OF GEOMETRY II** 3 cr.
 Prerequisite: MA 355.
 An extension of ideas of Math 355. The real projective plane is introduced and the analytic projective geometry of this plane. Three hours lecture per week.
- MA 361 ORDINARY DIFFERENTIAL EQUATIONS** 3 cr.
 Prerequisite: MA 015, 019, or 115.
 Special solvable non-linear equations, linear equations with solu-

tions based on operator techniques, the Laplace transform, or infinite series. Numerous applications to physical problems. Three hours lecture per week.

MA 362 PROBABILITY AND STATISTICS 3 cr.

For non-math majors.

Frequency distributions, measures of central tendency, variation, elementary probability, sampling, estimation, testing hypotheses, correlation, and regression; emphasis on applications, as opposed to theoretical development of subjects. Three hours lecture per week.

MA 363 INTRODUCTION TO PROBABILITY 3 cr.

Prerequisite: MA 015, or 019, or 115.

Probability theory necessary for an understanding of mathematical statistics is developed; applications of the theory are given, with emphasis on binomial, Poisson, and normal distributions. Distributions of sums and a central limit theorem are developed. Three hours lecture per week.

MA 364 MATHEMATICAL STATISTICS I 3 cr.

Prerequisite: MA 363.

Multivariate distributions, properties of the moment generating function, change of variable technique, Chi-square distribution, estimation, confidence intervals, testing hypotheses, contingency tables, goodness of fit. Many practical applications. Use of calculating machines where appropriate. Three hours lecture per week.

MA 365 MATHEMATICAL STATISTICS II 3 cr.

Prerequisite: MA 364.

Correlation and regression from applied and theoretical points of view, bivariate normal distribution, small sample theory. Student's t and F distributions, analysis of variance, nonparametric methods. Many practical applications. Use of calculating machines or computers where appropriate. Three hours lecture per week.

MA 371 LINEAR ALGEBRA 3 cr.

Prerequisites: MA 231 and 233.

Topics covered in MA 233 are explored more deeply. Canonical forms, elementary divisors and multi-linear algebra are studied. Three hours lecture per week.

MA 376 ABSTRACT ALGEBRA I 3 cr.

Prerequisites: MA 231 and 233.

Development of theory of integral domains, fields, rings, and groups; designed to develop the student's power to think for himself and to improve his ability to construct formal proofs. Three hours lecture per week.

MA 377 ABSTRACT ALGEBRA II 3 cr.

Prerequisite: MA 376.

Designed to have the student continue study of algebra by use of the axiomatic method; Euclidean domains, polynomial domains and extension fields are included; inter-relationships between these structures and simpler structures, particularly groups and rings, are developed as in the study of the Galois group of a polynomial and in an introduction to Galois Theory. Three hours lecture per week.

MA 381 ADVANCED CALCULUS I 3 cr.

Prerequisite: MA 015, 019, or 111.

Study of set theory, the real number system, functions, the topology of cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity. Three hours lecture per week.

MA 382 ADVANCED CALCULUS II 3 cr.

Prerequisite: MA 381.

Includes the study of convergence, sequences in \mathbb{R} , global properties of continuity, uniform continuity, differentiation in \mathbb{R} , Riemann integrals, and infinite series. Three hours lecture per week.

MA 421 INTRODUCTION TO TOPOLOGY 3 cr.

Prerequisite: MA 115.

Study of sets, functions, continuity, compactness, the separation axioms, and metric spaces; application of topology to analysis is demonstrated. Three hours lecture per week.

MA 423-425 COMPLEX VARIABLES I AND II 3 cr. each

Prerequisite: MA 115.

Introduction to theory of functions of a complex variable; topics included are elementary functions, analytic functions, conformal mapping, integration, series, and applications. Three hours lecture per week.

MA 452 SEMINAR IN TEACHING ALGEBRA 1-4 cr.

MA 453 SEMINAR IN TEACHING GEOMETRY

MA 454 SEMINAR IN TEACHING
GENERAL MATHEMATICS

These seminars are designed for the pre-student teacher. Students in each class will gain insights into the problems in teaching each topic. They will become aware of the materials available and methods of instruction geared to the special type of student. Education majors only.

MA 471 INTRODUCTION TO APPLIED
MATHEMATICS 4 cr.

Prerequisite: MA 019 or 115.

Selected mathematical topics that are encountered in intermediate and advanced physics. Four hours lecture per week.

MA 480-489 SEMINAR IN MATHEMATICS 1-4 cr.

These seminars cover topics such as game theory, optimization, calculus of variations, etc., beyond the scope of the courses normally given. Seminar topics for a given semester will be available at time of registration. Course structure is at the discretion of the professor.

ED 456 TEACHING MATHEMATICS IN THE
SECONDARY SCHOOLS 3 cr.

(To be taken the semester or summer session preceding student teaching.)

Designed to prepare students to teach mathematics in the modern secondary school. Lesson planning and presentation evolves from examination of teaching strategies, use of media in teaching

mathematics, and handling of individual differences. Three hours lecture per week.

Courses for Elementary Education Majors Only

MA 160 MATHEMATICS FOR ELEMENTARY
TEACHERS I 3 cr.

Topics included are: sets, relations, and functions, methods of proof, development and structure of numeration systems, operations on the whole numbers and their properties, developing the set of integers. Three hours lecture per week.

MA 250 MATHEMATICS FOR ELEMENTARY
TEACHERS II 3 cr.

Prerequisite: MA 160.

Topics included are: operations on integers and their properties, development of rational number system, development of real number system, topics from number theory, finite number systems, informal geometry and introduction to topics in probability. Three hours lecture per week.

MA 251 BASIC CONCEPTS OF ALGEBRA
(ELEMENTARY) 3 cr.

Prerequisite: MA 250.

Treats topics touched upon in earlier courses but from a more axiomatic point of view; included are: language and proof in elementary algebra, algebraic structures, real numbers as a complete ordered field, algebraic expressions and functions and (if time permits) complex number system. Three hours lecture per week.

MA 350 FOUNDATIONS OF INFORMAL GEOMETRY
(ELEMENTARY) 3 cr.

Prerequisite: MA 250.

In line with present trends in the mathematics curriculum for elementary schools, topics in geometry are studied from the standpoints both of depth in deductive reasoning and of the presentation of topics to children. Three hours lecture per week.

MA 351 PRE-CALCULUS MATHEMATICS (ELEMENTARY) 3 cr.

Prerequisite: MA 251.

Examines the function concept as applied to elementary real number functions (polynomial, periodic, exponential and logarithmic functions); selected topics from algebra and analytic geometry included as time permits. Three hours lecture per week.

EL 313 TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOLS 3 cr.

Prerequisite: MA 160, for Special Education Majors.

Prerequisite: MA 250, for Elementary Education Majors.

Emphasis given to recent developments in curriculum and instruction, techniques for developing concepts, implications of recent research and resources and materials helpful to prospective teachers. Three hours lecture per week.



NATURAL SCIENCES

CHARLES R. FUGET, DIRECTOR

The program leading to the Bachelor of Science degree in Natural Sciences is designed to prepare students for various professional schools – optometry, chiropractic, podiatry, pharmacy, dentistry (not recommended for medical schools). The degree is offered by the School of Arts and Sciences.

In addition to the University's General Education requirements and the requirements of the School of Arts and Sciences, the credits required for the major in Natural Sciences are as follows:

Natural Science (38 credits)

Biology	14 cr.
Chemistry	16 cr.
Physics	8 cr.
Mathematics or Computer Science	7-8 cr.

NOTE: The credits in Natural Science and in Mathematics INCLUDE those required in the General Education portion of the degree requirements.

PHILOSOPHY DEPARTMENT

ROBERT M. HERMANN, CHAIRMAN; BOONE, CHAN, FERRARA, KANNWISHER, LIN, MONTGOMERY, SCHAUB.

"Philosophy is an attitude of mind towards doctrines ignorantly entertained . . . a resolute attempt to enlarge the understanding of the scope of application of every notion which enters into our current thought."

A. N. Whitehead

"The value of philosophy is . . . to be sought largely in its very uncertainty . . . It removes the somewhat arrogant dogmatism of those who have never travelled into the region of liberating doubt."

Bertrand Russell

Philosophy (Major and Minor)

The Philosophy Department offers, in addition to the introductory course, a variety of electives designed to serve the needs of two kinds of students.

Those majoring or minoring in philosophy, whatever their vocational aims, must satisfy the requirements indicated on the chart below. They should expect to emerge from philosophic studies having undergone some quite unpredictable changes in attitude and belief. Few escape such transformation, for objective inquiry in the philosophic discipline is calculated to this end . . . to forcing an examination of every theoretical tenet, and to "following the argument, wherever it leads."



Those whose primary interests are in other disciplines will find one or more philosophy courses which relate directly to their fields on the speculative level. Minoring is especially encouraged for its reflective benefits, and because professional philosophers frequently come to their vocational choices late in an academic career.

But apart from professional values, we would insist with William James that "to know the chief rival attitudes towards life . . . and to have heard some of the reasons they can give for themselves, ought to be considered an essential part of liberal education."

Religious Studies

The department also offers an ancillary program in religious studies, though neither a major nor minor is as yet available.

- PH 311 ORIENTAL RELIGIO-PHILOSOPHIC 3 cr.
THOUGHT*
Advanced study in those religious philosophies which have shaped the oriental worldviews and ways of life. Emphasis on Hinduism, Jainism, Buddhism, Confucianism, Taoism, Mohism, and Shinto.
- PH 321 LOGIC II — FORMAL SYSTEMS 3 cr.
Continuation of Logic I designed to enable the student to evaluate consistency of statements, validity of arguments, and other topics such as soundness and completeness, quantificational calculus, and inductive logic. (Recommended to math and science majors in substitution for Logic I as a general education requirement.)
- PH 322 LOGIC AND LANGUAGE 3 cr.
Investigation of topics in philosophical logic and philosophy of language, e.g., techniques of conceptual analysis, meaning, reference, and meaning of ethical, political and aesthetic terms. (No special background required. Recommended for language studies students.)
- PH 323 POLITICAL PHILOSOPHY 3 cr.
Political thought of such major classical theorists as Plato, Aristotle, Cicero, Augustine, Aquinas, Hobbes, Rousseau, Locke, Marx, and Mill, examined against the background of metaphysical roots from which their political views derive.
- PH 324 HISTORY OF PHILOSOPHY I 3 cr.
Prerequisite: PH 120 or departmental permission.
Western philosophy of pre-Socratic, classical Greek, Roman and medieval periods. Special attention given to Plato, Aristotle, Augustine, and Aquinas, as well as the philosophic schools.
- PH 325 HISTORY OF PHILOSOPHY II 3 cr.
Prerequisite: PH 120 or departmental permission.
Continuation of PH 324, beginning with 15th century Renaissance thought and ending with the 19th century precursors of contemporary philosophies.
- PH 327 AMERICAN PHILOSOPHIC THOUGHT 3 cr.
Prerequisite: PH 120 or departmental permission.
Study of more original and influential philosophic postures developed in America from colonial period to present, and of thinkers who gave them their most complete expressions.
- PH 328 AESTHETICS 3 cr.
Meaning of aesthetics as a philosophical discipline; methodological questions; a classification of problem areas; questions of imitation, history and art, the artist, the audience; consideration of some of the major western and non-western writers' positions. Nature of artistic creativity; art and anarchy; chance and art; definition of art in the present culture.
- PH 329 PHILOSOPHY OF RELIGION 3 cr.
Philosophical problems in religious thought: nature of religious experience, mysticism, defining "religion," conceptions of deity, existence of God, meaning of religious language, faith, and knowledge.
- PH 330 PHILOSOPHY OF SCIENCE 3 cr.
An investigation into nature of formal and empirical sciences: structure of scientific thought and its dependence upon or independence of theory; the logical and metaphysical status of scientific "laws" and theoretical concepts; reductionism in science; the concept of causality; the logic of explanation; problems in confirmation theory; science and value. (No special background required. Recommended for math and science majors.)
- PH 340 CONTEMPORARY WESTERN 3 cr.
RELIGIOUS THOUGHT*
Introduction to thought of such contemporary theologians as Bonhoeffer, Buber, Bultmann, Kierkegaard, Teilhard, Tillich, Barth, Brunner and Niebuhr.

PHYSICS DEPARTMENT

- PH 410 CONTEMPORARY PHILOSOPHY 3 cr.
Survey in depth of the 20th century philosophic scene; to include logical positivism, logical and linguistic analysis, existentialism and phenomenology.
- PH 420 METAPHYSICS 3 cr.
Divergent views of subject's nature and of main questions which it raises; being, form, substance, unity, mind, existence, necessity, possibility, time, eternity, space, and the self.
- PH 421 EPISTEMOLOGY 3 cr.
Investigation into problems involved in justifying knowledge claims and a consideration of methods suggested for their resolution. Particular attention paid to problems of certainty, objectivity, perception and truth.
- PH 430 HONORS THESIS (Majors Only) 3 cr.
Independent research, culminating in a paper of thesis quality to be defended orally. Topic and advisor must be selected prior to semester in which course is scheduled. Four copies of final draft must be on advisor's desk two weeks before final examination period.



DANIEL G. REIBER, CHAIRMAN; BERRY, BUCKWALTER, EDDY, FOX, GAGGINI, HERSHMAN, MATOLYAK, MATOUS, MC NAMARA, NOZ, RAMSEY, RIBAN, R. D. ROBERTS, WHITSON.

The Physics Department aims to fully prepare qualified young men and women for careers in physics. Two degrees are offered within the School of Arts and Sciences: the Bachelor of Science in Physics and the Bachelor of Arts in Physics. Each of these is adequate preparation for those wishing to enter a graduate program in physics or wishing to pursue research in industrial technology or for those wishing a strong physics background before aiming at their direct goal of medical research, air pollution control, etc. Two degrees are provided within the School of Education, the Bachelor of Science in Education with a Physics major and the Bachelor of Science in Education with a Physics-Mathematics major. The department also provides a minor in Physics, as well as general science courses for those who wish to be truly liberally educated with a working knowledge of the rudiments of physical science.

CURRICULA

Core Program

Requirements for ALL Physics programs are 18 credits in Physics and 18 credits in Mathematics as follows:

Physics

*PY 131 – Physics I-C	3 cr.
*PY 132 – Physics II-C	3 cr.
*PY 141 – Physics I-C Laboratory	1 cr.
*PY 142 – Physics II-C Laboratory	1 cr.
PY 222 – Mechanics I	2 cr.
PY 322 – Electricity and Magnetism I	2 cr.
PY 331 – Modern Physics	3 cr.
PY 350 – Intermediate Experimental Physics I	3 cr.

Mathematics

*MA 017 – Calculus I for Physics	4 cr.
*MA 019 – Calculus II for Physics	4 cr.
MA 361 – Ordinary Differential Equations	3 cr.
MA 471 – Introduction to Applied Math	4 cr.
CO 200 – Introduction to Computers	
or	
CO 110 – Introduction to Computer Science	3 cr.

*Or appropriate substitute.

B. S. in Physics

In addition to the Core Program, requirements for the degree of Bachelor of Science in Physics are 24 more credits in Physics and 3 more credits in Mathematics, as follows:

Physics

PY 223 – Mechanics II	2 cr.
PY 231 – Electronics	4 cr.
PY 242 – Optics	3 cr.
PY 323 – Electricity and Magnetism II	2 cr.

PY 342 – Thermal and Statistical Physics	3 cr.
PY 351 – Interm. Exp. Physics II	3 cr.
PY 483 – Quantum Mechanics I	4 cr.
PY 472 – Nuclear Physics	
or	
PY 490 – Solid State Physics	3 cr.
Physics Elective	3 cr.

Mathematics. One of the following:

MA 233 – Intro to Linear Algebra	3 cr.
MA 363 – Introduction to Probability	3 cr.
MA 381 – Advanced Calculus I	3 cr.
MA 423 – Complex Variables I	3 cr.
CO 250 – Intro to Numerical Methods	3 cr.

B. A. in Physics

In addition to the Core Program, requirements for the degree of Bachelor of Arts in Physics are 18 more credits in Physics as follows:

Physics

PY 223 – Mechanics II	2 cr.
PY 231 – Electronics	4 cr.
PY 323 – Electricity and Magnetism II	2 cr.
PY 351 – Interm. Exp. Physics II	3 cr.
PY 483 – Quantum Mechanics I	4 cr.
Physics Elective	3 cr.

In addition, students are required to complete a two-semester Natural Science sequence other than Physics and a two-semester advanced Social Science or a two-semester advanced Natural Science sequence.

B. S. in Education (Physics Major)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a Physics major are 10 more credits in Physics and 8 credits in Chemistry as follows:

Physics	
PY 231 – Electronics	4 cr.
PY 242 – Optics	3 cr.
Physics Elective	3 cr.
Chemistry	
CH 111-112 – General Chemistry I and II	4 cr. each

B. S. in Education (Physics – Mathematics Major)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a combined Physics-Mathematics major are 6 more credits in Physics and 12 more credits in Mathematics, as follows:

Physics	
PY 242 – Optics	3 cr.
Physics Electives	3 cr.
Mathematics	
MA 231 – Intro to Algebraic Structures	3 cr.
MA 233 – Intro to Linear Algebra	3 cr.
MA 355 – Foundations of Geometry I	3 cr.
MA 381 – Advanced Calculus I	3 cr.

Minor in Physics

To minor in Physics, a student must offer 15 credits in Physics.

COURSE DESCRIPTIONS

PY 111	PHYSICS I	3 cr.
Prerequisites: Elementary algebra and trigonometry.		
General college physics; mechanics, wave motion, and sound.		
Three hours lecture per week.		
PY 112	PHYSICS II	3 cr.
Prerequisite: PY 111.		
Electricity and magnetism, heat, light, atomic and nuclear physics, and an elementary introduction to relativity and quantum theory.		
Three hours lecture per week.		
*PY 121	PHYSICS LABORATORY I	1 cr.
Physics laboratory at level of Physics I; exercises in mechanics, wave motion, and sound. Three hours laboratory per week.		
*PY 122	PHYSICS LABORATORY II	1 cr.
Physics laboratory at level of Physics II; exercises in optics, electricity and magnetism, and radioactivity. Three hours laboratory per week.		
PY 131	PHYSICS I-C	3 cr.
Prerequisites: MA 013, 017, or 111, at least concurrently.		
A calculus-based course in general college physics; topics covered are similar to those covered in Physics 111, but are treated in more depth through use of calculus. Three hours lecture per week.		
PY 132	PHYSICS II-C	3 cr.
Prerequisites: MA 015, 019, or 113, at least concurrently.		
Continuation of Physics I-C; topics covered are similar to those covered in Physics II, but are treated in more depth through the use of the calculus. Three hours lecture per week.		

- *PY 141 PHYSICS LABORATORY I-C 1 cr.
Sequence of physics laboratory at same level as Physics I-C, exercises in mechanics, wave motion, sound and kinetic theory. Three hours laboratory per week.
- *PY 142 PHYSICS LABORATORY II-C 1 cr.
Sequence of physics laboratory at same level as Physics II-C, exercises in optics, electricity and magnetism, and radioactivity. Three hours laboratory per week.
- PY 151 MEDICAL PHYSICS 3 cr.
Development of concepts and principles of physics with a strong emphasis as to their use and application in medical and other biophysical areas.
- PY 161 MEDICAL PHYSICS LAB 1 cr.
Experimental work dealing with applications of physical principles to field of medicine. Practical experience with use of electronic equipment, chart recorders, etc., of type found in modern day medicine will be introduced.
- PY 222 MECHANICS I 2 cr.
Prerequisites: PY 111 or 131; MA 015, 019, or 113.
Dynamics of a particle in one, two and three dimensions, central forces including planetary and satellite motion, energy in particle dynamics, statics, systems of particles. Two hours lecture per week.
- PY 223 MECHANICS II 2 cr.
Prerequisites: PY 222, MA 071 or MA 361.
Mechanics of a rigid body, constraints, oscillations, wave motion, introduction to Lagrangian and Hamiltonian formulation and relativistic mechanics. Two hours lecture per week.
- PY 231 ELECTRONICS 4 cr.
Prerequisites: PY 112 or 132, MA 015, 019 or 113.
Circuit theory, transients, vacuum-tube and transistor circuits, frequency response, input and output impedance, feedback and electronic noise. Operational amplifiers and digital electronics. Three hours lecture, 3 hours laboratory per week.
- PY 242 OPTICS 3 cr.
Prerequisites: PY 112 or 132, MA 015, 019 or 113.
Geometrical optics, physical optics, including interference, diffraction and polarization. Quantum Optics is introduced. Three hours lecture per week.
- PY 322 ELECTRICITY AND MAGNETISM I 2 cr.
Prerequisite: PY 222.
Electrostatic potential theory, dielectrics, dipole theory, magnetostatics, Maxwell's equation for static fields, and Legendre's polynomials and other approximation methods. Two hours lecture per week.
- PY 323 ELECTRICITY AND MAGNETISM II 2 cr.
Prerequisite: PY 322.
Time-dependent form of Maxwell's equations, electromagnetic induction, vector potential, magnetism, radiation fields, and Poynting vector. Three hours lecture per week.
- PY 331 MODERN PHYSICS 3 cr.
Prerequisites: PY 112 or 132; MA 015, 019, or 113.
Introduction to particle and wave properties of matter, atomic structure, relativity, solid state and nuclear physics. Three hours lecture per week.
- PY 342 THERMAL AND STATISTICAL PHYSICS 3 cr.
Prerequisites: PY 112 or 132, MA 015, 019, or 113.
Thermometry, laws of thermodynamics, low-temperature physics, entropy, properties of ideal gas, and an introduction to statistical mechanics. Three hours lecture per week.
- *Physics 121, 122, 141, 142 also satisfy the General Education requirement for a laboratory science.

- PY 350 INTERMEDIATE EXPERIMENTAL PHYSICS I** 3 cr.
Prerequisites: PY 242 and 331.
Required fundamental experiments in areas of mechanics, optics, modern physics and heat. Six hours laboratory per week.
- PY 351 INTERMEDIATE EXPERIMENTAL PHYSICS II** 3 cr.
Prerequisite: PY 350.
Increasingly sophisticated experiments in essential areas of physics. Analog and digital computers and the Van de Graaff are available. Three hours lecture per week.
- PY 421 SELECTED EXPERIMENTS I** 3 cr.
Prerequisites: PY 231 and 331.
Experiments selected from advanced optics, microwaves, radio and optical astronomy, semiconductor properties, cryogenics, and classic experiments in atomic physics. Six hours laboratory per week.
- PY 432 ADVANCED ELECTRONICS** 3 cr.
Prerequisite: PY 231.
Digital Measurement, Switching Circuit, Logic circuits, Counting, Coding, Input and Output, AD and DA converters, Computer organization. Two hours lecture, 3 hours laboratory per week.
- PY 472 NUCLEAR PHYSICS** 3 cr.
Prerequisite: PY 331.
Survey of nuclear physics; nuclear size; nuclear mass, reaction theory, types of radioactive decay, nuclear models, nuclear forces and elementary particles. Three hours lecture per week.
- PY 483 QUANTUM MECHANICS I** 4 cr.
Prerequisites: PY 222 and 331.
Quantum mechanics following method of Schrodinger; the theory is applied to properties of harmonic oscillator, hydrogen atom, electron in a magnetic field and radioactive decay of alpha particles. Four hours lecture per week.
- PY 484 QUANTUM MECHANICS II** 3 cr.
Prerequisite: PY 483.
A sequel to Phys 483. General principles of quantum mechanics

are further developed. Matrix mechanics, angular momentum theory, time-independent perturbations, variational methods, spin, and introduction to the many-body problem. Three hours lecture per week.

- PY 490 SOLID STATE PHYSICS** 3 cr.
Prerequisites: PY 223 and 331.
Reciprocal lattice, crystal structure, the quantization of fields to produce quasi-particles such as phonons, magnons, excitons. Fermi gas of electrons, energy bands, semiconductor crystals, and photo-conductivity. Three hours lecture per week.
- PY 498 PROBLEMS IN PHYSICS** 1-4 cr.
Prerequisites: PY 112 or 132; MA 013, 017, or 111.
Students select from topics such as: Physics education projects, spectrum analysis, cosmic rays, digital and analog computer applications, astrophysics, Van de Graaff accelerator experiments, cryogenics and electro-paramagnetic resonance.

General Education Courses

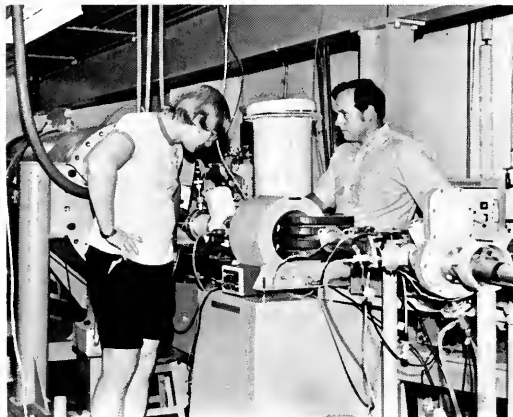
- SC 105 PHYSICAL SCIENCE I** 4 cr.
The physical world is studied by focusing on concepts of matter and energy; emphasis on physical phenomena that can be explained by Physics and Astronomy. Three hours lecture, 2 hours laboratory per week.
- SC 106 PHYSICAL SCIENCE II** 4 cr.
See course descriptions in Chemistry Department section.
- SC 401 THE GROWTH OF SCIENCE AND ITS CONCEPTS I** 3 cr.
Traces development of science concepts and their interaction with growing society of Western Civilization, from earliest beginnings to time of Newton. Treatment is non-mathematical. Three hours lecture per week.

SC 402 THE GROWTH OF SCIENCE AND ITS CONCEPTS II 3 cr.

Influence and development of concepts of Science in Western Civilization are studied from Newton to present time; stress placed on non-mathematical understanding of the basic ideas. Three hours lecture per week.

ED 457 TEACHING PHYSICS IN THE SECONDARY SCHOOL 3 cr.

Provides foundation for a prospective secondary school physics teacher in the area of current professional practices, curriculum, and methods.



POLITICAL SCIENCE DEPARTMENT

RICHARD F. HEIGES, CHAIRMAN; CARONE, CHASZAR, GREEN, KEENE, KRITES, LEE, MORRIS, PALMER, PLATT, SMITH, THORPE, WILSON.

Political scientists focus upon political systems, including the effect of environment on the system, system inputs, the decision-making agencies which render binding public policies, and system outputs. Approaches to the study of government and politics include: the **NORMATIVE** approach, in which philosophical attention centers on values by asking the question, "What ought to be?"; and the **BEHAVIORAL** approach, in which an attempt is made to develop verifiable theories through scientific methods by asking the questions, "how" and "why?"

Students majoring in political science find employment as public school teachers and also opportunities, usually through civil service examinations, in federal, state, and local governments, and with private civic groups, interest groups, and political groups. Students who go on to graduate work find appointments at higher levels and in college teaching. Students majoring in political science, as in any of the social sciences, are in demand by employers in business and industry.

The political science major is also especially suitable for the pre-law student.

Degrees offered by the Political Science Department are the Bachelor of Arts in Political Science; the Bachelor of Arts in Government and Public Service; the Bachelor of Arts in Pre

Law-Political Science; and the Bachelor of Science in Education with a Social Science Major, concentrating on Political Science. The department also offers a minor in political science.

An interdisciplinary major sponsored by the Political Science Department is International Studies. For information on this major, see page 123.

CURRICULA

Core Program

Required of ALL Political Science majors and minors (except Government and Public Service majors) are six credits in the following basic courses:

PS 111 – American Politics (formerly American Citizenship)	3 cr.
PS 101 – World Politics	3 cr.

B. A. in Political Science

In addition to the Core Program, requirements for the Bachelor of Arts in Political Science are 30 more credits in political science, distributed so that at least one course is in three of the following four areas: American Studies, Political Theory, Public Administration, and International Studies. Students preparing for graduate study should take PS 499 – Scope and Methods, at least one Political Theory course, and courses in Computer Science and Statistics.

B. A. in Government and Public Service

This major requires 36 s.h. as follows: PS 370, 371, 251; Economics 372, 336; Psychology 358; Sociology 345; Psychology 300 or Sociology 262; plus four of the following: PS 250, 350, 351, 352, 353, 354, 355, 358, 499, 458-459 (Internship). Also majors should select one of five interdisciplinary minors prescribed by department. For descriptive information about this new interdisciplinary program, contact department chairman.

B. A. in Pre Law-Political Science

The requirements for this major are the same as for the political science major with the addition of a 21 s.h. pre-law interdisciplinary minor.

For requirements in a pre-law minor students should contact the departmental pre-law adviser.

B. S. in Education (Political Science Concentration)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a major in Social Science, Political Science concentration, are 9 more credits in political science. Recommended electives are PS 250, 251, 350, 351, 353, or 354 and 499; desirable alternatives are PS 280, 283, 285, 352, 359, and 381-386.

Minor in Political Science

A minor in political science consists of 15 credits in political science, composed of the 6-credit Core Program and 9 more credits elected from all political science courses.

COURSE DESCRIPTIONS

Required Courses

- PS 111 AMERICAN POLITICS (FORMERLY AMERICAN CITIZENSHIP) 3 cr.
Introduction to American national government and politics, emphasizing Constitution, Party system, Congress, Presidency, Courts, and problems in national-state relations, civil rights, foreign policy, and social and economic policies.
- PS 101 WORLD POLITICS 3 cr.
Analysis of contemporary (Post 1945) state system and forces shaping world in which we live. Student is given a framework within which he can analyze contemporary international politics.

American Studies

- PS 250 CONTEMPORARY POLITICAL PROBLEMS 3 cr.
Emphasizes dynamics of government as they are evidenced in public opinion, pressure groups, political parties and our governmental institutions; attention also directed toward the political-economic nexus within American society.
- PS 251 STATE AND LOCAL POLITICAL SYSTEMS 3 cr.
Institutions and processes of state and local governments, with special attention to Pennsylvania; emphasis on nature of federalism, state constitutions, and role of state and local government in an urban society.
- PS 298-299 NEWS INTERPRETATION 1 cr. each
Designed to provide students with techniques for intelligent reading of daily newspaper and weekly news magazines and to give some understanding of current affairs at state, national and international levels.

- PS 350 THE PRESIDENCY 3 cr.
Examination of Office of President, with attention to constitutional foundations, evolution, structure, powers, and functions; some comparisons between presidential and parliamentary systems and between offices of President and Governor.
- PS 351 LEGISLATIVE PROCESS 3 cr.
Functional study of legislative bodies and process of legislation, covering organization of legislative assemblies, operation of committee system, procedures, bill drafting, aids, and controls over legislation.
- PS 352 PUBLIC OPINION 3 cr.
Study of nature of public opinion within political system; attention to formation of public opinion, expression, propaganda, mass media, and interest groups.
- PS 353 AMERICAN POLITICAL PARTIES 3 cr.
The role of people, parties, and pressure groups in politics of American democracy; attention to sectional and historical roots of national politics, voting behavior, pressure group analysis, and campaign activities.
- PS 354 METROPOLITAN PROBLEMS 3 cr.
Analyzes multiplicity of problems facing our metropolitan areas. Contemporary developments such as urban renewal, and shrinking tax base, federal aid to cities, subsidized mass transit, municipal authorities, and political consolidation are examined.
- PS 355 INTERGOVERNMENTAL RELATIONS 3 cr.
Explores characteristics of federal systems of government, with emphasis on theories, origins, institutions, problems in intergovernmental relations in United States, federal systems in other nations, and trends.
- PS 358 JUDICIAL PROCESS 3 cr.
Explores nature and limits of judicial power, courts as policy-making bodies, selection of judges, decision process, external

forces impinging on the courts, and role of Supreme Court in its relationship with Congress, the Presidency, and federalism.

PS 359 CONSTITUTIONAL LAW AND CIVIL LIBERTIES 3 cr.

Study of civil liberties and civil rights issues through leading Supreme Court decisions; topics treated include First Amendment rights, procedural due process and the Bill of Rights, and Equal Protection problems in civil rights.

Political Theory

PS 360 POLITICAL PHILOSOPHY 3 cr.

Evolution of the Western political tradition of Constitutionalism from Plato and Aristotle to Locke and Montesquieu: religious and rational foundations; medieval theories of authority and representation; early modern theories of the state and sovereignty; concepts of law; natural rights, liberty and equality, and justice treated in detail.

PS 361 MODERN POLITICAL THOUGHT 3 cr.

Development of Western political thought since the mid-16th century: classic liberalism; conservative thought; modern irrational ideologies such as fascism and national socialism; socialist thought; contemporary collectivist liberalism.

PS 362 AMERICAN POLITICAL THOUGHT 3 cr.

Develops an understanding of American political thinkers from the Puritans through the current Afro-American writers. Political phenomena is examined relating to past writings and inferences are made for future political behavior.

Public Administration

PS 370 PUBLIC ADMINISTRATION 3 cr.

Theories of organization and structural organization, personnel

processes, executive functions, financial administration, the politics of administration, public relations, and problems of democratic control of bureaucracy.

PS 371 FEDERAL ADMINISTRATIVE POLICY 3 cr.

Intensive study of role of Federal agencies and their administrators in determining and developing public policy. Public administration in practice is emphasized by utilizing case studies.

International Studies

PS 280 COMPARATIVE GOVERNMENT II – WESTERN POLITICAL SYSTEMS 3 cr.

Analyzes western political systems with emphasis upon major contemporary democratic governments of Europe. Analyzes and compares their political cultures, political institutions and political processes.

PS 281 INTERNATIONAL RELATIONS 3 cr.

Provides a conceptual framework for understanding sovereignty, nationalism, power, security, dispute settlement, and diplomatic, legal, economic, and military relations of nation-states.

PS 282 INTERNATIONAL LAW AND ORGANIZATIONS 3 cr.

Analysis of nature and function of international law in relations among nations, and an inquiry into purposes, structures, and actions of contemporary international political organizations, with emphasis on United Nations.

PS 283 AMERICAN FOREIGN POLICY 3 cr.

Examines formulation and execution of American foreign policy, with attention to governmental institutions, mass media, interest groups, and public opinion; emphasizes contemporary problems.

PS 285 COMPARATIVE GOVERNMENT II: NON-WESTERN POLITICAL SYSTEMS 3 cr.

Analyzes major non-western political systems with emphasis upon authoritarian and totalitarian systems. Analyzes and compares in a systematic manner their political cultures, political institutions and political processes.

PS 380 SOVIET POLITICS 3 cr.

