

Summer Sessions 1973

Indiana University





Indiana University Bulletin Undergraduate Summer '73

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Indiana, Pennsylvania

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This bulletin contains announcements of courses for the summer sessions of 1973. The University reserves the right to repeal, change or amend the rules, regulations and courses contained in this bulletin at any time.

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



Summer Sessions 1973 – Indiana University of Pennsylvania

University Calendar

Pre-Session

On Campus Registration and classes begin Monday, June 4*
Session ends Friday, June 22

Main Session

On Campus Registration Monday, June 25
Classes begin Tuesday, June 26
Legal holiday Wednesday, July 4
Session ends Friday, August 3

Post Session

On Campus Registration and classes begin Monday, August 6*
Session ends Friday, August 24
Summer Commencement Sunday, August 19

First Semester 1973-74

Classes begin September 10

*In Pre and Post sessions, the first class will be held on the same day as registration but at a special time. Classes which normally meet at 8:00 a.m. will meet at 1:00 p.m. on day of registration only, and those which normally meet at 9:30 a.m. will be at 2:00 p.m. on day of registration only.

Saturday classes have been discontinued during the summer session, EXCEPT as noted in the schedule of courses.

William W. Hassler	President
Bernard Ganley	Administrative Vice President
Bernard J. Gillis	Academic Vice President & Provost
Dale P. Marchand	Assistant to Academic Vice President
George W. Murdoch	Financial Vice President
Joseph Gallanar	Dean of the Graduate School
Lawrence Janni	Associate Dean of the Graduate School
George T. Wiley	Associate Dean of the Graduate School for Research
Isadore Lenglet	Vice President of University Development
Robert L. Marx	Assistant Campus Planner
George A. W. Stouffer, Jr.	Dean, School of Education
William Salesses	Associate Dean, School of Education
Francis McGovern	Dean, School of Arts & Sciences
Roger Axford	Director, Community University Studies
Elwood B. Sheeder	Dean, School of Business
Kathleen Jones	Dean, School of Home Economics
William R. Becker	Acting Dean, School of Fine Arts
Samuel F. Furgiuele	Director of Public Relations
Randy L. Jesick	Assistant Director of Public Relations
S. Trevor Hadley	Vice President of Student Affairs
James W. Laughlin	Associate Dean of Students
Cleo McCracken	Dean of Women
Sherrill A. Kuckuck	Assistant Dean of Women
Ronald Thomas	Dean of Men
Donald S. McPherson	Assistant Dean of Men
John E. Frank	Assistant Dean of Men; Veterans' Counselor
Fred Dakak	Dean of Admissions
Charles R. Fuget	Associate Dean, Natural Science & Mathematics Division
James R. Green	Associate Dean, Humanities Division
Raymond L. Lee	Associate Dean, Social Sciences Division

Administrative Organization of the University

Peter Metarko	Associate Director of Admissions
Lyman Connor	Assistant Director of Admissions
Robert L. Morris	Director Center for International Studies
John J. Nold	Director Computer Center
Thomas J. Hassler	Assistant Director Computer Center
Robert L. Woodard	Director of Institutional Research
Lawrence D. Bergman	Executive Director, University Foundation
James M. Nix	Director of Cultural Affairs
Harold Dock	Director of Laboratory Experiences
Samuel Hoenstine	Director of Career Services
Roy A. Moss	Assistant Director of Career Services
Owen Dougherty	Housing Director
J. Robert Murray	Director, Learning Resource Center
Frederick A. Joseph	Director, Financial Aid
William Srsic	Assistant Director, Financial Aid
Larry Judge	Director, Alumni Affairs
Warner E. Tobin	Director University School
Herman Sledzik	Director of Athletics
Robert O. Warren	Vice President of University Services
C. Donald Seagren	Registrar
Frederick A. Sehring	Assistant Registrar
William E. Lafranchi	Director of Libraries
Ronald A. Steiner	Associate Director of Libraries
Harold C. McCormick	Business Manager
Richard T. Wolfe	Assistant Business Manager
Charles T. Buford	Director of Personnel
John Felice	Director Employee Relations
Christopher Knowlton	Manager, Student Co-op Association

Chairmen of Departments

Richard M. Strawcutter Allied Health Professions
 Benjamin T. Miller Art
 Francis W. Liegey Biology
 Dennis D. Tiger Business & Distributive Education
 Charles L. Cooper Business Management
 Paul R. Wunz Chemistry
 Howard E. Tompkins Computer Science
 Donna L. Streifthau Consumer Services
 George L. Spinelli Counselor Education
 William F. Wegener Criminology
 Donald A. Walker Economics
 Anthony A. Angeloni Educational Psychology
 Robert L. King Elementary
 Craig G. Swauger English
 Allen M. Woods Food Service
 Don-chean Chu Foundations of Education
 Kenneth W. Brode Germanic & Slavic Languages
 Thomas G. Gault Geography
 Walter H. Granata Geoscience

Clyde G. Gelbach History
 Ruth Browning Interim Chairman, Home Ec. Education
 Daniel V. Mattox, Jr. Learning Resources & Mass Media
 Melvin R. Woodard Mathematics
 Col. John P. Burke Military Science
 James H. Wildeboor Interim Chairman, Music
 Manan A. Murray Nursing
 Robert M. Hermann Philosophy
 Charles A. Godlasky Physical Education for Men
 C. Elizabeth McCauliff Physical Education for Women
 Richard E. Berry Physics
 Richard F. Heiges Political Science
 Richard D. Magee Psychology
 Charles W. Faust Romance & Classical Languages
 Robert J. Firenze Safety Sciences
 David M. Azimi Sociology-Anthropology
 Morton M. Morris Special Education
 Warner E. Tobin University School

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RHODES R. STABLEY LIBRARY



General Information

SUMMER SESSIONS 1973

There will be three sessions in the summer of 1973, two of three weeks each and one of six weeks. The pre-session will begin on Monday, June 4, and extend through Friday, June 22. The main summer session starts June 25 and extends through August 3. The post-session begins August 6 and continues through August 24.

In the pre and post sessions a student may enroll in a maximum of either one course or 3 semester hours of credit. In the main session a student may enroll in a maximum of either two courses or 6 semester hours of credit, plus a one (1) credit physical activity course.

OBJECTIVES OF THE SUMMER SCHOOL

The summer school program at Indiana University of Pennsylvania is designed to meet the needs of many students. Courses, workshops and seminars will be offered in the liberal arts, in teacher education, and in other fields of study.

Regular university students, including newly

admitted freshmen, who wish to accelerate their program of studies will find both general education and special courses in all fields of study.

Indiana students who were freshmen during the school year 1972-73 are given until the end of the main summer session of 1973 to achieve their required quality point average of 1.8. Upper classmen who were in attendance during the school year 1972-73, likewise are given to the end of the main summer session 1973 to attain their required quality point average of 2.0.

Students from other colleges and universities may take courses in our summer school. Indiana University of Pennsylvania is accredited by the Middle States Association of Colleges and Secondary Schools and by the National Council for Accreditation of Teacher Education. Its credits are recognized by other accredited colleges and universities. Students from other colleges who attend Indiana University of Pennsylvania in the summer should request our Registrar to send a transcript of the credits they earn to their respective institutions.

Teachers-in-service will find courses in our summer program to serve their varied needs. They may take work to qualify for permanent certification. They may take refresher courses in their field of specialization, or they may take courses for the purpose of extending their certification to a new field.

Veteran Benefits. Veterans, and sons and daughters of veterans who are eligible for education benefits should complete the proper forms in the office of the Veterans Counselor, Whitmyre Hall, room 121, at the beginning of the summer session.

Other individuals than the foregoing will be admitted to our summer school. They may take any of the courses offered and participate in the workshops and seminars which they may find useful or interesting to them, but they are not considered as a matriculating student.

ADMISSION POLICIES

Admission to the Summer School program in no way implies assured admission toward a degree at Indiana University of Pennsylvania. Credits taken in the summer months, however, are applicable toward degree programs and are transferable to other institutions. Acceptance of summer credits at other institutions, of course, will depend upon the consent of these institutions. High school graduates

not officially admitted to Indiana University of Pennsylvania may take summer work as a special student with the understanding that it would constitute college credit but not acceptance as a degree candidate. Students attending summer sessions must have earned a high school diploma and, if a degree candidate at another institution, be in good standing both academically and socially at that institution. Students not meeting these requirements may be asked to withdraw from the University.

READMISSION POLICIES

Indiana students who had been dismissed for academic reasons and who were not in attendance during the academic year 1972-73 are required to apply for readmission to Indiana as a regular student. This application must be filed with the Dean of the University school in which they were enrolled by April 1, 1973. The attainment of the required quality point average for readmission must be completed by the end of the main summer session 1973 in order to qualify for readmission status for the 1973-74 academic year.

SCHOOLS AND MAJOR DEPARTMENTS

Arts and Sciences — English, Philosophy, History, Political Science, Economics, Anthropology and Sociology, Geography, Psychol-

ogy, Criminology, Mathematics, Biology, Chemistry, Physics, Romance and Classical Languages, Germanic and Slavic Languages, Geoscience, Computer Science, Speech and Theatre.

Business — Business Management, Business and Distributive Education.

Education — Dental Hygiene, Elementary Education for Mentally Retarded, Academic Subjects, Public School Nursing, Speech and Hearing, Rehabilitation Education.

Fine Arts — Art, Art Education, Music, Music Education.

Health Services — Health and Physical Education, Nursing, Medical Technology, Inhalation Therapy, Safety Management, and Driver Education (Certification).

Home Economics — Home Economics Education, Food Services, Consumer Services.

UNIVERSITY REGULATIONS

Students attending the Indiana University summer sessions are expected to maintain acceptable standards of social behavior suitable to a college community. The University reserves the right at all times to ask students to withdraw from the summer sessions if such standards are not maintained.

All freshman and sophomore students are required to live in University supervised housing and to take their meals in University dining halls, unless such students reside with their parents and commute from their homes. Any exceptions to this rule must be approved by the Dean of Women/Men before the student makes other housing arrangements.

All rules and regulations of the University apply during the summer sessions.

STUDENT ADVISORY SERVICES

All regular students attending the summer sessions, or those students who enrolled in the summer sessions and who have been admitted as degree candidates to Indiana University of Pennsylvania, are requested to consult the Deans of their respective schools if their department chairmen and/or advisors are not available during the summer sessions. Advice and counsel should be sought in regard to the following matters:

1. Planning their summer school program.
2. Revising their summer school program.
3. Determining their academic standing.
4. Determining their graduation requirements.
5. Making a request for refunds.

Summer-January entrants admitted through the

Admissions Office will be assigned advisors on the basis of the department they will enter. These advisors will function on a temporary basis during the summer until the January semester of the freshman year. It is the responsibility of the Summer-January entrants to meet with their advisors on each of the "Meet Your Advisor Days" so designated on summer calendar bulletins, etc. All Summer-January freshmen are required to attend all activities sponsored by the University for entering Summer-January students. Information available through this program will not be repeated in January.

SCHEDULING

Summer Sessions Course Request Cards have been included with this catalog on which you may indicate your course interests and needs. All courses listed in this catalog will be offered if there are ten or more students enrolled in each course. Additional sections of a course will be opened if the need indicates. (If Course Request Cards are not enclosed, they may be obtained by writing to the Office of the Registrar, Clark Hall, I.U.P.)

Receipt of the Course Request Cards will serve to assure you a place in the summer school, will provide the Director of Housing with your desired meal and housing requirements, and will serve as the basis for assessment of your fees. Whether you

can obtain the specific courses entered on the Course Request Cards will depend upon the conditions cited in the paragraph above.

Please return the Course Request Cards to the Scheduling Center, John Sutton Hall, I.U.P., by **May 10, 1973** if you will begin in the **Pre Session**; by **May 31, 1973** if you will begin in the **Main Session**; and by **July 12, 1973** if you will attend only the **Post Session**.

Students who submit a Course Request Card or cards before the above deadlines will receive final scheduling materials and fee statements in the mail at their home addresses before each session begins. I.U.P. students attending the spring semester, 1972-73, may complete the Course Request Cards during the pre-scheduling period for the fall semester. Students in attendance during the Pre or Main Sessions will be given the opportunity to file Course Request Cards for the following session on campus (as announced in the Daily Bulletin).

FINAL SCHEDULING AND FEE PAYMENT

All students are required to attend Final Scheduling at the Memorial Field House on the following dates, according to their assigned appointment times:

Pre Session — Monday, June 4, 1973.

Main Session — Monday, June 5, 1973.

Post Session Monday, August 6, 1973.

Students must be prepared to do the following at Final Scheduling:

1. Process their schedules
2. Arrange for meals and housing if not previously assigned
3. **PAY ALL FEES IN FULL.**

All questions pertaining to fees, class schedules, and room assignments must be settled at Final Scheduling so that classes may operate on a full time basis the following day. In the Pre and Post Sessions, classes will meet at 1:00 P.M. (First Period) and 2:00 P.M. (Second Period) for one hour the first day only. Those wishing credits evaluated should see the Dean of the School in which they are enrolled.