Essential features of Communist party and government of U.S.S.R., including geographical and historical background and ideological and theoretical foundations. PS 280, Comparative Government, should be taken prior to this course.

PS 381-386 POLITICAL SYSTEMS 3 cr. each

Intensive, comparative study of the government and politics of a selected region. Suggested prerequisite: PS 280.

PS 381 – Latin America

PS 382 – Africa

PS 383 – Asia

PS 384 – Middle East

PS 385 – Central and Eastern Europe

PS 386 – Atlantic Community

PS 389 DEVELOPING NATIONS 3 cr.

Political characteristics of emerging nations; impact of economic and social change upon political structure; evolving patterns of political development; and techniques of nation-building. Suggested prerequisite: PS 280.

Research, Study, and Methodology

PS 480 POLITICAL SCIENCE SEMINAR 3 cr.

Readings and brief written assignments on a specific topic determined by the instructor in charge.

PS 481 SPECIAL TOPICS 3 cr.

Readings and brief written assignments on a specific topic determined by the instructor in charge.

PS 482 INDEPENDENT STUDIES 3 cr.

Readings and brief written assignments on a specific topic determined by the instructor in charge.

PS 485 HONORS IN POLITICAL SCIENCE 3 cr.

Prerequisites: 15 credits in Social Sciences, including 9 credits in Political Science, 2.0 OPA in Social Studies, and permission of department chairman and instructor.

Directed readings and one or more papers; topic to be selected by instructor and student.

PS 458-459 POLITICAL SCIENCE INTERNSHIP 2-6 cr. each

Prerequisites: 9 credits in Political Science with 2.0 OPA; PS 111; approval of instructor and Chairman.

Practical experience in government and politics. Course grade determined by the instructor.

PS 499 SCOPE AND METHODS 3 cr.

Prerequisite: PS 111.

Explores approaches, methods, and tools of Political Science; designed to prepare student who plans to do graduate work in Political Science. Majors and Minors only.



PSYCHOLOGY DEPARTMENT

RICHARD D. MAGEE, CHAIRMAN; BARNETT, CARTWRIGHT, EDGAR, GROVER, JACOBS, LORE, PATTON, REID, RITTLE, ROSS, SCHNEIDER, STIRES, THORNTON, VANDECREEK, WALZ. ADJUNCT PROFESSORS: BESHAI, KLINEDINST, LEVIT, PLUMMER, RUSNAK.

The program in psychology leads to a Bachelor of Arts degree and is designed to provide the student with an understanding of the methods and major findings of the science of behavior, with an introduction to several areas of professional application. The major offers the background required for graduate work in psychology and preparation for such related fields as social work, personnel work, advertising, medicine, law, and theology. The department also offers a minor in psychology.

CURRICULA

B. A. in Psychology

The major in psychology consists of a minimum of eleven courses, including PC 101 — General Psychology and MA 362 — Probability and Statistics, both of which can be used to meet General Education requirements, and Experimental Design and Analysis I and II. At least two courses must be taken from Group A and two courses from Group B below. The remaining three course choices are not restricted.

Course Group A

PC 361 — Motivation	3 cr.
PC 362 — Physiological Psychology	3 cr.
PC 363 — Perception	3 cr.
PC 365 — Conditioning and Learning	3 cr.
PC 366 — Human Learning and Memory	3 cr.
PC 367 — Animal Behavior	3 cr.

Course Group B

PC 351 — Intro. to Psych. Measurement	3 cr.
PC 354 — Developmental Psychology	3 cr.
PC 357 — Abnormal Psychology	3 cr.
PC 356 — Personality	3 cr.
PC 358 — Social Psychology	3 cr.

Suggested Course Sequence for Psychology Majors

Freshman Year

First Semester	PC 101 — General Psychology
Second Semester	MA 362 — Probability & Statistics

Sophomore Year

First Semester	PC 290 — Experimental Design & Analysis I
Second Semester	PC 291 — Exp. Design & Analysis II

Junior Year

First Semester	One course from Group A One course from Group B
Second Semester	One course from Group A One course from Group B

Senior Year

At least three additional courses in psychology

Minor in Psychology

A minor in psychology consists of six courses: General Psychology, Probability and Statistics, Experimental Design and Analysis I, one course from Group A, one course from Group B, and one additional course to be selected by the student.

COURSE DESCRIPTIONS

PC 101	GENERAL PSYCHOLOGY	3 cr.
	An introduction to the scientific study of behavior.	
PC 200	THE PSYCHOLOGY OF ADJUSTMENT	3 cr.
	Prerequisite: PC 101. Designed to present fundamental concepts of psychological adjustment. Emphasis on preventive approaches to maladjustment and psychological disorders. (Cannot be used to meet requirements for major in psychology.)	
PC 290	EXPERIMENTAL DESIGN AND ANALYSIS I	3 cr.
	Prerequisites: PC 101, MA 362. A laboratory course devoted to designing, conducting and evaluating results of psychological experiments.	
PC 291	EXPERIMENTAL DESIGN AND ANALYSIS II	3 cr.
	Prerequisites: PC 101, 290. A continuation of Experimental Design and Analysis I.	
PC 351	INTRODUCTION TO PSYCHOLOGICAL MEASUREMENT	3 cr.
	Prerequisite: PC 101. Survey of psychological measurement techniques, with emphasis on theoretical assumptions underlying these techniques and discussion of interpretation and limitations of measuring instruments.	

PC 354	DEVELOPMENTAL PSYCHOLOGY	3 cr.
	Prerequisite: PC 101. Comprehensive study of all factors that contribute to human development from conception to death, particularly as they relate to psychological development of individual.	
PC 356	PERSONALITY	3 cr.
	Prerequisite: PC 101. Provides comparative analysis of major representative traditional and contemporary theories of personality.	
PC 357	ABNORMAL PSYCHOLOGY	3 cr.
	Prerequisite: PC 101. Abnormal behavior studied from statistical, normative, and pathological reference point.	
PC 358	SOCIAL PSYCHOLOGY	3 cr.
	Prerequisite: PC 101. Scientific approach to study of behavior and experience of individuals in relation to other individuals, groups, and cultures.	
PC 361	MOTIVATION	3 cr.
	Prerequisites: PC 101, 290, 291. Systematic study of how behavior is initiated, sustained, directed, and terminated. Lecture and laboratory.	
PC 362	PHYSIOLOGICAL PSYCHOLOGY	3 cr.
	Prerequisites: PC 101, 290, 291. Study of relationship between behavior and anatomy and physiology of nervous system. Lecture and laboratory.	
PC 363	PERCEPTION	3 cr.
	Prerequisites: PC 101, 290, 291. Study of perceptual process. Sensory mechanisms for processing information are examined, as well as responses to complex stimuli. Lecture and laboratory.	
PC 365	CONDITIONING AND LEARNING	3 cr.
	Prerequisites: PC 101, 290, 291.	

Examination of basic principles of learning and related phenomena, discussion of classical conditioning, discrimination learning and aversive control of behavior. Lecture and laboratory.

- PC 366 HUMAN LEARNING AND MEMORY 3 cr.
Prerequisites: PC 101, 290, 291.
Study of methods and findings in areas of verbal learning and retention, encoding, storage, and retrieval processes. Lecture and laboratory.
- PC 370 CHILD PSYCHOLOGY 3 cr.
Prerequisite: PC 101.
Study of factors that influence total development and behavior of child. Current theories and research are considered, with focus upon optimum development of individual.
- PC 373 ADOLESCENT PSYCHOLOGY 3 cr.
Prerequisite: PC 101.
Study of adolescent and his world, especially the physical aspects of adolescence, psychological growth patterns, social pressures and adaptation.
- PC 374 PSYCHOLOGY OF ADULTHOOD AND OLD AGE 3 cr.
Prerequisite: PC 101.
Examines developmental and psychological needs of young adult, the middle-aged and elderly, in light of current theory and research.
- PC 367 ANIMAL BEHAVIOR 3 cr.
Prerequisites: PC 101, 290, 291.
Comparative survey of behavioral processes, with emphasis on sensory systems and learning, in organisms of different phylogenetic levels. Lecture and laboratory.
- PC 390 HISTORICAL TRENDS IN PSYCHOLOGY 3 cr.
Prerequisite: PC 101.
Comprehensive overview of historical antecedents of contemporary psychology.

- PC 400 INDUSTRIAL PSYCHOLOGY 3 cr.
Prerequisite: PC 101.
Systematic study of applications of psychology to business and industry.
- PC 450 INTRODUCTION TO CLINICAL PSYCHOLOGY 3 cr.
Prerequisites: PC 101 and department consent.
Overview of clinical psychology, with emphasis upon clinician's use of methods of evaluation, and treatment and modification of behavior.
- PC 451 PSYCHOLOGICAL PRACTICUM 3 cr.
Prerequisites: PC 101 and department consent.
Under supervision of psychology department, selected students receive experience in application of psychological techniques. May be taken twice for credit.
- PC 470 RESEARCH SEMINAR PSYCHOLOGY 3 cr.
Prerequisites: PC 290, 291 and department consent.
A tutorial exposure to experimentation in psychology.
- PC 471 SPECIAL TOPICS IN PSYCHOLOGY 2-3 cr.
Prerequisites: PC 101 and department consent.
A seminar providing study of selected topics not emphasized in other courses. May be taken more than once to a maximum of 6 credits.
- PC 472 INDEPENDENT STUDY IN PSYCHOLOGY 1-3 cr.
Prerequisites: PC 101 and department consent.
Individual students pursue their particular interests in psychology in consultation with a member of the staff. May be taken more than once to a maximum of 6 credits.

SOCIAL SCIENCE

RAYMOND L. LEE, ASSOCIATE DEAN

COURSE DESCRIPTIONS

SS 101 CONTEMPORARY SOCIAL SCIENCE 3 cr.
An Interdisciplinary study of a current social topic that uses a team teaching approach. Topics may vary from semester to semester. The course is one option in the Social Science General Education Program.

SS 398 SOCIAL SCIENCE FOREIGN STUDY 2-6 cr.
Directed foreign study, emphasizing historical, political, economic, social and geographical aspects of the area. Background reading, lectures and briefings, diary or evaluative paper. Course credit may be applied as General Education or elective credit. (For details see Center for International Studies.)

Social Science Minor 21 s.h.
A Social Science minor consists of course work in three Social Science departments beyond General Education courses.



SOCIOLOGY-ANTHROPOLOGY DEPARTMENT

D. M. AZIMI, CHAIRMAN; BENTON, GERALD, GRANT, HOLTZ, KRAUS, LANHAM, LEVENSON, LOUDEN, NEWHILL, OLIN-FAHLE, RAIBOURN, RAWLEIGH, VEXLER.

The Sociology-Anthropology Department provides an opportunity for studies in two closely related disciplines. Although a student may elect to concentrate his studies in one area more than another, studies in both disciplines are recommended. Sociology and anthropology are both concerned with man's social and cultural setting and the nature of his relationships with his fellow men. Sociology focuses primarily on studies of our own society, whereas anthropology is mainly concerned with non-Western cultures.

Sociology-Anthropology training can be preparatory for a variety of vocations. Teaching in secondary schools or in colleges and universities are vocations of interest to many students. Social work is an area of increasing opportunities. Anthropologists find employment opportunities primarily in higher education, museum work, and in civil service positions. Students planning future studies in theology, law, personnel management or other human relations occupations will find that undergraduate training in sociology and anthropology is eminently appropriate.

Degrees offered by the department are the Bachelor of Arts in Sociology-Anthropology, with concentration in either Sociology or Anthropology, the Bachelor of Science in Education with a major in Social Sciences, concentrating on

Sociology. The first degree program is under the School of Arts and Sciences, and the second is under the School of Education. The department also offers a minor.

CURRICULA

A major in Sociology-Anthropology requires a total of 27 credits in the department, including courses noted on the next page.

Core Program

All programs require six credits of Core Program, as follows:

SO 151	Principles of Sociology	3 cr.
AN 110	Introduction to Anthropology	3 cr.

B. A. with Concentration in Sociology

In addition to the Core Program requirements for the degree of Bachelor of Arts with a concentration in Sociology are 21 credits in sociology, distributed as follows:

Required Courses:		
SO 231	Contemporary Social Problems	3 cr.
SO 343	Development of Social Theory	3 cr.
SO 344	Introduction to Social Research	3 cr.
Sociology Electives		12 cr.

B. A. with Concentration in Anthropology

In addition to the Core Program, requirements for the

Degree of Bachelor of Arts with a concentration in Anthropology are 21 credits in anthropology, distributed as follows:

Required Courses:

AN 222	Introduction to Physical Anthropology	3 cr.
AN 233	Cultural Symbolism I: Language in Culture	3 cr.
AN 244	Basic Archaeology	3 cr.
	Anthropology Electives	12 cr.

B. S. in Education (Sociology Concentration)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a major in Social Science, Sociology concentration, are 9 more credits in sociology, at the student's choice.

Minor in Sociology or Anthropology

A minor in Sociology or Anthropology consists of 15 credits in either discipline composed of the 6-credit Core Program and 9 more credits, elected from either sociology or anthropology courses.

COURSE DESCRIPTIONS

Sociology Courses

SO 151	PRINCIPLES OF SOCIOLOGY	3 cr.
	The science of structure and functioning of human groups; taking culture and social institutions as basic materials, studies seeking to record and explain man's social behavior are explored.	

SO 231	CONTEMPORARY SOCIAL PROBLEMS	3 cr.
	Prerequisite: SO 151. Explores pressing social issues; problems are defined and solutions explored in light of historical, political, economic, social and anthropological data.	
SO 238	INTRODUCTION TO SOCIAL WORK	3 cr.
	Prerequisite: SO 151. Principles of social work; their application to problems of family and child welfare; casework and group techniques.	
SO 262	MODERN SOCIAL INSTITUTIONS	3 cr.
	Prerequisite: Sophomore standing or higher. Focuses on modern social institutions, such as science and technology, arts, industry, etc., and their place in society. Readings, assignments, and topics of discussion determined by instructor.	
SO 332	RACIAL AND CULTURAL MINORITIES	3 cr.
	Prerequisite: SO 151. Study of national, racial and religious minorities and divergent heritages in our national life.	
SO 333	JUVENILE DELINQUENCY	3 cr.
	Prerequisite: SO 151. Study of some of social and cultural factors that relate to delinquency; emphasis on consequences of societal reaction to delinquency.	
SO 334	POPULATION PROBLEMS	3 cr.
	Prerequisite: SO 151. Focus upon population growth and distribution; the present "population explosion" is a topic of central interest.	
SO 335	SOCIAL STRATIFICATION	3 cr.
	Prerequisite: SO 151. Study of social status patterns and social mobility; determinants of social class divisions and consequences of class distinction for individuals and society discussed.	

- SO 451 SPECIAL READINGS IN SOCIOLOGY 3 cr.
Prerequisite: SO 151 and permission of instructor.
Readings on specific topics in sociology, with presentations and class discussions. Instructor guides selection of readings and presentations. May be taken twice for credit (with different instructors who present different topics.)
- SO 471-472 FIELDWORK PROSEMINAR IN SOCIOLOGY 2-3 cr. each
Prerequisite: 9 credits (2.0 QPA or better) in sociology, including SO 231 or 333. (For majors and minors only.)
Supervised practical experience in community work with cooperating public and private agencies. Given in summer.

Anthropology Courses

- AN 110 INTRODUCTION TO ANTHROPOLOGY 3 cr.
General consideration of man's biological and cultural adaptations, stressing analysis of the nature of cultural systems as a method for perceiving and understanding variations among men today.
- AN 211 CULTURAL ANTHROPOLOGY 3 cr.
Survey of problems and theories in science of culture. Each student makes a study of a particular major anthropologist or theoretical approach.
- AN 222 INTRODUCTION TO PHYSICAL ANTHROPOLOGY 3 cr.
Biological evolution and principles of human genetics; evolution of primates and fossil record for the evolution of man stressed; relationship between race and culture discussed.
- AN 233 CULTURAL SYMBOLISM I: LANGUAGE IN CULTURE 3 cr.
Focuses on social and cultural functions of language; particular emphasis on problems in anthropology with respect to non-Western languages.

- AN 244 BASIC ARCHAEOLOGY 3 cr.
Investigates nature of archaeological data, goals of archaeology, models for history and prehistory, and significant archaeological contributions to knowledge. Includes a survey of excavation methods.
- AN 312 WORLD ETHNOGRAPHY 3 cr.
Prerequisite: AN 110 or 211.
Study in depth of specific non-literate cultures to explore questions of cultural integration.
- AN 313 OLD WORLD ARCHAEOLOGY 3 cr.
Prerequisite: AN 110 or 244.
Prehistory of Europe and Asia, from Paleolithic through Neolithic developments; emphasis on technology, chronology, ecology, and cultural processes.
- AN 314 ETHNOLOGY OF NORTH AMERICAN INDIANS 3 cr.
Prerequisite: AN 110 or 211.
Survey of culture history and culture area characteristics of Indians of North America; detailed study of representative groups related to historical, functional, and ecological concepts.
- AN 315 NORTH AMERICAN ARCHAEOLOGY 3 cr.
Prerequisite: AN 110 or 244.
Prehistory of North American Indians, emphasizing technology and stylistics, cultural evolution, and cultural ecology.
- AN 316 THE ANTHROPOLOGY OF RELIGION 3 cr.
Prerequisite: AN 110 or 211.
Deals with nature, function and universal characteristics of religion in human society by utilizing the cross-cultural approach. Theories concerning religious phenomena serve as topics for discussion.
- AN 317 QUANTITATIVE AND INSTRUMENTAL ARCHAEOLOGY 3 cr.
Prerequisite: AN 244.
Theory and methods for quantitative analysis of archaeological

data will be applied to data recovered by University excavation programs. Instruments used for analysis of artifacts, flotation samples, features, soil samples, and for report preparation will be used by each student.

AN 318 MUSEUM METHODS 3 cr.
Prerequisite: AN 110, 211, or 244.

Lecture and laboratory course concentrating on history of museums, natural science and anthropological museum methods and techniques, providing practical experience in exhibit preparation and installation

AN 319 SOCIAL STRUCTURE AND FUNCTION 3 cr.
Prerequisite: AN 110 or 211.

A survey concerning mechanisms of integration in social organization and their role in the development of societies; Family, Kinship and Ideological systems are stressed.

AN 320 ARCHAEOLOGICAL FIELD SCHOOL 6 cr.
Prerequisite: AN 110 or 244.

Field excavation of selected archaeological sites in Indiana and adjacent counties, opportunity for varied experience in historic and prehistoric Indian sites, both open sites and rock shelters.

AN 321 METHODS OF CROSS-CULTURAL ANALYSIS 3 cr.
Prerequisite: AN 110 or 211.

Comparative methods and techniques reviewed and evaluated in relation to the problems they were designed to solve. Statistics and computational equipment will be used in analysis of data derived from Ethnographic Atlas or Human Relations Area Files.

AN 371 CULTURAL AREA STUDIES 3 cr.
Prerequisite: AN 110 or 211.

Analysis of prehistoric, historic, and contemporary aspects of ethnological studies in a culture area; social organization, linguistic ties, cultural ecology, folklore, mythology, artistic expressions of peoples, and their world view examined. Course may be repeated UNDER DIFFERENT LETTER DESIGNATIONS according to selection of culture areas by instructors responsible for the course.

THE FOLLOWING CULTURE AREAS ARE AVAILABLE
INITIALLY:

AN 371A CULTURAL AREA STUDIES: NORTHERN EUROPE
AN 371B CULTURAL AREA STUDIES: SOUTHEAST ASIA
AN 371C CULTURAL AREA STUDIES: CHINA AND JAPAN
AN 371D CULTURAL AREA STUDIES: CARIBBEAN

AN 401 SOCIAL AND CULTURAL CHANGE 3 cr.
Prerequisites: AN 110 or SO 151 and Junior Standing or permission of instructor.
For description of course, see SO 401.





The School of Business

ELWOOD B. SHEEDER, DEAN

The establishment of a School of Business was authorized by the Board of Trustees of Indiana University of Pennsylvania in May 1966, and it was indicated that the School should consist of several departments. At present, these are the Business and Distributive Education Department and the Business Management Department.

Degree programs offered by the School of Business are the Bachelor of Science in Education with a major in Business Education or with a major in Distributive Education and the Bachelor of Science in Business Management.

Business Education has been one of Indiana's areas of specialization for some 50 years. The program in Distributive Education prepares Teacher-Coordination for schools offering programs in marketing, distribution and cooperative work experience. These two degree areas are designed to prepare teachers for comprehensive high schools, area vocational-technical schools, and community colleges. The Business Management program has as its primary purpose the preparation of students for careers in business and industry.

DEPARTMENTS

Business and Distributive Education

Those enrolled in this Department have a choice of the following areas of concentration; Accounting, Data Proces-

sing, Secretarial (all include certification in Typewriting), and Distributive Education. Students are encouraged to select more than one area of concentration, as additional hours beyond the minimum requirements enrich the student's preparation for teaching. Student teaching is carried out under local supervision at the various centers. In addition, coordinators from the University observe and counsel the student teachers.

Business Management

The training offered by the Business Management Department is intended to provide a broad liberal background in the behavioral sciences; to give a keen perception of the social-economic world in which we live and work; to provide the foundation of general professional education for personally fruitful and socially useful careers in the varied fields of business and other types of institutions; and to furnish the opportunity to obtain the specialized knowledge and skills essential to future occupational growth and advancement for students preparing for responsible technical, supervisory, and executive positions. Students may pursue work according to their particular interests and aptitudes.

DEGREE REQUIREMENTS

All degree candidates in the School of Business must fulfill the University's 52-credit General Education requirement,

and candidates for degrees in Education must fulfill the 28-credit requirement in professional Education courses, needed for certification. Specific courses to fulfill the General Education requirement and meet special degree requirements within the School of Business are identified under the Departments involved.

In addition, degree requirements for ALL Business students include a general requirement of 18 credits in Business courses as follows:

General Requirement

BU 221	Introduction to Accounting	3 cr.
BU 235	Business Law I	3 cr.
BU 251	Intermediate Accounting	3 cr.
BU 321	Business Communication	3 cr.
BU 336	Business Law II	3 cr.
BU 339	Business Data Processing	3 cr.

ACADEMIC CONCENTRATION IN HOSPITAL AND HEALTH CARE ADMINISTRATION

The hospital administrator's unique contribution to the health of the public is his expertise in the organization of the many components of the health care delivery system in general and the hospital in particular. The hospital is clearly one of the most complex institutions in our society. The hospital administrator occupies a difficult management position and an important one if the public is to be properly served.

Today, thirty-eight universities in the United States, Canada and Puerto Rico offer graduate degrees in health and hospital administration. A baccalaureate degree from an accredited college or university is the primary prerequisite for admission. Graduate programs leading to a master's degree in health and hospital administration consist of one to two years of full-time academic study and may include a period of up to one year of administrative residency in a hospital or other health-related organization under the preceptorship of an administrator. Courses in hospital administration remain the foundation of the curricula.

For additional information on the Academic Concentration in preparation for a career in Hospital and Health Care Administration see page under School of Health Services.

COURSE DESCRIPTIONS

The courses listed below (prefix BU) are available to students in both the Business and Distributive Education Department and the Business Management Department. Students in the School of Business should refer to the specific requirements for their respective degrees (BE — Business Education, DE — Distributive Education, and BM — Business Management), shown by the department.

BU 101	BUSINESS ORGANIZATION AND MANAGEMENT	3 cr.
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This introductory course is an overview of the principles, practices, and methods common to most business firms in a private enterprise system.

- BU 131 PRINCIPLES OF TYPEWRITING** 2 cr.
Emphasis on development of correct techniques in typewriting, introduction to basic styles of business letters, simple tabulations and simple manuscripts; specific standards of speed and accuracy are required. Credit may be given by examination.
- BU 132 INTERMEDIATE TYPEWRITING** 2 cr.
Prerequisite: 2.0 QPA in BU 131 or "credit by examination."
Emphasis on further development of speed, accuracy, and production ability; includes business letters with special features, business reports, business forms, rough drafts, manuscripts, liquid and stencil duplication.
- BU 221 INTRODUCTION TO ACCOUNTING** 3 cr.
Introduces student to the keeping of records for service and professional establishments, as well as mercantile enterprises involving the single proprietor.
- BU 233 MARKETING** 3 cr.
Study of business activities necessary to planning, pricing, promoting, and placing of goods and services for use by household consumers and industrial users.
- BU 235 BUSINESS LAW I** 3 cr.
Deals with the nature of law and the agencies and procedures for its enforcement, contracts, agency employment, negotiable instruments, property and bailments.
- BU 251 INTERMEDIATE ACCOUNTING** 3 cr.
Prerequisite: at least a 2.0 QPA in BU 221.
Special consideration given to accrued and deferred items, the significance and handling of valuation accounts and interpretation of the effect of all types of transactions on the operation of a business.
- BU 261 SHORTHAND THEORY** 3 cr.
An introductory course in the basic principles of Gregg Shorthand, Diamond Jubilee.
- BU 262 SHORTHAND DICTATION** 3 cr.
Prerequisite: BU 261.
Major objectives are to review and strengthen student's knowledge of principles of Gregg Shorthand, Diamond Jubilee, to build shorthand-writing speed, and to build transcription skill.
- BU 271 ADVANCED TYPEWRITING** 2 cr.
Prerequisites: At least a 2.0 QPA in BU 131 and 132.
Continuation of speed and accuracy development and production ability, advanced work in letter forms, legal documents, statistical reports, tables, and manuscripts. Instruction on VariTyper included.
- BU 321 BUSINESS COMMUNICATIONS** 3 cr.
Prerequisite: English 101 and 102.
Major objective is to develop student's ability to write business communications clearly and effectively.
- BU 332 RETAIL MANAGEMENT** 3 cr.
Prerequisite: DE 331 or BU 233 or BU 333.
Study of structure and changing environment of retailing, special emphasis on merchandise management, organization, sales promotions, services and control.
- BU 333 PRINCIPLES OF SELLING** 3 cr.
Covers field of selling, preparing to sell, the selling process and an introduction to sales management. Sales demonstrations incorporating audio-visual aides are a part of course.
- BU 335 OFFICE MACHINES** 2 cr.
Covers fundamentals of operating office machines — key driven and electronic printing calculators; key punch; dictating and transcribing machines; bookkeeping machines. Includes instruction in records management.
- BU 336 BUSINESS LAW II** 3 cr.
Prerequisite: BU 235.
The basic aim is same as that stated for Business Law I. Attention given to kinds of business organizations, sales, insurance, surety

and guaranty, leases and mortgages, trust and estates, bankruptcy, business torts and crimes.

BU 339 BUSINESS DATA PROCESSING 3 cr.

Students are familiarized with development and use of Business Data Processing Systems. Data processing methods and equipment, computer programming, and interpretation of business information are covered.

BU 352 CORPORATE ACCOUNTING 3 cr.

Prerequisite: BU 251.

Continued study of financial principles and practices of accounting with emphasis on characteristics, records, and financial reports of corporations.

BU 353 COST ACCOUNTING 3 cr.

Prerequisite: 2.0 QPA in BU 221 and BU 251.

Basic theory and procedures for determining unit cost of production and cost control involving material, labor, and manufacturing expenses in job-order and process cost systems. The costing of joint and by-products.

BU 363 TRANSCRIPTION 3 cr.

Prerequisite: BU 262.

Develop additional speed in taking dictation, with emphasis on development of transcription skill.

BU 364 SECRETARIAL OFFICE PRACTICE 3 cr.

Prerequisite BU 363.

Advanced study of theory and practice in activities common to the office — handling mail, telegraphic services, shipping services, meeting callers, various business reports, and secretarial standards.

BU 439 BUSINESS INFORMATION SYSTEMS 3 cr.

Orientates student to philosophy and concepts of business information systems. Areas of problem definition, information economics, information management, flow charting, truth table testing, and documentation included.

BU 454 FEDERAL TAXES 3 cr.

Prerequisite: BU 352.

The intent is to acquaint students with Federal Income Tax Laws as they affect individuals, single proprietorship, and partnerships.

BU 455 AUDITING 3 cr.

Prerequisite: BU 353.

Study of auditing theory and practical application of auditing standards and procedures to the verification of accounts and financial statements; working papers; and audit reports.



BUSINESS AND DISTRIBUTIVE EDUCATION DEPARTMENT

DENNIS D. TIGER, CHAIRMAN; BEAUMONT, BETTA, GHESSIE,
HILEMAN, MAHAN, MOREAU, PATTERSON, POLESKY, RISHER,
SHROCK, SPENCER, THOMAS, VARNER, WOOMER.

B. S. IN EDUCATION (BUSINESS EDUCATION MAJOR)

DENNIS D. TIGER, CHAIRMAN

Degrees offered by the Business and Distributive Education Department are the Bachelor of Science in Education with a Business Education major and the Bachelor of Science in Education with a Distributive Education major.

In addition to the 18 credits in business courses required of all candidates for a degree from the School of Business, a core program of 18 credits is required of all majors in the Business and Distributive Education Department, as follows:

Core Program

Business

BU 101	Business Org. and Management	3 cr.
BU 131	Principles of Typewriting	2 cr.
BU 132	Intermediate Typewriting	2 cr.
BU 333	Principles of Selling	3 cr.
BU 335	Office Machines	2 cr.

Business Education

*BE 111	Foundations of Mathematics	3 cr.
*BE 212	Business Math II	3 cr.

*May be part of the University's General Education requirement.

The curriculum in Business Education prepares students for a professional career in teaching office occupations. The Business Education curriculum is designed with three areas of concentration or fields of specialization. The three fields of concentration are Accounting, Data Processing, and Stenography. Students may pursue the work of the entire curriculum or they may elect to pursue work according to their aptitudes as follows:

1. The Complete Program leads to certification in all of the high school business subjects. Those who possess aptitudes that indicate success in Accounting, Data Processing, and Secretarial work may pursue this complete program if they wish. School administrators believe that the complete program is desirable for breadth of certification: when teaching in the public schools of the Commonwealth of Pennsylvania.
2. The Accounting Field includes all courses in the curriculum listed under that heading and meets the requirements for certification in Accounting and Typewriting.
3. The Secretarial Field includes all courses in the curriculum listed under that heading and meets the requirements for certification in Secretarial subjects and Typewriting.

4. The Data Processing Field includes all courses in the curriculum listed under that heading and meets the requirements for certification in Accounting, Data Processing, and Typewriting.

All Business Education majors are required to complete the requirements for certification in at least three of the following areas of certification.

1. Accounting
2. Data Processing
3. Marketing
4. Stenography
5. Typewriting

Students pursuing the Accounting Field or Secretarial Field must elect courses which will afford certification in a third area of certification since the courses listed under these headings in the curriculum only provide for certification in two areas.

All majors in Business Education must take two (2) more credits in Business and six (6) more credits in Business Education.

Business			
BU 271	Advanced Typewriting		2 cr.

Business Education			
*BE 311	Methods of Teaching Business Courses	3 cr.	
*BE 312	Eval. Tech. in Business Courses	3 cr.	

*These are included in the 28 Professional Education requirements.

Practical Business Experience

Before graduation, each student is encouraged to complete the equivalent of 12 months of secretarial practice, accounting practice, data processing, clerical practice, or a combination of these. This experience should be in the field or fields in which the student is contemplating certification and can be acquired during summer vacations and in offices on the campus during the regular school term.

Specialization in the several areas available to the Business Education student is accomplished by taking the additional courses listed as follows:

Courses Required in the Secretarial Sequence

BU 261	Shorthand Theory	3 cr.
BU 262	Shorthand Dictation	3 cr.
BU 363	Transcription	3 cr.
BU 364	Secretarial Office Practice	3 cr.

Courses Required in the Accounting Sequence

BU 352	Corporate Accounting	3 cr.
BU 353	Cost Accounting	3 cr.
	or	
BU 454	Federal Taxes	3 cr.

Courses Required in the Data Processing Sequence

BU 340	Business System Technology	3 cr.
BU 439	Business Information Systems	3 cr.
BU 342	Business Problem Application I	3 cr.
BU 339	Business Data Processing	3 cr.
BU 352	Corporate Accounting	3 cr.

BU 353	Cost Accounting or	3 cr.
BU 454	Federal Taxes	3 cr.
Special Electives*		
BU 455	Auditing	3 cr.

*Certain Business Management courses may be selected as electives.

COURSE DESCRIPTIONS

BE 111	FOUNDATIONS OF MATHEMATICS	
	Fundamental processes are reviewed, plus fractions, decimals, and percentage. Business topics studied are the 60-day, 6% method of computing interest; compound interest; bank, cash, and trade discounts; and partial payments.	
BE 212	BUSINESS MATHEMATICS II	3 cr.
	Prerequisite: BE 111. To apply the principles of business mathematics with speed and accuracy in solving advanced problems encountered by the businessman and the consumer. Provides a background for beginning accounting courses.	
BE 311	METHODS OF TEACHING BUSINESS COURSES	3 cr.
	Prerequisites: EP 302 and completion of at least one major area. Methods of teaching shorthand, typewriting, bookkeeping, office machines, and general business courses are presented. Unit plans, lesson plans, and video-taped microteaching are emphasized.	
BE 312	EVALUATIVE TECHNIQUES IN BUSINESS COURSES	3 cr.
	Prerequisite: BE 311. Construction, administration, scoring, treatment and grading of	

various types of tests; includes analysis of test results, remedial teaching and other evaluation procedures.

BE 433	SUPERVISED WORK EXPERIENCE AND SEMINAR IN OFFICE OCCUPATIONS	6 cr.
	Students gain experience in selected office occupations. This cooperative business experience is conducted by competent business and University personnel. There is a weekly evening seminar.	

General Electives

BE 371	PERSONAL TYPEWRITING AND DUPLICATING	1 cr.
	In this beginning course in typewriting, students learn how to touch type and use the spirit duplicator and mimeograph machines. (Open to all students EXCEPT BE and DE majors and Office Management majors in the Business Management Department.)	

B. S. IN EDUCATION (DISTRIBUTIVE EDUCATION MAJOR)

DONALD C. MAHAN, TEACHER-EDUCATOR

The curriculum in this department is designed to prepare students for a professional career teaching the distributive occupations. Students following this program will be graduated as Teacher-Coordination of Distributive Education and will be also certified to teach certain courses in Business Education.

Teaching in the field of Distributive Education combines the personal satisfaction of teaching with the enjoyment of public relations work in the distributive area of business –

retailing, wholesaling, and service enterprises. The student who likes the prestige of teaching, along with the plus values of working with business leaders and young people, will find this a challenging and rewarding career. Distributive Education presents a promising future for persons in the teaching profession. With the recognition of the importance of distribution to our national economy, this vocational field of teaching is expanding rapidly.

Students enrolled in this field are encouraged to combine this area of concentration with the Accounting field.

Degree requirements include those previously outlined for the School and the department plus 6 more credits in Business, 15 credits in Distributive Education, and 3 in Economics as follows:

Business

BU 233	Marketing	3 cr.
BU 332	Retail Management	3 cr.

Distributive Education

DE 310	Principles of Distributive Ed.	3 cr.
DE 313	Methods of Teaching Distrib. Ed.	3 cr.
DE 331	Modern Merchandising	3 cr.
DE 434	Work Exp. and Sem. in Distrib. Ed.	6 cr.

Economics

EC 122	Prin. of Economics	3 cr.
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COURSE DESCRIPTIONS

Admission to professional courses in Distributive Education is subject to approval by a faculty committee.

DE 310 PRINCIPLES OF DISTRIBUTIVE EDUCATION 3 cr.

To acquaint prospective teacher-coordinators with objectives of vocational distributive education, including state plan and curriculum. To understand problems in organizing, administering, and supervising a complete cooperative program.

DE 313 METHODS OF TEACHING COURSES IN DISTRIBUTIVE EDUCATION 3 cr.

Prerequisite: DE 310.

To acquaint students with basic principles of group and individual instruction in various subject matter areas, as well as methods of presentation. Students prepare unit plans, lesson plans, demonstrations and evaluations.

DE 331 MODERN MERCHANDISING 3 cr.

Techniques for planning and controlling inventory, analyzing sales, working with modern systems for handling cash, uses of color, line and design. Practice in preparing merchandise display units.

DE 434 SUPERVISED WORK EXPERIENCE AND SEMINAR IN DISTRIBUTIVE EDUCATION 6 cr.

Prerequisite: BU 333.

Students gain experience in selected distributive occupations. This cooperative business experience is conducted by competent business and University personnel. There is a weekly evening seminar.

BUSINESS MANAGEMENT DEPARTMENT

DONALD J. ROBBINS, CHAIRMAN; BREYER, BURNER, CAWLEY, COOPER, FLETCHER, McAFOOSE, McCAFFREY, McCLURE, PILLION, PLIVELIC, REIFEL, SHILDT, SPENCER, STEVENSON, STROCK.

This Department offers those who seek a career in the world of business or industry an opportunity to pursue their interests in any of seven areas of specialization: Accounting, Systems Analyst, Office Management, Finance, Marketing, Personnel Management, or General Business. The degree offered by the Business Management Department is the Bachelor of Science in Business Management. The curriculum is generally similar for all during the first two years. The choice of an area of specialization is necessary prior to the start of the student's junior year.

The Accounting area provides the training necessary for a person to enter the field of public accounting, accounting in business or industry, or governmental accounting.

The Finance area provides specialized training for those desiring positions in banking, brokerage, or insurance.

The Marketing area provides training for those interested in advertising, marketing research, sales management, retailing and the marketing service departments of wholesalers and manufacturers.

The Personnel Management program is designed to prepare students for eventual positions in personnel and related management areas.

The Systems Analyst area provides training in business computer technology and in the designing and implementation of management information systems.

The Office Management area provides training for executive secretarial positions and various related office positions.

The General Business area provides an opportunity for students to pursue training in two or more of the previous areas of specialization, but not to the extent permitted a student concentrating in only one of these areas.

Each area provides for a variety of business, economics, or business-related courses, designed to enrich the student's understanding of the world of modern business.

The Department requires that two-thirds of a student's electives be taken in Business or business-related courses.

In addition to the 18 credits in Business courses required of all candidates for a degree from the School of Business, a core program of 25-26 credits is required of all Business Management majors, as follows:

Core Program

Business		
BU 233	Marketing	3 cr.
Business Management		
BM 201	Personnel Management	3 cr.
BM 215	Business Statistics	3 cr.

Other		
*MA 011	Elementary Functions and	3 cr.
*MA 013	Calculus I for the Natural and Social Sciences	4 cr.
	or	
*MA 013-015	Calculus I and II for the Natural and Social Sciences	4 cr. each
*MA 362	Probability and Statistics	3 cr.
EC 121*-122	Principles of Economics I and II	6 cr.

*May be part of the University's General Education requirement.

Courses required for the specific areas of specialization follow.

Accounting Sequence

In addition to the requirements previously outlined, requirements for specialization in Accounting are 12 more credits in Business, 9 more credits in Business Management, and 6 more credits in Economics, as follows:

Business		
BU 352	Corporate Accounting	3 cr.
BU 353	Cost Accounting	3 cr.
BU 454	Federal Taxes	3 cr.
BU 455	Auditing	3 cr.
Business Management		
BM 241	Finance	3 cr.
BM 451	Advanced Principles of Accounting	3 cr.
BM 456	Advanced Cost Accounting	3 cr.

Economics		
EC 325	Monetary Economics I	3 cr.
EC 330	Labor Economics	3 cr.

This program leaves 12 credits for electives.

Finance Sequence

In addition to the requirements previously outlined, requirements for specialization in Finance are 6 more credits in Business, 24 more credits in Business Management and 6 more credits in Economics, as follows:

Business		
BU 352	Corporate Accounting	3 cr.
BU 454	Federal Taxes	3 cr.
Business Management		
BM 241	Finance	3 cr.
BM 380	Principles of Invest.	3 cr.
BM 381	Insurance I	3 cr.
BM 382	Principles of Real Estate	3 cr.
BM 383	Insurance II	3 cr.
BM 385	Securities & Commodities Markets	3 cr.
BM 481	Investment Analysis	3 cr.
BM 485	Financial Inst. and Markets	3 cr.
Economics		
EC 325	Monetary Economics I	3 cr.
EC 330	Labor Economics	3 cr.

This program leaves 3 credits for electives.

Marketing Sequence

In addition to the requirements previously outlined, requirements for specialization in Marketing are 6 more credits in Business, 21 more credits in Business Management and 6 more credits in Economics, as follows:

Business

BU 332	Retail Management	3 cr.
BU 352	Corporate Accounting	3 cr.

Business Management

BM 241	Finance	3 cr.
BM 331	Consumer Behavior	3 cr.
BM 332	Marketing Management	3 cr.
BM 433	International Marketing	3 cr.
BM 434	Advertising	3 cr.
BM 435	Seminar – Cur. Market Problems	3 cr.
BM 438	Marketing Research	3 cr.

Economics

EC 325	Monetary Economics I	3 cr.
EC 330	Labor Economics	3 cr.

This program leaves 6 credits for electives.

Personnel Management Sequence

In addition to the requirements previously outlined, requirements for specialization in Personnel Management are 6 more credits in Business, 9 more credits in Business Management, 6 more credits in Economics, 3 credits in Sociology, and 3 credits in Psychology, as follows:

Business

BU 352	Corporate Accounting	3 cr.
BU 454	Federal Taxes	3 cr.

Business Management

BM 301	Training Management	3 cr.
BM 401	Case Studies in Personnel Management	3 cr.
BM 480	Practices and Processes of Collective Bargaining	3 cr.

Economics

EC 325	Monetary Economics I	3 cr.
EC 330	Labor Economics	3 cr.

Sociology

SO 340	Industrial Sociology	3 cr.
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Psychology

PC 400	Industrial Psychology	3 cr.
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This program leaves 9 credits for electives.

Systems Analyst Sequence

In addition to the requirements previously outlined, requirements for specialization as a Systems Analyst are 6 more credits in Business, 24 more credits in Business Management, and 3 credits in Computer Science, as follows:

Business

BU 352	Corporate Accounting	3 cr.
BU 439	Business Information Systems	3 cr.

Business Management

BM 241	Finance	3 cr.
BM 340	Business Systems Technology	3 cr.
BM 342	Bus. Problems Appl I	3 cr.
BM 441	Bus Prob Program	3 cr.
BM 442	Bus Prob Appl II	3 cr.
BM 443	Bus Systems Analysis I	3 cr.
BM 444	Bus Systems Analysis II	3 cr.
BM 445	Quant Methods – Operat Res	3 cr.

Computer Science

CO 300	Assembly Language Programming	3 cr.
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This program leaves 6 credits for electives.

Office Management Specialization

In addition to the requirements previously outlined, requirements for specialization in Office Management are 20 more credits in Business, 3 more credits in Business Management, and 6 more credits in Economics, as follows:

Business

BU 131	Principles of Typewriting	2 cr.
BU 132	Intermediate Typewriting	2 cr.
BU 261	Shorthand Theory	3 cr.
BU 262	Shorthand Dictation	3 cr.
BU 271	Advanced Typewriting	2 cr.
BU 335	Office Machines	2 cr.
BU 363	Transcription	3 cr.
BU 364	Secretarial Office Practice	3 cr.

Business Management

BM 470	Office Management	3 cr.
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Economics

EC 325	Monetary Economics I	3 cr.
EC 330	Labor Economics	3 cr.

This program leaves 12 credits free for electives.

General Business Specialization

In addition to the requirements previously outlined, requirements for specialization in General Business are 6 more credits in Business, 3 more credits in Business Management, and 6 more credits in Economics, as follows:

Business

BU 352	Corporate Accounting	3 cr.
BU 454	Federal Taxes	3 cr.

Business Management

BM 241	Finance	3 cr.
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Economics

EC 325	Monetary Economics I	3 cr.
EC 330	Labor Economics	3 cr.

This program leaves 24 credits for electives.

COURSE DESCRIPTIONS

BM 201	PERSONNEL MANAGEMENT	3 cr
Introduces and stresses basic policies and procedures required in management of personnel, with emphasis on procuring, developing, maintaining, and utilizing employees for maximum efficiency.		

- BM 215 BUSINESS STATISTICS** 3 cr.
Prerequisites: BM 111, MA 362.
Objective is application of statistical methods, which are used in guiding business decisions, emphasis is on classical decision theory and Bayesian decision theory.
- BM 241 FINANCE** 3 cr.
Study of methods of securing and managing funds on short, intermediate, and long-term bases, the financial analysis, planning, and control of a corporation.
- BM 301 TRAINING MANAGEMENT** 3 cr.
Prerequisite: BM 201.
Principles, problems and procedures in planning, organizing, directing, and controlling training at all echelons of a business enterprise.
- BM 331 CONSUMER BEHAVIOR** 3 cr.
Prerequisites: BU 233, PC 201.
Survey of noteworthy contributions of behavioral sciences and research of consumer purchasing and decision-making process, with particular attention to formal and informal influence patterns.
- BM 332 MARKETING MANAGEMENT** 3 cr.
Prerequisites: BU 233, BM 331.
Analysis of marketing and operational problems and policies involved in planning, organizing, coordinating, and controlling a business from a total marketing program.
- BM 340 BUSINESS SYSTEMS TECHNOLOGY** 3 cr.
Prerequisites: BU 339, 439, CO 300.
Reviews computer technology and its influence on the organization and processing of data files, along with the input, output, processing communications and storage devices.
- BM 342 BUSINESS PROBLEM APPLICATION I** 3 cr.
Prerequisites: BU 339, 439, CO 300.
System design and programming of applications related to different business areas utilizing card, taped, and disk files.
- BM 380 PRINCIPLES OF INVESTMENTS** 3 cr.
Prerequisite: BM 241.
Analysis of various types of securities and other forms of investment possibilities and a study of sound investment policies from a corporate viewpoint. Factors influencing the general movement of security prices and the return from investments are considered.
- BM 381 INSURANCE I** 3 cr.
Comprehensive study of that insurance which provides protection against the economic loss caused by termination of earning capacity. Analyzes benefits, underwriting, ratemaking, and legal doctrines.
- BM 382 PRINCIPLES OF REAL ESTATE** 3 cr.
Study of the regulations, legal aspects and professional ethics of the real estate business, including the area of financing, advertising, property valuation and appraisal and selling.
- BM 383 INSURANCE II** 3 cr.
Study of the hazards of underlying, the principles involved in, and the protection provided by property and liability insurance, including multiple line and "all risks" insurance, and corporate suretyship.
- BM 385 SECURITIES AND COMMODITIES MARKETS** 3 cr.
Prerequisite: BM 241.
Study of the structure of security and commodity markets; the nature of speculative transactions and methods of trading, analysis of pricing; and the objectives of security and commodity market regulation.
- BM 401 CASE STUDIES IN PERSONNEL MANAGEMENT** 3 cr.
Prerequisite: BM 201.
Actual and realistic case studies illustrating the principles, practices, and procedures involved in planning, organizing, and controlling the personal aspect of supervising employees.

- BM 433 INTERNATIONAL MARKETING** 3 cr.
Prerequisites: BU 233, BM 331.
International marketing is analyzed, with consideration given to the significance of government regulation; organization structures of export and import enterprises; and credit policies.
- BM 434 ADVERTISING** 3 cr.
Prerequisite: BU 233.
An introduction to the principles, practices, and creations of advertising. The use of various media, legal, economic, social and ethical aspects of advertising are also considered.
- BM 435 SEMINAR IN CURRENT MARKETING PROBLEMS** 3 cr.
Prerequisites: BM 332, 438, 434.
A terminal course designed for majors in Marketing, considers current literature in the field, case problems pertaining to the total marketing effort, and actual problems of local companies.
- BM 43B MARKETING RESEARCH** 3 cr.
Prerequisite: BU 233.
The nature, methods, analysis, and application of present-day marketing research techniques utilized in the solution of practical marketing problems, studied through the use of case material and outside research.
- BM 441 BUSINESS PROBLEM PROGRAMMING** 3 cr.
Prerequisites: BU 339, 340, 439; CO 300; BM 342.
The study of Business-oriented high-level languages of Cobol, and RPG, and solving problems in accounting, marketing, statistics, and finance.
- BM 442 BUSINESS PROBLEM APPLICATION II** 3 cr.
Prerequisites: BU 439; BM 340, 342.
Business-oriented information system involving magnetic tape and indexed sequential disk files; creation, maintenance, and report-writing functions are considered.
- BM 443 BUSINESS SYSTEMS ANALYSIS I** 3 cr.
Prerequisites: BU 339,439; CO 300; BM 340, 342.
Study of the techniques used in Systems Analysis, involving systems definition, feasibility, quantitative, and evaluative techniques of business.
- BM 444 BUSINESS SYSTEMS ANALYSIS II** 3 cr.
Prerequisites: BM 441, 442, 443.
Study of business sub-systems, such as production, inventory, and marketing, with the requirement of a documented study of a sub-system of an outside business.
- BM 445 QUANTITATIVE METHODS — OPERATING RESEARCH** 3 cr.
Prerequisites: BM 441, 442, 443.
Develops the computer programs necessary for business decision-making techniques; intensive analysis of the decision-making process: diagnosing problems; evaluation of alternative solutions, projection of results and the choice of alternatives.
- BM 451 ADVANCED PRINCIPLES OF ACCOUNTING** 3 cr.
Prerequisite: BU 352.
Study of accounting problems of a specialized nature, including the application of funds statement, consignments, installment sales, receivership accounts, agency and branch accounting and corporate combinations.
- BM 456 ADVANCED COST ACCOUNTING** 3 cr.
Prerequisite: BU 353.
Study of the theory, preparation, and use of budgets, the analysis of cost variances, direct costing, and extensive analysis of various cost-control and profit-planning programs.
- BM 470 OFFICE MANAGEMENT** 3 cr.
Prerequisite: Seniors only.
Study of the principles of office management and their application in controlling office costs; work flow, office equipment

selection; selection, training and supervision of office employees; report writing.

BM 480 THE PRACTICES AND PROCESSES OF COLLECTIVE BARGAINING 3 cr.

The role, function, and authority of negotiation committees, techniques of negotiation, the negotiations agreement, the mediation process and the arbitration process will be analyzed through mainly a case study approach.

BM 481 INVESTMENT ANALYSIS 3 cr.
Prerequisites: BU 352, BM 241, 380.

Integrates the work of the various courses in the finance areas and familiarizes the student with the tools and techniques of research in the different areas of investments.

BM 485 FINANCIAL INSTITUTIONS AND MARKETS 3 cr.
Prerequisites: EC 325, BM 380.

Review of entire structure of financial institutions, money and capital markets, of which the business enterprise is both a supply and demand factor, and structure and dynamics of interest-rate movements.

BM 490 DECISION MAKING IN BUSINESS 3 cr.
Prerequisite: Seniors only.

A case approach to the analytical techniques and concepts necessary in making business decisions concerning marketing, costs, pricing, profits, competition, production, and capital management.

BM 497 ACCOUNTING INTERNSHIP 6 cr.
Practical experience with a public accounting firm.

BU 101 BUSINESS ORGANIZATION AND MANAGEMENT 3 cr.
(Restricted to Freshmen and Sophomores)

PC 400 INDUSTRIAL PSYCHOLOGY 3 cr.
SO 340 INDUSTRIAL SOCIOLOGY 3 cr.

Any 3 credit BU or BM course not requiring a prerequisite or for which you have had the prerequisite. 3 cr. each

Any non-required Economics course for which you have fulfilled the prerequisite requirements. 3 cr. each

Non-Business Electives:

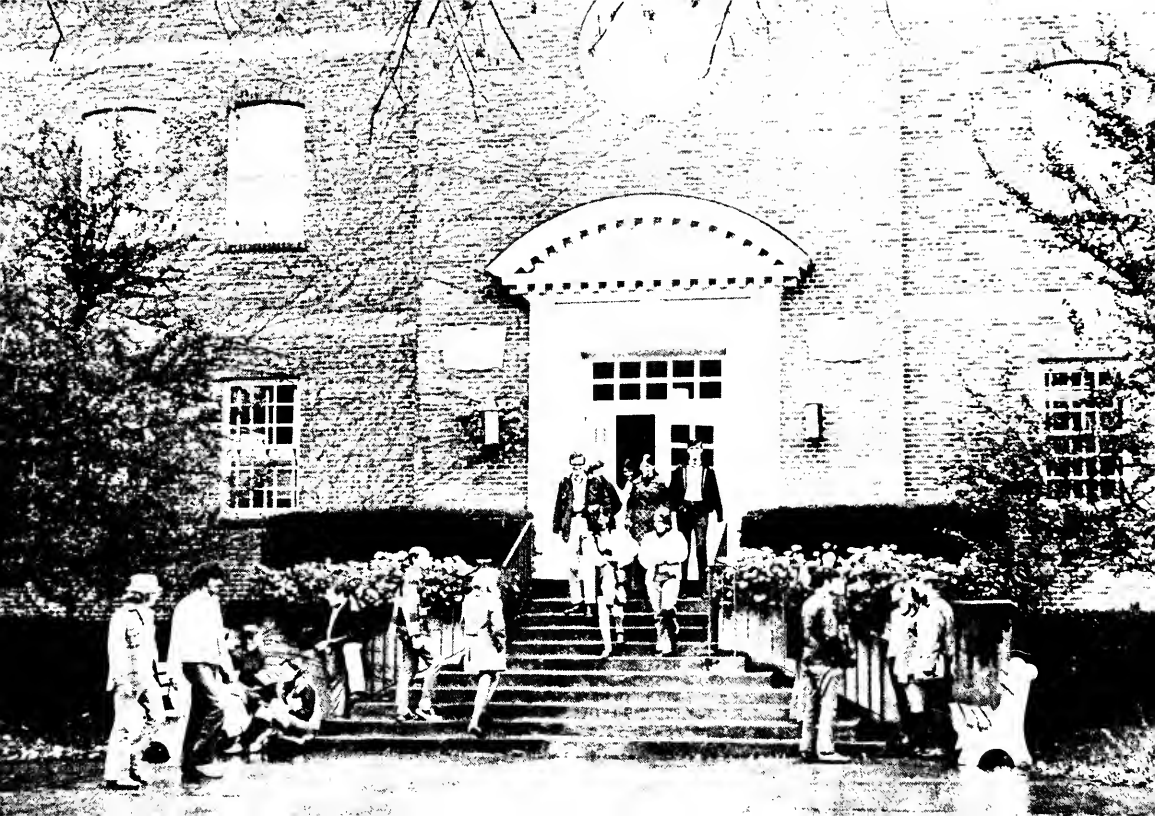
Any course listed above in the Social Science and Humanities elective groups. 3 cr. each

Other non-business electives are available with the approval of the Dean, School of Business or the department chairman.

Business Electives

66-2/3rds percent of your undesignated electives must be from the following courses:





The School of Continuing Education

GEORGE W. BILICIC, DEAN

The School of Continuing and Non-Resident Education at IUP operates Branch Campuses located at Punxsutawney and Kittanning, Pennsylvania. Further it provides an opportunity for community adults to participate in non-credit courses offered through the Community-University Studies Series each spring and fall. It enables interested persons to take criminology courses for credit at a number of locations via the University Extension Program and facilitates study abroad programs and foreign exchange for faculty and students.

THE BRANCH CAMPUSES

**ROBERT H. DOERR, DIRECTOR,
ARMSTRONG BRANCH CAMPUS**

**ROBERT E. DAIN, DIRECTOR,
PUNXSUTAWNEY BRANCH CAMPUS**

Indiana University of Pennsylvania operates two branch campuses, one in Punxsutawney, 28 miles north of the Indiana Campus, and one in Kittanning, 28 miles west of the Indiana Campus.

The first branch campus was established in September, 1962, in Punxsutawney. The following year the Armstrong County Campus in Kittanning was opened. Over 200 students are enrolled at the Punxsutawney Campus and 550 students at Armstrong County Campus.

Both campuses have University faculty members who teach full time at the branch campuses. To meet additional curriculum needs, other faculty from the main campus travel to the branch campuses.

The branches provide one or two full years of college work which, if satisfactory, is transferable to the main campus of Indiana University of Pennsylvania or to other accredited colleges.

Control of the branch campuses is directly vested with the Indiana University of Pennsylvania administration and Board of Trustees. Advisory Boards from the respective areas identify local needs.

Both branch campuses carry full accreditation as integral parts of the undergraduate programs of Indiana University of Pennsylvania. This means that courses offered at the branch campuses are of the same quality as those offered on the main campus.

Programs of Study

Since the redesignation of Indiana State College as Indiana University of Pennsylvania in 1965, the structure of the University has been reorganized and expanded into seven undergraduate schools including the School of Education, School of Arts and Science, School of Business, School of Fine Arts, School of Home Economics, School of Continuing and Non-Resident Education, and the School of Health

Services. There is also a Graduate School in the University.

Indiana University of Pennsylvania offers programs leading to the degrees of Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, and Bachelor of Science in Education on the undergraduate level.

Students at the branch campuses of Indiana University of Pennsylvania are able to take basic general education courses in most majors in the various undergraduate schools of the University. These students may schedule the full program for the freshman and sophomore years by pursuing work that will fulfill these general education requirements. In addition to these required courses, which will make up a major part of the student's first two years of college work, a number of electives are offered in many fields.

In some majors, the student will be able to complete only one year's work at a branch campus instead of the two years' which would qualify him for junior status; hence it will be necessary for him to continue his studies at the University's Indiana Campus after the first year. This is true of students majoring in highly specialized fields. Art and music students should make arrangements with their respective department chairmen to submit a portfolio or an audition tape for admission to their respective department. In any event, no student accepted at either of the branch campuses is eligible for transfer to the main campus at Indiana until he has completed two semesters and has achieved the necessary grade point average.

Students find many advantages in remaining at the branch

campuses for two years providing they can obtain a full program of University credit. A smaller student body and a closer relationship among faculty members, administration, and students at the branch campuses are very beneficial to students.

Faculty advisors and administrators at the branch campuses are available to advise students of their instructional program and of the proper time for continuing at the Indiana campus whether it be after two, three or four semesters.

Criminology Associate Degree Program

This special two-year Academic Diploma Program in Criminology is offered only at the Branch Campuses and is not offered on the Main Campus of IUP. When a student is accepted for admission into this two-year program, it is understood that he will remain in the particular program at the Branch Campus until it is completed. It is further understood that the student in this special two-year program may not transfer into any other major offered by the University until completion of this program. At that time, the student may apply for admission into a four-year baccalaureate degree program according to the availability of openings on the Main Campus of Indiana University of Pennsylvania. Admission is not guaranteed. If accepted, however, the credits earned in the two-year diploma program will apply toward the four-year degree program in Criminology.

Admission

Any prospective student who wishes to attend either of the Branch Campuses instead of the Indiana Campus may apply for admission by requesting an application from the Admissions Office, Indiana University of Pennsylvania, or from the Director of either Branch Campus. The same standards and requirements used for admission at the main campus are applied at both University Branch Campuses.

Housing

Both branch campuses maintain privately-owned residence halls for students living beyond commuting distance. At the Punxsutawney Campus, the Punxsutawney Area College Trust maintains two residence halls which provides housing for students residing at the campus. In certain cases the branch campus director permits students to live in approved private homes. At the Armstrong County Campus there are two co-ed residence halls: Trust Hall and Boyer Hall. Some students make their own arrangements for living in the community. A list of rooms and apartments is available in the office of the Director of the Campus. Cost of off-campus housing is comparable to the University residence hall fees.

Students living in residence halls at Armstrong County Campus pay \$225.00 per semester in both Boyer and Trust Hall. Students living in residence halls at Punxsutawney Campus pay \$225.00 per semester (first floor, one of the residence halls, \$234.00).

The University employs a head resident who lives in private quarters in each hall. The head residents are part of the staff of the University.

The residence halls at both branch campuses have integral laundry facilities. Study lounges and recreational lounges are located in all facilities.

Food Service

Each branch campus has its own dining hall within the residence hall. It is mandatory that all students housed in the residence halls at the branch campuses contract for the meal service plan. The cost of the meal service is \$198.00 per semester. (All fees subject to change.)

Non-resident students including male students housed in private homes may make arrangements to take meals in the dining halls. The dining service is operated by the ARA Slater Food Service.

Libraries

The Armstrong County Campus library, an integral part of Academic Hall, has more than 12,000 volumes and a capacity for 25,000 volumes. In addition, the library provides microfilm, 150 periodicals, and language and shorthand tapes and records. All books and magazines are displayed on open stacks. The library which seats about 100 students is open 65 hours per week.

The Punxsutawney library contains more than 12,000 volumes as well as 100 periodicals, recordings of music, poetry and dramas. There are 59 titles available on microfilm in addition to *The New York Times*, 1965-1970. The Punxsutawney library is open 56 hours a week.

The University employs professional librarians for both of the branch campuses. The libraries at the Branch Campuses are especially practical since the volumes are geared for the specific curricula. If volumes and other materials are not immediately available, the general holdings of the Rhodes R. Stabley Library on the Indiana Campus are available to the students through inter-library loan.

Extra-Curricular Activities — Armstrong County Campus

A large part of the extra-curricular activities at the Armstrong County Campus takes place in the Student Union which adjoins the two dormitories and the Academic building. The Union is a two story building, the first floor of which is equipped for such activities as pool, ping pong, and dancing. The second floor is furnished as a lounge with television and a piano. Movies are scheduled bi-weekly and dances are scheduled on alternate Fridays.

Each Wednesday from 7:00 to 10:00 P.M. the students may participate at the local YMCA in a Gym-Swim sponsored by the branch campus and supervised by college faculty. The Gym-Swim physical activity includes swimming, gymnastics, volleyball, and basketball.

Each year two semi-formal dances for students and faculty are held, one during the Christmas season and the other in the Spring. A fall outing at the University Lodge on the outskirts of Indiana is supervised by faculty members. All three functions are organized and sponsored by student government.

The students of the Armstrong County Campus are encouraged to attend the University Artists-Lecture Series on the Indiana campus. Bus transportation is provided for those students who wish to attend these monthly activities.

Many of the students are active in Women's Judicial Board, Student PSEA, Big Brother and Big Sister, Newman Club, and other branch campus activities.

The churches, social and civic organizations of the area invite and encourage the students to take an active part in their projects and activities.

Extra Curricular Activities — Punxsutawney Campus

The newly completed Student Union building will be the scene of a major portion of extra-curricular activities at the Punxsutawney Campus. The new Union will provide facilities for dances, pool, ping-pong, movies and will also have lounge areas equipped with color television and piano. This building is expected to re-activate the drama club since it provides more suitable facilities for plays and musicals.

Outstanding functions of the school year are the Christmas and Spring semi-formal dinner dances and an informal party

at the University Lodge held in conjunction with the Kittanning Campus.

A van has been purchased for the campus and this will facilitate the transporting of small groups of students for such events as intramural athletic activities to both Main Campus and the Kittanning Campus. Bus transportation is provided for larger groups of students wishing to attend artist series performances, athletic events and other Main Campus activities.

Various clubs are active on the Punxsutawney Campus, especially the Circle K which is the college division of Kiwanis International. Circle K participates in many worthwhile community service projects. The elected Student Government supervises and arranges for all extra-curricular activities on the campus.

The churches of the area invite and encourage students to take an active part in their functions and the Coalition for Christian Outreach sponsors a person to spend time with the students giving spiritual help and guidance to those desiring it.

Rules and Regulations Concerning Student Behavior

Students at the Branch Campuses are subject to the same rules and regulations as students on the main campus. See page 45.

Fees

Branch Campus students pay the same basic fees as main campus students. See page 16.



COURSE OFFERINGS AT THE BRANCH CAMPUSES

Anthropology-Sociology Department

- AN 110 Intro to Anthropology
- SO 151 Principles of Sociology

Art Department

- AR 101 Introduction to Art
- AR 116 Western Art: Renaissance to Baroque

Biology Department

- BI 103 General Biology I
- BI 104 General Biology II

Business Department

- BU 101 Business Organization & Mgt
- BU 221 Intro to Accounting
- BU 233 Marketing
- BU 235 Business Law I
- BU 251 Intermediate Accounting
- BU 321 Business Communications

Chemistry and Physics Department

- SC 105 Physical Science I
 SC 106 Physical Science II

Criminology Department

- CR 101 Gen Adm of Justice
 CR 102 Criminology
 CR 301 Criminal Law I
 CR 302 Criminal Law II
 CR 201 Police Admin I
 CR 202 Police Admin II
 CR 310 Criminal Invest
 CR 340 Crime Prevention
 CR 350 Techniques of Interviewing
 CR 370 Community Relations
 CR 431 Etiology of Delinq. Beh.
 CR 432 Treatment & Control of Delinquency
 CR 440 Institu. Treatment of the Offender
 CR 445 Non-Institu. Treatment of the Offender
 CR 490 Crime in Modern Society

Economics Department

- EC 101 Basic Economics
 EC 121 Principles of Economics

English Department

- EN 101 English I
 EN 102 English II
 EN 103 Introduction to Theater
 EN 201 English III
 EN 358 Modern American Fiction

Foreign Language Department

- SP 151 Spanish I
 SP 152 Spanish II
 SP 251 Spanish III
 SP 252 Spanish IV
 FR 151 French I
 FR 152 French II
 FR 251 French III
 FR 252 French IV

Geography Department

- GE 101 World Geography
 GE 251 Geog of United States and Canada

Health and Physical Education Department

- HE 101 Health

History Department

- HI 101 Hist of Civilization I
 HI 102 Hist of Civilization II
 HI 104 Hist of U. S. and Pa. II

*Home Economics Department

- CS 113 Management and Equipment
 CS 315 Fam. Finance and Con. Econ.

Mathematics Department

- MA 011 Elementary Functions
 MA 013 Calculus I (Non-Math & Non-Physics Majors)
 MA 015 Calculus II (Non-Math & Non-Physics Majors)
 MA 101 Foundations of Math
 MA 111 Calculus I (Math Majors)

- MA 113 Calculus II (Math Majors)
- MA 160 Math for Elem Teaching I
- MA 231 Intro to Alg. Structures
- MA 250 Math for Elem Teaching II
- MA 362 Probability and Statistics

Military Science Department

- MS 101 World Military History (Fresh)
- MS 102 American Military History (Fresh)
- MS 203 Fundamentals of Tactical Operations
With Applied Terrain Analysis &
Military Topography (Soph)
- MS 204 National Security and Concept of Force
(Soph)

Music Department

- MU 101 Introduction to Music

Philosophy Department

- PH 110 World Religions
- PH 120 Intro to Philosophy
- PH 221 Logic I – General Logic
- PH 222 Ethics

Political Science Department

- PS 111 American Politics

Psychology Department

- PC 101 General Psychology
- EP 302 Educational Psychology
- PC 354 Developmental Psychology

*Home Economics courses are offered only at the Armstrong County Campus.

COMMUNITY UNIVERSITY STUDIES SERIES

ROGER W. AXFORD, DIRECTOR

As a special phase of Continuing Education, the School runs a Fall and Spring series in the adult education field entitled *The Community-University Studies Series*. These non-credit courses are established to fill demands and needs of adults in the areas served by the University. The Director of Community-University Studies should be contacted regarding this program.



UNIVERSITY EXTENSION PROGRAM

MARK E. McNABB, DIRECTOR

Indiana University of Pennsylvania is a member of the National University Extension Association. Extension courses in criminology are offered at a number of locations in the surrounding area. For information regarding location, classes to be offered, costs, and application blanks, contact the Director, Criminology Extension Classes, Indiana University of Pennsylvania, 357-3065. The University cooperates with the Law Enforcement Education Program. Any officer of any publicly funded law enforcement agency may be eligible to receive a grant to be used for tuition and books. The grant will be based upon need. Grant recipients will be reimbursed. Grant applications can be obtained from the Department of Criminology.

In addition, the University offers courses at the Branch Campuses for special needs as they arise, as well as other sites when groups make a demand known.

CENTER FOR INTERNATIONAL STUDIES

ROBERT L. MORRIS, DIRECTOR

The Center for International Studies offers several different programs to meet the needs of the University. It facilitates study-abroad programs and foreign exchanges for students and faculty.

Foreign Study

Junior Year Abroad: Basel and Verona – Indiana has combined with 26 colleges and universities in Eastern Ohio, West Virginia and Western Pennsylvania to offer a Junior Year Abroad Program for students in the Humanities and Social Sciences. For this purpose, the Regional Council for International Education operates colleges in Switzerland and Italy where courses in language, art, literature, and national-international issues are taught in English. Students are encouraged to do extensive traveling during 7 weeks of scheduled vacations. A comprehensive fee covering tuition, housing and food for the year, plus partial travel, was \$3,600 in 1973–74. Students may earn 30 semester hours of credit. Interested students should consult the Director of the Center for International Studies, Indiana.