EXPENSES AND FEES

(Subject to Change)

Contingent Fee:

All Schools – \$29.00 per semester hour. (Minimum Contingent Fee for each session \$87.00).

Out-of-state students, \$46.00 per semester hour of credit. (Minimum contingent fee for each session \$138.00.)

Other Fees:

Degree Fee, to be paid only by those who graduate at the end of the summer session, \$5.00.

Approximate expenses for books \$10.00 to \$20.00.

Room and Board Fees. The fee for room and board in University housing is \$22.00 per week. Housing fees for private dormitories vary.

Late Registration Fee: A student who registers after the date officially set for registration – June 4 for the pre-session, June 25 for the regular session, and August 6 for the post-session – will pay an additional fee of \$1.00 per day until the student is in regular attendance. Every late registrant must pay his fee unless excused in advance by the Dean of the school in which he is enrolled because of illness or other unavoidable cause. Even with the payment of a late fee no registration will be accepted after the second day of the Pre and Post sessions and after the fourth day of the Main session.

Activity Fee: The activity fee for the regular summer session is \$10.50 and \$5.25 for the Pre and the Post session.

How to Pay Fees: All fees, except the degree fee, are to be paid at the time of final scheduling (see Final Scheduling and Fee Payment section for dates).

Change in Fees: The foregoing fees are subject to change without notice.

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 for each bad check.

FINANCIAL AID

A limited amount of financial aid may be available to full-time summer session students. Any student interested in this possibility should contact the Director of Financial Aid, First Floor, Pratt Hall, for further information. Deadline for filing applications, April 1, 1973.

Only students who have attended Indiana University of Pennsylvania on a full-time basis one semester prior to summer school will be considered for financial aid. Freshmen students who have been admitted under the Summer-January Program will be considered for any financial assistance which the Office of Financial Aid administers.

WITHDRAWAL POLICY

A student may withdraw from a course or courses within the time periods specified below for each Summer Session provided he completes an appropriate withdrawal from (available in departmental offices) for each course. In such case a grade of "W" will be assigned by the instructor on the grade card submitted at the conclusion of the

Session. Appropriate withdrawal does not guarantee a refund of fees paid.

*Pre and Post Session.....First four days

*Main Session.....First eight days

*Subject to interpretation of the Director of Summer Sessions.

REFUND POLICY

No portion of summer school fees will be refunded with the exception of complete withdrawal from the University due to severe illness, military obligation, death, or other reasons which the Vice President of Student Affairs feels refunds should be granted. Withdrawal must be accomplished within the first four calendar days of Pre and Post Session and within the first eight calendar days of Main Session to qualify for a refund under this provision. Refunds will not exceed one-half (1/2) of the session fees.

RHODES R. STABLEY LIBRARY

The Rhodes R. Stabley Library named for the late Dr. Rhodes R. Stabley, chairman of the English-Speech Department from 1941 to 1958, was completed in the spring of 1961. The three story building houses 450,000 volumes and provides study room for about 550 students.

An instructional program in the use of library

tools and reference books is carried on by the staff to develop needed skills in the library use. The well-organized general holdings are enhanced by the reference collection, 3,900 current magazines, extensive files of bound and microfilmed magazines and newspapers, state and federal documents, pamphlets, and curriculum materials.

Library hours are posed at Stabley Library for Summer Sessions and during vacation periods.

SUMMER GRADUATION

Students who plan to graduate in the summer must have completed all requirements for graduation by the end of the Main Summer Session, unless prior exception be made by the School Dean.

The summer commencement for 1973 will be held on Sunday afternoon, August 19. The responsibility for graduation rests upon students. All students who plan to graduate in the summer of 1973 should write or call at the office of the Dean of their respective schools to secure application forms for graduation. These forms properly filled in must be returned to the office of the Deans of these schools not later than June 1, 1973.

CAREER SERVICES

— E. Samuel Hoenstine, Director

The services of this office are available to students who are graduating, students who are attending for certification, students who have been admitted to the graduate school as a degree candidate, and alumni. The directors of the various departments take an active interest in the placement of their graduates. The professional staff is available for career counseling and career information. The Office supplies credentials to employers who are seeking applicants for positions, arranges for interviews, and serves as a center where graduates may keep their records up-to-date. A computerized information retrieval system is available which permits experienced college graduates to make their qualifications known to employers seeking to fill their company's open positions. Positions are not guaranteed by the University, but Indiana's record of placement is one of the very best in Pennsylvania. The Career Services Office also receives and makes available to graduates and undergraduates lists of vacancies in summer camp counseling.



HOUSING

All freshman and sophomore students must reside in university supervised housing and take meals in university dining halls. Junior and senior students (those who have completed at least 4 full semesters) may select living quarters in town; those students may contact the secretary for the Assistant Dean of Men (Whitmyre Hall) or the secretary for the Dean of Women (Pratt Hall) for available accommodations.

During Arena registration, students will be expected to register their address and telephone numbers. During any session any changes must be reported to the Director of Housing immediately.

MEALS

All students living in a residence hall are required to pay for meals.

ROOM RESERVATION

Room reservations will be made from your Summer Course Request Cards. Since the number of single rooms is limited, prospective resident students will be assigned a roommate. Please

Student Life

indicate a choice of roommate on your course Request Card if you have a preference. Notification of room assignment will be enclosed with the scheduling appointment time notice and fee statement which you will receive before the session begins.

Residence halls will be open for students on the Sunday before the Session begins at 2:00 p.m. Students should report directly to the head resident of the building where you have been assigned. The residence halls will be open for students on June 3, June 24, and August 5.

CLASS HOURS

During the pre- and post-sessions some classes will begin at 8:00 a.m., run to 9:30 and then resume at 11:00 and run to 12:30 o'clock. Others will begin at 9:30 a.m., run to 11:00 and then resume at 12:30 and run to 2:00 o'clock. In the main session classes begin at 8:15 a.m. and close at 2:25 p.m., each period being 85 minutes. Some laboratory periods, field trips, practice periods for musical organizations, and similar activities are conducted in the afternoon. Each student should make certain that he can adjust his time to these

periods as arranged before making his schedule. The time followed will be that of the Indiana Community.

CLOTHING

To enjoy sports activities such as hiking, swimming and tennis, women students will find slacks, comfortable shoes, swim suits, and shorts very useful.

Summer activities usually include a party for which a summer evening dress is suitable. For all other occasions, cool, comfortable dresses and spectator sports clothes will meet all needs.

All students who live in the university must provide themselves with blankets, as the university furnishes only the linen and spreads. Each student must also provide soap, towels and needful toilet articles.

AUTOMOBILES

All students, graduate and undergraduate, are required to register their motor vehicles at the Housing Office, first floor John Sutton Hall. They must present their validated I-card, driver's license, and owner's registration card when applying for a

parking decal. Failure to register the automobile may result in fines and towing.

INFIRMARY

Slight illnesses are cared for in the University Infirmary without charge for a period of three days. After three days, a charge includes the regular nurse and medical services, but does not include special nurse or special medical service. All students living off-campus and not taking meals in the dining halls are charged \$3.00 a day from the first day.

RELAXATION AND RECREATION AT INDIANA

Accent on the finest in recreational activities combined with a pleasant environment and favorable climate make the University at Indiana an ideal spot for summer study and relaxation.

The University campus itself provides many sources of entertainment. A notable example of this is the Summer Theatre Guild in which students participating in the regular summer drama workshop, together with people from the community and imported actors, present at least six full length plays during the main session. In the past these productions have been acclaimed equal to or surpassing professional and summer stock performances.

Present plans for the summer of 1973 call for

the continuation of the Summer Theatre Guild program in Fisher Auditorium under the direction of Mr. Robert Ensley. The university-community theater will present six plays each for four nights a week. Students of the Main Session will receive tickets for admission to all six of these plays on their activity cards.

An exceptional summer lecture series is another feature of Indiana University summer sessions. Attendance is voluntary, but these events have proved to be highlights of the summer program.

The recreation program developed by a student-faculty committee, is ample and varied so that each individual may find an outlet for his own tastes and desires. Tentative plans for the 1973 sessions include continuation of the Saturday night dances at the Union and outdoor concerts.

One of the most popular features of the summer sessions has been the regular Monday night Feature Film Series.

Much of the summer recreation program centers at the University Lodge near Indiana where many picnics, outings, steak fries, informal parties and hikes are held in a woodland surrounding.

On the campus proper, the Field House is open for swimming and athletic activity, while indoors the Student Union provides an attractive setting for informal dances, art exhibits, jazz and folk sessions, pool, games, and visiting.

General Education Program

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 which will enable him to play a constructive role in his community and in society without respect to his professional or 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.

All students (unless exempted) are required to have credit for:

English 101, 102, and 201 –

*Eng I, II, and III

10 cr.

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



Art 101 — Introduction to Art or Music 101 — Introduction to Music or English 103 — Introduction to Theatre	3 cr.
Mathematics (any course approved by the student's School Dean)	3 cr.

Women Students:

Health and Physical Education 101 — Personal and Community Health.	2 cr.
Health and Physical Education — 120 through 150 — (Elect one course)	1 cr.
Health and Physical Education 260 through 265 — (Elect one course)	1 cr.

Men Students:

Health and Physical Education 101 — Personal and Community Health	2 cr.
Health and Physical Education 105 through 116 — (Elect one course)	1 cr.
Health and Physical Education 260 through 265 — (Elect one course) 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 credits in Social Sciences. Elections must be made from the following:

HUMANITIES (6 to 9 credits)

Foreign Language (2 courses)	3 cr.
Art 115 — Art of Western Man to 1200 AD	3 cr.
Art 116 — Western Art: Ren. to Baroque	3 cr.
Eng 371 — The English Bible as Literature	3 cr.
Eng 358 — Modern American Fiction	3 cr.
Eng 359 — Black American Literature	3 cr.
Eng 346 — Contemporary American And British Poetry	3 cr.
His 101 — History of Civilization I	3 cr.
Mus 301 — Music History I	3 cr.
Phil 110 — World Religions	3 cr.
Phil 120 — Introduction to Philosophy	3 cr.
Phil 221 — Logic	3 cr.
Phil 222 — Ethics	3 cr.
Phil 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.

NATURAL SCIENCES AND MATHEMATICS (8 to 11 credits)

Mathematics (see Department recommendation)	3 cr.
Laboratory science (any sequence from the following):	8 cr.
Biol 103-104 General Biology I and II	4 cr. each
Chem 111-112 General Chemistry I and II	4 cr. each
Geos 111-112 Solar System and Stellar Astronomy	3 cr. each
Geos 121-122 Physical and Historical Geology	4 cr. each
Phys 111-112 Physics I and II with accompanying labs (Phys 121-122)	8 cr. total
Phys 131-132 Physics I and II – with accompanying labs (Phys 141-142)	8 cr. total
Sci 105-106 Physical Science I and II	8 cr. total

NOTE: “Geoscience 111-112 Solar System and Stellar Astronomy” 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.

SOCIAL SCIENCES (15 credits)

Each student will elect 5 courses from the following:

Anth 101 – Introduction to Anthropology	3 cr.
Crnm 101 – Administration of Justice	3 cr.
Econ 101 – Basic Economics	3 cr.
Geog 101 – World Geography	3 cr.
Hist 102 – History of Civilization II	3 cr.
Hist 104 – History of U.S. & Pa. II	3 cr.
IS 101 – World Politics	3 cr.
PolS 111 – American Politics	3 cr.
Psy 101 – General Psychology	3 cr.
Soc 151 – Principles of Sociology	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.

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

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 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 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.

THE SCHOOL OF ARTS AND SCIENCES

— Francis G. McGovern, Dean

Many of the courses, institutes, workshops and seminars in our summer school program are applicable to Arts and Sciences. The program of studies in the School of Arts and Sciences is designed to enable the student to pursue a general program, a study in depth within a chosen subject, an interdisciplinary program or a pre-professional program of study. All students in this school are required to take the program in General Education of 52 semester hours as outlined on pages 17 and 18. Each student also must elect a major in one of the subject fields in the Humanities, Natural Sciences and Mathematics or the Social Sciences. He may also elect a minor in the field approved by his adviser. The overall graduation requirement is 124 credits.

Students in the Arts and Sciences program may receive either the Bachelor of Arts or Bachelor of Science degree depending on their program of study. Students in the Humanities and Social Sciences will be awarded the A.B. degree, whereas those in the Natural Sciences and Mathematics Division who complete the prescribed requirements for a single area of concentration may receive the B.S. degree or the A.B. degree depending upon the program elected. The major fields of study in the

three divisions are as follows:

Humanities Division	Social Sciences Division	Natural Sciences and Mathematics Division
English, and Speech Theater	Criminology, and Criminology	Biology
Germanic and Slavic Languages	Extension Program	Chemistry
German, Russian	Economics	Computer Science
Romance and Classical Languages	Geography, and Urban/Regional Planning	Geoscience, and Geology
French, Latin, Spanish, Greek	History	Mathematics, and Applied Mathematics
Philosophy	International Studies	Physics
	Political Science	Natural Sciences
	Psychology	
	Sociology and Anthropology	

Double majors and minors are available, as are interdisciplinary and pre-professional programs.