Opportunities for Foreign Study – Students have the option of studying for credit in a great variety of programs offered by cooperating institutions. The Center for International Studies cooperates with the Regional Council and Pennsylvania Consortium for International Education in the Salzburg Summer Program and a program in Cuernavaca, Mexico, where credits can be earned in almost any discipline. Students have used the intern and individualized study arrangements of the University to study on a kibbutz in Israel, on the Chapman College Afloat program, at the Beaver College London Semester, and in the programs of the Institute for European Studies. Students planning to study abroad should select the program which best suits their needs as early as possible so that their total undergraduate program can be



planned in conjunction with the study-abroad program selected. The Center for International Studies will assist students who plan to study abroad.

Contemporary Europe — For the past several years the school has sponsored a 3 week study-travel tour during the Pre-Session. Designed for students in every department of the University, this tour emphasizes the basic political, economic, social, and military organization of Contemporary Europe and the unresolved tensions of that part of the world. Background reading, lectures in major capitals, sight-

seeing, and an extensive personal diary are required. Two — four hours of graduate-undergraduate credit are granted.

For details write to: Director, Center for International Studies.

Argentine Seminar — The University cooperates with the Pennsylvania Consortium for International Education in sponsoring an Argentine Seminar program in Buenos Aires during the Main and Post sessions of Summer School. Six semester hours credit may be earned: 3 credits in conversational Spanish and 3 credits in Social Science Special Studies.

The basic cost of the program in 1973 was \$666. This included the cost of transportation, room and board. University fees depend on the number of credits elected by the student. Applicants must have completed the intermediate sequence in Spanish.

For details write to: Director, Center for International Studies.

STUDENTS SHOULD CONSIDER THE ABOVE CREDIT PROGRAMS AS MEANS OF WIDENING THEIR INTELLECTUAL HORIZONS, AS TRAVEL OR SPECIAL LOCATION IS COMBINED WITH STUDY. ARRANGEMENTS, INCLUDING TIMING AND THE SPECIFICS OF CREDIT RECOGNITION, SHOULD BE WORKED OUT WITH THE RESPONSIBLE UNIVERSITY OFFICES REFERRED TO WELL IN ADVANCE.



The School of Education

GEORGE A. W. STOUFFER, JR., DEAN

The departments of the School of Education offer programs leading to the degree of Bachelor of Science in Education, the degree of Master of Education, and the doctoral program leading to the degree of Doctor of Education in Elementary Education. Appropriately, all programs completed in the School of Education lead to certification for public school teaching or supervision in the Commonwealth of Pennsylvania.

SUMMARY OF PROGRAMS OFFERED

Elementary Education	Bachelor of Science in Education Master of Education Doctor of Education
Secondary Education	Bachelor of Science in Education Master of Education
*English	
Communication	
*Biology	
*Chemistry	
*Earth and Space Science	
General Science	
*Mathematics	
*Physics	
*Physics-Mathematics	
*Comprehensive Social Studies	
French	
German	
Russian	
*Spanish	
Latin	
*Master of Education	

Counselor Education	Master of Education (for details, see Graduate School Bulletin)
Educational Psychology	Master of Education (for details, see Graduate School Bulletin)
Dental Hygiene	Bachelor of Science in Education
Public School Nursing	Bachelor of Science in Education
Reading Specialist	Master of Education (for details, see Graduate School Bulletin)
Special Education	
Education for Mentally Retarded	Bachelor of Science Master of Education
Rehabilitation Education	Bachelor of Science in Education
Speech Pathology and Audiology	Bachelor of Science in Education Master of Education
Certification Areas	
Undergraduate	
Education for Safe Living — Driver Education	Certificate (for details, see School of Health Services)
Graduate	
Instructional Media Specialist	Certificate (for details, see Graduate School Bulletin)
School Psychologist	Certificate

DEGREE REQUIREMENTS

All degree candidates in the School of Education (except for three special programs) must complete satisfactorily a minimum of 124 credits in three categories: General Education, a

specialized major field, and professional education:

General Education – 52 to 55 credits, described under requirements for Graduation.

Specialized major field – requirements listed under Department offerings.

Professional Education – 27 credits, as follows:

EP 302	Educational Psychology	3 cr.
EP 377	Educ. Tests & Measurements	3 cr.
FE 302	History and Philosophy of American Education	3 cr.
LR301	Audio-Visual Education	3 cr.
	Methods Course – (Teaching of _____, see under major department offerings)	3 cr.
	One semester student teaching, including professional Practicum and School Law	14 cr.

The three special programs are those leading to the Bachelor of Science in Education in Dental Hygiene, in Public School Nursing, and in Rehabilitation Education. For each program, the degree requirements are listed in the following pages.

SOPHOMORE SCREENING FOR JUNIOR STANDING

School of Education majors are screened at the close of the sophomore year for Junior Standing approval. The student must have earned a minimum of 57 semester hours, achieved a 2.0 cumulative quality point average, successfully com-

pleted English I and English II and received speech clearance and department approval.

THE UNIVERSITY SCHOOL

The University School provides for a program of instruction from kindergarten through sixth grade, thus affording opportunities for professional laboratory experiences and research activities. Professional laboratory experiences are planned and scheduled with the Director of Professional Laboratory Experiences. Research activities are scheduled with the Director of the University School.

THE UNIVERSITY CLINICS

Three clinics under the supervision of the School of Education offer diagnostic testing and remedial service and instruction in the following areas:

PSYCHOLOGICAL CLINIC – diagnosis of academic and behavior problems and personal, vocational, and educational counseling.

READING CLINIC – diagnosis and remedial instruction for reading and spelling disabilities and instruction for the improvement of present skills.

SPEECH AND HEARING CLINIC – diagnosis of speech problems, hearing tests and evaluations, and a regular program of therapy.

Regularly enrolled students at the University may avail themselves of these services without charge.

In addition, a CHILD STUDY CENTER provides psychological testing for any pre-school and school-aged child within the area served by the University.

COMMONWEALTH REQUIREMENTS FOR TEACHER CERTIFICATION

Certification standards for Commonwealth public school teachers are established by the Department of Education and the State Council on Education. The Chairman of the Department in which the student is majoring must verify to the office of the School of Education that all qualifications are met. The Dean of the School is authorized to determine final approval for certification.

Applicants for certification are required by State Law to be of good mental and physical health; not in the habit of using either narcotic drugs in any form or intoxicating beverages to excess; and be a citizen of the United States.

The Instructional I certificate is issued to the beginning teacher upon graduation from the School of Education. With the addition of 24 semester hours of post-baccalaureate work and successful teaching experience, students may acquire the Instructional II certificate, leading to permanent certification to teach in the Commonwealth of Pennsylvania. Graduates of approved programs in non-teaching areas, such as Dental Hygiene and Public School Nursing, are issued an Educational Specialist I certificate.

GRADUATE PROGRAMS

Information descriptive of M.Ed., Ed.D. and Teaching Internship programs may be found in the current issue of the Graduate School Bulletin.

DENTAL HYGIENE

On November 17, 1950, the Board of Presidents of the State Colleges approved a curriculum for dental hygienists leading to the degree of Bachelor of Science in Education, upon fulfillment of the following:

- (1) The satisfactory completion of an accredited 2-year curriculum for the preparation of dental hygienists, approved by the State Dental Council and Examining Board.
- (2) Licensing of the student by the proper state authorities.
- (3) In addition, the satisfactory completion of 62 credits of professional and general education courses.

General Education		34 credits
EN 101 and 102	English I and II	7 cr.
EN 201	English III	3 cr.
AR 101	Introduction to Art	3 cr.
	or	
MU 101	Introduction to Music	
GE 251	Geography of the United States and Canada	3 cr.
	or	
GE 252	Geography of Pennsylvania	

Social Studies – 18 credits selected from the following:

HI 101 and 102	History of Civilization I and II	6 cr.
HI 104	History of U. S. and Pa. II	3 cr.
PS 111	American Politics	3 cr.
EC 121	Principles of Economics I	3 cr.
SO 151	Principles of Sociology	3 cr.

Education 15 credits

FE 302	Hist and Phil of American Education	3 cr.
PC 201	General Psychology	3 cr.
EP 302	Educational Psychology	3 cr.
PC 300	The Psychology of Adjustment	3 cr.
LR 301	Audio-Visual Education	3 cr.

Electives 14 credits

Total 64 credits

In each category above, credit may be given for equivalent courses in the two-year dental hygiene curriculum. In such cases, students may increase their electives by the number of semester hours so credited.

Electives may be chosen with the approval of the Dean from any field or curriculum offered at the college in which the student is enrolled.

Dental hygienists who have had less than two years of special training on the basis of which they have been licensed by the State Dental Council and Examining Board will pursue additional courses to fulfill the requirements for the degree.

EDUCATIONAL PSYCHOLOGY DEPARTMENT

ANTHONY A. ANGELONI, CHAIRMAN; W. BAHN, CUTLER, DE FABO, HAYS, HELMRICH, LEVENTRY, MEADOWCROFT, QUIRK, SHANK, YANUZZI.

COURSE DESCRIPTIONS

Professional Education Courses

EP 302 EDUCATIONAL PSYCHOLOGY 3 cr.

Prerequisite: PC 101.

(Required of all Education majors – It is recommended that this course be taken immediately prior to the student teaching experience.)

Designed to promote better understanding of principles of psychology governing human behavior, with particular emphasis on their relation to learner, learning process, and learning situation in an educational environment.

EP 377 EDUCATIONAL TESTS AND MEASUREMENTS 3 cr.

Prerequisite: PC 101.

(Recommended that this course be taken immediately prior to student teaching experience.)

Designed to acquaint students with major methods and techniques of evaluation used to assess and report growth, development, and academic achievement of individuals in an educational environment. Includes interpretation of standardized test information and basic research techniques.

General Electives or for Instructional II Certification

EP 372 PSYCHOLOGY OF CHILDHOOD EDUCATION 3 cr.

Prerequisite: EP 302.

Emphasizes relationship which physical, social, emotional, and intellectual development have on theory and practice of childhood education.

ELEMENTARY EDUCATION DEPARTMENT

ROBERT L. KING, CHAIRMAN; BAKER, BARTHA, A. DAVIS, B. DAVIS, DORSEY, GLOTT, KUHNS, LOTT, MC FEELY, MILLWARD, MOTT, REILLY, RIZZO, STUART, WILLIAMS.

Requirements for a degree in Elementary Education, in addition to the University's General Education requirements and 24 credits in Professional Education, are 27 credits in Elementary Education and a concentration of at least 18 credits in one of the following academic areas: early childhood education, English, French, geography, German, history, mathematics, science, social studies, or Spanish.

COURSE DESCRIPTIONS

Required Courses in Elementary Education

EL 211 MUSIC FOR THE ELEMENTARY GRADES 2 cr.
Geared for elementary education students. Includes basic ideas for understanding, development, and confidence for future classroom teachers and their pupils in areas of music education.

EL 213 ART FOR THE ELEMENTARY GRADES 2 cr.
The creative use of art materials and an understanding of development of capacities of children through art.

EL 215 CHILD DEVELOPMENT 3 cr.
Survey of human development, from conception to adolescence, in terms of basic scientific data. Development, growth, and behavior studied and their implications for home, school, and community considered.

EL 221 CHILDREN'S LITERATURE 3 cr.
Acquisition of a wide acquaintance with children's literature, old

EP 373 PSYCHOLOGY OF ADOLESCENT EDUCATION 3 cr.
Prerequisite: EP 302.
Study of significant characteristics, behavior, and educational and social problems of adolescents.

EP 376 BEHAVIOR PROBLEMS 3 cr.
Prerequisite: EP 302.
Examination of emotional and social aspects of behavior problems encountered in classroom situations and potential remedial techniques.

EP 378 LEARNING 3 cr.
Prerequisite: EP 302.
Explores learning theories and educational application in the classroom.

EP 380 MENTAL HEALTH IN THE CLASSROOM 3 cr.
Prerequisite: EP 302.
Considers human adjustment and mental health in relation to causative factors and explores dynamics of personal and interpersonal relationships.

EP 383 EDUCATION OF THE DISADVANTAGED CHILD 3 cr.
Prerequisite: EP 302.
Acquisition of necessary understandings of physiological, psychological, and social implications relevant to working with and teaching disadvantaged child.

EP 384 TUTORIAL EXPERIENCE IN THE PUBLIC SCHOOLS 3 cr.
Prerequisite: instructor permission.
Provides student with tutorial experience in the public schools with professional supervision.

EP 450 SPECIAL TOPICS IN EDUCATIONAL PSYCHOLOGY 3 cr.
Prerequisite: Department Chairman permission.
Provides opportunity for students to investigate in depth an area of Educational Psychology under professional supervision.

and new. Poetry selections, annotated stories, and bibliographies will be assembled. Ways and means to develop, stimulate, and guide children's reading of literature presented. Principles and techniques of successful story-telling studied and practiced.

EL 222 TEACHING OF READING 3 cr.
Systematic coverage of teaching of reading, including methods, techniques and materials, from first through sixth grades.

EL 312 TEACHING OF ELEMENTARY SCIENCE 3 cr.
Emphasis placed upon science as it relates to child and curriculum, planning for teaching science, and recent innovations in science teaching. Course offered on the block only.

EL 313 TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOL 3 cr.
Prerequisites: MA 160 and MA 250.
Recent developments in curriculum and methods of instruction of contemporary elementary school mathematics programs. Students will become acquainted with books, materials and other resources helpful to prospective teachers. Includes observations of master teachers.

EL 314 TEACHING OF HEALTH AND PHYSICAL EDUCATION 2 cr.
Games, stunts, rhythms, relays, tumbling, dances, and skills suitable for elementary school child. Teaching of health in elementary school is emphasized, including methods, materials and lesson planning.

EL 411 TEACHING OF SOCIAL STUDIES 3 cr.
Overview of social studies in elementary school. Includes study of objectives, trends, areas of content, patterns and principles of organization and techniques of teaching. Variety of learning experiences and materials used and evaluated.

EL 413 TEACHING LANGUAGE ARTS 3 cr.
Techniques for teaching, oral and written communication, spelling,

handwriting, vocabulary development, listening, and linguistics for Elementary Education students. Evaluates recent trends and research.

ED 423 PROFESSIONAL PRACTICUM, INCLUDING SCHOOL LAW 2 cr.
Series of conferences and related activities to prepare students for actual teaching experiences. Parallels student teaching experience in junior and senior years.

Elective Courses in Elementary Education

EL 212 TEACHING OF MUSIC IN THE ELEMENTARY GRADES 3 cr.
Prerequisite: EL 211.
Continuation of skills and understandings as developed in EL 211, with emphasis on methods and materials for upper grades. Additional opportunities for growth in music reading and part singing are provided. Correlation of music with other areas.

EL 214 TEACHING ART IN THE ELEMENTARY GRADES 3 cr.
Prerequisite: EL 213.
In-depth experiences in two- or three-dimensional materials relative to art and credit for elementary school child.

EL 330 PROBLEMS IN ELEMENTARY EDUCATION 3 cr.
Prerequisite: ED 302.
For in-service teachers and those working toward permanent certification. Formulation of solutions to problems of organization and instruction in elementary school; in-depth study of teacher-pupil-parent interrelationships.

EL 351 CREATIVE ACTIVITIES IN THE ELEMENTARY SCHOOL 3 cr.
Provides student with a wide range of creative experiences in fields of art, crafts, music, rhythmic, dramatics and games in

elementary school. Stress is placed upon need to help children in developing their capacities for creative expression in these areas.

EL 352 **DIAGNOSTIC AND REMEDIAL READING** 3 cr.
Causes of reading disability; methods of diagnosis; procedures and materials for remedial work, group and individual.

EL 353 **PRE-SCHOOL EDUCATION** 3 cr.
Principles and practices of guiding learning experiences of kindergarten student. Special attention given to observations, kindergarten program and its curriculum, materials, and methods of instruction.

EL 355 **GUIDANCE IN THE ELEMENTARY SCHOOLS** 3 cr.
Study and discussion center about child himself – his characteristics, needs, problems, materials, and relationship with others – and around techniques and procedures for identifying, studying, and giving help to children.

EL 451 **TEACHING OF READING IN THE
PRIMARY GRADES** 3 cr.
The teaching of developmental reading, consistent with child growth, in primary grades. Methods and techniques for readiness, word perception, comprehension, work-study skills, independent reading in both group and individualized approaches studied.

EL 452 **SOCIAL STUDIES IN THE PRIMARY GRADES** 3 cr.
Prerequisite: EL 411.
Examination of content, objectives and resource materials for social studies in kindergarten through third grade. Research problems examined and representative units developed.

EL 461 **ORGANIZATION OF THE ELEMENTARY
SCHOOL AND ITS CURRICULUM** 3 cr.
Study of organization of elementary school from standpoint of curriculum design and development. Role of teacher as it relates to evaluation, improvement, and development of elementary school curriculum. Designed for those who have completed student teaching or are postgraduates.

EL 462 **INNOVATIONS IN ELEMENTARY
EDUCATION** 3 cr.

Study of innovations which influence and direct educational objectives of modern elementary school and its organization. Educational innovations dealing with curriculum, school organization, and materials of instruction. Designed for those who have completed student teaching or are postgraduates.

EL 463 **WORKSHOP IN ELEMENTARY TEACHING** 3 cr.
Prerequisite: At least one student teaching experience.
Designed for in-service teachers and those who are preparing to work with elementary school children, including elementary education majors who have had at least one student teaching experience. Course provides for investigation of subject matter, materials, methods and procedures used in modern elementary classroom. Emphasis placed upon observation and participation in programs currently being demonstrated in the University School.

Graduate Programs

Programs leading to the M.Ed. and Ed.D. degrees are described in the current issue of the Graduate School Bulletin. For a limited number of Elementary Education graduates, an internship program leading to the Master of Education degree is offered.



FOUNDATIONS OF EDUCATION DEPARTMENT

GERARD C. PENTA, CHAIRMAN; CHU, MERRYMAN, ROTIGEL,
THIBADEAU, YOUCIS

COURSE DESCRIPTIONS

Professional Education Courses

FE 302 HISTORY AND PHILOSOPHY OF AMERICAN EDUCATION 3 cr.

Promotes understanding of modern educational system through study of historical changes in instructional processes and ideas. Emphasis on study of educational beliefs and points of view; fostering of critical thinking concerning role of school in our social structure; meaning of democracy; the teacher and his profession, and methods and objectives of school. (Required of all students in Education.)

FE 422 SCHOOL LAW 2 cr.
Provides interpretation of school law as it pertains to needs of the teacher.

General Electives (Open to Juniors and Seniors)

FE 454 PUBLIC SCHOOL ADMINISTRATION 3 cr.
Designed to acquaint the teacher with administration and organization of American public school. Consideration given to cultural role of schools and decision-making in operation of schools. Functions and methods of all professional personnel in operation and improvement of schools also considered.

FE 455 COMPARATIVE EDUCATION 3 cr.
Comparative analysis of educational features of some Western European, "underdeveloped" and Communist nations. Development of insights into American educational ideas and practices.

FE 456 ISSUES AND TRENDS IN EDUCATION 3 cr.
Examination of important current issues in American education. A critical analysis of trends in educational innovation.

FE 457 SECONDARY SCHOOL CURRICULUM 3 cr.
Examination of social diagnosis for curriculum development, curriculum principles and procedures, patterns of organization, and curriculum issues.

FE 599 INTERNATIONAL EDUCATION STUDIES PROGRAM 3 cr.
Study of various peoples through their cultural settings and educational systems. On-site visitation to selected schools and other social agencies and institutions, seminars with school officials, and directed readings. Undergraduate or graduate credit.

Sequence in Urban Education

FE 458 ORIENTATION TO TEACHING IN URBAN CENTERS 3 cr.
Gives students understanding of children and youth in urban centers, where specialized knowledge of learning and behavior problems is required. Instructional personnel are experienced teachers at elementary and secondary levels actively engaged in urban education. Emphasis on developing understanding of special needs of disadvantaged child and how origin of attitudes and values affects relationship which exists between students and teachers. Special attention given to practical application of theoretical information to problems of urban education. Field trips are an essential aspect of course.

FE 440 FIELD EXPERIENCES IN URBAN CENTERS 6 cr.
Provides specialized experience for students desiring to teach in inner-city schools. Participants should have completed student teaching requirements at undergraduate level. Aspects to be emphasized include physical characteristics of community, back-

DEPARTMENT OF LEARNING RESOURCES AND MASS MEDIA

**DANIEL V. MATTOX, JR., CHAIRMAN; BERGMAN, JULIETTE,
KLINGINSMITH, LAVENBURG, MACISAAC, MURRAY, SARGENT**

ground and aspirations of children and youth and specialized teacher competencies; classroom management, planning, instructional materials, teaching strategies, and evaluations. Students encouraged to take FE 458 as prerequisite. Records of comprehensive experiences in urban areas will be taken into consideration in making student teaching assignments. Schools selected for student teaching experience located in Pittsburgh.

FE 482 INTERPRETING URBAN FIELD EXPERIENCES 3 cr.

Evaluation of learning and behavior problems encountered during student teaching experience in urban schools. Flexible approach stressed to encourage wide range of investigation and exploration of psychological and sociological problems as they affect education. Supervision and guidance for investigating specific problems provided by specialists from psychology, sociology and education who will function as resource personnel, providing direction enabling students to combine experiences gained by teaching in urban schools with recent and pertinent theoretical information.

Graduate courses offered by this Department include Historical, Philosophical, Social and Comparative Foundations of Education. For specific information concerning these courses, see the current edition of the Graduate School Bulletin.



The department serves pre-service teachers and other students who are required to complete the basic course in Audio Visual Education, LR 301. In addition, many students each year take such elective courses as photography, motion picture, radio and television production.

Students may declare a *Minor in Media* by obtaining the approval of their Major adviser and the chairman of the Learning Resources Department. Eighteen semester hours of credit from the courses described below are required for the minor.

The department also offers a master of Education in Media degree and a Media Specialist Certificate. Refer to the current Graduate School Catalog for details. Undergraduate degrees in media are not required for graduate training.

COURSE DESCRIPTIONS

LR 301 AUDIO VISUAL EDUCATION 3 cr.

(Professional course required of all students in Education)

Prerequisite: PC 201.

Pre-service teachers gain competencies in selecting, using and evaluating audio-visual machines and materials. Performance-based activities in instructional design, materials production, machines operation and related learning resources activities relevant to prospective teaching experiences stressed.

- LR 371 PHOTOGRAPHY IN EDUCATION 3 cr.
Introduction to photography emphasizing the potential value of teacher-made photographic materials in teaching. Both technical and artistic aspects of photography considered. Student must provide 35 mm camera and exposure meter. See instructor.

- LR 372 MOTION PICTURE PRODUCTION IN EDUCATION 3 cr.
Emphasizes possibilities for effective use of teacher-made films in classroom. No prerequisite. Student must provide camera and exposure meter. See instructor.

- LR 373 INTRODUCTION TO RADIO BROADCASTING 3 cr.
Introduction to organization and operation of a radio station. Technical aspects of radio and programming techniques. Examination of station's relationship with educational, industrial, and other social institutions.

- LR 445 ADVANCED MOTION PICTURE PRODUCTION 3 cr.
Prerequisite: LR 372.
Emphasizes motion picture production planning. Such techniques as directing, advanced picture and sound editing, and use of sound recording and laboratory facilities stressed. Also, live action cinematography, titling, animation and special effects photography investigated.

- LR 471 ADVANCED PHOTOGRAPHY IN EDUCATION 3 cr.
Prerequisite: A basic course in photography or practical experience and permission of instructor.
Provides in-depth experiences in technical and artistic aspects of photography. Students may elect to develop skills in such specialized areas of high-contrast photography, micro-photography, slide duplication and binding, and advanced enlarging techniques. Students must provide 35 mm camera and exposure meter. See instructor.

- LR 481 TELEVISION PRODUCTION 3 cr.
Develops basic skills in television production and direction. Con-

sideration of operating problems of a television studio, as well as functions, limitations, and capabilities of television equipment and facilities. Stress placed on educational application of television production.

- LR 482 PREPARATION OF INSTRUCTIONAL MATERIALS 3 cr.

Provides experiences in planning and preparing commonly used materials for classroom and TV use: graphic materials, including layouts and lettering; mounting techniques; copying techniques, such as Thermofax, Polaroid, photography, and Xerography; laminating and color lifting.



PUBLIC SCHOOL NURSING

On January 19, 1951, The Board of Presidents of the State Colleges approved a curriculum for public school nurses leading to the degree of Bachelor of Science in Education, upon fulfillment of the following:

EP 302	Educational Psychology	3 cr.
PC 300	Psychology of Adjustment	3 cr.
LR 301	Audio-Visual Education	3 cr.
SH 354	Audiometry for Public School Nurses	3 cr.

(1) Satisfactory completion of a three-year curriculum in an approved school of nursing and registration by the State Board of Examiners for the Registration of Nurses of Pennsylvania.

(2) Satisfactory completion of 60 credits of additional preparation, distributed as follows:

Electives 13 credits

Nurses with less than three years' preparation for registration must pursue additional courses to meet the requirements for the degree.

Courses Related to Public School Nursing	15 credits
PN 301 Public School Nursing	2 cr.
PN 302 Public School Organization	2 cr.
PN 401 Public Health Nursing	6 cr.
PN 402 Nutrition and Community Health	2 cr.
PN 403 Family Case Work	3 cr.

General Education	18 credits
EN 102 English II	3 cr.
EN 201 English III	3 cr.
HI 101	
or 102 History of Civilization I or II	3 cr.
HI 104 History of the U. S. and Pa. II	3 cr.
PS 111 American Politics	3 cr.
SO 151 Principles of Sociology	3 cr.

Education	14 credits
FE 302 History and Phil of American Education	3 cr.

COURSE DESCRIPTIONS

PN 301 PUBLIC SCHOOL NURSING 2 cr.
Study of role of nurse in public schools. Offers information on organization, development, implementation, and evaluation of school health services. Students given opportunity for practical experience in performing school nursing procedures and functions. Programs, policies, and procedures presented are in conformity with Pennsylvania School Health Law, Regulations of State Departments of Health and Education, and standards adopted by national health and education authorities.

PN 302 PUBLIC SCHOOL ORGANIZATION 3 cr.
Designed to acquaint student with administration and organization of American public school. Consideration given to cultural role of schools, to decision-making in operation of schools. Functions and methods of all professional personnel in operation and improvement of schools considered.

PN 401 PUBLIC HEALTH NURSING 6 cr.
Designed to provide understanding of principles of public health nursing and basic public health services which come under official jurisdiction. Traditional emerging health programs at national,

state, and local level are explored. Emphasis placed on utilization of public health services in school setting.

PN 402 NUTRITION AND COMMUNITY HEALTH 2 cr.
Study of nutritional problems of family members, from infant to aged of community. Emphasis placed on reorganizing good nutritional status and on ways of guiding families toward better nutrition. School health lunch also emphasized.

PN 403 FAMILY CASE WORK 3 cr.
Course proposes that, in order to understand a child and guide his experiences in school more intelligently, educators must have an acquaintance with his family and home situation. This involves recognizing parents' attitudes toward child, child's feelings toward his parents, child's role in family, and special factors within family life that affect his behavior and mental health. Guided experiences in working with families and preparing case studies are provided.



SPECIAL EDUCATION AND CLINICAL SERVICES

MORTON MORRIS, CHAIRMAN; M. BAHN, BORMANN, BRUNGARD, CHAPMAN, FELIX, FIDDLER, FLAMM, GEISEL, MEASE, REBER, SHANE, POUNDS, SCANLON, VICKERS, YAGEL.

This department offers the degree of Bachelor of Science in Education in any one of three options for students whose major interest is work with exceptional children and adults. Each of the three options follows a prescribed sequence of courses. Students may elect to major in any one of the following fields of exceptionality:

- (A) Education for the Mentally Retarded
- (B) Speech Pathology and Audiology
- (C) Rehabilitation Education

Completion of either of the first two major areas leads to certification in the Pennsylvania Public Schools. All three major areas prepare students seeking career opportunities with state and federal rehabilitation agencies and with health and welfare agencies in clinical and institutional settings.

Students in other departments not intending to major in any of the options but who wish to improve their understanding of exceptionality may elect any of the following introductory courses:

INTRODUCTORY COURSES (OPEN TO ALL STUDENTS)

SE 220	INTRODUCTION TO EXCEPTIONAL CHILDREN	3 cr.
	Surveys characteristics, needs, problems, and behavior patterns of	

children who deviate sufficiently from "normal" to be considered exceptional. Consideration given to those who fall intellectually both above and below average; those who are handicapped visually, acoustically, behaviorally, orthopedically, neurologically or in respect to speech patterns.

SE 215 CHILD DEVELOPMENT 3 cr.
Childhood foundations of human growth and development. Research from various disciplines is studied in terms of understanding physical, mental, social and emotional factors and how these interrelate throughout childhood development.

SH 254 SPEECH DEVELOPMENT AND IMPROVEMENT 3 cr.
Study of those aspects of speech and hearing problems pertaining to classroom situation. Types of speech and hearing disorders, conducting speech improvement lessons, classroom aids for the speech and hearing defective child, and school and community resources for these children are emphasized.

SE 362 DEVELOPMENTAL READING 3 cr.
Objectives, background knowledge and understandings of developmental reading process, an over-view of elementary program, pre-adolescent and adolescent and their needs in reading, finding and providing for instructional needs, and special problems.

(A) EDUCATION FOR THE MENTALLY RETARDED

Students may become certified as teachers of the mentally retarded by pursuing a coordinated sequence of prescribed courses and by fulfilling requirements for student teaching with the mentally retarded. Student teaching experiences are provided at elementary and secondary levels and with educable or trainable mentally retarded, according to individual

preferences. The program also provides a foundation for pursuing additional work at the graduate level. Further specialized training in mental retardation offers opportunities for qualified persons in administration, supervision, vocational rehabilitation and related fields.

A coordinated program of not less than 30 credits (in addition to the 27 credits in Professional Education required by the School), leading to a comprehensive certification to teach the mentally retarded, as follows:

SE 215	Child Development	3 cr.
PC 300	The Psychology of Adjustment	
	or	
SE 216	Mental Health in the Schools	3 cr.
SE 220	Introduction to Exceptional Children	3 cr.
SH 254	Speech Development and Improvement	
	or	
SE 255	Development of Language in Children	3 cr.
SE 301	Reading and Language Arts for the Mentally Retarded	3 cr.
SE 320	Psychology of the Mentally Retarded	3 cr.
SE 362	Methods of Teaching Reading	
	or	
EL 222	Teaching of Reading	3 cr.
SE 411	Health and Phys Ed and Recreation for the Exceptional	3 cr.
SE 431	Curriculum and Methods for the Mentally Retarded	3 cr.
AR 330	Arts and Crafts for the Mentally Retarded	3 cr.

Basic Courses in Mental Retardation

- SE 216 MENTAL HEALTH IN THE SCHOOLS** 3 cr.
 Concept of mental health developed in terms of optimal human functioning and concentrates on positive aspects and modifications of behavior, rather than on malfunctioning and clinical treatment of mental and emotional disorders. The practical application of mental health principles in school setting is emphasized. (Given only in summer; regular students take PC 300.)
- SE 255 DEVELOPMENT OF LANGUAGE IN CHILDREN** 3 cr.
 Explores levels and sequences of child's linguistic acquisition at various ages, his sensitivity to extra-language information by which he must operate with others, and complex processes instrumental in formulation of his responses.
- SE 301 READING AND LANGUAGE ARTS FOR THE MENTALLY RETARDED** 3 cr.
 Prerequisite: EL 222 or SE 362.
 Deals with preparation and execution of teaching units in reading, vocabulary development, spelling, handwriting, and/or written communication. Emphasis on what retarded children can reasonably be taught, as well as methods and materials used to teach elementary and secondary aged mentally retarded children.
- SE 320 PSYCHOLOGY OF MENTALLY RETARDED CHILDREN** 3 cr.
 Prerequisite: SE 220.
 Consideration of retarded children and youth as living, adjusting individuals who respond to many kinds of personal and social situations and who are capable of far more than usually imagined. Ways in which retarded develop, learn, and adapt to various home, school, community, or sheltered settings.
- SE 411 HEALTH, PHYSICAL EDUCATION AND RECREATION FOR THE EXCEPTIONAL** 3 cr.
 Prerequisite: SE 220.
 Provides a thorough understanding of a program of health, physical education and recreation as it applies to individuals with mental and physical handicaps from pre-school through adulthood. Special attention given to needs of individuals with developmental problems.
- SE 455 STUDENT TEACHING OF EXCEPTIONAL CHILDREN** 3 cr.
 Students required both to observe and to participate in teaching of exceptional children. (When possible, this course will be offered in conjunction with SE 451 for summer school students.)
- SE 431 CURRICULUM AND METHODS FOR THE MENTALLY RETARDED** 3 cr.
 Prerequisite: Qualified seniors.
 Consideration of basic content and method for teaching mentally retarded. Emphasis upon organization of curriculum in fundamentals and in social and pre-vocational skills for daily living. Resource materials used for instruction at elementary and secondary levels will be explored.
- SE 423 SPECIAL CLASS METHODS FOR THE MENTALLY RETARDED** 3 cr.
 Prerequisite: SE 220.
 Study of practical methods and materials that can be used effectively with slow-learning children. (Summer only)
- SE 454 DIRECTED ACTIVITIES** 1-3 cr.
 Prerequisite: SE 220.
 Involves working with exceptional children on an individual or group basis. Department approval for credit necessary for students engaged in activities sponsored by various community or cooperating agencies. Students required to submit in writing a report of activities. Eighteen clock hours of work with children will be required for one (1) semester hour of credit.
- SE 460 SELECTED PROBLEMS IN SPECIAL EDUCATION** 1-3 cr.
 Prerequisite: Junior and senior majors who qualify by virtue of

academic standing and interest.
Critical exploration of problems relating to exceptional children.

SE 466 EDUCATION OF CHILDREN WITH LEARNING DISABILITIES 3 cr.

Prerequisites: SE 220, SE 215, SE 320.
Designed to bring to student theory and practice concerning remediation of learning disabilities. Study devoted to special education of children who exhibit symptoms of reading, writing, and arithmetic disorders, expressional language disorders, and perceptual disabilities.

SE 446 TEACHING THE TRAINABLE MENTALLY RETARDED 3 cr.

Prerequisite: Open to qualified juniors and seniors, and certified teachers.
Provides for analysis of curriculum and program content for TMR children and adults. Directed toward students who plan to teach the trainable retarded and/or profoundly retarded in public schools, institutional facilities, or sheltered workshops.

AR 330 ARTS AND CRAFTS FOR THE MENTALLY RETARDED 3 cr.
(Offered by the Art Department)

EL 222 TEACHING OF READING 3 cr.
(See course description under Elementary Education Department)

EL 313 TEACHING OF MATH IN THE ELEMENTARY SCHOOL 3 cr.
(See course description under Elementary Education Department)

individuals exhibiting speech, hearing, or language disorders of communication. Completion of the curriculum leads to Penna. State Certification to act as a Speech Correctionist or a Speech and/or Hearing Clinician on Speech and Hearing Programs or Hearing Itinerant Programs in the public schools. The program also provides students with the basic skills to pursue careers as Speech Clinicians in early childhood education programs, public health facilities, rehabilitative settings, and in the Department of Welfare Institutions of the Commonwealth. Since in some settings a Master's Degree is required for employment, emphasis throughout the curriculum is placed on encouraging and promoting students' participation in graduate programs of Speech Pathology and Audiology.

In addition to fulfilling the General Education requirements established by the University and the Professional Education requirements set by the School of Education, students are obligated to complete 40 additional credits in the specialized field and its related areas. An option allows substitution of Math 362 Probability and Statistics (see listing under Math department) for Ed Psy 305 Educational Tests and Measurements in the Professional Educational sequence.

The requirements for the area of specialization are as follows:

Speech and Hearing

SH 111	Fundamentals of Speech and Hearing	3 cr.
SH 122	Phonetics	3 cr.
SH 222	Introduction to Audiology	3 cr.

(B) SPEECH PATHOLOGY AND AUDIOLOGY

The program in Speech Pathology and Audiology is designed to prepare students for a professional career working with

SH 232	Speech Pathology	3 cr.
SH 242	Bases of Oral Communication	3 cr.
SH 251	Anatomy and Physiology of the Speech and Hearing Mechanism	3 cr.
SH 310	Speech Clinic I	1-3 cr. (1 recommended)
SH 311	Aural Rehabilitation	3 cr.
SH 312	Organization & Administration of Speech and Hearing Programs (also counts as Methods Course in Professional Ed. requirements)	3 cr.
SH 320	Speech Clinic II	1-3 cr. (3 recommended)
SH 321	Psychology of Speech and Language	3 cr.

Related Areas

SE 220	Introduction to Exceptional Child	3 cr.
SE 362	Methods of Teaching Reading	3 cr.
	or	
EL 222	Teaching of Reading	3 cr.

One elective from the following: 3 cr.

SE 215	Child Development	
EL 215	Child Development	
PC 300	Psychology of Adjustment	
SE 255	Development of Language in Children	
SE 320	Psychology of Mentally Retarded	
EN 333	Trends in Linguistics	

The Speech and Hearing Clinic serves as a laboratory for required clinical practice, and student participation in an

established speech and hearing program is essential to meet the student teaching requirement.

Students not intending to obtain certification in this field but who are interested in assisting children or adults to develop better communication skills may elect certain courses in the curriculum with permission of the instructor.

Required Basic Courses in Speech Pathology and Audiology

SH 111	FUNDAMENTALS OF SPEECH AND HEARING	3 cr.	(Prerequisite for all other required courses in the division except Phonetics.) Introduction to study of physiological, acoustical, and scientific processes involved in production and reception of speech. The genetic development of speech sounds, and factors that hinder or facilitate speech and language acquisition.
SH 122	PHONETICS	3 cr.	Detailed study of phonemes of American-English speech from a physical and acoustical point of view. Development of proficiency in use of International Phonetic Alphabet for transcription and translation of speech sounds.
SH 222	INTRODUCTION TO AUDIOLOGY	3 cr.	The auditory function, anatomy of auditory mechanism, psychophysics of sound, types and causes of hearing loss, measurement of hearing, and educational considerations for hearing handicapped child.
SH 232	SPEECH PATHOLOGY	3 cr.	Basic orientation to speech disorders, their prevalence, symptoms, causes and treatment. Disorders of articulation and rhythm emphasized, with some consideration given to voice problems, cleft palate, cerebral palsy and defects of symbolization.

SH 242 BASES OF ORAL COMMUNICATION 3 cr.
Study of communication process with emphasis on physical characteristics of sound production, transmission and perception of the sound, and the involvement and use of symbols for meaningful communication. The scientific principles of normal oral communication stressed, and language learning recognized as basis for oral communication.

SH 251 ANATOMY AND PHYSIOLOGY OF THE SPEECH AND HEARING MECHANISM 3 cr.
Consideration of genetic development, structure, and function of organs of speech and hearing. Anatomical systems involved in respiration, phonation, articulation, and hearing, and relationships between systems in production and reception of speech.

SH 310 SPEECH CLINIC I 1-3 cr.
Prerequisite: Approval by advisor. 1 credit recommended.
Orientation to theory and techniques of speech and hearing therapy as applied to specific clients. Introduction to lesson planning and writing of case histories and reports. Observation of clients and limited participation with clients.

SH 311 AURAL REHABILITATION 3 cr.
Consideration of effects of varied degrees of hearing loss sustained by individuals at different stages of development and study of total education and rehabilitative procedures for hard-of-hearing child or adult. Application of techniques of teaching the hard-of-hearing to persons presenting language problems of other etiologies.

SH 312 ORGANIZATION AND ADMINISTRATION OF SPEECH AND HEARING PROGRAMS 3 cr.
(Meets requirement for Professional Education Course.)
Consideration of varied procedures in establishing and maintaining speech and hearing programs. The philosophy and methodology for work with speech- and hearing-handicapped children in public schools. Techniques of screening and other case finding methods, scheduling, and record keeping, teacher and parental counseling, and coordination with other school activities.

SH 320 SPEECH CLINIC II 1-3 cr.
Prerequisite: SH 310. 3 credits recommended
Experience in working with individuals or groups of persons who exhibit speech or hearing problems. Lesson planning, writing of reports, and case histories of a detailed nature.

SH 321 PSYCHOLOGY OF SPEECH AND LANGUAGE 3 cr.
Nature of speech and language as a behavioral influence and as a communicative code, behavior in response to language, and psychological principles involved. Normal involvement of social, motor, and speech skills emphasized and their interrelationships in making satisfactory personal adjustments.

Required Courses in Related Areas

SE 220 INTRODUCTION TO EXCEPTIONAL CHILDREN 3 cr.
(See course description under Special Education and Clinical Service.)

EL 222 TEACHING OF READING 3 cr.
(See course description under Elementary Education.)

or

SE 362 METHODS OF TEACHING READING 3 cr.
(See course description under Special Education and Clinical Services.)

Suggested Electives in Related Areas

SE 215 CHILD DEVELOPMENT 3 cr.
(See course description under Special Education and Clinical Services.)

or

EL 215 CHILD DEVELOPMENT 3 cr.
(See course description under Elementary Education.)

PC 300 THE PSYCHOLOGY OF ADJUSTMENT 3 cr.
(See course description under Psychology Department, School of Arts and Sciences.)

SE 255 DEVELOPMENT OF LANGUAGE IN CHILDREN 3 cr.
(See course description under Education for the Mentally Retarded.)

SE 320 PSYCHOLOGY OF MENTALLY RETARDED 3 cr.
(See course description under Education for the Mentally Retarded.)

EN 331 TRENDS IN LINGUISTICS 3 cr.
(See course description under English Department, School of Arts and Sciences.)

Electives (Offerings vary from term to term)

SH 302 LANGUAGE DEVELOPMENT 3 cr.
Study of requisites, stages, and principles which enter into development of an interpersonal communication system; language as a system of symbols for communication and structure of English language, including phonology, syntax, and semantics with emphasis on generative evolution of sentences.

SH 330 SPEECH CLINIC III 1-2-3 cr.
Experience, of an independent nature, in working with individuals or groups of persons who exhibit speech or hearing problems. Offered for those who specifically desire or need practicum experience in addition to Speech Clinic II.

Required Courses in Related Areas

SE 220 INTRODUCTION TO EXCEPTIONAL CHILDREN 3 cr.
(See course description under Special Education and Clinical Services.)

EL 222 TEACHING OF READING 3 cr.
(See course description under Elementary Education.)

or

SE 362 METHODS OF TEACHING READING 3 cr.
(See course description under Special Education and Clinical Services.)

SH 404 DIAGNOSTIC METHODS 3 cr.
Evaluation of diagnostic tests and techniques used for diagnosis of speech and language disorders; interpretation of diagnostic results and planning appropriate subsequent case management. Interviewing techniques appropriate to case-history taking. Writing of diagnostic and case-history reports.

SH 410 ARTICULATION 3 cr.
Comparative evaluation of traditional, sensory-motor and linguistic theories of speech production with major emphasis on functioning of articulatory mechanism; etiology, symptomatology, and diagnosis of articulatory disorders of functional, organic, or neurological origin with appropriate methods of remediation adapted to either group or individual use. Critical review of selected topics of research.

SH 412 CLEFT PALATE 3 cr.
Study of over-all problems associated with phenomenon of cleft lip and palate with special emphasis in areas of speech, hearing, and language. Included in scope will be human embryology, with specific emphasis on oral facial development; physical remediation, including both surgical and prosthetic repair; effects of clefts on structure and function of speech and hearing mechanism; role of speech correctionist on cleft palate team; evaluation and current remedial procedures for speech, hearing, and language problems.

SH 414 NEUROPATHOLOGIES OF SPEECH 3 cr.
Study of anatomy and physiology of nervous system in relationship to common neuropathologies affecting speech and language. Investigation of symptoms and etiologies associated with deviant

neural transmission and muscular contraction. Examination of diagnostic techniques employed in neuro-muscular conditions resulting from palsies, progressive degenerative diseases, dysarthrias, tumors, and paralytic or paretic involvement. Emphasis given to therapeutic approaches currently in use and associated psychological impact of such debilitating conditions.

SH 416 STUTTERING 3 cr.
Intensive study of nature and causes of stuttering. Considerable emphasis on diagnoses and management. Counseling and learning theory applications as two main approaches to treatment. Consideration of the person as a stutterer. Review of pertinent and recent research topics.

SH 418 VOICE 3 cr.
Advanced study of scientific principles of voice production emphasizing malfunctioning, structural abnormalities, deviant innervation, and pathologies which relate to voice defects, identification, diagnosis, and therapeutic considerations of remediation for various voice problems and relationship between voice disorders and disorders of personality. Special treatment given to treatment of laryngectomized

SH 430 LANGUAGE DISORDERS OF CHILDREN 3 cr.
A highlighting of current research regarding normal acquisition and development of language with special consideration of factors related to language delay. Emphasis on various approaches in identification and differential diagnosis of language disorders and principles and techniques of remediation, including Association Method as developed with children labeled aphasic.

SH 432 APHASIA 3 cr.
Consideration of language, speech, and related problems resulting from cerebro-vascular accidents. Neurological functioning and dysfunctioning highlighted. Diagnosis and management of persons with aphasia, agnosias or apraxias emphasized. Role of family and family counseling considered.

SH 440 ADVANCED AUDIOLOGY 3 cr.
Identification of types of peripheral hearing impairment by standard audiometric procedures. Pure tone audiometry Air Conduction, Bone Conduction, Masking. Speech Audiometry: Speech Reception Threshold, Speech Discrimination Score, Tolerance Level. Hearing aids, selection procedures and acoustics. Specialized diagnostic audiological tests for cochlear lesions, retrocochlear lesions, central lesions, and non-organic losses. Practical experience to develop skills in administration of standard tests, special tests, and hearing aid selection.

SH 450 SPEECH SCIENCE 3 cr.
Study of physiologic, acoustic, and perceptual characteristics of speech, with special emphasis on speech monitoring and controls. Major laboratory instrumentation and research techniques in current use are described and demonstrated. Status of present knowledge is summarized and discussed.

SH 474 FACULTY-STUDENT RESEARCH PROJECTS 1-2-3 cr.
Investigation of worthwhile problems within limits of resources of Speech and Hearing Clinic. Collection of data, data analysis, and writing of an article to be submitted for publication. Open only to seniors, and with permission of faculty. Should be taken for two semesters, 1 credit each.

SH 475 SEMINAR 1-3 credits
Intensive study of one or more areas of speech science, speech and language pathology, or audiology. Topics vary to meet students' needs and interests. Course may be repeated for credit with a change in area considered. Prerequisite Speech Pathology major and advisor approval.

Courses for Non-Majors

SH 254 SPEECH DEVELOPMENT AND IMPROVEMENT 3 cr.
Study of aspects of speech, language, and hearing problems pertaining to classroom situation. Types of speech and hearing

disorders, conducting speech and language improvement lessons, classroom aids for the speech- and hearing-defective child, and school and community resources for these children. (Required for majors in Special Education: Mentally Retarded, and suggested for Elementary Education majors.)

SH 354 AUDIOMETRY FOR PUBLIC SCHOOL NURSES 3 cr.
Intensive review of physiology of hearing; etiologies and classifications of hearing loss; use of audiometric testing equipment in schools; interpretation of audiogram; and role of nurse in public health hearing programs.

(C) REHABILITATION EDUCATION

The program leading to the degree of Bachelor of Science in Education, specializing in Rehabilitation Education, is offered to students seeking career opportunities with health and welfare agencies and institutions. Although originally identified with the needs of the war disabled, the benefits of Rehabilitation have been extended to the larger requirements of civilian handicapped. This program provides basic training and a foundation for pursuing additional work at the graduate level. Non-majors may elect certain courses with permission of the instructor.

In addition to the University's requirement of 52 credits in General Education, requirements for the degree in Rehabilitation Education include 62 or 63 more credits, distributed as follows:

Psychology		9 credits
PC 300	The Psychology of Adjustment	3 cr.
PC 351	Intro to Psychological Measurement	3 cr.
PC 357	Abnormal Psychology	3 cr.

Special Education		12 credits
SE 215	Child Development	3 cr.
SE 220	Intro to Exceptional Children	3 cr.
SE 255	Development of Language in Children	3 cr.
SE 320	Psychology of Mentally Retarded Children	3 cr.

Other		12 credits
BI 151	Human Physiology	3 cr.
MA362	Problems and Statistics	3 cr.
SO 333	Juvenile Delinquency	3 cr.
SO 338	Introduction to Social Work	3 cr.

Rehabilitation Education		26-27 credits
SR 211	The Physical Basis of Disability	3 cr.
SR 222	Psychological Basis of Disability	3 cr.
SR 313	Principles and Methods of Rehabilitation	3 cr.
SR 324	Occupational Information	3 cr.
SR 405	Field Training in Rehabilitation	12 cr.
SR 406	Rehabilitation Practicum	2-3 cr.

Courses in Rehabilitation Education

SR 211	THE PHYSICAL BASIS OF DISABILITY	3 cr.
	Prerequisites: BI 103, 104, SE 220, BI 151. Exploration of such selected disabilities of individuals as: blind and visually handicapped; cardiac, diabetic, and amputee; deaf and hard-of-hearing; cerebral-palsied, cleft palate, cerebro-vascular, and laryngectomized.	
SR 222	PSYCHOLOGICAL BASIS OF DISABILITY	3 cr.
	Prerequisites: PC 201, SO 151. Clarification of emotional and social responses which influence behavior and relationships of handicapped individuals and rehabilitation workers alike.	

COUNSELOR EDUCATION DEPARTMENT

SR 313 PRINCIPLES AND METHODS OF REHABILITATION 3 cr.

Prerequisite: SR 211.

Delineates roles of members of professional disciplines of physical, orthopedic, and internal medicine; psychiatry, psychology, otology, ophthalmology, audiology, speech pathology, prosthetics, physical and occupational therapy, special education; appropriate use of such diagnostic information in evaluating and helping disabled individual.

SR 324 OCCUPATIONAL INFORMATION 3 cr.

Types of jobs, levels of education or skill necessary for occupational success, methods of job training and assessment, and influence of appropriate employment on personality development and social outlook of disabled, legal aspects and legislation affecting job placement.

SR 405 FIELD TRAINING IN REHABILITATION 12 cr.

Emphasizes development of student rehabilitation, coordinator by working with disabled clients in a public or private agency. Writing and analysis of case reports, counseling of clients, understanding of agency responsibilities and limitations, referral, follow-up, and final evaluation of client's ability to function with various degrees of autonomy.

SR 406 REHABILITATION PRACTICUM 2-3 cr.

Discussion of current topics of interest in the field, such as state and federal legislation; new prosthetic advances, proposals of National Rehabilitation Association; or recent techniques in working with specific disabilities.

SR 412 MOBILITY TRAINING FOR THE BLIND 3 cr.

Prerequisites: Rehabilitation majors, normal program sequence; for non-majors, PC 201 and SE 220.

The nature of blindness; psychological and social effects of visual deprivation; use of intact sensorium in adjustment of blind; techniques and principles of teaching blind how to orient themselves in physical environment and to retain mobility.

GEORGE L. SPINELLI, CHAIRMAN; SAYLOR, SHAFFER, PESCI, WASHBURN, WILSON, WORZBYT.

The courses listed below are available, as electives and as offered, to undergraduate students in Education, in-service teachers, and other school personnel seeking a broad understanding of helping roles in a school program of guidance services. These courses are not designed for those who would aspire to become school counselors. For more information on counselor education programs see the current Graduate School Bulletin.

COURSE DESCRIPTIONS

CE 251 FUNDAMENTALS OF GUIDANCE 3 cr.

This course is an elective for upper level undergraduate students in Education and aims to provide a broad understanding of the role of the classroom teacher in a school guidance program.

CE 252 GUIDANCE IN SCHOOL SETTINGS 3 cr.

This is a survey course in guidance designed as an elective for in-service teachers and school personnel other than counselors.

CE 253 COUNSELING IN SCHOOL SETTINGS 3 cr.

This is an elective course designed to provide in-service teachers and school personnel, other than counselors, a basic understanding of the knowledge, information, and skills appropriate to counseling with individuals and groups.



The School of Fine Arts

J. CHRISTOPHER BENZ, DEAN

ART AND ART EDUCATION DEPARTMENT

The School of Fine Arts, established by the IUP Board of Trustees in May of 1966, has two departments: The Art and Art Education Department, and the Music and Music Education Department.

The General Education requirements are the same as for all other Schools of the University. The departments of the School have slight variations and substitutions in specific courses needed to meet these requirements.

Admission to the School of Fine Arts has one additional step beyond the admission requirements for other Schools in the University. Prospective art majors will have been advised of admission requirements by the University and department. Second semester freshmen and transfer students will be required to present a portfolio upon request by the chairman or departmental admission committee. The music department requires an audition of a prospective music student. This audition must be successfully completed before a student can be accepted by the department. Instructions for the preparation of this audition are available in the Music Department office, McFarland House.

The Bachelor of Science in Education degree received by art and music education majors also carries certification, which authorizes the graduate to teach art or music in the schools of the Commonwealth of Pennsylvania.

BENJAMIN T. MILLER, CHAIRMAN; BALSIGER, BEN-ZVI, BURWELL, V. CLAY, JR., CRONAUER, DE FURIO, DONGILLA, DROPCHO, FREUND, HAMILTON, INNES, JOHNSON, LOVETTE, MC VITTY, ROSS, SEELHORST, J. SLENKER, R. SLENKER, VISLOSKY, WERT.

The entering student will have been advised of all requirements of the University and the department when he makes formal application for admission.

The art program includes both general and professional studies, directed toward the development of the student's creative and expressive abilities.

CURRICULA

Some students may choose art teaching as a career, while others may choose to gain a knowledge of art applicable to related fields. In every case, the undergraduate courses are basic to advanced. Degrees offered by the department are the Bachelor of Science in Education with an art major and the Bachelor of Arts in Art (offering concentrations in Painting, Drawing, and Sculpture; or Art History; or Design). The degree in education provides certification for teaching art at all levels of the public schools in Pennsylvania.

The department also offers a minor in art.

Core Program

In fulfilling the University's General Education requirement, art majors are required to include PC 201, General Psychology, and MU 101, Introduction to Music, or EN 103, Introduction to Theater. Requirements for ALL art majors, beyond the University's General Education requirement, are 30 credits in art, as follows:

AR 111	Drawing (All Media)	2 cr.
AR 112	Drawing (Comp and Figure)	2 cr.
AR 113	Design (Color and Design)	2 cr.
AR 114	Design (Volume and Space)	2 cr.
AR 115	The Art of Western Man to 1200	3 cr.
AR 116	Western Art: Renaissance to Baroque	3 cr.
AR 211	Painting (Water-Base Media)	2 cr.
AR 212	Painting (Oil and Mixed)	2 cr.
AR 213	Crafts I	2 cr.
AR 214	Ceramics I	2 cr.
AR 215	Sculpture	2 cr.
AR 216	Metalry I	2 cr.
AR 217	Printmaking I	2 cr.
AR 218	Graphic Design	2 cr.

B. A. in Art

The department requires that all candidates for the degree of Bachelor of Arts in Art present six credits in foreign language at the intermediate level.

The department provides for concentration in any one of the

three fields in fulfilling the requirements for the Bachelor of Arts in Art. In addition to the Core Program the requirements for individual concentrations are as follows:

Art History Concentration	30 credits
AR 321 Ceramics II	2 cr.
AR 410 Primitive and Pre-Greek Art	3 cr.
AR 411 Modern Art	3 cr.
AR 412 Classical Art	3 cr.
AR 413 Seminar in Art	2 cr.
AR 414 Medieval Art	3 cr.
AR 415 Italian Renaissance Art	3 cr.
AR 416 Northern Renaissance Art	3 cr.
Art Studio	8 cr.
Painting, Sculpture Concentration	34 credits
AR 321 Advanced Drawing	2 cr.
AR 411 Modern Art	3 cr.
AR 413 Seminar in Art	2 cr.
AR History elective	3 cr.
Art Studio	24 cr.
Design Concentration	34 credits
AR 321 Advanced Drawing	2 cr.
AR 411 Modern Art	3 cr.
AR 413 Seminar in Art	2 cr.
AR History elective	3 cr.
AR Studio	24 cr.

B. S. in Education (Art Majors)

In addition to the Core Program, requirements for the degree

of Bachelor of Science in Education with an art major are 29 credits in art plus 14 credits in education, as follows:

Art		
AR 311	Painting (All Media)	2 cr.
AR 312	Ceramics II	2 cr.
AR 313	Sculpture	2 cr.
AR 314	Costume and Theatre Arts	2 cr.
AR 315	Printmaking II	2 cr.
AR 316	Metalry II	2 cr.
AR 317	Arts and Crafts in El. Ed.	3 cr.
AR 318	Arts and Crafts in Secon. Ed.	3 cr.
AR 411	Modern Art	3 cr.
AR 413	Seminar in Art	2 cr.
AR electives		6 cr.
Education		
ED 441	Art Student Teaching	12 cr.
ED 442	Professional Practicum	2 cr.
LR 301	Audio-Visual Education	2 cr.
EP 302	Educational Psychology	3 cr.
FE 302	History & Philosophy of American Education	3 cr.

Minor in Art

The minor in art consists of 15 to 21 credits, of which the following are required:

AR 111	Drawing (All media)	2 cr.
AR 112	Drawing (Comp. and Figure)	2 cr.

AR 113	Design (Color and Design)	
	or	
AR 114	Design (Volume and Space)	2 cr.
AR 115	Art of Western Man to 1200	
	or	
AR 116	Western Art: Renaissance to Baroque	
	or	
AR 411	Modern Art	3 cr.
AR 211	Painting (Water-Base Media)	2 cr.
AR 213	Crafts I	2 cr.
AR 215	Sculpture	2 cr.
	Art electives	

Minor in Art History:

The minor in Art History consists of 15 to 21 credits, of which the following are required:

AR 115	The Art of Western Man to 1200 (formerly Art History I)
AR 116	Western Art: Renaissance to Baroque (formerly Art History II)
AR 411	Modern Art (formerly Art History III)

COURSE DESCRIPTIONS

General Education

AR 101	INTRODUCTION TO ART (elective for all students)	3 cr.
	Designed to introduce to student significance of art as related to contemporary living and our historical heritage.	

AR 115 THE ART OF WESTERN MAN TO 1200 3 cr.
(formerly Art History I)

Study of art of man from Prehistoric times to Renaissance. Man's artistic development is seen in light of political, social, economic and religious events influencing him.

AR 116 WESTERN ART: RENAISSANCE TO BAROQUE (formerly Art History II) 3 cr.

Study of art from Renaissance to modern times, in light of historical events which affect man's artistic impulses and development.

Core Courses

AR 111 DRAWING 2 cr.
(Drawing in All Media)

Foundation course in drawing, including a study of the structure of drawing and composition with a variety of media and subject matters.

AR 112 DRAWING 2 cr.
(Composition and Figure Drawing)

Figure construction, anatomy, and life drawing are studied. Included are pictorial design and composition.

AR 113 DESIGN 2 cr.
(Color and Design)

Basic elements and principles of design and color are studied. Basically a course in design in two dimensions.

AR 114 DESIGN 2 cr.
(Design in Volume and Space)

Provides student with a wide variety of experiences in three-dimensional design. Emphasis on experimentation with materials and ideas.

AR 211 PAINTING 2 cr.
(Water Base Media)

Primarily concerned with transparent water color painting, but includes gouache, mixed media, and experimental approaches to painting in water-base media.

AR 212 PAINTING 2 cr.
(Oil Color and Mixed Media)

A beginning course in painting with opaque plastic media. Student introduced to technical as well as aesthetic and philosophical bases of painting.

AR 213 CRAFTS I 2 cr.
(Crafts in Metal and Wood)

Introductory experience, with emphasis on and understanding of, and involvement with, the crafts in metal and wood.

AR 214 CERAMICS I 2 cr.
(Pottery and Ceramics)

Prerequisite to AR 312.
General introduction to techniques and aesthetics of clay. Student will work both at wheel and with hand building methods.

AR 215 SCULPTURE 2 cr.
(Modeling and Sculpture)

Beginning sculpture, approached from standpoint of carving. Work attempted in wood, stone and other related materials. Emphasis on study of form, as well as visualizing in third dimension.

AR 216 METALRY I 2 cr.
(Jewelry)

Prerequisite to AR 316.
The designing and creating of handmade sterling silver jewelry using semiprecious stones and related materials. Approached from viewpoint of beginning craftsman, learning basic processes of metal fabrication.

AR 217 PRINTMAKING I 2 cr.
(Graphic Arts)

Prerequisite to AR 315.

Basic techniques of graphic expression, including: relief, intaglio, lithograph, and serigraph prints.

AR 218 GRAPHIC DESIGN 2 cr.
(Lettering, Commercial Art and Illustration)

Students explore various techniques and how they can be translated into commercial art work, package design, trademark and other design problems. Lettering stressed, both instant type and hand lettering.

struction, painting, lighting, costuming, and properties.

AR 315 PRINTMAKING II 2 cr.
Prerequisite: AR 217.

Basic techniques of graphic expression are extended to provide student with a wider range of possibilities within techniques of printmaking.

AR 316 METALRY II 2 cr.
(Lapidary Art, Metalsmithing, Casting, Enameling)

Prerequisite: AR 216.

Additional jewelry making and metalworking processes employing lapidary art, beginning metalsmithing (raising), elementary casting and enameling on metal.

AR 321 DRAWING 2 cr.
(Advanced Drawing)

Prerequisites: 2 lower level drawing courses.

Advanced course in drawing, designed to meet problems of student who has some background in field. Problems of composition, two- and three-dimensional relationships, and surface are discussed on an individual basis.

AR 410 PRIMITIVE AND PRE-GREEK ART 3 cr.

Survey of painting, architecture and sculpture of Prehistoric Man: Egypt and the Near East, as well as Art of Primitive Man of later times – The American Indian, African Art, and the Art of Oceanic. (Offered in alternate semesters.)

AR 411 MODERN ART 3 cr.
(Formerly Art History III)

Majors only.

Great revolutionary movements which began about 1850 and trends of contemporary arts as they are vital to art students of today.

AR 412 CLASSICAL ART 3 cr.

Historical survey of painting, architecture, sculpture, decorative and utilitarian arts of Classical period, includes art of pre-Greek

Upper Level Courses

AR 311 PAINTING 2 cr.
(All Media)

Student given opportunity for continued growth in his creative and expressive ability through painting. Experiences are offered in transparent and opaque qualities of oil, synthetic and water base media.

AR 312 CERAMICS II 2 cr.
Prerequisite AR 214.

Student concentrates in area of his choice. An introduction given to kiln techniques and methods of glaze testing.

AR 313 SCULPTURE 2 cr.
(Contemporary Media)

Emphasizes additive or constructed approach to sculptural concepts. Student becomes involved with welding, plastics, metal, plaster, and related materials.

AR 314 COSTUME AND THEATRE ARTS 2 cr.

Exploration of traditional and experimental design for theatre and theatre-related experiences. Theory and practice in design, con-

cultures (Minoan-Mycenaean), Greek, Etruscan, and Roman.
(Offered in alternate semesters.)

- AR 413 SEMINAR IN ART 2 cr.
Intended to help students develop adequate vocabularies and methods to be used in discussion and criticism of works of art.
- AR 414 MEDIEVAL ART 3 cr.
Art History Majors, by special arrangement.
Art and architecture of Europe during Middle Ages, beginning with a study of Early Christian and Byzantine art and concluding with art of Romanesque and Gothic periods.
- AR 415 ITALIAN RENAISSANCE ART 3 cr.
Art History Majors, by special arrangement.
Covers span of Italian art from 1400's through 1850 and Mannerist movement. Special attention paid to great masters of the period.
- AR 416 NORTHERN RENAISSANCE ART 3 cr.
Art History Majors, by special arrangement.
Explores phenomena of art North of the Alps from 1400 to 1600, especially as it appears in the Lowlands, as well as side explorations into art of France, Germany, Austria and court at Prague.
- AR 417 BAROQUE AND ROCOCO ART 3 cr.
General survey of art from 1575—1775; will include architecture, sculpture, painting and the other arts.
- AR 418 PRACTICUM IN SLIDE ROOM PROCEDURES 1 cr.
Practicum course devoted to study of slide room practices and techniques; organization, cataloguing, filing, mounting and labeling of slides. (Art History majors and minors only.)
- AR 419 MUSEUM INTERNSHIP 2-6 cr.
(Credits depend upon length of experience)
The student will work at cooperating museum under supervision of museum director. Museum techniques and practices in an "on-the-job" training situation will be stressed.

Professional Education Courses

- AR 317 ARTS AND CRAFTS IN ELEMENTARY EDUCATION 3 cr.
Prerequisite to student teaching.
Examines children's artistic development, art programs, planning, motivation and evaluation. Weekly teaching experience is an integral part of the course.
- AR 318 ARTS AND CRAFTS IN SECONDARY EDUCATION 3 cr.
Prerequisite to student teaching.
The relationship of art education to the total secondary curriculum studied to determine goals of junior-senior high school art. Adolescent and his creative products are analyzed to help prospective art teacher to identify himself with problems of his students.
- ED 441 ART STUDENT TEACHING AND DIRECTED STUDENT ACTIVITIES 12 cr.
Prospective art teacher is given many opportunities, under capable supervision, to guide creative efforts of students at all age levels in primary, elementary, junior, and senior high schools. Current philosophies of general and art education are applied in a practical teaching situation. Emphasis is placed on creative growth of teacher and pupil.
- ED 442 PROFESSIONAL PRACTICUM (including School Law) 2 cr.
Consideration given to recent education trends and methods, art curricula, and to planning of art courses for all grade levels. Practicum also includes professional readings, discussions, observations, and accumulation and organization of pertinent teaching materials.

Electives

The work will be mainly individual, experimental and in depth. These studio workshop courses stress advanced techniques in the particular

MUSIC AND MUSIC EDUCATION DEPARTMENT

R. S. KNAB, INTERIM CHAIRMAN; BACHMANN, W. BECKER, BERNAT, BIRD, BORST, BRAMAN, CHA, DE CESARE, DI CICCIO, DIETZ, FORNEAR, E. J. FRY, GODT, GOLZ, A. HARROLD, HULBERT, INTILI, KESSLER, LLOYD, MC NAUGHTON, MALITSKY, NELSON, G. OLMSTEAD, PERKINS, D. J. PERLONGO, S. T. PERLONGO, POLAND, J. STAPLES, THORELL, VOUKLIZAS, WEBER.

Admission to the Music and Music Education Department requires satisfactory completion of an audition, in addition to the University's general requirements. Detailed instructions will be sent to the applicant on request.

Degrees offered by the department are the Bachelor of Arts in Music, the Bachelor of Fine Arts in Music, and the Bachelor of Science in Education with a music major.

CURRICULA

The program leading to the Bachelor of Arts in music has been designed to give the Liberal Arts student a considerable, but not necessarily a professional experience in music. The student will expect to gain a broad understanding of the culture in which he lives, and the function of music in that culture. The student seeking this degree has the choice of three concentrations: Music Literature, Music Performance, and Music Theory.

The program leading to the Bachelor of Fine Arts in Music (equivalent to the Bachelor of Music Degree) is a flexible

program with a major in one of 18 areas of performance. The graduate of this program will be prepared for graduate study or for an audition for membership in a professional organization.

The program leading to the Bachelor of Science in Education with a music major leads to certification to teach in the public schools of Pennsylvania.

Core Program

Requirements for ALL music majors are:

MU 115, 116, 215, 216	Theory I through IV	12 cr.
MU 111, 112	Sight Singing I and II	4 cr.
MU 113, 114	Ear Training I and II	2 cr.
MU 220, 221	Music Literature I and II	4 cr.
MU 301, 302	Music History I and II	6 cr.

It must be noted that music majors may not include MU 101, Introduction to Music, in fulfilling the Humanities segment of the General Education requirement.

Special Requirements

All students must participate in two (minimum) performing ensembles each semester.

Students must attend (1) all Departmental and Area Recitals and (2) ten campus recitals and concerts per semester.

B. A. IN MUSIC

In addition to the Core Program, requirements for the

Bachelor of Arts in Music include 22 additional credits in music, of which 16 credits must be in the concentration selected, as follows:

Music Performance Concentration – Applied Music Major	
or	
Music Theory Concentration – Theory Courses	
or	
Music History and Literature Concentration – Music History Courses	16 cr.
Music Electives	6 cr.

B. F. A. IN MUSIC (BACHELOR OF MUSIC)

In addition to the Core Program, requirements for the Bachelor of Fine Arts in Music, which is a degree in performance, are 44 more credits, as follows:

Major Applied Music	32 cr.
MU 217, 218 – Keyboard Harmony I and II	2 cr.
Upper Division Music Electives	10 cr.
Piano Proficiency required.	
Junior and senior Recitals required in the Major.	