Pre Professional Programs

Dental School Preparation	Related Professional Fields:
Law School Preparation	Chiropractic
Theological School Preparation	Pharmacy or Pharmacology
Veterinarian School Preparation	Optometry
	Osteopathy
	Podiatry

THE SCHOOL OF BUSINESS

— Elwood B. Sheeder, Dean

The establishment of a School of Business was authorized by the Board of Trustees of the

University in May, 1966. In doing so, it was indicated that the School should consist of several departments.

The department of Business Education, which has been one of Indiana's areas of specialization for some fifty years, represents one of the departments. Distributive Education was recently created to prepare Teacher-Coordinators for those schools offering programs in marketing and distribution. These two areas are designed to prepare teachers for comprehensive high schools, area vocational technical schools and community colleges. Another newly instituted department was designated as the Department of Business Management. The primary purpose of this area of study is to prepare students for activity in the world of business and industry.

General Education — The credit requirements in General Education are the same in the School of Business as they are in all other Schools of the University. Slight variations in specific courses needed to meet the General Education requirements exist in the several departments of the School.

Two areas of concentration are available:

1. **Business and Distributive Education Department.** Those persons enrolled in the Business Education Program have a choice of four areas of specialization. Accounting, Data Processing, Sec-

retarial, and the Marketing field represent the possibilities. A new area of concentration is available in Distributive Education, a vocational program preparing teacher-coordinators. It is a requirement of the department that all persons enrolled in these areas choose two of the fields according to their interests and desires in order to meet the department's standard for graduation. All state requirements for certification are more than adequately met in Indiana's curriculum. Additional hours beyond the State's requirement enrich the student's preparation for teaching in their chosen fields. Student Teaching under supervision provided at the centers where this experience is gained combined with supervision from the college during this stage of training provides a fine conclusion to the preparation for teaching. It is an experience which brings together in a useful form all of the trainees' academic preparation.

2. **Business Management Department** consists of a curriculum that provides students with a choice of four areas of concentration in their preparation for positions in business and industry. These areas are Accounting, General Business, Office Management, and Systems Analyst. In each of these areas provision has been made for a generous selection of a wide variety of courses in business and economics designed to broaden the student's background. Not only is it possible to concentrate in a particular

area, it is also possible to include training in the other areas because of the available electives in each area of concentration.

THE SCHOOL OF EDUCATION

— George A. W. Stouffer, Jr., Dean

The School of Education offers many fields of major study leading to certification to teach these subjects in the public as well as the private schools of Pennsylvania. The program includes studies in general education, specialization in both academic subjects and special fields, and professional education including directed student teaching.

General Education — All students in the School of Education are required to take the same general education program as indicated for Arts and Sciences students, but for 60 semester hours. Approximately two-thirds of this work is taken during the first two years of college.

Major Fields of Study — Major studies may be pursued in the academic subjects of Biology, Communication, Chemistry, Earth Science, English, French, German, Mathematics, Physics, Russian, Latin, Greek, General Science, Social Science and Spanish. Students may also major in Art, Business, Home Economics, Music, in Elementary Education, and in such special fields as Speech and Hearing, Mentally Retarded, Public School Nurs-

ing, Dental Hygiene, Rehabilitation, and Distributive Education.

In most instances the number of semester hours required for a major in the foregoing fields exceeds the requirement for certification. The course and semester hour requirements for these major fields of study may be found in the regular university catalog.

Professional Education — Students in the School of Education are required to take from 24 to 27 semester hours of professional education. Within this program all students are required to take History and Philosophy of American Education, Educational Psychology, Evaluation Methods, a course in the teaching of their major subject and 14 semester hours of Student Teaching and Professional Practicum. Elective courses in Psychology and Professional Education are offered for those who are interested in increasing their professional competence.

THE SCHOOL OF FINE ARTS

— William R. Becker, Acting Dean

The School of Fine Arts consists of four departments in two administrative units; the Art and Art Education Department, and the Music and Music Education Department.

One requirement in the General Education program for all students of the University is the option of a course in Art, Music or Theatre. The School of Fine Arts offers Introduction to Art and Introduction to Music to fulfill this requirement.

After a two year core program, the art student may major in art education; art history; drawing, painting and sculpture; or design.

The music student may major in music education, music performance, theory and composition, or music literature and history.

All students in the School of Fine Arts must complete the requirements in General Education as listed in their sequence in the main catalogue. Those majoring in Art Education and Music Education must also complete the requirements in Professional Education.

THE SCHOOL OF HEALTH SERVICES

— **John Chellman, Dean**

The establishment of a School of Health Services provides an opportunity to educate needed personnel representing various health, medical, and safety disciplines. The School offers professional curricula leading to appropriate baccalaureate

degrees for men and women in health and physical education; medical technology; inhalation therapy; safety management; and nursing. Indiana University of Pennsylvania is affiliated with approved schools and hospitals for specialized training in programs of the allied health professions and nursing. A certification (12 semester hours) in safety education is also offered.

At the present time, the School of Health Services includes six departments:

1. Allied Health Professions
2. Nursing
3. Health and Physical Education for Women
4. Health and Physical Education for Men
5. Safety Sciences
6. Athletic

General Education — All students in the School of Health Services are required to complete the general education program as stated in the main catalog. Allowances are made for those students in nursing, medical technology, and inhalation therapy who complete the clinical phase of their work off campus.

Professional Education — Students who plan to be certified for teaching must complete a thirty-six (36) semester hour department major core requirement and twenty (20) semester hours of professional education courses.

THE SCHOOL OF HOME ECONOMICS

— M. Kathleen Jones, Dean

The School of Home Economics offers courses in the five subject-matter areas of home economics: clothing and textiles, foods and nutrition, housing and home furnishings, family economics and home management, and human development and the family. In addition, professional courses in education and food services are available. These courses are given by the three Departments of the School: Consumer Services, Food Services, and Home Economics Education.

The Home Economics Education program of study leads to certification to teach general and vocational home economics in the public schools. The curriculum of the Food Services Department leads to certification in school food service and to a dietetic internship. Graduates of the Consumer Services Department are prepared to enter a variety of home economics careers.

The credit requirements in general education are the same in the School of Home Economics as they are in all other Schools of the University. Slight variation in specific courses needed to meet the general education requirements exist in the various departments. Students enrolled in the School of Home Economics are encouraged to elect general education courses in art, sociology, psychology, economics, and anthropology.

All students in the Home Economics Education and Nutrition Education curricula are required to take the following professional education courses: History and Philosophy of American Education, Educational Psychology, Audio Visual Education, Methods of Teaching, School Law, and directed student teaching or a school food service experience.

THE GRADUATE SCHOOL

— Joseph Gallanar, Dean

Indiana University of Pennsylvania offers programs of study leading to the degrees: Master of Arts, Master of Education, Master of Science, Doctor of Education in Elementary Education, and Doctor of Philosophy in English.

Graduate credit is issued to students who are admitted to the Graduate School and who are registered in the graduate courses. (Courses numbered 500 or above.)

The graduate programs and courses are not listed in this bulletin but are shown in the "Graduate Bulletin." Interested persons should write to the Dean of the Graduate School for information regarding admission, course offerings, and degree requirements. Applications for admission to the Graduate School for summer work should be filed in the Graduate Office prior to May 15.

A qualified graduate student may earn the Master of Arts Degree in English, History, Geography, Music, and Counseling Services. The Master of Education Degree is offered in Art, Biology, Business, Chemistry, Counselor Education, Elementary Education, Elementary Science, English, Geography, Home Economics, Mathematics, Music, Physics, Science, Social Science, Spanish, Special Education, and Speech & Hearing. A program leading to the Master of Science Degree is available in Mathematics, Geography, Physics, Chemistry, and Biology.

There are Specialist Certification Programs in Learning Resources, Public School Psychology, Reading, and Elementary Education.

The Graduate School offers a program leading to the Doctor of Education degree in Elementary Education and a program leading to the Ph.D. degree in English and American Literature.

MILITARY SCIENCE

— **Col. John P. Burke**

The United States Army has a unit of the Reserve Officers Training Corps at the University. In fulfilling the University's General Education requirement, men 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 I-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.

Special Programs

AEROSPACE WORKSHOP

3 cr.

This workshop will be conducted as a seminar with a number of visiting aerospace authorities. It treats of the atmosphere and space environment; history of flight and flight problems; satellites and space probes; manned orbital and space exploration projects; propulsion; communication, and remote sensing. System analysis will be treated. Problems of teaching and bibliography will be considered. An indoctrination flight in a small craft and field trips to air age installations and projects fortify learning. This group will be limited to 25 persons because of air flight arrangements and field trip preparations.

This course may be taken for graduate (Geog 522), undergraduate (Geog 191), or as a non-credit course.

ARCHAEOLOGICAL FIELD SCHOOL

6 cr.

Archaeological excavation of Historic Colonial Sites and American Indian living sites will be conducted as a training program and a research project for undergraduate students. In 1973 excavation will proceed on a Historic Fort site and a

Late Woodland Village site in Indiana County under the direction of three instructors.

Excavation techniques taught will include: methods for establishing and maintaining horizontal and vertical controls; feature recognition, excavation and recording methods; diagnostic soil sampling procedures; flotation processes for ecological studies; and field photography for records and public relations.

Evening seminars will focus on the following major topics: analytical procedures for artifactual and feature data; photography of specimens; elementary statistical comparisons; Historic and Pre-historic archaeological manifestations, and areal problems revolving around culture change and migration.

A limited number of field trips will be made to some of the Colonial and Indian sites in Western Pennsylvania.

A field trip and supply fee of approximately \$40 will be charged each student. University facilities for housing and meals will be available. Enrollment will be limited to 30 students. Prerequisite Anth 110, Introduction to Anthropology or Anth 244, Basic Archaeology and permission of the instructor.

ARGENTINE SEMINAR

6 cr.

The University cooperates with the Regional Council 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 1972 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.

BISHOP METHOD WORKSHOPS

The School of Home Economics will sponsor non-credit Bishop Workshops conducted by Mrs. Fay Hammerschmitt of the Bishop Sewing Council. These one-week sessions in fitting, dressmaking, clothing construction, working with knits, constructing men's wear and tailoring will be held during the weeks of July 8-13 and July 15-20. For specific details concerning course offerings and registration, contact Mrs. Betty Wood, School of Home Economics.

CONTEMPORARY EUROPE**3 cr.**

Indiana University is sponsoring a 4 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 Western Europe and the unresolved tensions of that part of the world. The tentative itinerary includes stops in major cities in Spain, Italy, Switzerland, Germany, France, and England. Cost: Approximately \$700 plus tuition. Admission to program with consent of instructor. Families may attend at the same rate; children under 12 at reduced rate. Requirements include background reading, lectures in major capitals, and an extensive personal diary of program.

DRAMA WORKSHOP**3 to 6 cr.**

For the past twenty-one summers the university has conducted a very successful drama workshop, which has attracted widespread attention. Sets, make-up, properties, publicity and ticket distribution are among the important and exacting duties in the day's work for those in the workshop. Eight full-length plays of good quality, given during the summer sessions, offer opportunity for acting, prompting and assisting in many phases of production.

Students who participate in this Workshop may receive credit for one, two, or three of the following courses: Dramatic Arts, Play Production, Creative Dramatics and Story Telling, Costume and Make-up, and Stagecraft and Scene Design. Each of these courses carries three semester hours credit.

The drama workshop cooperates with the Summer Theater Guild, a university-community summer theater project which uses University facilities in Fisher Auditorium for the presentation of eight plays. The Sunday edition of the *New York Times* regularly carries notices of its offerings. Guild personnel will again include community people and some imported actors, directors, and technical specialists. Working with these people provides excellent experience in dramatics for university students and yields from three to six hours of credit.

**HOME ECONOMICS
EDUCATION WORKSHOP****3 cr.**

This vocational education workshop designed for in-service teachers will focus on curriculum planning for Consumer and Homemaking Education programs. Prerequisites: A course in Methods, teaching experience, or special permission. For further information contact Dr. Kathleen Jones, Dean, School of Home Economics.

HOME ECONOMICS STUDY TOURS

The School of Home Economics will offer two study tours during the summer of 1973, available for graduate or undergraduate credit. Mr. Ronald Simkins, Food Services Department, will conduct an educational foods tour in Europe during the Main Session. Dr. Donna Streifthau, Consumer Services Department, will lead an European tour in Clothing, Textiles and Furnishings during the Post Session.

Students desiring graduate credit must be admitted to the Graduate School. Deadlines for submitting an application for graduate study are: Pre session, May 1; Main session, June 1; Post session, July 15. For information concerning admission to the Graduate School, write to the Dean of the Graduate School. The tour may be taken non-credit.