B. S. IN EDUCATION (MUSIC MAJOR)

Requirements for the Bachelor of Science in Education (Music Majors) are as follows:

General Education

Humanities		13 hrs.
English I and II	8	
English Literature I or II	2	
Introduction to Art or Theater	3	
Natural Sciences and Mathematics		11 hrs.
Laboratory Science I and II	8	
Foundations of Math I	3	
Social Sciences		15 hrs.
History of US and PA II	3	
General Psychology	3	
Electives (3)	9	
American Politics		
Introduction to Anthropology		
General Administration of Justice		
Basic Economics		
World Geography		
History of Civilization II		
Principles of Sociology		
World Politics		
ROTC or Physical Education		4 hrs.
Rhythmic Activities I	1	
Health or Military Science I	2	
Elective	1	
Rhythmic Activities II		
Military Science I		
Physical Education		

Music Education

		35 hrs.
Class Brass I	1	
Class Percussion I	1	
Class Strings I	1	
Class Woodwinds I	1	
Class (or private) piano I and II	2 or 4	
Class Voice I and II	2	
Fundamentals of Conducting	2	
Applied Instruction (major instrument)	14	
Music Electives	11	
Choral Conducting		
Instrumental Conducting		
French Diction		
German Diction		
Italian Diction		
Class Brass II		
Class Percussion II		
Class Strings II		
Class Woodwinds II		
Music History Elective		
Counterpoint I		
Counterpoint II		
Orchestration I		
Orchestration II		
Additional Applied Instruction		

Professional Education

		28 hrs.
Educational Psychology	3	
Audio-Visual Education	2	

History and Phil. of American Education	3
Elementary Methods	2
Secondary Methods	2
Instrumental Methods	2
Professional Practicum	2
Student Teaching	12

Each student must declare a principal performing medium. Those who elect voice as their principal instrument normally elect piano as a secondary instrument; those who elect piano as their principal instrument normally elect voice as a secondary instrument.

Student teaching will include all areas of music education at all levels of public schools.

COURSE SEQUENCE – MUSIC EDUCATION

<u>FIRST SEMESTER</u>		<u>CR.</u>	<u>SECOND SEMESTER</u>		<u>CR.</u>
MU 115	Music Theory I	3	MU 116	Music Theory II	3
MU 111	Sight Singing I	2	MU 112	Sight Singing II	2
MU 113	Ear Training I	1	MU 114	Ear Training II	1
MU 151	Class Voice I	1	MU 152	Class Voice II	1
MU 155	Class Strings I	1	MU 157	Class Percussion I	1
AM	Principal Instrument I	2	AM	Principal Instrument II	2
MU/AM	Class (or private) piano	1-2	MU/AM	Class (or private) piano	1-2
EN 101	English I	4	EN 102	English II	3
HP	Physical Education	1	HP 101	Health	2
MU 475	Music Lab (recitals)	0	MU 475	Music Lab (recitals)	0
MU	Two Music Ensembles	0	MU	Two Music Ensembles	0
		16-17			16-17

THIRD SEMESTER			FOURTH SEMESTER		
	CR.			CR.	
MU 117	Music Theory III	3	MU 118	Music Theory IV	3
MU 220	Music Literature I	2	MU 221	Music Literature II	2
MU 161	Class Woodwinds I	1	MU 159	Class Brass I	1
AM	Principal Instrument III	2	AM	Principal Instrument IV	2
MU/AM	Music Elective	1-2	MU/AM	Music Elective	1-2
EN 201	English III	3		Intro to Art or Theater	3
	Lab. Science I	4		Lab. Science II	4
MU 475	Music Lab (recitals)	0	MU 475	Music Lab (recitals)	0
MU	Two Music Ensembles	0	MU	Two Music Ensembles	0
		<hr/>			<hr/>
		16-17			16-17

FIFTH SEMESTER			SIXTH SEMESTER		
	CR.			CR.	
MU 301	Music History I	3	MU 302	Music History II	3
MU 311	Fundamentals of Conducting	2	MU 331	Elementary Methods	2
AM	Principal Instrument V	2	AM	Principal Instrument VI	2
HP 144	Rhythm and Movement	1	MU/AM	Music Elective	1-2
MA	Foundations of Math	3	PC 101	General Psychology	3
HI 104	US and PA II	3		Social Science Elective	3
LR 301	Audio-Visual Ed.	2		Social Science Elective	3
MU/AM	Music Elective	1-2	MU 475	Music Lab (recitals)	0
MU 475	Music Lab (recitals)	0	MU	Two Music Ensembles	0
MU	Music Ensembles (two)				
		<hr/>			<hr/>
		17-18			17-18

SEVENTH SEMESTER			EIGHTH SEMESTER		
	CR.			CR.	
AM	Principal Instrument VII	2	ED 441	Student Teaching	12
MU/AM	Music Elective	1-2	ED 442	Professional Practicum	2
MU 333	Secondary Methods	2			
MU 334	Instrumental Methods	2			
EP 302	Educational Psychology	3			
FE 302	Hist. & Phil. of Am. Ed.	3			
	Social Science Elective	3			
MU 475	Music Lab (recitals)	0			
MU	Two Music Ensembles	0			
		<hr/>			<hr/>
		16-17			14

MUSIC MINOR*

The Music Department offers the following courses in a program for a minor in music:

Required:

MU 115	Theory I	3 cr.
MU 116	Theory II	3 cr.
AM	Private Instruction (two semesters)	4 cr.
MU 113	Ear Training I	1 cr.
MU 114	Ear Training II	1 cr.
MU 220	Music Literature I (instrumental music)	
	OR	2 cr.
MU 221	Music Literature II (vocal music)	

*Subject to final approval by the University Faculty Senate.

Elective courses: (4 to 6 credits chosen from the following)

MU 215	Theory III	3 cr.
MU 220	Music Literature I	2 cr.
MU 221	Music Literature II	2 cr.
MU 301	Music History I	3 cr.
MU 302	Music History II	3 cr.
MU 411	Composition	2 cr.
MU 311	Fundamentals of Conducting	2 cr.
AM	Private instruction (in addition to required)	2 cr.

COURSE DESCRIPTIONS

MU 101	INTRODUCTION TO MUSIC	3 cr.
Course presumes no technical background, but does utilize the varied musical experiences of each individual to help him extend his interest as far as possible. Attendance at various concerts of college organizations, cultural life events, and visiting artist concerts are required; to augment listening experiences of student.		

Music Theory and Composition

MU 111	SIGHT SINGING I	2 cr.
Designed to develop student's skill at interpreting written music by use of his own voice.		
MU 112	SIGHT SINGING II	2 cr.
Prerequisite: MU 111 with 2.0 or better. Continuation of development of skills in areas of Sight Singing I.		
MU 113	EAR TRAINING I	1 cr.
Develops dictation skills and notation in following areas: primary harmonies in all inversions, and melodic dictation with implied and actual harmonies.		

MU 114	EAR TRAINING II	1 cr.
Prerequisite: MU 113 with 2.0 or better. Continuation of development of dictational and notational skills of Ear Training I.		
MU 115	THEORY I	3 cr.
MU 116	THEORY II	3 cr.
MU 215	THEORY III	3 cr.
(Three consecutive semesters.) Study of compositional devices of 18th and 19th centuries. Emphasis upon melodic, harmonic, rhythmic, and formal structures, with occasional reference to contrapuntal implications.		
MU 216	THEORY IV	3 cr.
Prerequisites: MU 115, 116, 215. Study of compositional devices of latter half of 19th century and first half of 20th century.		
MU 217	KEYBOARD HARMONY I	1 cr.
Prerequisite: Nominal facility at keyboard. Designed to develop keyboard skills in student, so he may realize and produce in sound basic harmonic progressions.		
MU 218	KEYBOARD HARMONY II	1 cr.
Prerequisite: MU 217. Continuation of Keyboard Harmony I, involving chromatic harmony and more complex progressions.		
MU 304	FORM AND ANALYSIS I	2 cr.
Prerequisite: MU 216. Thorough study of smaller forms of music.		
MU 305	FORM AND ANALYSIS II	2 cr.
Prerequisite: MU 304. Thorough study of larger forms of music.		
MU 306	COUNTERPOINT I	2 cr.
Prerequisite: MU 216. After study and analysis of style of 16th Century contrapuntal		

writing, student will do original writing using techniques and devices of period. As time permits, same approach will be made to explore style of 17th and 18th Century composers.

MU 307 COUNTERPOINT II 2 cr.

Prerequisite: MU 306.

Continuation of study, analysis, and restricted writing of 17th and 18th Century composers. Consideration given to free contrapuntal techniques used by later composers.

MU 308 FUGUE AND CANON 2 cr.

Prerequisite: MU 306.

Application of contrapuntal techniques within these two specific forms through analysis, assigned exercises, and creative writing

MU 309 ORCHESTRATION I 2 cr.

Prerequisite: MU 216.

All instruments of orchestra are studied from viewpoint of their contribution to total sound of ensemble. Ranges and timbres are considered, as well as actual arranging of selected music.

MU 310 ORCHESTRATION II 2 cr.

Prerequisite: MU 309.

A continuation of Orchestration I.

MU 315 THEORY V 3 cr.

Prerequisite: MU 216.

Many of harmonic idioms of past half century are considered, such as: comparative analysis of dissonance; polytonality; polyrhythms, atonalism and 12-ton system, and microtonalism. Original writing in these styles required.

MU 411 COMPOSITION I 2 cr.

Prerequisite: MU 216.

Instruction in Composition I is, of necessity, highly individualized. Compositional devices studied through analysis of works by major composers. Students write original works.

MU 412 COMPOSITION II 2 cr.

Prerequisite: MU 411.

Continuation of Composition I. Outstanding works will be programmed by University organizations.

Music Literature And History

MU 220 MUSIC LITERATURE I 2 cr.

Major works studied and analyzed as to form, style, and historical placement.

MU 221 MUSIC LITERATURE II 2 cr.

Continuation of Music Literature I.

MU 301 HISTORY OF MUSIC I 3 cr.

Study of development of music, from ancient Greek and Roman cultures through Baroque period. Although approach is historical one, considerable analytic listening is required.

MU 302 HISTORY OF MUSIC II 3 cr.

Starting in 18th Century, with Haydn and Mozart, History of Music II is study of the development of music to present. Analytic listening required through all available sources.

MU 316 LITERATURE OF THE MAJOR I 2 cr.

Student researches literature of his major instrument or voice with assistance of his private instructor and instructor of course.

MU 317 LITERATURE OF THE MAJOR II 2 cr.

The student continues his research from Literature of Major I.

MU 320 MUSIC OF THE ANCIENT WORLD 3 cr.

Prerequisites: MU 316, 317.

Concentrated study of music from early Greeks up to Middle Ages.

MU 321 MUSIC OF THE MIDDLE AGES 3 cr.

Prerequisites: MU 316, 317.

Starting with the Jongleurs, Troubadors, and Trouveres of Early

Middle Ages, course deals with literature of music through English and Burgundian Schools at close of the Middle Ages.

MU 322 RENAISSANCE MUSIC 3 cr.

Prerequisites: MU 316, 317.

Beginning with Ockeghem and ending with Palestrina and his contemporaries, music literature of this age is carefully and thoroughly studied.

MU 323 THE BAROQUE ERA 3 cr.

Prerequisites: MU 301, 302.

Extends from Monteverdi through Bach and Handel, and considers vocal and instrumental forms, styles, and practices of era.

MU 324 EIGHTEENTH CENTURY MUSIC 3 cr.

Prerequisites: MU 301, 302.

Although Mozart and Haydn comprise greater portion of 18th Century music, Rococo Period involves D. Scarlatti and C.P.E. Bach as well.

MU 325 THE EARLY ROMANTIC PERIOD 3 cr.

Prerequisites: MU 301, 302.

Beethoven, Schubert, Rossini, Weber, Mendelssohn, Berlioz, Schumann, and Chopin are major composers to be studied in Early Romantic Period.

MU 326 THE LATE ROMANTIC PERIOD 3 cr.

Prerequisites: MU 301, 302.

Wagner, Verdi, Glinka, Bruckner, Meyerbeer, Liszt, Gounod, Brahms, Offenbach, Smetana, J. Strauss, Grieg, Bizet, Moussorgsky, Saint-Saens, Tchaikowsky, Massenet, Franck, Borodin, Rimski-Korsakoff, Wolf, R. Strauss, Mahler, Faure, Puccini, Dvorak, Mac Dowell, and Elgar are major composers of this study.

MU 420 CONTEMPORARY MUSIC 3 cr.

Prerequisites: MU 301, 302.

Beginning with Debussy, Ravel and other impressionists, touching

on Schoenberg, Stravinsky, Webern, Honneger, Milhaud, et. al. Contemporary Music ends with today and tomorrow. Various trends, styles, techniques are noted; judgments are attempted on more experimental forms; limited predictions of trends are ventured.

MU 421 AMERICAN MUSIC 3 cr.

Prerequisites: MU 301, 302.

A study of history and literature of music in America from 1600 to present day.

Conducting

MU 311 FUNDAMENTALS OF CONDUCTING 2 cr.

Emphasis placed on fundamental physical skills of conducting process; various beat patterns are mastered, and elementary score reading and interpretation considered.

MU 312 CHORAL CONDUCTING 2 cr.

Prerequisite: MU 311.

Provides opportunity for student to apply his basic conducting techniques to choral music. Each student conducts rest of class in many of standard choral works of the literature. Includes survey of suitable literature, organizational problems, voice testing, rehearsal techniques, program building, interpretation, and diction.

MU 313 INSTRUMENTAL CONDUCTING 2 cr.

Prerequisite: MU 311.

Provides student opportunity to apply his basic conducting skills to various instrumental ensembles. Includes survey of suitable literature, organizational problems, audition procedures, rehearsal techniques, program building, and interpretation.

MU 401 CHORAL SCORE READING 2 cr.

Prerequisites: MU 216, 312.

MU 402 INSTRUMENTAL SCORE READING 2 cr.

Prerequisites: MU 216, 313.

Music Education

- EL 211 MUSIC FOR THE ELEMENTARY GRADES 2 cr
(See the Elementary Education Department, School of Education, for a course description.)
- EL 212 TEACHING MUSIC IN THE ELEMENTARY GRADES 3 cr
(See the Elementary Education Department, School of Education, for a course description.)
- MU 331 ELEMENTARY METHODS 2 cr
Includes analytical study of texts, recordings, equipment, instruments, and other materials suitable to musical development of elementary pupils, proper treatment of child voice, selection, use, and teaching of rote songs; rhythmic activities and development, music reading, part singing, planning and organization, guided observations, and evaluation techniques.
- MU 333 SECONDARY METHODS 2 cr
Includes General Music Class, choral organizations, changing voice, techniques of instruction, including team teaching and programmed learning, high school theory courses, high school music literature courses, scheduling, administrative problems, curriculum development, evaluation of materials and equipment, evaluative techniques, and guided observation.
- MU 334 INSTRUMENTAL METHODS 2 cr
Treats understandings, techniques, equipment, and materials necessary to develop an effective instrumental music program in public schools. Demonstrations and laboratory work designed to give student competencies needed to meet successfully various teaching situations in instrumental music from grades through high school. Guided observations required.
- MU 405 PIANO PEDAGOGY 2 cr
Prerequisites: Junior Standing in Piano, and a piano major or minor.
Survey of current and significant past developments in teaching of piano, both privately and in small and large classes. The various piano methods are analyzed, compared, criticized, and adapted to each individual's use.
- MU 406 VOICE PEDAGOGY 2 cr
Prerequisites: A voice major or minor, and permission of the instructor.
Survey of current and past developments in teaching of voice, both privately and in small and large classes. The various vocal methods are analyzed, compared, criticized, and adapted to each individual's use.
- MU 407 MASTER CLASS IN ORGAN 2 cr
Prerequisites: For organ majors only, with instructor's permission.
From time to time the organ instructor will accept from four to eight organ majors for this course. Every student observes every other student's instruction, and various techniques of teaching organ are demonstrated.
- MU 408 MARCHING BAND TECHNIQUES 2 cr
Considers building a band show, alignment of ranks and files, development of a standard pace of 6 to 5 and 8 to 5, selection of music, instrumentation, techniques of developing morale, and fundamentals of uniform design.
- ED 441 STUDENT TEACHING 12 cr
Music major begins practice teaching with observation and various simple teaching assignments, gradually assuming greater teaching responsibilities on elementary, junior, and senior high school levels in instrumental and vocal music. A University faculty member coordinates the work of the student teacher and his school supervisor.
- ED 442 PROFESSIONAL PRACTICUM 2 cr
(Including School Law)
Significant problems of an advanced nature, and closely related to student teaching, are introduced in order to insure further professional growth. Observing of other teaching situations, reading of books and professional journals, along with reports and discussions at conferences, aid in this growth.

APPLIED MUSIC**Class Instruction**

The following courses are designed to acquaint the student with basic skills in each particular area.

MU 151	Class Voice I	1 cr.
MU 152	Class Voice II	1 cr.
MU 153	Class Piano I	1 cr.
MU 154	Class Piano II	1 cr.
MU 155	Class Strings I	1 cr.
MU 156	Class Strings II	1 cr.
MU 157	Class Percussion I	1 cr.
MU 158	Class Percussion II	1 cr.
MU 159	Class Brass I	1 cr.
MU 160	Class Brass II	1 cr.
MU 161	Class Woodwinds I	1 cr.
MU 162	Class Woodwinds II	1 cr.
MU 353	French Diction	2 cr.
MU 354	German Diction	2 cr.

Private Instruction

Private instruction gives 2 credits for each half-hour lesson and 10 hours practice per week for one semester. The instructor determines which series apply:

- 100–150 Series, for Freshmen
- 200–250 Series, for Sophomores
- 300–350 Series, for Juniors
- 400–450 Series, for Seniors

Available in the following performance areas:

Piano	1	Clarinet	11
Organ	2	Oboe	12
Harpsichord	3	Bassoon	13
Harp	4	Saxophone	14
Voice	5	Trumpet	15
Violin	6	French Horn	16
Viola	7	Trombone	17
Cello	8	Baritone Horn	18
Base Viol	9	Tuba	19
Flute	10	Percussion	20

Ensembles

Ensembles carry no credit. The student will receive a mark of S or U.

MU 120	Brass Ensemble	MU 129	University Symphony Orchestra
MU 121	Chamber Ensembles		
MU 122	University Chorale	MU 130	String Ensemble
MU 123	Concert Band	MU 131	University Wind Ensemble
MU 124	Glee Club		
MU 125	Marching Band	MU 132	Women's Chorus
MU 126	Opera Theater	MU 133	Woodwind Ensemble
MU 127	Percussion Ensemble	MU 134	Oratorio Chorus
MU 128	University Chamber Orchestra		



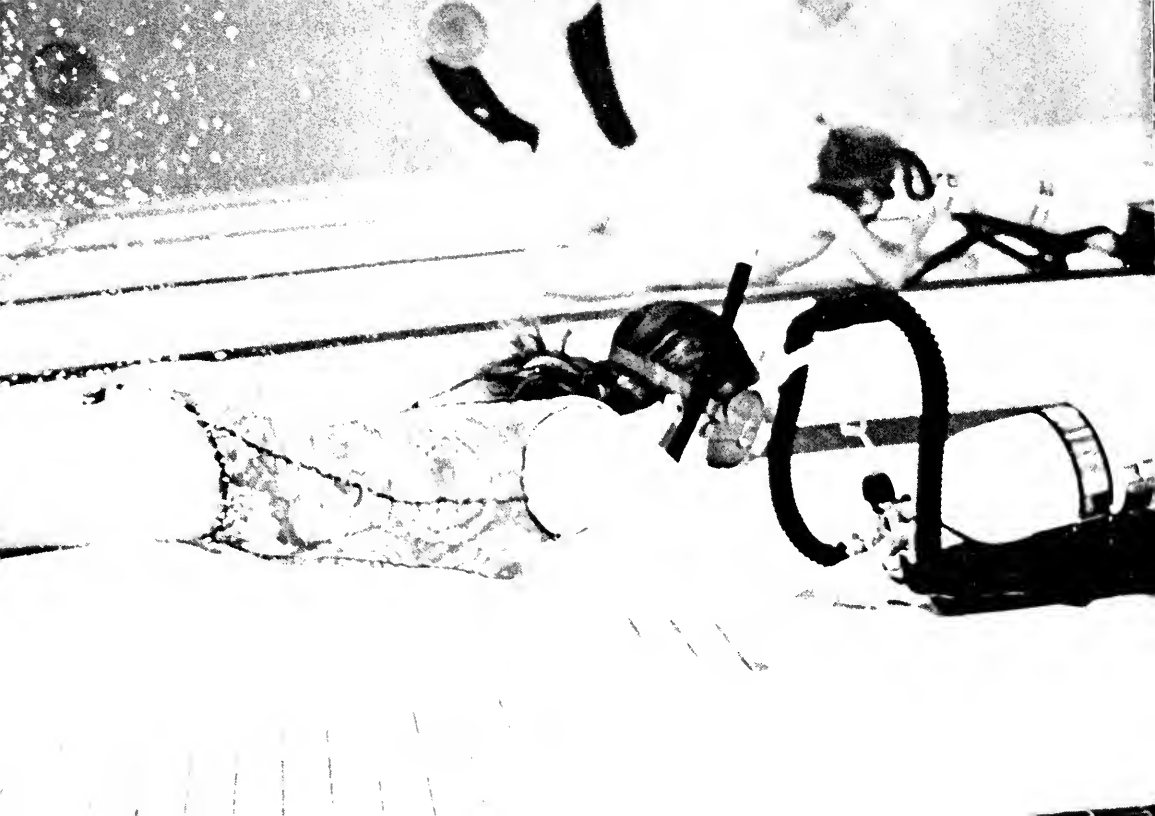
Graduate School

JOSEPH M. GALLANAR, DEAN

Indiana University of Pennsylvania offers several programs leading to graduate degrees. The primary purposes of the graduate programs are to encourage excellence in scholarship, to provide for depth in the student's special field, and to stimulate enthusiasm for continued cultural and professional growth.

Graduate credit is issued to students who have been admitted to the Graduate School and who are registered in graduate courses (those numbered 500 or above).

The graduate programs and courses are listed in the Graduate School Bulletin, which may be obtained from the Dean of the Graduate School.



The School of Health Services

JOHN CHELLMAN, DEAN

The School of Health Services provides an opportunity to educate personnel needed in various health disciplines. The School offers professional curricula leading to appropriate baccalaureate degrees for men and women in health and physical education; inhalation therapy; medical technology; nursing; and safety management. Indiana University of Pennsylvania is affiliated with approved schools and hospitals for specialized training in all programs of the allied health professions and nursing.

At present, the School of Health Services includes five departments:

1. Allied Health Professions
2. Athletic
3. Health and Physical Education
4. Nursing
5. Safety Sciences

In addition, the School of Health Services offers an academic concentration in Hospital and Health Care Administration.

ACADEMIC CONCENTRATION IN HOSPITAL AND HEALTH CARE ADMINISTRATION

Hospital and Health Care Administration Today

The hospital administrator's unique contribution to the health of the public is his expertise in the organization of

the many components of the health care delivery system in general and the hospital in particular. The hospital is clearly one of the most complex institutions in our society. The hospital administrator occupies a difficult management position and an important one if the public is to be properly served.

There are approximately 4.3 million individuals involved in providing health services to the American public. Approximately half of these are employed by hospitals. The number of persons involved in health care is rapidly expanding, and by 1975 the health industry is expected to become the nation's largest employer.

Hospitals are moving toward broader responsibilities to the entire community and, as this role has evolved, hospital administrators have had to master a complex and expanding body of knowledge and have broadened their commitments. They are in demand in a number of organizations including the following: general hospitals, extended-care facilities, health maintenance organizations, nursing homes, psychiatric hospitals, rehabilitation institutions, group practice plans, outpatient clinics, welfare departments, private insurance programs, Blue Cross and Blue Shield Plans, hospital facility planning agencies, comprehensive health planning agencies, health departments, federal health agencies, health and hospital associations, graduate educational programs and research institutes.

Graduate Programs

Today, thirty-eight universities in the United States, Canada and Puerto Rico offer graduate degrees in health and hospital administration. A baccalaureate degree from an accredited college or university is the primary prerequisite for admission. Graduate programs leading to a master's degree in health and hospital administration consist of one to two years of full-time academic study and may include a period of up to one year of administrative residency in a hospital or other health-related organization under the preceptorship of an administrator. Courses in hospital administration remain the foundation of the curricula.

Programs may be found in separate university departments or in such professional schools as medicine, public health, or business.

Undergraduate Preparation

Although entrance requirements for graduate study vary, most institutions prefer that the undergraduate program be a liberal curriculum for the first two years; that the student select a major curriculum which offers the highest degree of motivation; and to include courses in accounting, biology, business administration, economics, psychology, sociology, statistics, college algebra, and calculus. It is with this general concept of the curriculum that such students should be processed through their school, department, and major program. As their particular academic interests and abilities develop during the junior and senior years in regard to

graduate studies in hospital and health care administration, specific advisement as to the admission criteria for any of the thirty-eight institutions offering graduate work will be available through the office of the Dean, School of Health Services. Bulletins, admission requirements, costs, financial aid, and general information regarding institutional curricular emphases and sources of career information are available. There need be no change in the student's school, department or major curriculum designation. Students interested in this concentration should inform their adviser in order that proper courses may be scheduled.



ALLIED HEALTH PROFESSIONS DEPARTMENT

LOUIS GOLD, ACTING CHAIRMAN

INHALATION (RESPIRATORY) THERAPY

Inhalation (Respiratory) Therapists assist physicians in the care of patients who have respiratory system problems or illness that relates to breathing. Their assistance includes administering gaseous drugs and executing therapeutic procedures. Included are the operation and maintenance of specialized equipment.

The program leads to the degree, Bachelor of Science in Inhalation (Respiratory) Therapy. Presented jointly by Indiana University of Pennsylvania and the Western Pennsylvania Hospital (Pittsburgh), the program offers intensive theoretical and applied knowledge to produce highly-skilled graduates who are prepared to enter the profession as therapists or instructors.

Two academic years of University studies, followed by two academic years of hospital studies and clinical practice, constitute the program. While at the University, students are required to complete the following courses or approved substitutes, which give a total of 62 credits:

Biology

BI 105	Cell Biology	4 cr.
BI 241	General Microbiology	3 cr.
BI 151	Physiology	3 cr.

Chemistry

CH 101-102	Chemistry I and II for Health Professions	8 cr.
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Health and Physical Education

*HP	Two activity courses	2 cr.
HP 221	Human Anatomy	3 cr.

Humanities

AR 101	Introduction to Art or	3 cr.
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EN 103	Introduction to Theater or	3 cr.
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MU 101	Introduction to Music	3 cr.
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EN 101, 102 & 201	English I, II, & III	10 cr.
-----	Approved Elective	3 cr.

*Or ROTC Option

Social Sciences

-----	Approved Electives	12 cr.
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Other

LR 301	Audio-Visual Education	2 cr.
MA 101	Fundamentals of Math	3 cr.
PY 111	Physics I	3 cr.
BM 201	Personnel Management	3 cr.

In addition to clinical practice each semester during the junior and senior years and research projects during the

senior year, students, while at the hospital, study the following subjects:

AH 327	Pharmacology	2 cr.
AH 328	Introduction to Inhalation (Respiratory) Therapy	4 cr.
AH 329 & 334	Inhalation (Respiratory) Therapy Equipment I and II	8 cr.
AH 330	Cardiopulmonary Resuscitation	3 cr.
AH 335	Nursing Arts	3 cr.
AH 336	Cardiopulmonary Evaluation	4 cr.
AH 427	Special Topics in Inhalation (Respiratory) Therapy	2 cr.
AH 428	Ethics & Administration	2 cr.
AH 429	Inhalation (Respiratory) Facilities Design & Function	4 cr.
AH 435	Inhalation (Respiratory) Therapy Pediatrics	2 cr.

Sixty-two credits are awarded for these studies.

MEDICAL TECHNOLOGY

Medical Technologists are highly-skilled members of the medical care team. They perform a wide range of tests and studies, whose results aid physicians in diagnosis and treatment. The program of studies presented jointly by Indiana University and approved hospitals prepares students to enter the profession.

Upon completion of the four-year program, the degree of Bachelor of Science in Medical Technology is granted. The first three years are devoted to University studies. The University-wide General Education obligations may be varied by election of three to six credits in Humanities and six to nine in Social Sciences.

Required are at least 16 credits in Biology, 24 credits in Chemistry, a course in Mathematics, and two semesters of Physics, as follows:

Mathematics		
MA 001	Elementary Functions or higher level substitute	3 cr.
Chemistry		
CH 111-112	General Chemistry I and II	8 cr.
CH 231-232	Organic Chemistry I and II	8 cr.
CH 323	Analytical Methods	4 cr.
CH 351	Biochemistry	4 cr.
Biology		
BI 105	Cell Biology	4 cr.
BI 120	Animal Biology	5 cr.
BI 361	Microbiology	3 cr.
	Biology Electives	4 cr.
Physics		
PY 111-112	Physics I and II	6 cr.
PY 121-122	Physics I and II Laboratory	2 cr.
NOTE: Biology courses frequently elected:		
BI 281	Parasitology	3 cr.

BI 285	Biotechniques	3 cr.
BI 263	Genetics	3 cr.
BI 341	General Physiology	3 cr.

Following the three academic years of University work, each student devotes 12 months to studies at an approved hospital School of Medical Technology to which he gains admission on a competitive basis. Indiana maintains short- and long-term affiliations with selected hospital schools. The Latrobe Area Hospital School of Medical Technology provides its program only in conjunction with Indiana.

The Department provides student counseling and maintains liaison with hospital schools. However, since not all students are equally successful in academic studies and since the hospital schools select and admit the students to their programs using various criteria, Indiana cannot guarantee admission to hospital school studies (also known as the clinical year). During academic year 1973-74, there are 33 students enrolled in hospital school clinical programs at the following hospitals:

Abington Memorial (PA)	Morris Cafritz Memorial (DC)
Altoona (PA)	Rochester General (NY)
Cleveland Clinic (OH)	St. Francis (NY)
Glencove Community (NY)	St. Joseph (PA)
Conemaugh Valley Memorial (PA)	St. Luke's (PA)
Harrisburg (PA)	The Western Pennsylvania (PA)
Latrobe Area (PA)	Washington (PA)

Thirty-two semester hours of credit are earned at the

hospital School of Medical Technology. In addition to integrated clinical practice, the following subjects are typically studied:

Urinalysis	Histology
Hematology and Coagulation	Cytology
Radio-Isotopes	Bacteriology
Clinical Chemistry and Toxicology	Parasitology and Mycology
Blood Bank	Serology
	Virology

Completion of college and clinical training is followed by an examination conducted by the Registry of Medical Technology of the American Society of Clinical Pathologists (ASCP). Successful passage of this examination certifies a student as an M.T. (Medical Technologist), signifying that he is a professionally qualified laboratory technologist.



ATHLETIC DEPARTMENT

HERMAN L. SLEDZIK, DIRECTOR; BECK, BETTS, BLACKSMITH, CAMPISANO, CELTNIKS, DAVIS, GODLASKY, HORNFECK, JOHNSON, LETSO, LISCINSKY, MILL, MOORE, NEAL, PANAI, SLONIGER, SUTTON, ZAUCHA.

RUTH PODBIELSKI, COORDINATOR, WOMEN'S ATHLETICS; BARTHELEMY, ELTZ, KORAB, NESBITT

DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION

D. SHELBY BRIGHTWELL, CHAIRPERSON; AIERSTOCK, BARTHELEMY, BECK, BLACKSMITH, CELTNIKS, DAKAK, DAVIS, DICKIE, ELTZ, GODLASKY, HORNFECK, JOHNSON, KAYLOR, KORAB, LEPLY, LISCINSKY, LOMMOCK, LUCAS, MC CAULIFF, MILEFF, MILL, MOORE, NEAL, NESBITT, PODBIELSKI, SLEDZIK, SLONIGER, SUTTON, TUCKER

The Department of Health and Physical Education provides dual services in the University program: (1) instruction is provided in health and various physical activities, thus serving part of the University's General Education requirement and providing leadership in a wide-ranging recreational program; and (2) the degree of Bachelor of Science in Education is offered with a major in Health and Physical Education.

These dual objectives are implemented through the conduct of the following services of the Department of Health and Physical Education:

- (1) Required programs of Health and Physical Education for all University students.
- (2) Professional instruction leading to a baccalaureate degree in Health and Physical Education for men and women who plan careers in this specialized area or in the related health professions.
- (3) Adaptive programs designed to meet exceptional physical needs of specific students and equip them to participate at maximum potential in the formal activity programs on campus.
- (4) Intramural programs, consisting of a wide range of activities to meet the interests of University students.
- (5) Sports clubs, clinics, and informal recreational opportunities for students, faculty, and other University personnel.
- (6) Diverse programs of varsity sports, to allow exceptionally skilled students to participate in the learning situation of competitive athletics.
- (7) Recreational and instructional programs meeting the interests and needs of the community of Indiana, Pennsylvania, insofar as is possible within the limitations of faculty and facilities necessary for the fulfillment of all obligations to the University community.

CURRICULA

Required Program

University students not in the ROTC program are required

to complete two credits of physical education and 2 credits in HP 101, Personal and Community Health. Any two activity courses numbered HP 110 through 151 may be elected to fulfill the physical education requirement. (Veterans are given four credits towards the above requirement. Verification of service must be established.) All such courses are coeducational. In addition, a few select courses for men and women are offered.

The requirement may be altered after consultation with the Chairperson of the Health and Physical Education Department, who will act upon the recommendation of the family physician and/or University physician and the Dean, School of Health Services.

Regulation uniforms are required for most curricular activities and may be purchased at the Memorial Field House for approximately \$10.00 (men) and at Waller Gymnasium for \$5.00 (women).

B. S. in Education (Health and Physical Education)

Requirements for the degree of Bachelor of Science in Education with a major in Health include the University's 52-credit General Education requirement, Professional Education requirements, and the Health and Physical Education core requirement (36 credits). Upon completion of the degree program, the student is qualified for a Pennsylvania Provisional College Certificate in Health and Physical Education, issued by the Department of Public Instruction in Harrisburg, Pennsylvania. This certificate is valid for teaching

health and physical education in any of the grades of the public schools of Pennsylvania. Major students may utilize free electives to specialize in the areas of elementary, secondary, adaptives, recreation, health, or dance.