For further information about these tours see the course descriptions FS 406 and CS 405. Write to Mr. Simkins or Dr. Streifthau concerning details of a particular tour.

INDIA: A NATION IN TRANSITION 9 cr.

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 conducted in India related to economics, culture, geography, politics, and personal experience in a non-western culture. It will include living for a week with individual Indians, industrial development visits, experiences related to non-western religion with visits to a limited number of shrines, examination of contributions of Indian culture and changes taking place, a look at Indian urbanization, etc. Tuition, \$100, plus incidentals. Prerequisites: Upper level (Junior standing) major in one of the social sciences, graduate in one of the social sciences, teacher of social sciences in elementary, secondary, community college, or college level, curriculum director or administrator of public schools. Families will be discouraged.

SCHOOL FOOD SERVICE INSTITUTE

For the fifteenth year Indiana University of Pennsylvania will participate in the summer institute program offered for school food service employees. No college credit is given, but every effort is made to solve the problems of employees in all positions. State, federal and regional specialists assist. The Indiana Area School system provides supplementary facilities. Expenses include a registration fee plus lodging and meals.

The first session of the Institute will be held from 8:00-4:00 daily, July 8-13. A repeat session will be held from July 15-20. For further information contact Mr. Allen Woods of the Food Services Department.

SS 390 SOCIAL SCIENCE FOREIGN STUDY

2-6 cr.

A study tour focused on a specific area of the world, normally conducted during the summer sessions. Background reading, observation, seminars, lectures, formal or informal paper. May be used to meet General Education requirements in Social Science. Details of all study tours currently sponsored by the Division may be obtained by writing to:

Director, Center for International Studies
Indiana University of Pennsylvania
Indiana, Pennsylvania 15701

ATHLETIC CAMP FOR BOYS (Ages 9-18 years)

- Football Camp – June 11-16, 18-21,
August 1-4, 5-10
- Wrestling Camp – June 17-22
- Basketball Camp – June 10-16, August 5-10
- Baseball Camp – June 10-16
- Soccer Camp – June 17-22

HANDICAPPED CHILDREN'S CAMP

A resident camp for handicapped children will be held at the Lion's Health Camp during the Main Session. The camp is a cooperative project shared by the University, the Lion's Club, the Society for Crippled Children and Adults and other community agencies. The program will be under the direction of the Health and Physical Education Departments, using full time faculty members, graduate students, and upper division undergraduate students.

SUMMER CHILDREN'S PHYSICAL EDUCATION PROGRAM

A physical education program for faculty, students, staff and community children (ages 7-14) will be offered from 9:00 a.m. to 12:00 noon Monday through Friday, during Main Session. The program will be under the direction of the Men's Health and Physical Education Department, graduate students, and a number of men and women physical education majors.

Each student will become involved in team and individual physical activities designed to promote maximum physical, social and cultural growth.

A fee will be charged for instructional salaries, supplies, and insurance.



ALLIED HEALTH PROFESSIONS DEPARTMENT

— Richard M. Strawcutter, Chairman

No on-campus courses are offered by the department. The required and elective on-campus courses listed under the curricula for Medical Technology and Inhalation (Respiratory) Therapy are offered by the respective departments; consult the current University bulletin. Off-campus courses offered by the adjunct faculty at affiliate hospital schools are open only to departmental majors through special arrangement; details are available at the departmental office.

DEPARTMENT OF ART AND ART EDUCATION

— Benjamin T. Miller, Chairman

Art Courses Leading to Permanent Certification in Art — Advanced Study

Art graduates who are seeking Permanent Certification may attend courses as scheduled either as an undergraduate (for advanced credit) or as a graduate student in graduate classes. Students attending classes under a graduate number (500 series) must first be admitted to the Graduate School and must have completed their undergraduate certification requirements. Any questions pertaining to Permanent Certification should be directed to the department office.

Course Descriptions

Art 101 Introduction to Art 3 cr.
(elective for all students)

Designed to introduce the significance of art as related to contemporary living and our historical heritage.

Art 111 Drawing I 2 cr.
(Drawing in All Media)

A foundation course in drawing. Includes a study of the structure of drawing and composition with a variety of media and subject matter (No prerequisite).

Art 112 Drawing II 2 cr.
(Composition and Figure Drawing)

Figure construction, anatomy, and life drawing are studied. Included are pictorial design and composition (No Prerequisite).

Art 113 Design I 2 cr.
(Color and Design)

Basic elements and principles of design and color are studied. Basically a course in design in two dimensions (No prerequisite).

Art 114 Design 2 cr.
(Design in Volume and Space)

Provides the student with a wide variety of experiences in three-dimensional design. Emphasis is on experimentation with materials and ideas.

Art 115 Art History I 3 cr.
(Open to all students)

The visual arts are examined as modes of expression in relation to the life of the individual in the home and in the community. The period covered is from Prehistoric times to the Renaissance (No prerequisite).

Art 116 Art History II 3 cr.
(Open to all students)

This is a combination of Art History in which appreciation and critical judgment of old and modern masterpieces are goals. The relation of art to the world from the Renaissance to the 20th Century is presented (No prerequisite).

Art 211 Painting I 2 cr.
(Water Color and Mixed Media)

Primarily concerned with transparent water color painting but includes gouache and water based media. Work begins with a study of brush strokes and realistic on-the-spot painting and progresses through creative realism, semi-abstract and non-figurative approaches.

Art 212 Painting II 2 cr.
(Oil Color and Mixed Media)

A beginning course in painting with oil and opaque plastic media. The student is introduced to the technical as well as the aesthetic and philosophical basis of painting through a creative approach to the design possibilities inherent in these materials.

- Art 214 Ceramics I 2 cr.**
 Prerequisite to Art 312.
 A basic introduction to the art and craft of ceramics. Wheel throwing, hand building, and ceramic sculpture methods will be dealt with. Understanding of basic glaze composition, firing methods and decorative techniques will be explained in theory and demonstrated in practice.
- Art 216 Metalry I 2 cr.**
 (Jewelry)
 The designing and creating of handwrought, decorative objects using gemstone, ivory, enamels, wood and nonferrous metals is approached from the viewpoint of the beginning craftsman learning the basic processes of metal fabrication. Jewelry making, the lapidary arts and beginning metal-smithing are experienced.
- Art 217 Printmaking I 2 cr.**
 (Graphic Arts)
 Prerequisite to Art 315.
 Basic techniques of graphic expression, including: relief, intaglio, lithograph, and serigraph prints.
- Art 311 Painting 2 cr.**
 (All Media)
 The student is given the opportunity for continued growth in his creative and expressive ability through painting. Experiences are offered in the transparent and opaque qualities of oil, synthetic and water base media.
- Art 312 Ceramics II 2 cr.**
 Prerequisite: Art 214.
 The student concentrates in an area of his choice. An introduction is given to kiln techniques and methods of glaze testing.

- Art 315 Printmaking II 2 cr.**
 Prerequisite: Art 217.
 The basic techniques of graphic expression are expanded to provide the student with a wider range of possibilities within the techniques of printmaking.
- Art 316 Metalry II 2 cr.**
 (Lapidary Art, Metalsmithing, Casting, Enameling)
 Prerequisite: Art 216.
 Additional jewelry making and metalworking processes employing lapidary art, beginning metalsmithing (raising), elementary casting and enameling on metal.

Professional Education Courses

- Art 317 Arts and Crafts in Elementary Education 3 cr.**
 Prerequisite to student teaching.
 Examines children's artistic development, art programs, planning, motivation and evaluation. Local teaching experience is an integral part of the course.
- Art 318 Arts and Crafts in Secondary Education 3 cr.**
 Prerequisite to student teaching.
 The relationship of art education to the total secondary curriculum is studied to determine the goals of junior-senior high school art. The adolescent and his creative products are analyzed to help the prospective art teacher identify himself with the problems of his students.
- Art 459 Fabrics 3 cr.**
 Provides the student with a working knowledge in the design and execution of projects in weaving, macrame, and related areas. Other fabric techniques will be available for the students to explore as desired.

Special Courses

Art 330 Arts and Crafts for the Mentally Retarded 3 cr.

The materials and processes of arts and crafts are studied for opportunities they offer in the training, therapy and education of students who are mentally retarded or crippled, or need special help for any reason.

HE 213 Principles of Design 2 cr.

Principles of design and color are studied and applied to a crafted object. The major emphasis is on the aesthetic quality inherent in designing with materials.

El 213 Art for Elementary Grades 2 cr.

The course is basic to the creative use of art materials and an understanding of the development of the capacities of children through art.

El 214 Teaching Art in Elementary Grades 3 cr.

Prerequisite: El 213.

Students are offered in-depth experiences in two- and three-dimensional materials relative to art and craft for the elementary school child.

BIOLOGY DEPARTMENT

— Francis W. Liegey, Chairman

Biol. 103 General Biology I 4 cr.

Deals with the principles of biology. Topics include cellular structure and physiology, growth and repair, reproduction and development, control, sources of food energy, inheritance, and man's interrelationship with his biological environment. The classification of plants and animals is reviewed briefly.

Biol. 104 General Biology II 4 cr.

A continuation of General Biology I.

Biol. 105 Cell Biology 4 cr.

An 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. Laboratory work will include an introduction to current biological instrumentation and selected experiments designed to demonstrate certain cellular phenomenon. Three hours of lecture and two hours laboratory per week.

Biol. 263 Genetics 3 cr.

Prerequisites: General Biology I and II.

Gives the student an understanding of the laws of inheritance as they operate in plants, animals, and humans. Cell structure, Mendelian inheritance, eugenics, linkage, probability, crossing over, and random assortment are considered. Two hours lecture and three hours laboratory per week.

Biol. 498 Problems in Biology 1-3 cr.

The student may independently investigate any field of biology in which he is interested. This work is supervised by a faculty member but does not involve regular class or laboratory hours. The student should expect to spend three hours per week for each credit earned. Enrollment is by permission only.

Biol. 499 Research Biology 3 cr.

Prerequisite: Consent of Instructor.

Designed to acquaint the undergraduate student with the techniques of modern research by actively engaging in a program of biological experimentation and/or research. Students will work in close harmony with the faculty.

member (or members) engaged in an active research project. There are no formal lectures or laboratories and a broad biological background is required. Enrollment is by permission only.

Required Courses for Students in Elementary Education

Biol. 311 Environmental Biology 4 cr.

A laboratory and field course that provides the student with basic knowledge in biology as well as some practical aspects.

Biol. 312 Teaching of Elementary Science 3 cr.

The fundamental areas of physics and chemistry are covered. Student participation is fundamental to their understanding of the basic principles that can be transferred to the elementary classroom, and to their familiarization with scientific equipment. The latter part of the course is devoted to a survey of the biological environment and continues the work begun in Elementary Science.

Required Courses for Students in Home Economics and Nursing

Biol. 151 Human Physiology 3 cr.

A study of the various physiological processes occurring in the human body and the functioning of the various tissues and organs.

Biol. 241 Microbiology 3 cr.

The study of micro-organisms with emphasis on the study of micro-organisms encountered in food and water and pathogenic for man. Laboratory work emphasizes

bacteriological techniques and principles of asepsis. Two hour lecture and three hour laboratory per week.

SCHOOL OF BUSINESS

— **Elwood B. Sheeder, Dean**

The courses listed below (prefix BUS.) are available to all students in the School of Business regardless of departmental affiliation but subject to departmental requirements.

Bus 101 Business Organization and Management 3 cr.

This introductory course is an overview of the principles, practices, and methods common to most business firms in a private enterprise system.

Bus 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.

Bus 132 Intermediate Typewriting 2 cr.

Prerequisite: 2.0 QPA in Bus 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.

Bus 221 Introduction to Accounting 4 cr.

Prerequisite: BM 111 or BE 111.

Introduces the student to the keeping of records for

service and professional establishments, as well as mercantile enterprises involving the single proprietor.

Bus 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.

Bus 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.

Bus 251 Intermediate Accounting 3 cr.

Prerequisite: Bus 221 - with at least a 2.0 QPA.

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.

Bus 271 Advanced Typewriting 2 cr.

Prerequisites: At least a 2.0 QPA in Bus 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.

Bus 321 Business Communications 3 cr.

Prerequisite: English 101 and 102.

The major objective of this course is to develop the student's ability to write business communications clearly and effectively.

Bus 333 Principles of Selling 3 cr.

Covers the 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 the course.

Bus 335 Office Machines 2 cr.

The fundamentals of operating office machines - key driven and electronic printing calculators; key punch; dictating and transcribing machines; bookkeeping machines. Includes instruction in records management.

Bus 336 Business Law II 3 cr.

Prerequisite: Bus 235.

The basic aim is the same as that stated for Business Law I. Attention is given to kinds of business organizations, sales, insurance, surety and guaranty, leases and mortgages, trust and estates, bankruptcy, business torts and crimes.

Bus 352 Corporate Accounting 3 cr.

Prerequisite: Bus 251.

A continued study of the financial principles and practices of accounting with emphasis on the characteristics, records, and financial reports of corporations.

Bus 353 Cost Accounting 3 cr.

Prerequisite: Bus 352.

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.

Bus 454 Federal Taxes 3 cr.

Prerequisite: Bus 352.

To acquaint students with the Federal Income Tax Laws as they affect individuals, single proprietorship, and partnerships.

BUSINESS AND DISTRIBUTIVE EDUCATION DEPARTMENT

— Dennis D. Tiger, Chairman

BE 111 Foundations of Mathematics (BE) 3 cr.
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 the beginning accounting courses.

BE 311 Methods of Teaching Business Courses 3 cr.
Prerequisites: Ed. Psy. 302 and completion of one major area.
Methods of teaching shorthand, typewriting, book-keeping, office machines, and general business courses are presented. Unit plans, lesson plans, and videotaped microteaching are emphasized.

BE 312 Evaluative Techniques in Business Courses 3 cr.
Prerequisite: BE 311.
The construction, administration, scoring, treatment and grading of various type tests will be covered. Included will be analysis of test results, remedial teaching and other evaluation procedures.

BE 433 Supervised Work Experience and Seminar in Office Occupations 6 cr.

Students will gain experience in selected office occupations. This cooperative business experience will be conducted by competent business and university personnel. There will be a weekly evening seminar.

DE 434 Supervised Work Experience and Seminar in Distributive Education 6 cr.

Prerequisite: Bus 333.

Students will gain experience in selected distributive occupations. This cooperative business experience will be conducted by competent business and university personnel. There will be a weekly evening seminar.

BUSINESS MANAGEMENT DEPARTMENT

— Charles L. Cooper, Chairman

BM 111 Foundations of Math (Management) 3 cr.

Emphasis placed on solving business problems through business mathematics. Personal business and consumer-related areas, such as interest and discount, are included, as well as percentage, markup, taxes, and insurance.

BM 201 Personnel Management 3 cr.

Introduces and stresses basic policies and procedures required in the management of personnel, with emphasis on procuring, developing, maintaining, and utilizing employees for maximum efficiency.

BM 215 Business Statistics 3 cr.

Prerequisites: BM 111, Math 362.

Objective is the 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 the financial structures of various types of business organization; methods of securing and managing funds on short, intermediate, and long-term basis; analysis of fixed and working capital requirements.

BM 331 Consumer Behavior 3 cr.

Prerequisites: Bus 233, Psy 201.

Survey of noteworthy contributions of the behavioral sciences and research of consumer purchasing and decision-making process, with particular attention to formal and informal influence patterns.

BM 380 Principles of Investments 3 cr.

Analysis of various types of securities and other forms of investment possibilities and a study of sound investment policies. Factors influencing the general movement of security prices and the return from investments are considered.

BM 382 Principles of Real Estate 3 cr.

Study of the regulations, practices, 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 431 Advertising 3 cr.

An introduction to the principles, practices, advantages, and limitations of advertising, including the purposes, techniques, media, and organization of advertising campaigns. The legal, economic, and social aspects of advertising are also considered.

BM 480 Practices & 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 490 Decision Making in Business 3 cr.

A case approach to the analytical techniques and concepts necessary in making business decisions concerning marketing, costs, pricing, profits, competition, production, and capital management.

CHEMISTRY DEPARTMENT

— **Paul R. Wunz, Jr., Chairman**

Chem. 101-102 Chemistry for Home Economics I and II and Health Professions 4 cr. each

Planned to include those topics from the fields of inorganic chemistry, organic chemistry and biochemistry that are most important for the student of home economics and nursing. This information then serves as a basis for the study of various materials encountered by a professional home economist, whether teaching or employed by private industry or in the nursing profession.

Chem. 103 Principles of Chemistry 4 cr.

Open only to students in the nurses' training program connected with the hospital and to physical education majors. It is a one semester course, designed to survey the areas of inorganic, organic and biochemistry, particularly those topics which are related to the fields of medicine, nursing, and health. Three hours lecture and two hours laboratory per day.

Chem. 111-112 General Chemistry I and II 4 cr. each

General Chemistry I includes the study of the nature of matter, atomic structure, periodic law, chemical bond, stoichiometry, gases, liquids, solids, and solutions. General Chemistry II includes chemical kinetics, chemical equilibrium, electrical energy and chemical change, oxidation and reduction, descriptive chemistry, and organic chemistry.

Chem. 231-232 Organic Chemistry I and II 4 cr. each

Prerequisites: General Chemistry I and II.

A study of the compounds of carbon with special emphasis being placed on the structure and reactions of the more important classes of carbon compounds. The laboratory work involves the preparation and purification of representative compounds. Two hours lecture and four hours laboratory per day.

Chem. 302 Industrial Chemistry 3 cr.

Prerequisites: Organic Chemistry I and II.

A study of the applications of chemistry and science to the industries of Western Pennsylvania for the science teacher. Consists of lectures, laboratory work, and field trips to representative industries. Two hours lecture and three hours laboratory per day.

Chem. 305-306 New Approaches to Teaching High School Chemistry 3 cr. each

Designed to acquaint the teacher and prospective teacher with the newer approaches to high school chemistry. One semester would consider the Chemical Bond Approach curriculum and the other semester the Chem. Study curriculum. The student must be at least a junior chemistry education major. Arts and Science majors may take the course but will not be given credit towards graduation. Three hours to be divided between lectures and laboratory.

Chem. 321 Quantitative Analysis 4 cr.

Prerequisites: Chem. 111 and 112.

The theory and practice of quantitative analysis includes gravimetric and volumetric analysis. Special emphasis is placed on perfecting the student's laboratory technique and application of general chemical knowledge through problem solving. Lectures, three hours per week; laboratory four hours per day.

Chem. 322 Instrumental Analysis 4 cr.

Prerequisite: Chem. 321.

Designed to instruct the student in Modern Instrumental Methods of Chemical Analysis. The student will learn the theory behind the instrument, the principles of operation, the interpretation of the data obtained, and the limitations of the methods. Two hours of lecture and six hours of laboratory.

Chem. 351 Biochemistry 4 cr.

Prerequisite: Organic Chemistry I.

A study of the chemistry of carbohydrates, lipids, proteins, minerals, and vitamins as well as the biological functions of each. Two hours lecture and three hours lab per day.

Chem. 355 Biochemistry and Nutrition 3 cr.

Prerequisites: Home Economics Chemistry I and II

A study of the chemistry and biological function of biologically active compounds with respect to nutritional requirements.

Sci 106 Physical Science II 1 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 Sci 105. Three hours lecture, 2 hours laboratory per week.

CONSUMER SERVICES DEPARTMENT

— Donna Streifthau, Chairman

CS 112 Clothing Construction and Fitting 3 cr.

Principles and techniques of fitting and construction of clothing are applied and analyzed through directed garment projects. Exemption by submitting examples of work and passing exam. Exempt students take CS 211.

CS 314 Textiles 3 cr.

Interpretation of basic textile knowledge with emphasis on fiber, yarn, fabric structures and fabric finishes. Discussions include the importance of factors related to consumer information, protection, and satisfaction. Prerequisite: Chemistry 102.

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.

CS 405 European Study Tour—Clothing, Textiles and Furnishings 2-4 cr.

Opportunity is provided to visit establishments concerned with the production and distribution of textiles, apparel and home furnishings and to view historic costumes, textiles and furnishings along with sightseeing. Tentative countries on the itinerary include Ireland, England, France, Denmark and Norway. A paper is required of those taking the tour for credit. Contact the School of Home Economics for specific information.

CS 414 Home Management (Resident House) 3 cr.

Decision making and cooperation in group living are stressed. Students plan, prepare and serve nutritious meals; use and care for equipment and furnishings; and provide for individual and group needs. Submit your name to the office, Dean of School of Home Economics if you plan to take this course.

CS 417 Tailoring 3 cr.

Prerequisites: CS 112 or equivalent experience.

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.

COMPUTER SCIENCE DEPARTMENT

— Howard E. Tompkins, Chairman

Comp. Sci. 110 Introduction to Computer Science 3 cr.

Basic structure of computers; problem analysis, planning, and flowcharting; programming in a higher algorithmic language. Course open to students in any major

program who plan to use computers effectively in their future work. Course hours are half devoted to lecture, half to laboratory work. Meets an extra 125 minutes per week during summer main session to provide sufficient laboratory time.

Comp. Sci. 200 Introduction to Computers 3 cr.

Survey of computer applications areas, and the effects computers have had on the individuals and organizations using them, and on society at large. Flowcharting of simple problems. Introduction to programming and debugging in BASIC. Not intended for students majoring in mathematics, computer science, or the physical sciences — those majors should take Comp. Sci. 110.

Comp. Sci. 250 Introduction to Numerical Methods 3 cr.

Prerequisites: C. Sci. 110 and Math 015, 019, or 113.
Algorithmic computer methods for evaluating functions, finding roots of equations, interpolation, curve fitting, solution of systems of equations, numerical integration and differentiation; errors in computation; programming solutions in FORTRAN.

Comp. Sci. 300 Assembly Language Programming 3 cr.

Prerequisite: Comp. Sci. 220, or Bus. 339, or consent of the instructor.

The structure and languages of computing machines; representation of data, addressing techniques, symbolic coding, assembly techniques, macros; problem solution using IBM/360 Assembly Language. Required course in the Computer Science and Business Systems Analyst programs.

Comp. Sci. 495 Special Topics in Computer Science 1-4 cr.

By arrangement
Project work in computing under supervision of a

faculty member. Project must be proposed, and agreement of faculty member to supervise it obtained, before the end of the prior Spring Semester. Proper documentation of the project will be required.

CRIMINOLOGY DEPARTMENT

— William F. Wegener, Chairman

Crmn. 101 General Administration of Justice 3 cr.

Administration of criminal justice in the United States. Deals with the role of the police, courts, and the correctional process.

Crmn. 102 Criminology 3 cr.

General survey of the nature and causes of crime and its prevention and treatment.

Crmn. 301 Criminal Law I 3 cr.

Prerequisites: Crmn. 101 and 102.
A formal study of specific crimes as found in common law and in state and local codes.

Crmn. 302 Criminal Law II 3 cr.

Prerequisite: Crmn. 301.
Detailed study of the legal procedures through which the accused passes. Laws of arrest, search and seizure, with a discussion of important case law. Analysis of safeguards established for the protection of individual liberties, especially as found in the application of rules governing the introduction and use of information in formalized legal proceedings.

Crmn. 310 Criminal Investigation 3 cr.

The theory and practice of investigation; discussion of

the various types of information obtainable from persons and things; application of investigative theory to crime and accidents.

Crmn. 350 Techniques of Interviewing 3 cr.
Consideration of the nature, methods, and principles of interviewing; emphasis on role playing in interviewing situations.

Crmn. 370 Community Relations 3 cr.
Prerequisite: Crmn. 102.
The role of law enforcement agencies in modern day society. The community relations units; human relations resources; civil rights and professionalism in law enforcement.

Crmn. 432 Treatment and Control of Delinquency 3 cr.
Analysis of juvenile court procedures, juvenile probation, juvenile institutions, and juvenile parole in the treatment and control of delinquency.

Crmn. 490 Crime in Modern Society 3 cr.
Analysis of the nature and extent of crime at the 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.

Crmn. 492 Correctional Administration 3 cr.
Administration of juvenile and adult probation and parole programs, and correctional institutions; emphasis on the special problems encountered in the field.

Crmn. 495 Seminar in Administration of Justice 3 cr.
Prerequisite: Crmn. 102.
A study of problems in the administration of justice.

Reports based upon original investigation, reviews of recent books and periodical literature; topics of current interest.

Crmn. 497 Internship 12 cr.
Prerequisite: 18 credits in Criminology.
A practicum designed to broaden the educational experience of students through appropriate observational work assignments with governmental agencies and private firms. Offered during the summer. (By appointment only.)

ECONOMICS DEPARTMENT

— Donald A. Walker, Chairman

Econ 101 Basic Economics 3 cr.
The study of how man makes a living individually and collectively, with particular reference to our own economic system. For those who do not plan to take more than 3 hrs. of economics.

Econ 121 Principles of Economics I 3 cr.
Nature and methodology of economics; mixed capitalism and the market economy; national income; employment theory, including the economics of fiscal policy; money, banking, and the Federal Reserve System; economic growth.

Econ 122 Principles of Economics II 3 cr.
Economics of the firm; theory of consumer demand; determination of price and output in different market structures; the distribution of income; foreign trade and the balance of payments.

- Econ 241 Contemporary Economic Issues 3 cr.**
An examination of relevant and important problematic aspects of the U.S. and of the world economy, including a rigorous but non-technical analysis of the problem, and a formulation and evaluation of possible corrective policies.
- Econ 325 Monetary Economics I 3 cr.**
Prerequisite: Econ 121.
Organization, operation, and economic significance of U. S. monetary institutions; commercial banks and the Federal Reserve System; survey of monetary theory and policy; the mechanism of international payments.
- Econ 330 Labor Economics 3 cr.**
Prerequisites: Econ 121 and Econ 122.
History, structure, and operations of trade unions and employer organizations; major federal labor legislation; collective bargaining theory; wage determination; current labor problems.