Candidates for the degree program in Health and Physical Education must demonstrate acceptable intellectual competence and physical qualifications, as well as desirable character and personality traits. The professional program seeks to foster those qualities of individual character and competence that are inherent in personal and professional maturity. These competencies are evaluated at the end of the sophomore year. The student is either granted Advanced Standing in the Department or restricted in his scheduling of advanced courses for not less than one probationary semester. Continuance in the major program is based upon the attainment of Department Advanced Standing.

REQUIRED UNDER GENERAL EDUCATION – In meeting the University's General Education requirement, the Health and Physical Education major must include:

Natural Sciences and Mathematics		
MA 362	Probability and Statistics	3 cr.
CH 103	Prin of Chemistry	4 cr.
BI 103, 104	Gen Biol I and II	
	or	
CH 111, 112	Gen Chem I and II	
	or	
SC 105, 106	Phys Sci I and II	8 cr.

Social Sciences

HI 104	History of U.S. and Pa. II	3 cr.
PC 101	General Psychology	3 cr.

Health and Physical Education

HP 101	Personal and Community Health (HP 263 and 264, or HP 264 and 265)	2 cr.
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Other General Education credits may be elected within the requirements described earlier.

SPECIALIZATION REQUIREMENTS – The 36 credits required for the Health and Physical Education major are listed as follows:

Prerequisite:

BI 151	Human Physiology	3 cr.
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Academic (26 credits)

HP 142	Intro to Health, Phys Ed and Rec	2 cr.
HP 221	Human Anatomy	3 cr.
HP 318	Activity Internship I	1 cr.
HP 321	Methods in EI Health and Phys Ed	3 cr.
HP 341	Tests and Measurement in Phys Ed	2 cr.
HP 342	Analysis of Movement	3 cr.
HP 343	Physiology of Exercise	2 cr.
HP 344	Adapted Phys Ed	2 cr.
HP 346	First Aid Instructor's Course	1 cr.
HP 404	Org and Adm of School Health Prog	3 cr.
HP 441	Org and Adm of Phys Ed	2 cr.
HP 442	Hist and Phil of Phys Ed	2 cr.

Methods – Activity (10 credits) – women

HP 301	Tennis – Badminton	1 cr.
HP 302	Soccer – Basketball	1 cr.
HP 303	Bowling – Golf	1 cr.
HP 304	Volleyball – Softball	1 cr.
HP 305	Square Dance – Folk Dance (co-ed)	1 cr.
HP 306	Field Hockey – Tumbling	1 cr.
HP 307	Basic Rhythms – Fund of Movement (co-ed)	1 cr.
HP 308	Modern Dance	1 cr.
HP 309	Apparatus – Track and Field	1 cr.
HP 310	Archery – Fencing	1 cr.

Methods – Activity (8 or 10 credits) – men

Majors electing ROTC must elect eight (8) of the following activities plus Aquatics.

Majors not electing ROTC must elect ten (10) of the following activities plus Aquatics.

ALL OF THE FOLLOWING COURSES ARE REQUIRED

	Sem. Hrs.	
HP 212	Tumbling	1
HP 213	Gymnastics	1
HP 214	Track & Field	1
HP 234	Soccer	1
HP 300	Racquet Sports	1
HP 305	Folk & Square Dance (co-ed)	1
HP 307	Rhythms & Movement (co-ed)	1
HP 335	Wrestling	1
HP ----	-----	1
HP ----	-----	1

The following activities may be taken on an elective basis:

HP 231	Football	1
HP 233	Basketball	1
HP 236	Volleyball – Individual Sports	1
HP 332	Baseball	1
HP 334	Officiating	1

Electives

Courses that may be elected in addition to those required are HP 311, 312, 314, 315, 336, 345, 405, 408, and 432.

COURSE DESCRIPTIONS

Meeting General Education Requirement

HP 101	PERSONAL AND COMMUNITY HEALTH	2 cr.
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The understanding of the scientific approach to personal health and the development of desirable attitudes and practices in all areas of personal health constitute the major part of the course. The cause, prevention, and control of various diseases are also considered.

Unless otherwise noted, the following courses provide opportunities for the learning of basic fundamentals and techniques of the activities. Specific courses may be offered in the fall, spring, or both semesters.

Co-Educational General Education Activity Courses

HP 110	BEGINNING SWIMMING	1 cr.
HP 111	ARCHERY – DANCE	1 cr.
HP 112	ARCHERY – FENCING	1 cr.
HP 113	ARCHERY – SWIMMING	1 cr.

HP 114	BADMINTON - FENCING	1 cr.
HP 115	BADMINTON – SWIMMING	1 cr.
HP 116	BADMINTON – VOLLEYBALL	1 cr.
HP 117	FITNESS – SWIMMING	1 cr.
HP 118	FITNESS – VOLLEYBALL	1 cr.
HP 119	GOLF – BOWLING	1 cr.
HP 120	TENNIS – SWIMMING	1 cr.
HP 121	SWIMMING – VOLLEYBALL	1 cr.
HP 122	CONTEMPORARY (MODERN) DANCE	1 cr.
HP 123	FOLK AND SQUARE DANCE	1 cr.
HP 124	TUMBLING	1 cr.
HP 125	HORSEBACK RIDING	1 cr.
HP 126	RESISTIVE EXERCISES	1 cr.
HP 144	RHYTHMS & MOVEMENT	1 cr.
*HP 150	ADAPTED PHYSICAL EDUCATION I	1 cr.
*HP 151	ADAPTED PHYSICAL EDUCATION II	1 cr.
HP 127	FENCING	1 cr.
HP 128	GOLF	1 cr.
HP 129	BADMINTON – TENNIS	1 cr.
HP 137	GYMNASTICS (WOMEN)	1 cr.
HP 138	FIELD HOCKEY – BASKETBALL (WOMEN)	1 cr.
HP 161	GYMNASTICS (WOMEN)	1 cr.
HP 162	FIELD HOCKEY (FALL, WOMEN)	1 cr.
HP 171	WRESTLING – SOCCER (MEN)	1 cr.
HP 172	BASKETBALL – SOFTBALL (MEN)	1 cr.

*All students who are unable to complete the two credit activity requirement must register for this course to obtain special class assignment or waiver of all or partial credit requirement. Such activity programs are designed for specific individuals who are medically restricted from participation in regular activities. Each program will be both therapeutic and recreational and subject to the approval of the student's personal physician.

Free Electives

The following courses may be taken by any student of the University for elective credit beyond the General Education

requirement. Courses are co-educational unless specified 'men only' (M) or 'women only' (W).

- HP 245 SYNCHRONIZED SWIMMING 1 cr.
Prerequisite: Advanced Swimmer.
- HP 246 CONTEMPORARY DANCE II 1 cr.
Prerequisite: HPE 196.
- HP 260 SENIOR LIFE SAVING 1 cr.
Prerequisite: Advanced Swimmer.
Emphasizes swimming and rescue skills necessary to complete American Red Cross Senior Life Saving Course. Certificates awarded upon successful completion of course.
- HP 261 WATER SAFETY INSTRUCTOR 1 cr.
Prerequisite: HP 260 or other proof of validated Senior Life Saving Certificate.
Emphasizes teaching aspect of skills, techniques and attitudes necessary in all areas of swimming. Students successfully completing course are qualified to hold such positions as water front directors, aquatic directors and other similar positions.
- HP 262 SCUBA DIVING 1 cr.
Prerequisite: American Red Cross Senior Life Saving Certificate.
Designed to teach necessary skills and proper use of equipment for underwater swimming. Tanks, regulators, weights, and special equipment furnished. Student must purchase a mask, fins and snorkel (approximately \$15.00). Includes theory as well as practical work.
- HP 263 AQUATICS I 1 cr.
Prerequisite: Physical Education Majors or department consent.
Basic performance techniques in swimming strokes, taught with special emphasis placed on teaching methodology.
- HP 264 AQUATICS II 1 cr.
Prerequisite: Physical Education Majors or department consent.

Swimming and rescue skills necessary to complete American Red Cross Senior Life Saving Course. Special emphasis placed upon a broad range of other aquatic experiences and teaching methodology.

- HP 265 AQUATICS III 1 cr.
Prerequisite: Physical Education Majors or department consent.
Advanced swimming skills, techniques and attitudes. Special emphasis placed upon a broad range of other aquatic experiences and teaching methodology.
- HP 314 ADVANCED MODERN DANCE 2 cr.
Prerequisite: Previous dance course or department acceptance of experience.
Advanced techniques of performance and choreography. Theory and composition form an integral part of course content.
- HP 333 PSYCHOLOGY OF SPORT
Study of influence of sports activity on individual as identified by his self concept and personality changes occurring during participation. An understanding of group values as reflected by team and spectator behavior related to sports activity will be pursued.
- HP 334 SPORTS OFFICIATING (M) 1 cr.
Techniques of officiating and rules interpretation. Practice in actual officiating required in several varsity sports.
- HP 336 ORGANIZATION AND ADMINISTRATION OF RECREATION 3 cr.
History, theory, and philosophy of recreation are discussed. Importance of play in modern world, trends in recreation, problems encountered in organizing community school programs and principles of leadership studied.
- HP 345 CARE AND ANALYSIS OF SPORTS INJURIES 2 cr.
Prerequisite: HP 221, Anatomy.
Prevention and care of accidents in sports activities studied. Significance of medical examination, conditioning exercise and

sound health practices discussed. Laboratory work includes taping, bandaging, use of physiotherapy equipment, massage and supervised training room experience.

HP 349 DANCE REPERTOIRE I 1 cr.
Prerequisite: Department consent.
Designed to permit students to be exposed to wide range of dance repertoire, original choreography and technique.

HP 350 DANCE REPERTOIRE II 1 cr.
Prerequisite: HP 349.
Designed to permit students to explore dance repertoire, choreography and technique beyond HP 349.

HP 405 ADMINISTRATION AND TECHNIQUES OF CAMPING 2 cr.
The growth and significance of camp movement, and understanding of camping techniques and various types of camp programs considered. Attention given to all camp activity areas. Study of outdoor education also.

HP 407 ADVANCED SYNCHRONIZED SWIMMING 2 cr.
Prerequisite: HPE 142, Physical Education Major, or department acceptance of experience.
Attention given to types of synchronized swimming and accompaniment, composition of performance routines and methods of training swimmers for synchronized swimming.

HP 432 ORGANIZATION AND ADMINISTRATION OF INTRAMURAL AND INTERSCHOLASTIC PROGRAMS 1 cr.
Organization and administration of intramural activities and interscholastic programs for men and women, attention to philosophical implications for school communities at all levels.

Physical Education Majors

All courses are conducted on a co-educational basis except

when noted 'Men only' (M) or 'Women only' (W).

HP 142 INTRODUCTION TO HEALTH, PHYSICAL EDUCATION AND RECREATION 2 cr.
Historical events, scientific principles and philosophical considerations involved in professions of health, physical education and recreation are studied.

HP 212 TUMBLING (M) 1 cr.
Physical conditioning given to students in first part of course as needed to prepare them for stunts and tumbling activities to follow.

HP 213 GYMNASTICS (M) 1 cr.
Prerequisite: HP 212.
Conditioning exercises, participation in all phases of gymnastics and the coaching of the sport.

HP 221 HUMAN ANATOMY 3 cr.
Prerequisite: BI 103, 104.
Anatomical organization of human body, surveyed in sufficient depth to prepare student for physiology, kinesiology, and adaptive physical education.

HP 231 FOOTBALL (M) 1 cr.
Fundamentals of position play, patterns of offense and defense, individual skills, and team organization in football.

HP 233 BASKETBALL (M) 1 cr.
Team tactics, drill patterns, conditioning, rules interpretations, and teaching methods.

HP 234 SOCCER (M) 1 cr.
Team tactics, drill patterns, conditioning, rules interpretation and teaching methods in soccer.

HP 236 VOLLEYBALL AND INDIVIDUAL SPORTS (M) 1 cr.
Development of the basic skills and team play of each sport.

HP 263	AQUATICS I OR HP 264 – AQUATICS II or	1 cr.	with opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.
HP 264	AQUATICS II OR HP 265 – AQUATICS III Prerequisite: Assignment by department advisor. See previous Physical Education listings.	1 cr.	
HP 300	RACQUET SPORTS (M) All racquet sports, with emphasis on participation by the class in tennis, badminton, and paddle tennis.	1 cr.	
HP 301	TENNIS – BADMINTON (W) Presentation of skill progressions and analyses, in combination with opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.	1 cr.	
HP 302	SOCCER – BASKETBALL (W) Presentation of skill progressions and analyses, in combination with opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.	1 cr.	
HP 303	BOWLING – GOLF (W) Presentation of skill progressions and analyses, in combination with opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.	1 cr.	
HP 304	VOLLEYBALL – SOFTBALL (W) Presentation of skill progressions and analyses, in combination with opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.	1 cr.	
HP 305	FOLK DANCE – SQUARE DANCE Presentation of skill progressions and analyses, in combination with opportunity to progress individually in skill competency in each activity. Methods and materials emphasized. The role of folk and square dance in the physical education programs of all levels considered.	1 cr.	
HP 306	FIELD HOCKEY – TUMBLING (W) Presentation of skill progressions and analyses, in combination	1 cr.	
HP 307	BASIC RHYTHMS AND FUNDAMENTALS OF MOVEMENT Designed to develop an awareness of basic movement techniques through rhythmic experiences, knowledge of music notation and terminology, and methods in creative presentation.	1 cr.	
HP 308	MODERN DANCE (W) Prerequisite: HP 307. Basic course in the dance, introducing student to technique and creative experiences in development of dance as creative art and an educational medium.	1 cr.	
HP 309	APPARATUS – TRACK AND FIELD (W) Presentation of skill progressions and analyses, in combination with opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.	1 cr.	
HP 310	ARCHERY – FENCING (W) Presentation of skill progressions and analyses, in combination with opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.	1 cr.	
HP 318	ACTIVITY INTERNSHIP I Students teach as assistants to a faculty member in two different activities in the service program. Emphasis on unit development, class management, presentation and evaluation.	1 cr.	
HP 321	METHODS IN ELEMENTARY HEALTH AND PHYSICAL EDUCATION Study and application of theories of movement, self-testing activities, rhythms, relays, games, gymnastics suitable for elementary school child. Observation, materials and methods of teaching and opportunities for intern teaching provided.	3 cr.	
HP 332	BASEBALL (M) Basic skills, position play and team participation in baseball.	1 cr.	

Circuit training, resistive exercises, weight training and use of weight equipment offered during second part of course.

- HP 335 WRESTLING (M) 1 cr.
Basic skills, moves and holds used in college and high school wrestling.
- HP 341 TESTS AND MEASUREMENTS 2 cr.
Prerequisite MA 362.
Application of tests in physical fitness, motor ability, motor educability, sports skills, and health education. Evaluation of tests results in health and physical education program also considered.
- HP 342 KINESIOLOGY 3 cr.
Student is taught structural considerations of human movement and led through analyses of motor performances
- HP 343 PHYSIOLOGY OF EXERCISE 2 cr.
Prerequisite HP 221 and BI 151.
Physiological aspects of various types of exercise on human body. Major factors of diet, conditioning, physical fitness, maximum performance level, and fatigue are considered.
- HP 344 ADAPTED PHYSICAL EDUCATION 2 cr.
Prerequisite HP 221, 342, BI 151.
Recognition of structural deviations is taught. Corrective exercise and physical education programs for a wide range of handicaps studied. Psychology of handicapped persons are presented.
- HP 346 FIRST AID INSTRUCTOR'S COURSE 1 cr.
American Red Cross Standard, Advanced and Instructor's certification awarded upon successful completion of this course
- HP 404 ORGANIZATION AND ADMINISTRATION OF THE SCHOOL HEALTH CURRICULUM 3 cr.
Prerequisite HP 101.
Study of principles, methods, course content, and role of a complete school health program. Emphasis given to curriculum planning at all school levels, pupil needs, community resources

and school health services.

- HP 441 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION 2 cr.
Administrative considerations involved in the instructional program including intramural and interscholastic sports programs of all grade levels, K-12, are studied. Relationship of physical education program to overall school program also presented.
- HP 442 HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION 2 cr.
Prerequisite Senior Status
Study of historical and philosophical concepts of physical education, in a seminar environment. Emphasis upon student exploration of historical, faculty, personal and peer concepts of total physical education program.



NURSING DEPARTMENT

HP 251 INTRODUCTION TO SAFETY EDUCATION 3 cr.

This course is concerned with the recognition of unsafe conditions and practices and the methods by which they may be eliminated or curtailed. It gives an overall view of the safety problems in the home, school, highway, public places, and the work environment.

HP 252 DRIVER EDUCATION 3 cr.

The student should have driving ability above the average and evidence of holding a driver's license, plus at least two years of driving experience without having a major accident for which the driver is responsible.

Driver Education is a combination of class instruction in traffic safety and driver training in actual behind-the-wheel practice in a dual control car. It prepares the student to teach driver education in a high school. Three hours lecture, two hours laboratory.

HP 253 METHODS & MATERIALS IN SAFETY EDUCATION IN THE SECONDARY SCHOOLS 3 cr.

Prerequisites: HP 251 and/or HP 252.

Methods and Materials of Safety Education in Secondary Schools emphasizes the various subjects and school activities as well as treating it as a separate subject.

HP 254 ORGANIZATION & ADMINISTRATION OF SAFETY EDUCATION 3 cr.

Prerequisites: HP 251 and/or HP 252.

The course emphasizes the basic principles of organizing, administering and supervising safety education procedure in the public schools at all grade levels. Encouraging student activities in the school and community is a part of the course.

HP 255 PSYCHOLOGY OF ACCIDENT PREVENTION 3 cr.

The application of the principles of psychology to the development of safe behavior in the school, home, community, highway, and industry. The cause of accidents in relation to attitudes, habits, and behavior.

MARY C. KATZBECK, CHAIRMAN; BISS, BLACK, CUNNINGHAM, GOFF, HALUSKA, HART, HOLT, KRESAK, MURRAY, SUHRIE, THISTLETHWAITE, WILSON, WRIGHT

In collaboration with Latrobe Area Hospital, the School of Health Services offers a curriculum leading to the degree Bachelor of Science in Nursing. Upon completion of the program, the graduate is prepared to write the examination for Pennsylvania licensure as a registered nurse.

The nursing curriculum has as its primary goal the development of competent practitioners of professional nursing who are liberally educated, clinically proficient, and aware of their social responsibilities as members of the health professions. The program is designed to provide a broad background in general education, coupled with the specialized knowledge and skills required for clinical competency. Additionally, the curriculum prepares the nurse to practice within the professional code of nursing ethics, to function effectively as a member of the health-care team, and to utilize scientific principles in planning and implementing health care. The objectives of the nursing program emphasize learning of concepts of health and illness, and the provision of health care in various settings within the community.

The first two years are devoted primarily to the General Education curriculum on the main campus. The courses outlined elsewhere in this Bulletin as mandatory in English, Humanities, Health and Physical Education (or ROTC), and Mathematics are in addition to the following:

Social Sciences

PC 201	General Psychology	3 cr.
PC 354	Developmental Psychology	3 cr.
	S. S. electives	9 cr.

Natural Sciences

CH 101-102	Chem I and II	8 cr.
BI 103-104	Gen Biol I and II	8 cr.
BI 371	Vertebrate Anatomy	3 cr.
BI 361	Microbiology	3 cr.
BI 151	Human Physiology	3 cr.

Other Requirements

FN 212	Nutrition	3 cr.
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Clinical experiences in patient care are provided at Latrobe Area Hospital and other area health agencies during one summer session, and the junior and senior years. Men and women are eligible to enroll in the nursing program.

Registered Nurse students are enrolled in the basic baccalaureate program in nursing. They will have a genuine upper division major in Nursing, and will fulfill all degree requirements set by the University. The Registered Nurse student may be awarded advanced standing, based on prior work completed at an accredited college or university and on exemption tests.

COURSE DESCRIPTIONS

General education and science courses listed for freshmen

and sophomore years are considered prerequisites for Nursing courses. Student must achieve Advanced Standing before enrolling for major nursing courses.

NU 300	NURSING CORE I	4 cr.
	Basic concepts of health and disease, implications for care of patients with problems common to maintenance of health.	
NU 301	NURSING I	4 cr.
	Theory and skills necessary for nursing intervention, diagnostic techniques, assessment, includes clinical practice.	
NU 302	NURSING II	4 cr.
	Concepts of health, introduction to illness and health problems, study of patients in hospital and various other settings, emphasis on medical and surgical aspects of nursing.	
NU 303	CLINICAL PRACTICE IN MEDICAL-SURGICAL NURSING	4 cr.
	Guided experience in care of medical-surgical patients in hospital and clinics, identification of patient's health needs, development and implementation of nursing care plan.	
NU 304	NURSING III	4 cr.
	The human reproductive cycle from conception to menopause in females, and through adolescence in children; normal biophysical and psychosocial growth and development, common abnormalities.	
NU 305	CLINICAL PRACTICE IN MATERNAL-CHILD NURSING	4 cr.
	Guided clinical practice in obstetric and pediatric nursing; exposure to the family in home, clinic, hospital.	
NU 321	JUNIOR SEMINAR I	3 cr.
	Organizational relationships; management of clinical unit; team method.	
NU 322	NURSING CORE II	3 cr.
	Basic pathophysiological concepts of health and disease; broad	

theoretical foundation for the nursing process.

- NU 323 NURSING CORE III 3 cr.
Continuation of concepts of pathophysiology introduced in Nursing Core II.
- NU 324 JUNIOR SEMINAR II 3 cr.
Survey of teaching-learning process as related to clinical nursing; study of provision of health teaching to community groups.
- NU 402 NURSING IV 4 cr.
Concepts of emotional health and illness, psychopathology, therapeutic intervention.
- NU 403 CLINICAL PRACTICE IN PSYCHIATRIC NURSING 4 cr.
Guided experience in care of patients with psychiatric illnesses in home, clinic, hospital and community agencies.
- NU 404 NURSING V 3 cr.
Advanced theory in medical and surgical nursing, critical care nursing.
- NU 405 NURSING VI 4 cr.
Study of multiple health problems, public health facilities, health care on a community level.
- NU 406 CLINICAL PRACTICE IN COMMUNITY NURSING 4 cr.
Guided clinical experience in caring for patients, particularly in home, clinic or other public health facility.
- NU 424 CLINICAL PRACTICE IN ADVANCED MEDICAL-SURGICAL NURSING 3 cr.
Guided clinical practice in coronary and intensive care, surgical nursing, team leadership.
- NU 425 SEMINAR IN NURSING 3 cr.
Study of trends in nursing practice, survey of nursing profession, pre-professional adjustments, philosophy of nursing.

NU 426,427 INDEPENDENT STUDY Varied credits
Internships, individual projects, faculty-supervised study focused on individual student interest.

NU 430 RESEARCH IN NURSING 3 cr.
Research methodology, development of a research study related to clinical nursing; writing research paper.



SAFETY SCIENCES DEPARTMENT

ROBERT MC CLAY, ACTING CHAIRMAN; LEE, FIRENZE

The department offers the degree of Bachelor of Science in Safety Management with a specialization in occupational safety and health.

CURRICULA

B. S. in Safety Management

The degree in Safety Management qualifies the student for professional, administrative, managerial, and supervisory positions in industry, manufacturing, insurance, transportation, utility, government, contract construction, trade service industry and many others. There is an acute need in Pennsylvania and in the nation for the university educated occupational safety and health professional. The curriculum includes a major of 36 credits in Safety Sciences and 18 credits in Business Management. In addition, a number of elective courses are available in the major and minor fields that will enable the student to strengthen his primary interest areas.

REQUIRED UNDER GENERAL EDUCATION — In meeting the University's General Education requirement, the Safety Sciences major must include:

CH 101 and 102	Chem for Health and Home Ec. Majors	8 cr.
PC 101	General Psychology	3 cr.
SO 151	Principles of Sociology	3 cr.

MA 101 and 362	Foundations of Mathematics	6 cr.
	Probability and Statistics	
SC 105	Physics for Health Service Majors	4 cr.

SAFETY SCIENCES MAJOR — The 36 credits required in Safety Sciences must be achieved by completing the following courses: SA 101, 111, 211, 301, 302, 303, 311, 345, 412, 445, and 450.

BUSINESS MANAGEMENT — The following courses are required in the Business Management specialty:

BU 101	Bus Org and Mgt	3 cr.
BM 201	Personnel Management	3 cr.
BU 321	Bus Communications	3 cr.
BU 339	Bus Data Processing	3 cr.
BM 383	Principles of Insurance II	3 cr.
BM 480	Practices and Proc of Collective Bargaining	3 cr.

COURSE DESCRIPTIONS

SA 101	INTRODUCTION TO OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT	3 cr.
	Covers theory and history of industrial hazard control, effects of hazards and failures on organizational control and productivity, safety and health legislation, accident causation, organization and administration of safety and health programs, aspects of recognizing, evaluating, and understanding control of safety and health hazards, acquiring hazard data, hazard analytical tools, communication techniques in safety and health management, and the role of interfacing management systems in hazard control.	

SA 111 & 211 INDUSTRIAL SAFETY ENGINEERING I & II 3 cr each

Prerequisite: SA 101.

Stresses understanding complexity of industrial hazard control problem by thoroughly examining elements of safety and health enumerated in OSHA Act promulgated standards. Emphasis given to plant layout and design, materials handling, machine guarding, walking and working surfaces, hazardous materials and combustible liquids, industrial sanitation and environmental controls, compressed gases and cryogenics, electrical and static electricity hazards, boilers and unfired pressure vessels, protective equipment, and construction safety.

SA 301 NATURE AND EFFECTS OF OCCUPATIONAL HEALTH HAZARDS 3 cr.

Prerequisites: SA 101, CH 101, CH 102, SC 105 (Physics for Health Services Majors).

Provides understanding of primary health hazards found in industry and their effects on human body. Students learn to recognize hazards involved with air contaminants, noise, heat, radiation, chemicals on the skin, and other stresses. Emphasis placed on study of occupational disease, industrial toxicology, and use of threshold limit values.

SA 302 MEASUREMENT AND EVALUATION OF OCCUPATIONAL HEALTH HAZARDS 3 cr.

Prerequisite: SA 301.

A lecture/laboratory course which provides basic understanding of techniques used in measuring and evaluating the magnitude of health hazards in industry. Laboratory sessions provide experience in air sampling, noise measurement, heat measurement, particle size analysis, chemical analysis, and evaluation of industrial ventilation systems.

SA 303 CONTROL OF OCCUPATIONAL HEALTH HAZARDS 3 cr.

Prerequisites: SA 301, SA 302.

Study of engineering, administrative, and personal protective

equipment methods of reducing or eliminating hazards to the health of industrial worker. Topics covered include: industrial ventilation, noise control, heat control, radiation control, personal protective equipment, and industrial health program.

SA 311 INDUSTRIAL FIRE PROTECTION 3 cr.
Prerequisites: CH 101, CH 102, SC 105 (Physics for Health Services Majors), SA 101, SA 211.

Introduces fundamental concepts in protection of industrial workers and property from fire and explosion. Fire chemistry, control of ignition sources in industry, and properties of combustible materials discussed. Fire detection and extinguishment covered along with building construction for fire prevention, fire codes, and related topics.

SA 345 SYSTEMS SAFETY ANALYSIS 3 cr.
Prerequisites: SA 111, SA 211.

Takes the approach of systems analysis in accident prevention, economics of system safety, information acquisition, analytical approaches, systems safety methodology, human factors engineering, mathematics of systems analysis (including statistical methods, boolean algebra, and testing and reliability), comparison of various analytical methods in the engineering design, inductive and deductive analytical techniques: PRELIMINARY HAZARD ANALYSIS, TASK ANALYSIS, FAILURE MODE AND EFFECT ANALYSIS, FAULT TREE ANALYSIS, and exercises in the application of FAULT TREE ANALYSIS to hardware and man/machine systems. Practical analysis work is accomplished in laboratory sessions.

SA 412 MEASURING SAFETY AND HEALTH PROGRAM EFFECTIVENESS 3 cr.

Prerequisite: MA 362, Senior standing.

Teaches reasons and importance for evaluating safety and health innovations on organization performance, devising measuring systems capable of extracting accurate, meaningful data, methods of collecting, codifying, and processing accident-injury information, and utilization of data retrieval systems.

SA 445 **PRODUCT SAFETY**

3 cr.

Prerequisite: SA 345.

Traces flow of applicable legislation dealing with consumerism and product safety. Corporate liability for product safety emphasized through case studies. Student familiarized with evolving role of Consumer Product Safety Commission. Corporate management of product development and safety detailed with emphasis on systems safety analysis, standards and product testing

SA 450 **INTERNSHIP**

6 cr.

Prerequisite: 24 hours of SA courses.

All Safety Management majors required to take and pass this course. It will be conducted away from the University at various industrial enterprises. Students are required to provide their own transportation. Intended to allow the student to apply hazard assessment and safety management practices to actual industrial situations while at same time being exposed to complexities of industrial environment. The student will spend 12 hours per week at an industrial location and 2 hours of classroom instruction weekly where his field assignments will be designated, his problems will be discussed, and his progress will be evaluated.

SA 462 **RADIOLOGICAL HEALTH**

3 cr.

Prerequisite: SA 301, SC 105 (Physics for Health Service Majors).

Study of problems associated with ionizing radiation in human environment. Emphasis given to biological effects, radiation measurement, dose computational techniques, exposure control, and local and federal regulations. Study and use of various radiological instruments included.



The School of Home Economics

KATHLEEN JONES, DEAN

At Indiana University of Pennsylvania, Home Economics is the ongoing investigation of human interaction with the near environment as it contributes to one's aesthetic, physical, economic and social-psychological well-being.

The School of Home Economics emphasizes family relations and human development, resource management and consumer economics, food and nutrition, clothing and textiles, housing and interior design in its study of the near environment. Research from all disciplines is utilized.

The objectives of the School of Home Economics at Indiana University of Pennsylvania are: to guide students in the development of competencies and skills necessary for professions in home economics and related fields; to provide students with a foundation for advanced study in home economics and related fields; to assist in preparing students to lead useful lives as individuals, family members, and citizens.

Curricula in the School contribute to the development of professional competencies which enable graduates to enter a diversity of careers in education, business, industry and community services. The School is composed of three departments: Home Economics Education, Food and Nutrition and Consumer Services.

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

Students enrolled in the School of Home Economics must meet the University requirements in General Education. The School requires that the Natural Sciences requirement be met by the following:

CH 101-102	Chem for Home Economics and Health Professions	8 cr.
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Mathematics (see major Department requirement)

*BI 151	Human Physiology	3 cr.
*BI 241	Microbiology	3 cr.

In meeting the Social Science requirements, all students in the School must take Psychology 101, General Psychology. Students in the Nutrition Education Option and Home Economics Education Department must elect History 104, History of the United States and Pennsylvania II. All students in the School are encouraged to elect general education courses in art, sociology, economics and anthropology.

*Students electing the Textiles, Clothing, Interior Design concentration in the Consumer Services Department may replace Biology 151 and 241 with a Humanities elective.

SCHOOL OF HOME ECONOMICS REQUIREMENTS

In addition to the University requirements, each student is required to pass one course offered by the departments in the School he/she is not enrolled in at the time of graduation. Accepted courses are:

Home Economics Education

HO 218	Child Development	3 cr.
HO 319	Family Relations	3 cr.

Food and Nutrition Department

FN 111	Introduction to Foods	3 cr.
FN 212	Nutrition	3 cr.
FN 351	Nutrition Education	3 cr.
FN 214	Food and Man	3 cr.

Consumer Services

CS 113	Management and Equipment	3 cr.
CS 315	Consumer Economics & Family Finance	3 cr.



HOME ECONOMICS EDUCATION DEPARTMENT

ALMA KAZMER, CHAIRMAN: ANDERSON, BELL, BROWNING, FERNANDEZ, GALLATI, HOVIS, LIU, NELSON, RUPERT

If you enjoy working with people of various age levels and incomes, a number of opportunities await you in Home Economics Education.

The program of studies leads to a Bachelor of Science in Education with a Home Economics major and meets certification requirements for teaching home economics at all levels (K–Adults) in the schools of Pennsylvania.

This program also prepares one for varied types of employment related to improving family life such as home economists with: state extension services, utility companies, social service organizations and government agencies.

In addition to University and School requirements, the student is required to complete the following home economics content and professional education courses.

Home Economics Content Requirements

CS 112	Clothing Construction and Fitting	3 cr.
CS 113	Management and Equipment	3 cr.
CS 214	Apparel Structure and Design	3 cr.
CS 216	Clothing and Man	3 cr.
CS 217	Interior Design	3 cr.
CS 314	Textiles	3 cr.
CS 315	Consumer Economics & Family Finance	3 cr.

CS 414	Home Management Residence	3 cr.	research in child development in analyzed. Three hours lecture per week.
FN 111	Introduction to Foods	3 cr.	
FN 211	Advanced Foods	3 cr.	
FN 212	Nutrition	3 cr.	
HE 213	Principles of Design (See under Special Courses in Art Department)	2 cr.	
HO 218	Child Development	3 cr.	
HO 319	Family Relations	3 cr.	
HO 412	Nursery School	3 cr.	
	Elective in any Home Economics Area	3 cr.	

HO 250 INTRODUCTION TO TEACHING VOCATIONAL HOME ECONOMICS EDUCATION 3 cr.

Emphasis placed on study of students, families, schools and communities. Planned observations in a variety of teaching situations. Variety of multi-media materials used and evaluated relative to their effectiveness. Self analysis in relation to desirable teacher competencies and/or behaviors included. Three hours lecture per week.

HO 350 METHODS OF TEACHING AND SCHOOL LAW IN VOCATIONAL HOME ECONOMICS EDUCATION 3 cr.

Prerequisites: EP 302, HO 250.
Students become orientated to classroom teaching through planned activities utilizing a variety of methods, techniques and resources while constantly evaluating them for increased teacher effectiveness. Basic principles of school law and vocational legislation relating to home economics education are studied. Three hours lecture per week.

HO 363 THE FAMILY AND THE COMMUNITY 3 cr.

Intensive study of community contributions and problems that affect the family, as well as contributions of families to community. Group dynamics, media of communication, and other experiences that aid understanding of human behaviors are investigated. Field work is an integral part of course. Three hours lecture per week.

Professional Education Requirements

HO 250	Introduction to Teaching Vocational Home Economics	3 cr.
HO 350	Methods of Teaching and School Law in Vocational Home Economics Education	3 cr.
EP 302	Educational Psychology	3 cr.
LR 301	Audio-Visual Education	2 cr.
FE 302	History and Philosophy of American Education	3 cr.
ED 431	Student Teaching (for Home Economics)	8 cr.