EDUCATIONAL PSYCHOLOGY DEPARTMENT

— Anthony A. Angeloni, Chairman

Professional Education Courses

- Ed Psy 302 Educational Psychology 3 cr.**
Prerequisites: General Psychology, Education Major.
(Required of all Education Majors — It is recommended that this course should be taken just before the student teaching experience.)
Designed to promote a better understanding of the principles of psychology that govern human behavior,

with particular emphasis on their relation to the learner, the learning process, and the learning situation in an educational environment.

- Ed Psy 305 Evaluation Methods 2 cr.**
- Ed Psy 377 Educational Tests and Measurements 3 cr.**
Prerequisites: General Psychology, Education Major.
(It is recommended that this course should be taken just before the student teaching experience.)
The design and scope of this course is to acquaint the student with the major methods and techniques of evaluation that are used to assess and report the growth, development, and academic achievement of individuals in an educational environment.
Ed Psy 377 satisfies the requirements of Ed Psy 305 and expands the content to include interpretation of standardized test information and basic research techniques.

General Electives or Courses for Instructional II

These courses satisfy post-graduate certification requirements and serve as electives for undergraduate students in approved teacher education programs.

- Ed Psy 372 Psychology of Childhood Education 3 cr.**
Prerequisites: Educational Psychology, Education Major.
Designed to emphasize the relationship which physical, social, emotional, and intellectual development have on the theory and practice of childhood education.
- Ed Psy 373 Psychology of Adolescent Education 3 cr.**
Prerequisites: Educational Psychology, Education Major.
Concerned with the study of the significant character-

istics, behavior, and educational and social problems of adolescents.

Ed Psy 376 Behavior Problems 3 cr.

Prerequisites: Educational Psychology, Education Major.
Explores the emotional and social aspects of behavior problems encountered in classroom situations and potential remedial techniques.

Ed Psy 378 Learning 3 cr.

Prerequisites: Educational Psychology, Education Major.
Explores learning theories and educational application in the classroom.

Ed Psy 380 Mental Health in the Classroom 3 cr.

Prerequisites: Educational Psychology, Education Major.
Designed to create an awareness of the areas of mental health and the relationship to individual adjustment in an educational environment.

Ed Psy 450 Independent Study in Educational Psychology 3 cr.

Prerequisites: Educational Psychology, Education Major.
Provides an opportunity for students to investigate in depth an area of Educational Psychology under professional supervision.

ELEMENTARY EDUCATION DEPARTMENT

— Robert L. King, Chairman

Psy. 215 Child Development 3 cr.

Designed to enable the teacher to understand and help children. A survey of human growth and development

from conception through early adolescence is made according to scientific data. Developmental growth and behavior are studied and implications for home, school, and community are considered.

EL 221 Children's Literature 3 cr.

Students become acquainted with children's literature, old and new. Ways to develop, stimulate, and guide children's reading of literature are presented. Techniques of successful storytelling are studied and practiced. Poetry selections, annotated stories, cards and bibliographies will be assembled.

EL 222 Teaching of Reading 3 cr.

A systematic coverage of the teaching of reading, including methods, techniques and materials, from first through sixth grades.

EL 312 Teaching of Elementary Science 3 cr.

The fundamental areas of physics and chemistry are covered. Student participation is fundamental to their understanding of the basic principles that can be transferred to the elementary classroom, and to their familiarization with scientific equipment. The latter part of the course is devoted to a survey of the biological environment and continues the work begun in Elementary Science.

EL 411 Teaching of Social Studies 3 cr.

Gives an overview of social studies in the elementary school. Emphasis is placed on inquiry and problem solving skills in the social studies. Implications of research in child development and learning theory are discussed as they relate to content and teaching methods.

EL 413 Teaching Language Arts 3 cr.
Designed to give the elementary student a knowledge of the latest techniques, methods and materials in the language arts area. Research and trends are studied. The fields of handwriting, spelling, and oral and written communication, and vocabulary development are included.

EL 330 Problems in Elementary Education 3 cr.
Designed for in-service teachers and those who are working toward permanent certification. The problems that are inherent in change will be studied in depth in the following areas: interrelationship between teacher-pupil, teacher-parent, and teacher-teacher; identify and formulate possible solutions to problems of instruction and organization in the elementary school.

EL 351 Creative Activities in the Elementary School 3 cr.
Planned to provide students with creative experiences in the subjects taught in the elementary school. Stress is placed upon ways to help children develop their capacities for creative expression.

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 355 Guidance in Elementary Schools 3 cr.
Designed to give the student an initial understanding of the guidance of young children. Study and discussion center around the child himself — his characteristics, needs, problems, motives, and relations with others — and around the techniques and procedures for identify-

ing, studying, and giving help to children in respect to their facets of personality.

EL 451 Teaching of Reading in the Primary Grades 3 cr.

Concerned with the teaching of developmental reading, consistent with child growth, in the primary grades.

Methods and techniques for readiness, word perception, comprehension, work study skills, independent reading in both group and individualized approaches will be studied.

Consideration will be given to the nature of reading, significant research in the field, the curriculum, selection of materials and the use of formal and informal tests.

EL 452 Social Studies in the Primary Grades 3 cr.

With EL 411, Teaching of Social Studies, as a prerequisite, this course will include a more detailed examination of content, objectives, and resource materials for social studies in kindergarten through third grade. Research problems will be examined and representative units developed.

EL 463 Workshop in Elementary Teaching 3 cr.

Designed for in-service teachers and those who are preparing to work with the elementary school child, including elementary education majors who have had at least one student teaching experience. Provides for investigation of the subject matter, materials, methods and procedures used in the modern elementary classroom. Emphasis will be placed upon observation and participation in programs currently being demonstrated in the University School.

ENGLISH DEPARTMENT

— Craig Swauger, Chairman

Required for General Education

Eng 101 English I 3 cr.

A basic required course for all students; should be taken in the first semester of study. Seven theme-length expository papers are written during the semester in addition to shorter exercises and a written final examination. The program is ordinarily based on readings in the nature and history of language, semantic and linguistic analysis, and problems in rhetoric. Meets in lecture one period each day in the summer; additional time is set aside for individual instructor-student conference according to a schedule arranged by the instructor.

Eng 102 English II 3 cr.

English II, the second required English course ordinarily taken immediately after successful completion of English I, will be a course in analytical reading of various types of non-fictional prose. The analysis will aim at enunciating both meaning and the techniques by which meaning is manifested, and the writing in the course, (three substantial documented papers, will be concerned with both problems. The nature and organization of the reading will be the instructor's option, and each instructor will produce an outline of his course for student examination at the time courses are to be selected.

Eng 103 Introduction to Theater 3 cr.

Explores the place of the theater in the life of man, with a critical appreciation of the various arts and skills involved. Emphasis is on the creative function of the audience.

Eng 201 English III 3 cr.

English III, for which successful completion of English I and II are prerequisites, takes the place of Literature I and II (Eng 201 and 301) as the final course of the general education requirement in English. Focus is on the analysis of an imaginative literature, the selection and organization of which is again at the instructor's discretion, except that the latter will produce an outline of his course for student examination at the time courses are to be selected. The writing of the course will consist of two substantial critical papers on themes generated by the reading.

English Electives

English elective courses in the summer serve several purposes. They may be used by:

1. English teachers in service with a provisional certificate to earn credits toward the 24-hour requirement for permanent certification.
2. Teachers certified in subjects other than English who wish to add English to their certification. (For this purpose they should consult with the chairman of the English department to be certain that such courses will apply to the approved certification program at Indiana University of Pennsylvania.)
3. Undergraduate elementary majors who wish to make English their academic concentration.
4. Regular undergraduate English majors who wish to accelerate their programs or who need to make up deficiencies.

Eng 202 Introduction to Literary Analysis 3 cr.

Offers beginning English majors opportunities to study examples of the various approaches to works of literary

art and requires them to practice such approaches through writing at least three critical papers.

Eng 206 Nature of Drama 3 cr.
A study is made of selected plays of various styles and periods to gain greater understanding and appreciation of the art of drama.

Eng 222 Journalistic Writing 3 cr.
Emphasis is on intelligent use of writing ability in a journalistic style, and an understanding of the "why" of journalism and mass media.

Eng 230 The History of the English Language 3 cr.
The historical development of the English language is studied as a basis for a better understanding of modern American English.

Eng 246 Contemporary Short Fiction 3 cr.
Attention is given to the form, the structure, and the art of the modern short story, British, American, and Continental.

Eng 247 Poetry and Its Forms 3 cr.
A study in the appreciation of poetry, with special attention to the technique of the poet and the structure of poetry.

Eng 305 Modern Drama 3 cr.
The reading of plays starts with Ibsen and other Scandinavian dramatists, followed by plays by outstanding Continental, British, and American playwrights.

Eng 310 Oral Interpretation 3 cr.
Emphasizes the understanding and appreciation of literature through developing skill in reading aloud. Special

attention is given to selecting, adapting, and preparing material for presentation in high school classes.

Eng 311 Public Speaking 3 cr.
Deals with fundamental principles of public speaking, audience analysis, interest and attention, selection and organization of speech material.

Eng 312 Drama Workshop 3-9 cr.
This is a theater practicum offering credit for practical experience in Theater-by-the-Grove, the university's semi-professional summer theater. It is offered for three credits in the pre-session and for six credits in the main session. Students in this workshop should be aware that they will be involved most of the day in the practical aspects of theater.

Eng 321 Feature Writing 3 cr.
Designed for the student who might work in journalism or who might wish to write on a part-time or free-lance basis, this course follows the idea that success in non-fiction feature writing for newspapers, magazines or public relations is a combination of systematic method and creative means.

Eng 330 The Structure of English 3 cr.
Training is given to the analysis of the American-English Language with structural and generative approaches to the system of grammar emphasized. This course is a prerequisite of Ed. 452 - Teaching of English and Speech in the Secondary School.

Eng 352 American Literature from 1915 to 1945 3 cr.
Provides a study of major writers and major works in American literature between World War I and World War II.

Eng 358 Modern American Fiction 3 cr.
Major American writers of fiction since 1945 are considered.

Eng 359 Black American Literature 3 cr.
Analyzes significant Black American literature of a variety of types—autobiography, essay, fiction, poetry. This course may be used as an elective in the humanities area in the general education program.

Eng 366 Shakespeare 3 cr.
Shakespeare's development as a poetic dramatist is studied against the background of the Elizabethan stage; the audience, textual problems, language, imagery, and philosophy are examined.

Eng 374 English Bible as Literature 3 cr.
Considers the literary aspects of the English Bible by relating earlier translations to the Authorized Version of 1611 and by tracing some of the major influences of the King James Bible upon the writers and speakers of modern English. This course may be used as an elective in the humanities area of the general education program.

Eng 379 The Romantic Movement 3 cr.
Examines basic tenets of Romantic philosophy in the major writings of the period from 1780-1832—poetry, the essay, and fiction.

Ed 452 Teaching of English, Speech and Reading in the Secondary School 3 cr.

Eng 330 is a prerequisite to this course, and this course is in turn a prerequisite to student teaching in English. Introduces the student to the current professional practices in the teaching of English in high school.

Background for competence in teaching is provided through (1) study of professional literature, (2) individual reports, (3) writing of unit plans and lesson plans, (4) observing teaching in high school classes, (5) participating in class demonstrations, and (6) building a professional file of instructional materials.

FOOD SERVICE DEPARTMENT

— Allen M. Woods, Chairman

FS 111 Introduction to Foods 3 cr.

Basic principles of food preparation, including use of equipment, menu planning, marketing and table service for family meals are investigated and studied. Demonstration and laboratory methods of teaching are used.

FS 211 Advanced Foods 3 cr.

Prerequisites: FS 111, Chem 102 or concurrently.
An in depth study of food preparation, including food preservation, protein, carbohydrate and fat cookery.

FS 313 Quantity Food Service Management 3 cr.

Prerequisites: FS 211, 212.
Designed to give instruction and fundamental experiences essential to quality food production on a quantity basis. Experiences include planning, purchasing, preparing and serving nutritionally adequate lunches. The requirements of the National School Lunch Program are emphasized.

FS 357 Special Problems in Food 3 cr.
Prerequisites: FS 211.

Emphasis is placed on demonstration of food preparation and problems of catering banquets, receptions and other social functions. Opportunity is provided for solving individual and/or group problems.

FS 362 Experimental Foods 3 cr.
Prerequisites: FS 211 and 212; Chem 102.

A study of food preparation based upon the scientific method is carried out wherein effects of chemical and physical principles are observed. This is accomplished by investigating group and individual problems.

FS 402 Nutrition and Community Health 3 cr.

The nutritional implications of both good and poor nutrition of all age groups in a practical home and community situation are studied. Corrective and preventive methods are emphasized. This course is also required of Public School Nursing majors as PSN 402.