COURSE DESCRIPTIONS

HO 218 CHILD DEVELOPMENT 3 cr.
Prerequisite: PC 101.
Focuses on helping students develop understanding of normal development and behavior of children. Survey made of physical, emotional, social, and intellectual development of children in the family from conception through early adolescence. Pertinent

HO 319 FAMILY RELATIONS 3 cr.
Prerequisites: PC 101, HO 218 (Majors).
Focuses on preparation for marriage and study of human relations principles basic to marital adjustment. Influence of community and family experiences on personal development and adjustment are studied. Three hours lecture per week.

- HO 412 NURSERY SCHOOL 3 cr.
Prerequisites: EP 302, HO 218 or equivalent (Open to Home Economics Education Majors or by special permission of department chairman.) Class taken for one quarter only. Techniques for planning and managing a group of pre-school children emphasized. Participation as a teacher assistant in the nursery school provides experience in applying principles of child guidance and development necessary for teaching in public pre-school centers or in Home Economics Child Development Laboratories in Secondary Schools. Two hours lecture and 6 hours laboratory per week for one quarter.
- HO 421 PRE-SCHOOL EDUCATION 3 cr.
AGES 2 – 5 YEARS
Prerequisite: HO 218.
Intensive observation and teaching experience in Nursery School or in a community-based pre-school program are used as the basis for understanding guidance procedures appropriate for pre-school children.
- HO 422 EARLY CHILDHOOD EDUCATION 3 cr.
Prerequisite: HO 218.
Current educational theories and research reviewed in terms of their implication for pre-school and their effects on material, equipment, and activity selection. Three hours lecture per week.
- HO 423 MARRIAGE AND FAMILY RELATIONS 3 cr.
Prerequisite: HO 319.
Emphasizes development of an understanding of interpersonal relations within the family. Potential problems of marriage are identified and investigated in terms of the development of an understanding of what constitutes good adjustment. Three hours lecture per week.
- HO 424 THE FAMILY 3 cr.
Prerequisite: HO 319.
Concentrated study of selected areas of family life, with emphasis on the dynamics of family interaction and interpersonal relationships. Three hours lecture per week.
- HO 425 STUDY TOUR IN FAMILY LIFE 2-6 cr.
Option: Family Life.
Offers opportunity to observe the family social structure and values in relation to cultural background and economic conditions. Culture, class and ethnic variations in family and kinship systems are examined, emphasizing the relationship to international relations and family life education.
Option: Child Development.
Provides the opportunity to observe the developing child in family life/education, as these relate to his cultural background and economic conditions.
- HO 451 WORKSHOP IN HOME ECONOMICS 3 cr.
EDUCATION
Prerequisite: HO 250.
Individual and group projects related to current trends, issues or problems are developed. Current curriculum trends are identified and evaluated. Two hours lecture, 2 hours laboratory per week.
- HO 453 INNOVATIVE TEACHING 1-3 cr.
Prerequisite: HO 250.
Innovative curriculum materials, resources and techniques investigated, studied and evaluated to determine usefulness and relevancy for present and future home economics programs.
- HO 454 HOME ECONOMICS EDUCATION 3 cr.
FOR ADULTS
Prerequisite: HO 250.
Adult education approached as one phase of a continuing development throughout the lifespan, necessary if individuals are to keep pace with our changing society. Dimensions of adult education include background and philosophy of the movement, types of programs. Characteristics of adult learner and adult educator are investigated. Contributions of Home Economics to adult education

CONSUMER SERVICES DEPARTMENT

DONNA STREIFTHAU, CHAIRMAN; CRAMER, LYNN, PURCELL, SHARMA, SHPARGEL, SOMMER, STEVENS, WOOD

are identified and plans for implementing adult home economics programs are formulated, analyzed and evaluated. Observation and participation in various types of adult programs are an integral part of the course. Three hours lecture per week.

ED 431 STUDENT TEACHING (FOR HOME ECONOMICS) 8 cr.

Prerequisite: HO 350.

Supervised opportunities provided to guide the efforts of students in home economics classroom. Self evaluation and analysis of personal and professional growth are emphasized. Attendance at Saturday seminars is required. This course meets for one Quarter.

*HO 471V CURRICULUM DEVELOPMENT IN HOME ECONOMICS EDUCATION 3 cr.

Prerequisite: HO 250.

The various tasks and processes of curriculum development are reviewed and analyzed. Special attention given to making realistic curriculum decisions and using innovative procedures in developing the home economics curriculum.

*HO 472V EVALUATION IN HOME ECONOMICS 3 cr.

Study of nature and scope of evaluation in contemporary home economics programs. A variety of evaluative methods and techniques designed to measure a comprehensive range of home economics educational objectives are studied. Special attention is given to the use and construction of teacher-made tests and evaluative devices.

*Dual level courses.

The Consumer Services Department offers the degree of Bachelor of Science in Home Economics with two options: Business and Community Service. Both options prepare men and women for positions where consumer concerns are of primary importance. Graduates are employed by retailing establishments, manufacturing companies, utility companies, extension, social and governmental agencies.

Subject matter courses offered by the department include those in the areas of textiles, clothing, housing, interior design, household equipment, consumer and family economics, and home management. These courses plus selected electives from other departments in the University may be utilized for specific programs to meet the particular career goals of individual students.

Students are encouraged to develop their individual potential through the application of knowledge gained in the classroom to job situations and departmental, campus, and community activities. Some students elect the Field Experience course which gives them the opportunity to apply their academic knowledge in an internship or job situation. Students may elect a study tour to gain an understanding of business procedures and/or consumer problems in various areas of the world. The faculty work closely with students in planning and integrating their academic program with meaningful experiences outside the classroom.

Course requirements for the degree include 52 credits in

General Education, required by the University, 36 credits in Home Economics courses, 18 credits in a concentration of courses outside the School of Home Economics related to the student's career goal, and 18 credits in supporting electives.

Department Requirements

In addition to meeting the University and School requirements, all students in the Department must take the following:

CS 113	Management and Equipment	3 cr.
CS 315	Family Finance & Consumer Economics	3 cr.
CS 421	Consumer Services Practicum	3 cr.
HE 213	Principles of Design	2 cr.
	(See under Special Courses in Art Department)	

HOME ECONOMICS IN BUSINESS OPTION

Students selecting this option may concentrate their home economics courses in the areas of (1) textiles, clothing, interior design, or (2) foods, nutrition, and equipment, or (3) they may choose a variety of courses from all subject matter areas of home economics. Graduates may be employed by business organizations producing or selling foods, clothing, textiles, home furnishings or related products, or by a department store or utility company.

Textiles, Clothing, Interior Design Concentration

Required:

CS 112	Fundamentals of Clothing Construction	
	or	
CS 114	Advanced Clothing Construction	3 cr.
CS 216	Clothing and Man	3 cr.
CS 217	Interior Design	3 cr.
CS 314	Textiles	3 cr.
CS 318	Fashion Analysis	3 cr.

Minimum of 6 Credits From the Following:

CS 214	Apparel Structure and Design	3 cr.
CS 312	Housing and Man	3 cr.
CS 354	Special Problems	3 cr.
CS 356	Historic Costume	3 cr.
CS 357	Interior Design Studio	3 cr.
CS 413	Problems in Consumer Economics	3 cr.
CS 416	Problems in Family Finance	3 cr.
CS 417	Tailoring	3 cr.
CS 433	Study Tour	1-6 cr.

Foods, Nutrition, Equipment Concentration

Required:

FN 211	Advanced Foods	3 cr.
FN 212	Nutrition	3 cr.
FN 357	Special Problems in Foods	3 cr.
FN 362	Experimental Foods	3 cr.

Minimum of 9 Credits From the Following:

FN 214	Man and Food	3 cr.
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FN 313	Quantity Food Service Management	4 cr.
FN 355	Diet Therapy	3 cr.
FN 406	Study Tour in Foods	2-6 cr.
CS 217	Interior Design	3 cr.
CS 312	Housing and Man	3 cr.
CS 354	Special Problems	3 cr.
CS 413	Problems in Consumer Economics	3 cr.
CS 416	Problems in Family Finance	3 cr.

Outside Concentration

A minimum of 18 credits is required from the following, or approved Business substitutes:

BU 101	Business Organization and Mgt.	3 cr.
*BE 111	Foundations of Math	3 cr.
BM 201	Personnel Management	3 cr.
BU 221	Intro to Accounting	4 cr.
BU 233	Marketing	3 cr.
BU 251	Intermediate Accounting	3 cr.
BU 332	Retail Management	3 cr.
BU 333	Principles of Selling	3 cr.
BU 339	Business Data Processing	3 cr.
BM 434	Advertising	3 cr.

Additional Requirements:

*EC 121	Principles of Econ I	3 cr.
EC 122	Principles of Econ II	3 cr.

*May be taken as a General Education requirement.

HOME ECONOMICS IN COMMUNITY SERVICES OPTION

Courses from all subject matter areas of home economics are included in this option. Electives may be concentrated in particular home economics areas. A concentration of courses is elected in a field of study outside home economics, such as sociology. Graduates may be employed by the Extension service or by various governmental and welfare agencies.

Required:

FN 212	Nutrition	3 cr.
HO 319	Family Relations	3 cr.
CS 112	Clothing Construction and Fitting	3 cr.
CS 216	Clothing and Man	3 cr.
CS 217	Interior Design	3 cr.
CS 314	Textiles	3 cr.
CS 414	Home Management	3 cr.

A minimum of 18 credits beyond General Education courses are to be selected in a field of concentration such as Sociology and/or Psychology. Suggested courses are:

SO 231	Cont. Social Problems	3 cr.
SO 332	Racial and Cult. Minor	3 cr.
SO 333	Juvenile Delinquency	3 cr.
SO 335	Social Stratification	3 cr.
SO 336	Soc. of Family	3 cr.
SO 338	Intro to Social Work	3 cr.
SO 339	The Community	3 cr.
AN 211	Cultural Anthro.	3 cr.
AN 319	Soc. Structure and Function	3 cr.

PC 300	Psy. of Adjust.	3 cr.
PC 351	Intro to Psy. Meas.	3 cr.
PC 354	Developmental Psy.	3 cr.
PC 356	Personality	3 cr.
PC 357	Abnormal Psy.	3 cr.
PC 358	Social Psy.	3 cr.
PC 361	Motivation	3 cr.
PC 373	Adolescent Psy.	3 cr.
PC 374	Psy. of Adulthood & Old Age	3 cr.

COURSE DESCRIPTIONS

CS 112	FUNDAMENTALS OF CLOTHING CONSTRUCTION	3 cr.
	Prerequisite: Beginner.	
	Principles and techniques involved in fundamental clothing construction and fitting are analyzed. Directed laboratory experiences provide opportunity to solve individual problems in garment structure through application of principles. For students with no sewing experience. One hour lecture, 3 hours lab.	
CS 113	MANAGEMENT AND EQUIPMENT	3 cr.
	Problems of consumer concerned with selection, use, and care of equipment for the home are investigated. Management and decision making processes relative to administration of a home are studied. Two 1-hour lectures, one 2-hour lab.	
CS 114	ADVANCED CLOTHING CONSTRUCTION	3 cr.
	Prerequisite: CS 112 or experience.	
	In-depth study of principles of advanced clothing construction and fitting are applied and analyzed through couture design. One hour lecture, 3 hours lab.	

CS 214	APPAREL STRUCTURE AND DESIGN	3 cr.
	Prerequisite: CS 112 or CS 114 or exemption exam.	
	Garment design achieved by use of flat pattern techniques. An understanding is developed of the interrelationship of garment design, fabric, fit, and construction processes. Two lecture hours, and 3 hours lab.	
CS 216	CLOTHING AND MAN	3 cr.
	Prerequisite: PC 201.	
	Cultural, social, psychological, aesthetic, functional, economic, and technological factors as they interact to determine meaning and use of clothing for individual and society. Three 1 hour lectures. Spring semester only.	
CS 217	INTERIOR DESIGN	3 cr.
	Prerequisite: HE 213 or equivalent.	
	Emphasis upon development of knowledgeable consumers in the selection and design of a home, its furnishings, and its total environment. Two 1-hour lectures, one 2-hour lab.	
CS 312	HOUSING AND MAN	3 cr.
	Managerial, sociological, economic, and aesthetic aspects of housing man are investigated as well as a consideration of the environment of the home as part of the community. Three hours lecture. Fall semester only.	
CS 314	TEXTILES	3 cr.
	Prerequisite: Chemistry 102.	
	Interpretation of basic textile knowledge with emphasis on fiber, yarn, fabric structures and fabric finishes. Discussions include importance of factors related to consumer information, protection, and satisfaction. Two 1-hour lectures, one 2-hour lab.	
CS 315	FAMILY FINANCE AND CONSUMER ECONOMICS	3 cr.
	Economic, sociological, and psychological principles are applied to family money management problems. Sources of consumer aid and protection are investigated. Three lecture hours.	

- CS 318 FASHION ANALYSIS 3 cr.
Prerequisite: CS 216.
A study of fashion as a social force and its economic impact; an investigation of aspects of fashion merchandise used by various groups of consumers for apparel and for furnishing the home. Three lecture hours. Fall semester only.
- CS 354 SPECIAL PROBLEMS 3 cr.
Particular consumer considerations are investigated in area of housing, equipment, interior design, clothing, textiles, or in management of resources. Three lecture hours.
- CS 356 HISTORIC COSTUME 3 cr.
Chronological study of historic costume from ancient times to the present day, emphasizing style details as well as social, economic, political, religious, and aesthetic influences on design of clothing worn. Three lecture hours. Odd year, spring.
- CS 357 INTERIOR DESIGN STUDIO 3 cr.
Prerequisite: CS 217.
Creative solutions to problems in interior environments emphasized. Field trips to museums, furniture factories, stores and private residences included. One hour lecture, 4 laboratory hours. Spring semester only.
- CS 413 PROBLEMS IN CONSUMER ECONOMICS 3 cr.
Prerequisite: CS 315 or Economics.
Problems in consumer expenditures studied with emphasis given to affects of current economic and social forces. Individual investigations required. Three lecture hours. Fall semester only.
- CS 414 HOME MANAGEMENT (Resident Apartment) 3 cr.
Decision-making and cooperation in group living stressed. Students plan, prepare, and serve nutritious meals; use and care for equipment and furnishings; and provide for individual and group needs. Three class hours plus residence for one quarter.
- CS 416 PROBLEMS IN FAMILY FINANCE 3 cr.
Prerequisite: CS 315.
More advanced problems in personal and family finance are studied. Three lecture hours. Spring semester only.
- CS 417 TAILORING 3 cr.
Prerequisite: CS 112 or CS 114.
Various tailoring methods are studied and applied in the selection, fitting and construction of a tailored garment. Consumer problems in the selection of ready-to-wear apparel are investigated. Two 3-hour lecture-lab hours. Fall semester only.
- CS 421 CONSUMER SERVICES PRACTICUM 3 cr.
Applies knowledge gained in Home Economics and supporting courses to individual vocational goals. Stress is placed upon independent research, analytical thinking and communication skills.
- CS 433 STUDY TOUR 1-6 cr.
Opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing abroad or in America. Museums, factories, designer's showrooms, distribution centers, stores, cultural events and seminars are included. Upper standing level.
- CS 451-452 FIELD EXPERIENCE 1-12 cr.
Prerequisites: Approval of instructor and department chairperson, upper level standing.
Field experience related to the student's major area of study, with objectives, supervised experience, and evaluation. Each segment may be taken for 1-6 semester hours and both segments may be taken simultaneously for a total of 12 hours.

FOOD AND NUTRITION DEPARTMENT

ALLEN M. WOODS, CHAIRMAN; BERTHY, CESSNA, CLARK, GRESSLEY, SIMKINS, STAHLMAN, STEINER, TOBIN

Interesting work, good salaries and opportunity for advancement in positions that give meaning, satisfaction and a purpose in life await young men and women who prepare for careers in the growing fields of dietetics, food service management, and educational food services.

Courses offered by the Food and Nutrition Department are planned to train the student as a professional to meet the challenge of his growing industry, which includes not only the commercial food service and hospitality facets of the industry, but hospital and educational segments as well.

The prime requisites for success in the field of foods and nutrition are an interest in people, an artistic appreciation of quality food, a realization of the need for good nutrition, and a knowledge of sound business principles.

NUTRITION EDUCATION CURRICULUM

Graduates of this program are prepared (1) to manage the school food service operation in order to provide meals with optimum nourishment to school children and other school clientele, and (2) to render professional service to teachers concerning the teaching of nutrition. The program meets Pennsylvania Department of Education certification requirements for a Nutrition Educational Specialist certificate.

Through additional elective credits course requirements for an American Dietetic Association Internship can be met within the minimum graduation requirement.

In addition to University and School requirements the following courses are required.

FN 111	Introduction to Foods	3 cr.
FN 201	Personnel Management	3 cr.
FN 211	Advanced Foods	3 cr.
FN 212	Nutrition	3 cr.
FN 313	Quantity Food Ser. & Mgt.	4 cr.
FN 321	Professional Emp. Pract.	0 cr.
FN 356	Food Service Administration	3 cr.
FN 358	F.S. Equipment & Layout	3 cr.
FN 359	Quantity Food Purchasing	3 cr.
FN 362	Experimental Foods	3 cr.
FN 402	Nutrition & Community Health	2 cr.
BU 221	Introduction to Accounting	3 cr.

Professional Education — 18

ED 422	School Law	1 cr.
PS 302	Educational Psychology	3 cr.
LR 301	Audio-Visual Ed.	2 cr.
FE 302	Hist. & Phil. Amer. Ed.	3 cr.
FN 364	Methods of Teaching	3 cr.
FN 361	St. Teach. & Mgt. Exp.	6 cr.

DIETETICS CURRICULUM

This program prepares the graduate to be a dietitian in

hospitals, businesses, and other institutional establishments. Course requirements for an American Dietetic Association internship are met. Elective credits permit the student to take additional course work in preparation for graduate education in food and nutrition.

In addition to University and School requirements the following courses are required.

FN 111	Intro to Foods	3 cr.
FN 211	Advanced Foods	3 cr.
FN 212	Nutrition	3 cr.
FN 355	Diet Therapy	3 cr.
FN 201	Personnel Management	3 cr.
FN 313	Quantity Food Service Management	4 cr.
FN 362	Experimental Foods	3 cr.
FN 358	Food Service Equipment & Layout	3 cr.
FN 361	Methods of Teaching	3 cr.
FN 359	Quantity Food Purchasing	3 cr.
FN 402	Nutrition & Community Health	3 cr.
FN 356	Food Service Administration	3 cr.
BU 221	Introduction to Accounting	3 cr.
CH 355	Biochemistry and Nutrition	3 cr.
ED 302	Educational Psychology	3 cr.

FOOD SERVICE MANAGEMENT CURRICULUM

This program is planned to prepare graduates for management positions with establishments providing food service to the general public. Graduates have competencies in the areas of nutrition and food management as well as in business.

In addition to University and School requirements the following courses are required.

FN 111	Intro to Foods	3 cr.
FN 211	Advanced Foods	3 cr.
FN 351	Nutrition Education	3 cr.
FN 201	Personnel Management	3 cr.
FN 313	Quantity Food Service Management	4 cr.
FN 362	Experimental Foods	3 cr.
FN 358	Equipment and Layout	3 cr.
FN 364	Methods of Teaching	3 cr.
FN 356	Food Service Administration	3 cr.
FN 359	Quantity Food Purchasing	3 cr.
FN 404	Hospitality Management Seminar	3 cr.
FN 406	Catering Management	3 cr.
BU 101	Business Organization & Mgt.	3 cr.
BU 221	Intro to Accounting	3 cr.
BU 235	Business Law I	3 cr.
BU 233	Marketing	3 cr.
BM 480	Collective Bargaining	3 cr.
CO 200	Intro to Computers	3 cr.

COURSE DESCRIPTIONS

FN 111	INTRODUCTION TO FOODS	3 cr.
	Basic principles of food preparation, including use of equipment, menu planning, marketing and table service for family meals. Two hours lecture and 2 hours of laboratory work and/or demonstration per week.	
FN 201	PERSONNEL MANAGEMENT	3 cr.
	The fundamental principles involved in maintaining harmonious	

- human relations at all levels of a business enterprise are studied. Course specifically designed for majors in Food and Nutrition Department. Three lecture hours per week. (Fall semester.)
- FN 211 ADVANCED FOODS** 3 cr.
Prerequisites: FN 111, CH 102 or concurrently.
An in-depth study of food preparation, including food preservation, protein, carbohydrate and fat cookery. Two hours lecture and 3 hours laboratory per week.
- FN 212 NUTRITION** 3 cr.
Prerequisites: CH 102, BI 151 or concurrently.
Sources and functions of nutrients and interdependence of dietary essentials and nutritive value of an optimum diet are studied. Attention given to varied conditions in human life. Three lecture hours per week.
- FN 214 MAN AND FOOD** 3 cr.
Prerequisites: PC 201 or SO 151 or AN 110.
Exploration of the economic, biological, psychological, social and aesthetic significance of food for individuals, families and society. Especially recommended for non-majors but is offered as an elective for majors in the School of Home Economics. Three lecture hours per week.
- FN 313 QUANTITY FOOD SERVICE AND MANAGEMENT** 4 cr.
Prerequisites: FN 211 and 212.
A basic course in quantity food production with experience in planning, purchasing, preparing and serving nutritionally adequate lunches. Menu requirements of National School Lunch Program emphasized in satellite and on-premise feeding.
- FN 321 PROFESSIONAL EMPLOYMENT PRACTICUM** 0 cr.
Prerequisites: FN 313 plus 60 credits.
Junior or sophomore summer is used for an employment experience in an approved food service facility. Students seek their own position. Assistance and guidance given by department chairman.
- FN 351 NUTRITION EDUCATION** 3 cr.
(School Education)
Study of the functional knowledge of nutritional concepts for helping teachers guide students and others through varied experiences directed toward improved food habits and nutritional health. Three lecture hours per week.
- FN 352 NUTRITION AND THE PRE-SCHOOL CHILD** 3 cr.
Nutritional needs of pre-school children studied from biological standpoint. Influences of social, economic and ethnic background factors in establishing dietary habits are analyzed. Designed for students without a chemistry background. Three lecture hours per week.
- FN 355 DIET THERAPY** 3 cr.
Prerequisites: FN 212, CH 102; BI 151.
Modification of normal adequate diet to meet nutritional needs in pathological conditions requiring special dietary treatment. Advanced nutrition study. Three lecture hours per week. Fall semester.
- FN 356 FOOD SERVICE ADMINISTRATION** 3 cr.
Prerequisites: PC 201, FN 313, 201 and BE 360.
Organization and administration of food service business, including personnel policies, work simplification, cost controls, supervision and sanitation.
- FN 357 SPECIAL PROBLEMS IN FOODS** 3 cr.
Prerequisites: FN 211.
Individual problems in foods investigated with emphasis on identified weaknesses in student's knowledge of food. Four hours per week.
- FN 358 FOOD SERVICE EQUIPMENT AND LAYOUT** 3 cr.
Prerequisite: FN 313.
Selection and layout of food service equipment in relation to production and work flow. Field trips permit investigation of a variety of layouts. Three hours per week. Fall semester.

FN 359 QUANTITY FOOD PURCHASING 3 cr.
Prerequisites: FN 313 or concurrently.

Course includes sources, standards of quality, grades, methods of purchase and storage of various foods. Emphasis is given to the development of purchasing policies and procedures. Spring semester.

FN 361 STUDENT TEACHING AND MANAGEMENT EXPERIENCE 6 cr.

Prerequisites: FN 313, 358, 364 and BE 360.

This is a guided experience under the supervision of a certified school food service director. Students gain practical experience in management and other aspects of a school food service operation and classroom experience in teaching of foods and/or nutrition. One-half of spring semester.

FN 362 EXPERIMENTAL FOODS 3 cr.
Prerequisites: FN 211, 212 and CH 102.

Study of foods based on scientific methods wherein physical and chemical principles are observed. Professional demonstration techniques are included. Four hours per week.

FN 364 METHODS OF TEACHING 3 cr.

Current teaching techniques and resource materials in nutrition education emphasized. Both classroom teaching and on-the-job training programs are included. Three lecture hours per week. Fall semester.

FN 401 FOOD MANAGEMENT COST CONTROLS 3 cr.

Food, beverage and labor cost controls for restaurants, school lunch programs and health care feeding facilities are studied including relationships between budgetary information and managerial decision making in large food service operations.

FN 402 NUTRITION AND COMMUNITY HEALTH 3 cr.
Prerequisite: FN 212.

Nutritional implications of both good and poor nutrition for all age groups in home and community situations are studied. Corrective and preventive measures emphasized. Spring semester.

FN 404 HOSPITALITY MANAGEMENT SEMINAR 3 cr.

Psychological and sociological aspects of serving public are considered along with current management techniques to provide student with a professional and technological insight of this rapidly growing industry.

FN 405 CATERING MANAGEMENT 3 cr.

Profitable organization, preparation, and service of catered food both on and off the premises is main focus of course.

FN 406 EDUCATION STUDY TOUR IN FOODS 2-6 cr.

Comprehensive program of directed activities permits first hand knowledge of growing, processing, marketing and preparation of foods. The historical and cultural aspects of food are studied. Visits to food markets, catering schools, research centers, famous restaurants, etc., are included.

Addendum: White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department.





MILITARY SCIENCE

COLONEL JOHN P. BURKE, CHAIRMAN; LTC CALDERWOOD, LTC WEAVER, LTC BUCZEK, MAJ CLARK, CPT WILLISON, SGM DALE, MSG POWELL, SFC KNUDTSON, SSG PARKER

Indiana University of Pennsylvania is authorized a Senior Division Reserve Officers' Training Corps unit. The Senior Division ROTC program offers the student an opportunity to prepare for service to his country; to learn leadership techniques that will be of benefit in both military and civilian endeavors; and to obtain credits which count towards graduation in all Schools of this University.

OBLIGATION

Enrollment in any of the freshman or sophomore level ROTC courses, MS 101, MS 102, MS 203, or MS 204, differs in no way from any other IUP course in terms of commitment. The student taking an ROTC program basic course incurs no obligation to the Army or to take further Military Science courses.

REQUIREMENTS FOR ENROLLMENT

The general requirements for enrollment in the ROTC are that the student be a citizen of the United States, physically qualified as prescribed by the Department of the Army, accepted by the institution as a regularly enrolled student, not less than 14 years of age, but less than 24 years of age

at the time of enrollment in the basic course. For continuance in the ROTC, the student must successfully complete such general survey or screening tests as are given to determine eligibility for admittance to the Advanced Course and agree in writing upon admission to the Advanced Course to complete the course of instruction offered, unless released by the Department of the Army. Veterans and graduates of the Junior ROTC program may receive credit for portions of the ROTC military course.

WHAT ROTC OFFERS

Uniforms, equipment, and ROTC textbooks are issued without cost to formally enrolled cadets.

Students having successfully completed the Basic Course, or having received credit for the Basic Course by having served on active duty in the Armed Forces, and meeting the Advanced Course admission requirements are paid a subsistence allowance, currently set at \$100 per academic month, during the time they are taking the Advanced Course.

After the student completes the Advanced Course and receives his baccalaureate degree from the college, he is commissioned as a second lieutenant in the United States Army Reserve.

Students who have completed the first year Advanced Course and have displayed outstanding qualities of military leadership, high moral character, and definite aptitude for military service are designated “Distinguished Military Stu-

dents”. Students so honored who maintain the standards until graduation are designated “Distinguished Military Graduates”, and may be offered an appointment in the Regular Army.

Policies affecting enrollment and continuance of students in the Senior Division of the Reserve Officers’ Training Corps are included in the provisions of the Selective Service Act of 1950. This Act provides for military deferment of students (certain Basic Course students upon their request, and all Advanced Course students) until completion of their academic course under the following conditions:

1. Students enrolled in the ROTC must remain in good standing in both their academic and military courses.
2. They must demonstrate proper and sufficient aptitude and leadership characteristics ultimately to qualify them for appointment as commissioned officers.
3. They must attend and successfully complete summer training camp (usually at the end of the junior year).
4. They are required to sign an agreement to accept a commission in the Army, if and when tendered, and to serve not to exceed two (2) years on active duty as an officer, subject to call by the Secretary of the Army.

THE MILITARY SCIENCE CURRICULUM

The Military Science curriculum covers four years and is

divided into two courses: The Basic Course and the Advanced Course.

The Basic Course

The first two years of Military Science constitute the Basic Course, which furnishes a background in the development of the U.S. Army and of the Army's role in support of national objectives. Additionally, fundamentals of leadership and management and the application thereof are stressed. (The student incurs no obligation and makes no commitment while enrolled in the Basic Course.)

MS 101 WORLD MILITARY HISTORY 2 cr.

A study of land and sea war, including relationship of strategy and tactics to geography, economics, sociology, and technology through the ages; relationship between members of the Armed Forces and the public; evolution of warfare including principles of war and weapons and equipment associated therewith. Also, see Leadership Laboratory.

MS 102 AMERICAN MILITARY HISTORY 2 cr.

Study of development of American military institutions, policies, experiences, and traditions in peace and war from colonial times to present. Emphasis on relationship between military and other aspects of American society and role of military in establishment, expansion, preservation, and development of nation. Also, see Leadership Laboratory.

MS 203 FUNDAMENTALS OF TACTICAL OPERATIONS WITH APPLIED TERRAIN ANALYSIS AND MILITARY TOPOGRAPHY 2 cr.

Structure, personnel, equipment resources, and mission capabilities of unit level combat teams are studied and applied to various types of combat operations with emphasis on terrain analysis and military map usage. Also, see Leadership Laboratory.

MS 204 NATIONAL SECURITY AND CONCEPT OF FORCE 2 cr.

Survey of the broad spectrum of national resources and their relationship to development of national power; tangible elements including geography, population, economic and military forces, intangible elements of social organization, ideology, and political systems. The role which military power plays in preserving nation's freedoms; organization for U.S. national defense to include the magnitude of management implications. Also, see Leadership Laboratory.

The Advanced Course

The second two years constitute the Advanced Course which provides case studies in leadership and management, leading to the development of the student's ability to express himself clearly and accurately with emphasis on analysis of military problems, the evaluation of situations, and preparation and delivery of logical solutions. Also covered is a study of combat operations and various military teams to include Military Geography, the coordination and planning necessary between the elements of the teams and the task forces.

MS 305 LEADERSHIP AND THE MILITARY TEACHING/LEARNING RELATIONSHIP 3 cr.

Study in practical application of principles of Leadership/Management as applied in classroom and field to include case studies in psychological, physiological, and sociological factors which affect human behavior; individual and group solution of leadership problems common to small units. Also, see Leadership Laboratory.

MS 306 ADVANCED LEADERSHIP AND MANAGEMENT 3 cr.

Analysis of leader's role in directing and coordinating efforts of

individuals and small units in execution of offensive and defensive tactical missions, to include command and control systems, the military team, and intelligence gathering. Also, see Leadership Laboratory.

MS 407 THEORY AND DYNAMICS OF THE MILITARY TEAM 3 cr.

Study of combat operations and the various military teams to include logistics as it applies to task force supply and movement and the planning and coordination necessary between the elements of Division Trains and the Task Force. Also, see Leadership Laboratory.

MS 408 SEMINAR IN MILITARY ANALYSIS AND MANAGEMENT 3 cr.

Contemporary analysis of use of military in world affairs to include importance of strategic mobility and neutralization of insurgent movements. Selected management problems and situations will be presented as they relate to military justice, administration, and obligation and responsibilities of an officer. Also, see Leadership Laboratory.

LEADERSHIP LABORATORY (MS 999)

A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses, it provides for articulation of students from the basic experience and development of the individual to the application of responsibilities and professional experience in a meaningful environment.

SUMMER CAMP

Students attend a six-week summer camp upon completion of the first year of the Advanced Course. Time at camp is devoted to practical application of principles and theories taught during the preceding school years. While at camp, each student receives lodging, subsistence, uniforms, medical care, reimbursement for travel and pay in amount of one-half the pay of a second lieutenant per month.

SUMMER CAMP

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UNIVERSITY SENATE

A revised University Senate became effective September 1971. The Senate consists of faculty, administrators, and students. The Chairperson of the University Senate is Dr. Thomas Goodrich; Mr. Donald G. Eisen is Vice Chairperson; Dr. Alice Davis, Secretary; and Dr. J. Merle Rife, Parliamentarian. The committees of the Senate are as follows:

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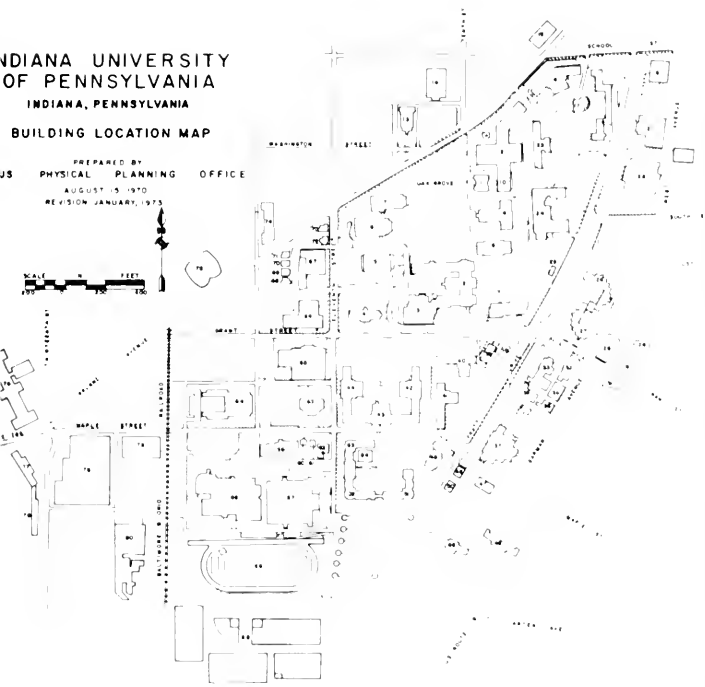
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INDIANA UNIVERSITY
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INDIANA, PENNSYLVANIA

BUILDING LOCATION MAP

PREPARED BY
PHYSICAL PLANNING OFFICE
AUGUST 15, 1970
REVISION JANUARY, 1973



A large, stylized number '8' graphic, rendered in a light gray color with a white outline. The top loop is slightly larger than the bottom loop. A horizontal bar extends from the right side of the middle of the '8' across the page.

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74-76