FS 406 European Study Tour in Foods 2-6 cr.

European foods are studied in relation to cultural, economic, and religious influences. The tour provides the opportunity to see food markets, processing plants, food stores, catering schools, research centers, and chef's training schools. Lecture and demonstrations are given by food experts. Famous restaurants where typical European food is served are visited. A paper is required of those taking the tour for credit. Contact the School of Home Economics for specific information.

FOREIGN LANGUAGES

Germanic and Slavic Languages Division

— Kenneth W. Brode, Chairman

Ger 151 German I 3 cr.

Designed primarily for the beginner in the language who needs a two semester sequence only. May not be counted toward the major, but may, upon departmental recommendation, be taken as remedial work by students with insufficient language background.

Ger 152 German II 3 cr.

This elementary course, a continuation of German 151, is designed primarily for the beginner in the language who needs a two semester sequence only.

Ger 251 German III 3 cr.

Designed primarily for students with one year of college or two years of high school language training. Along with a systematic review of grammatical principles the course introduces literature in the context of the culture of the language areas concerned. (Supplementary oral courses are not offered in summer sessions.)

Ger 252 German IV 3 cr.

Designed primarily for students with one year of college or two years of high school language training. Along with a systematic review of grammatical principles, the course introduces literature in the context of the culture of the language areas concerned. (Supplementary oral courses are not offered in summer sessions.)

Ger 430 German Culture: Portrayals in Postwar German Literature 2 cr.

Designed to examine recent works in German literature as historical, political and social portrayals of German culture. While the literary aspects of a variety of genres will be considered, examination of the texts will emphasize a critical analysis in terms of cultural insights. In keeping with the postwar German problem, works by both East and West German writers will be examined.

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.

Ed 453 Teaching of Foreign Languages in the Secondary Schools 3 cr.

Prerequisite: Successful completion of the sequence 351-352 and 055-056 in the student's major language; the successful passing of a language proficiency examination or consent of the instructor.

The objective is to prepare teachers of foreign languages for the modern high school. Considers methods and materials of instruction, current theories and techniques, and requires preparation and presentation of illustrative units.

Romance and Classical Languages Division — Charles W. Faust, Chairman

Fr 151 Sp 151 French I and Spanish I 3 cr. each

This elementary sequence is designed primarily for the student who will complete a two semester course only or has not had the language in question in high school. Its basic objectives are accuracy of pronunciation and to develop the ability to read, write, speak, and understand the basic elements of the language under study, with emphasis on the people and customs of the country or countries concerned. A student with a weak high school record in language may take these courses with the permission of the instructor.

Fr 152 Sp 152 French II and Spanish II 3 cr. each

This elementary sequence is designed primarily for the student who will complete a two semester course only or has not had the language in question in high school. Its basic objectives are accuracy of pronunciation and to develop the ability to read, write, speak, and understand the basic elements of the language under study, with emphasis on the people and customs of the country or countries concerned. A student with a weak high school record in language may take these courses with the permission of the instructor.

Fr 251 Sp 251 French III and Spanish III 3 cr. each

Designed for students who have had two years of the language requirement or for specialization. A systematic review of grammar and an intensive study of cultural texts, incorporating discussions and written exercises. Material of literary and cultural interest will be studied, and strong emphasis is given to the development of oral skills. Majors in French and Spanish must take 653 and

054 concurrently with the above courses; non-majors are invited to do so if they desire and their schedules permit additional work in oral practice.

Fr 252 Sp 252 French IV and Spanish IV 3 cr. each
Designed for students who have had two years of the language in high school or one year in college, and wish to continue in the same language, either to fulfill a language requirement or for specialization. The course is a systematic review of grammar and an intensive study of cultural texts, incorporating discussions and written exercises. Material of literary and cultural interest will be studied, and strong emphasis is given to the development of oral skills. Majors in French and Spanish must take 053 and 054 concurrently with the above courses; non-majors are invited to do so if they desire and their schedules permit additional work in oral practice.

Sp 055 Advanced Oral Practice I 3 cr.
(See Instructor)

Argentinian Exchange Program Students only. (Must register also for SS 390 3 cr.)

FOUNDATIONS OF EDUCATION

— Don-chean Chu, Chairman

FdEd 302 History and Philosophy of American Education 3 cr.

Designed to promote a clearer understanding of the modern educational system through a study of historical changes in instructional processes and ideas. Emphasis is placed upon the study of educational beliefs and points of view, the fostering of critical thinking concerning the

role of the school in our social structure, the meaning of democracy, the teacher and his profession, and the methods and objectives of the school. (Required of all students in Education.)

Ed 440 Field Experiences in Urban Centers 6 cr.

Provides a specialized experience for students desiring to teach in inner-city schools. Participants should have completed student teaching requirements at the undergraduate level. Aspects of urban education to be emphasized include the physical characteristics of the community, the background and aspirations of the children and youth and specialized teaching competencies; classroom management, planning, instructional materials, teaching strategies, and evaluations. Students are encouraged to take FdEd 458, Orientation to Teaching in Urban Centers, as a prerequisite. Records of comprehensive experiences in urban areas will be taken into consideration in making student teaching assignments. Schools selected for the student teaching experience are located in Pittsburgh. Personal interview required.

FdEd 454 Public School Administration 3 cr.

Designed to acquaint the teacher with the administration and organization of the American public school. Consideration is given to the cultural role of the schools, to decision-making in the operation of the schools. Functions and methods of all professional personnel in the operation and improvement of the schools will also be considered.

FdEd 455 Comparative Education 3 cr.

A comparative analysis of educational features of some Western European, "underdeveloped" and Communist nations. Development of insights into American educational ideas and practices.

FdEd 456 Issues and Trends in Education 3 cr.

An examination of important current issues in American education. A critical analysis of trends in educational innovation.

FdEd 457 Secondary School Curriculum 3 cr.

An examination of the social diagnosis for curriculum development, curriculum principles and procedures, patterns of organization, and curriculum issues.

FdEd 458 Orientation to Teaching in Urban Centers 3 cr.

Designed to give students an understanding of children and youth in urban centers, where specialized knowledge of learning and behavior problems is required. Instructional personnel consists of experienced teachers at the elementary and secondary levels who are actively engaged in urban education. Emphasis will be given to developing an understanding of the special needs of the disadvantaged child and how the origin of attitudes and values affects the relationship which exists between students and teachers. Special attention will also be given to the practical application of theoretical information to the problems of urban education. Field trips will be an essential aspect of the course.

FdEd 482 Interpreting Urban Field Experiences 3 cr.

Evaluation of learning and behavior problems encountered during the student teaching experience in urban schools. A flexible approach will be stressed to encourage a wide range of investigation and exploration of psychological and sociological problems as they affect education. Supervision and guidance for investigating specific problems will be provided by specialists from Psychology, Sociology and Education. These specialists

will function as resource personnel, providing direction which will enable students to combine experiences gained by teaching in urban schools with recent and pertinent theoretical information.

GEOSCIENCE DEPARTMENT

— **Walter H. Granata, Jr., Chairman**

GS 110 General Astronomy 3 cr.

Prerequisite: None.

Specifically designed to introduce students to the discipline of astronomy. The student will begin by studying his earth, then move out through the solar system, proceed to the stars, and finally view the galaxies of our universe. Emphasis will be placed on the study of the planets, our space program, the constellations, and the Milky Way. A few evening observations will be required.

GS 122 General Geology II 3 cr.

Prerequisite: GS 121 or permission of instructor.

Introduction to the history of the earth, its physical changes and sequences of configuration, and the record of biological evolution.

GS 132 General Geology II Lab 1 cr.

Prerequisite: None.

Selected problems in geologic map interpretation, paleontology, and stratigraphic rock sequences.

GS 327 Geomorphology 3 cr.

Prerequisite: GS 122 or permission of instructor.

A study of the origin and evolution of the earth's landforms.

GS 330 Paleontology 3 cr.
 Prerequisite: GS 122 or permission of instructor.
 Covers the morphology, classification and evolution of the common fossils; major emphasis on invertebrate fossils.

GS 335 Economic Geology 3 cr.
 Prerequisite: GS 122 or permission of instructor.
 Deals with the location and probable origin of fossil fuels, ores of the non-metals, and metallic ores, both ferrous and nonferrous.

GS 341 Solar System 3 cr.
 Prerequisite: Physics 111 & Math 013.
 Fundamentals of astronomy, with emphasis on observational methods, the mechanics and origin of the solar system, and the spatial relationship of the solar system to the other members of the universe. A few evening observations will be required.

GS 342 Stellar Astronomy 3 cr.
 Prerequisite: Physics 111 & Math 013.
 Fundamentals of astronomy, with emphasis on the sun, stars, galaxies, the sidereal universe, and the use of spectroscopy for gathering astronomical data. A few evening observations will be required.

GS 461 Field Techniques in Geoscience 3 cr.
 Prerequisite: GS 122 or permission of instructor.
 Instruction on the methods employed in the field to obtain and interpret geologic information.

GS 498 Problems in Geoscience 3 cr.
 (off-campus) Sec. 001
 Prerequisite: GS 121 or permission of instructor.
 Geology field trip to Florida with emphasis on the problems of origin of recent and ancient limestones. Pre-registration approval of instructor is required.

GS 498 Problems in Geoscience 1-2 cr.
 (on-campus) Sec. 002
 Selected problems in geoscience, investigated by upper level students. Credit determined by nature and scope of the work undertaken.

Marine Science Courses

The Marine Science Consortium of Pennsylvania Colleges and Universities was established in 1968 by 8 state colleges and the Indiana University of Pennsylvania for the purpose of promoting teaching and research in the Marine Sciences. These goals are achieved by pooling the resources of the participating institutions.

Participating institutions are: American University, Bloomsburg, Catholic University, Cheyney, Edinboro, Indiana, Kutztown, Millersville, Penn State, Shippensburg, Slippery Rock, West Chester, and West Virginia University.

Although a formal curriculum in the Marine Sciences does not exist, appropriate work may be credited toward programs in biology, geology, geography, earth science and education.

The Marine Science Consortium provides four 3-week sessions which in 1973 may be taught at the Delaware Bay Marine Science Center, Lewes, Delaware, or at the NASA-Wallops Island Station, Virginia. Each session features three undergraduate courses and a research course for graduate

students. In the latter, the student elects participation in research currently in progress.

Credit fees are to be paid in accord with the policies of the participating college through which the student registers after being accepted by the Consortium. Credit and grades are received from the participating institution through which the student registers. A student may enroll in only one course per session. Consortium fees are to be paid directly to the consortium. A \$35 operating fee plus \$30 per week for room and board (\$125 in total) is charged by the consortium for each session. Meals are provided Monday through Friday.

Students may make application and secure a catalog through the Directors of the Consortium at Indiana University of Pennsylvania; they are:

Dr. Gould F. Schrock	Prof. Paul A. Prince
Biology Department	Geoscience Department

Mar. Sci. 110 Introduction to Oceanography 3 cr.

Prerequisite: None.

An introductory course to introduce students from diverse backgrounds to the physical, chemical, biological and geological aspects of the oceans and to the methods and techniques of this rapidly expanding field. Emphasis is placed on lab. and at-sea assignments which focus the students' attention on the interrelationship and unity of oceanography, and its relation to other environmental sciences.

Mar. Sci. 211 Field Methods in Oceanography 3 cr.

Prerequisite: Mar. Sci. 110 or consent of the instructor. To familiarize students with the dynamic marine environment and field work on board small research vessels; to instruct in the use and application of standard

oceanographic instruments and sampling devices; to promote and encourage independent research through the initial stages of a scientific project.

Mar. Sci. 221 Invertebrate Zoology 3 cr.

Prerequisite: one year biology or consent of the instructor.

A study of the invertebrate phyla with emphasis on development, reproduction, structure, function, and classification of selected marine organisms. Laboratory and field experience will be given in collection, preservation and classification of the phyla.

Mar. Sci. 241 Marine Biology 3 cr.

Prerequisites: Botany and zoology or consent of the instructor.

A study of plant and animal life in the marine environment. Emphasis will be placed upon physical and chemical environmental factors affecting the biota in the intertidal, open water, and benthic habitats. Common biota characteristics of each habitat will be investigated in terms of their natural history, morphology, and ecological relationships.

Mar. Sci. 331 Chemical Oceanography 3 cr.

Prerequisite: Mar. Sci. 110, and one year of chemistry or consent of the instructor.

Treatment of a wide range of oceanic chemical phenomena, including salinity and age of the oceans, sources and residence times of chemical constituents in seawater, geochemical cycles of nutrients, application of isotopes to paleotemperature analysis, the carbon-dioxide/carbonate system in the oceans, mineral resources and trace elements. Sampling and laboratory analysis techniques.

Mar. Sci. 342 Marine Botany 3 cr.

Prerequisite: A course in general Biology and/or one semester of Botany or consent of the instructor.

A study of marine and marine fringe plants of the Middle Atlantic Coast, their taxonomy, ecology, distribution, life histories, physiology, and economic status. Techniques of collecting, preserving, identifying and herbarium cataloging will be stressed. Exercises in plant ecology, deep core pollen analysis and marine micro-biology will be included.

Mar. Sci. 362 Marine Geology 3 cr.

Prerequisite: Mar. Sci. 110 and physical geology or consent of the instructor.

A study of the structural and sedimentary environments of the continental shelf, slopes, and ocean basins. The crustal structure of the earth and its relation to the sedimentary record and geologic history of the oceans is examined. Sampling and laboratory procedures used by the marine geologist are introduced to the students.

GEOGRAPHY DEPARTMENT

— **Thomas G. Gault, Chairman**

Geog 101 World Geography 3 cr.

Understanding and appreciation of man's interrelationship with the earth, accomplished through the study of physical, cultural, economic, and demographic factors.

Geog 149 Economic Geography 3 cr.

Designed to promote geographic and economic concepts, methods, and skills pertinent to understanding of the spatial variation of production, consumption, and exchange over the earth's surface.

Geog 154 Cultural Geography 3 cr.

May be taken in lieu of Geog 101. Course considers the relationship of various ethnic and cultural groups to the natural environment. Student is acquainted with the tools, philosophy, and literature of cultural geography and related disciplines.

Geog 251 Geography of United States and Canada 3 cr.

Investigation of man's adjustment to his environment as influenced by the physical factors of climate, vegetation, relief soils, and natural resources, as well as recognition of cultural factors.

Geog 253 Geography and Society 3 cr.

Prerequisite: 3 cr. Geog.

Designed for elementary and secondary school social science teachers. Concepts such as: spatial arrangement, areal change, earth for support of man, urbanization, biophysical relationships with society, interdependency, the chorological organization of knowledge.

Geog 422 Aerospace Science 3 cr.

Treats of the atmosphere and space environment; flight problems; satellites and space probes; manned orbital and space exploration projects. Problems of teaching and bibliography will be considered. (Non-majors only.)

Geog 462 Field Techniques in Geography 3 cr.

Prerequisite: 12 cr. Geog or permission.

Proposes to give experience in the study of land utilization and use of geographic tools and techniques of the field.

Geog 492 Elements of Research 3 cr.

Prerequisite: 18 cr. Geog and 3 QPA in Geog.
Independent research under faculty direction.

HEALTH AND PHYSICAL EDUCATION DEPARTMENT

— C. Elizabeth McCauliff, Chairman, Women's Department

— Charles Godlasky, Chairman, Men's Department

Meeting General Education Requirement**HPE 101 Personal and Community Health 2 cr.**

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.

HPE 120 Beginning Swimming (W) 1 cr.

Non-swimmers and those with very low ability are oriented to water and taught basic survival and swimming skills.

HPE 106 Inter Swim Tennis (M) 1 cr.**HPE 115 Softball Conditioning 1 cr.**
Basketball (M)**HPE 121 Inter Swim Badminton (W) 1 cr.****HPE 123 Inter Swim Gymnastics (W) 1 cr.****HPE 133 Bowling Golf (W) 1 cr.**

The basic fundamentals and game techniques of the activities are taught. Proper drills and conditioning exercises are also a part of the course.

HPE 112 Introduction to Health, Physical Education and Recreation 2 cr.

The historical events, scientific principles and philosophical considerations involved in the professions of health, physical education and recreation are studied.

HPE 260 Senior Life Saving 1 cr.

Prerequisite: Advanced Swimmer.

Emphasizes the swimming and rescue skills necessary to complete the American Red Cross Senior Life Saving Course. Certificates are awarded upon successful completion of the course.

HPE 261 Water Safety Instructor 1 cr.

Prerequisite: HPE 260 or other proof of validated Senior Life Saving Certificate.

Emphasizes the teaching aspect of the skills, techniques and attitudes that are necessary in all areas of swimming. Students successfully completing the course are qualified to hold such positions as water front directors, aquatic directors and other similar positions.

HPE 262 Scuba Diving 1 cr.

Prerequisite: American Red Cross Senior Life Saving Certificate.

Designed to teach the necessary skills and proper use of equipment for underwater swimming. Tanks, regulators, weights, and special equipment will be furnished. Includes theory as well as practical work.

HPE 318 Activity Internship I (M & W) 1 cr.**HPE 319 Activity Internship II (M & W) 1 cr.**

Physical education major students assist a faculty member in assigned required program activity sections as teaching interns.

HPE 321 Methods in Elementary Health and Physical Education 3 cr.

Study and application of theories of movement, self testing activities, rhythms, relays, games, gymnastics suitable for the elementary school child. Observation, materials and methods of teaching and opportunities for intern teaching provided.

HPE 333 Psychology of Coaching 2 cr.

Techniques, team play and coaching theories are presented by varsity coaches. The psychological aspects of coaching are considered.

HPE 336 Organization and Administration of Recreation 3 cr.

History, theory, and philosophy of recreation are discussed. The importance of play in the modern world, trends in recreation, problems encountered in organizing community school programs and the principles of leadership are studied.

HPE 341 Tests and Measurements 2 cr.

Prerequisite: Math 362.

Application of tests in physical fitness, motor ability, motor educability, sports skills, and health education. Evaluation of tests results in the health and physical education program also considered.

HPE 343 Physiology of Exercise 2 cr.

Prerequisite: HPE 221 and Biol 151.

Physiological aspects of various types of exercise on the human body. Major factors of diet, conditioning, physical fitness, maximum performance level, and fatigue are considered.

HPE 344 Adapted Physical Education 2 cr.

Prerequisite: HPE 221, 342; Biol 151.

Recognition of structural deviations is taught. Corrective exercise and physical education programs for a wide range of handicaps are studied. Psychology of handicapped persons also presented.

HPE 345 Care and Analysis of Sports Injuries 2 cr.

Prerequisite: HPE 221, Anatomy.

Prevention and care of accidents in sports activities are studied. The significance of the medical examination, conditioning exercise and sound health practices are discussed. Laboratory work includes taping, bandaging, use of physiotherapy equipment, massage and supervised training room experience.

HPE 346 First Aid Instructor's Course 1 cr.

American Red Cross Standard, Advanced and Instructor's certification awarded upon successful completion of this course.

HPE 404 Organization and Administration of the School Health Curriculum 3 cr.

Prerequisite: HPE 101.

Study of the 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 the school health services.

HPE 405 Administration and Techniques of Camping 2 cr.

The growth and significance of the camp movement, and understanding of camping techniques and various types of camp programs are considered. Attention is given to all camp activity areas. Study of outdoor education also included.

HISTORY DEPARTMENT

— Clyde C. Gelbach, Chairman

Hist. 101 History of Civilization I 3 cr.

A survey course presenting in integrated form the origin and development of man's major political, social, economic, religious, and intellectual institutions from historical times to 1600 A.D. Although part of the course is devoted to Oriental and Near Eastern civilizations, the major emphasis remains on Greek, Roman, Medieval, and early Modern European civilizations. Through comparison an effort is made to point up both the similarity and the uniqueness of these civilizations. Through the presentation of detail and conflicting historical interpretations an effort is made to create an appreciation of the depth and complexity of man's past.

Hist. 102 History of Civilization II 3 cr.

Deals with man's development from 1600 to the present. Among the topics discussed are: The Commercial Revolution, the Age of Reason; the Age of Revolution—political, economic, and social; the rise of constitutional governments; nationalism and the clash of cultures incident to the growth of empire. Considerable attention is given to democracy, capitalism, communism, fascism, and socialism as the major ideologies of the nineteenth and twentieth centuries. The course concludes with an examination of the various formulas for world order proposed or attempted since 1900.

Hist. 103 History of the United States and Pennsylvania I 3 cr.

Covers the period in American history from the discovery of America to 1865 with emphasis on the history of Pennsylvania. Special attention is given to the colonial

foundations of our nation, the emergence of our Federal Union, the rise of an American culture, territorial and economic growth of the United States, the rise of political democracy, social reform, and the controversy over sectionalism and slavery.

Hist. 104 History of the United States and Pennsylvania II 3 cr.

The history of the United States and Pennsylvania from 1865 to the present. The industrialization of America, urbanization, the rise of organized labor, and the development of a distinctly American culture are stressed. Attention is also given to the political, economic, and social reform movements of this period in our history as well as to the increasing role of the United States in world affairs.

Hist. 347 Civil War and Reconstruction 3 cr.

Study of the failure of American democracy to cope with the issues of the mid-nineteenth century, followed by the political, economic, military, and social developments during the War and the reconciliation of the North and South.

Hist. 352 History of England to 1688 3 cr.

A survey of the growth of the English nation with emphasis on the political, social, and economic developments leading to the 17th century conflict between Crown and Parliament.

Hist. 353 History of England, 1688 to Present 3 cr.

Surveys the growth of England as a democratic constitutional monarchy, directing attention to the industrial revolution, and to imperial expansion and England's role in the 20th century world.

- Hist. 354 History of Russia 3 cr.
A general survey of Russian history, culture, and institutions. Special consideration is given to the study of those historical forces which were formative of the Revolution of 1917.
- Hist. 355 History of Soviet Russia 3 cr.
A general survey of contemporary Soviet history, culture, and institutions, giving special consideration to the study of communist theory and its place in current Russia historiography.
- Hist. 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.
- Hist. 391 Social and Intellectual History of the U.S. Since 1875 3 cr.
An analysis of the cultural forces which have helped to shape modern America. Ways of living characteristic of certain periods will be studied, together with the more significant social-reform movements and their attendant systems of thought.
- Ed. 455 Teaching Social Studies in the Secondary Schools 3 cr.
Provides an opportunity for the prospective teacher to develop understandings and competencies for teaching social studies. Emphases in the course include: values and goals in social studies, the teaching process, materials and learning activities, evaluation of learning, and planning for classroom teaching. This course is a prerequisite to student teaching in the social studies.

HOME ECONOMICS EDUCATION DEPARTMENT**— Louise Fernandez, Chairman**

- HE Ed 218 Child Development 3 cr.
Prerequisite: Psy 201.
Focuses on helping students to develop an understanding of the normal development and behavior of children. A survey is made of the physical, emotional, social, and intellectual development of children in the family from conception through early adolescence. Pertinent research in child development is analyzed.
- HE Ed 411 Family Relations 3 cr.
Focuses on preparation for marriage and the study of human relations principles basic to marital adjustment. The influence of community and family experiences on personal development and adjustment are studied.
- HE Ed 412 Nursery School 3 cr.
Prerequisites: Ed Psy 302, HE Ed 218. Submit your name to the office of the Dean, School of Home Economics, if you plan to take this course.
Techniques for planning and managing a group of pre-school children are emphasized. Experiences useful for teaching in Home Economics Child Development Laboratories in Secondary School are provided through the application of principles of child guidance and development and by student participation in the nursery school as a teacher assistant.
- HE Ed 451 Workshop in Home Economics Education 3 cr.
Prerequisites: Course in Methods or teaching experience. Individual and group projects related to current trends, issues, or problems are developed. Current curriculum trends are identified and evaluated.

- IE 213 Principles of Design** 2 cr.
Principles of design and color are studied and applied to a crafted object. The major emphasis is on the aesthetic quality inherent in designing with materials. (See Art Dept. Listings.)

CENTER FOR INTERNATIONAL STUDIES

— **Robert L. Morris, Director**

- IS 101 World Politics** 3 cr.
Analysis of the contemporary (Post 1945) state system and the forces shaping the world in which the student lives. The student is given a framework within which he can analyze contemporary international politics.

- S.S. 390 Argentine Seminar** Four 6 s.h.
May be earned in Social Science and/or Spanish. For details, contact Dr. Robert L. Morris, Director, Center for International Studies. See page 28.

- S.S. 390 Contemporary Europe** 6 cr.
For the past several years Indiana University 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 Western Europe and the unresolved tensions of that part of the world. Background reading, lectures in major capitals, sightseeing, and an extensive personal diary are required.

LEARNING RESOURCES AND MASS MEDIA DEPARTMENT

— **Daniel V. Mattox, Chairman**

- L.Res 371 Photography in Education** 3 cr.
Designed to provide a good introduction to photography and to emphasize the potential value of teacher made photographic materials in teaching. The student will learn to use his own camera effectively; to determine exposures; to develop, contact print, and enlarge his own black and white negatives; to experiment with natural and artificial lighting; and to shoot, develop, and mount his own color slides. Both the technical and the artistic aspects of photography will be considered. No prerequisite required. Student must provide his own 35mm camera and an exposure meter. See instructor.

- L.Res 481 Television Production** 3 cr.
A course to develop basic skills in television production and direction. Operating problems of a television studio will be examined plus the functions, limitations, and capabilities of television equipment and facilities. Stress will be placed on the educational application of television production.

- L.Res 482 Preparation of Instructional Materials** 3 cr.
Will provide experiences in planning and preparing commonly used materials for classroom and TV use: graphic materials, as transparencies, posters, and bulletin board displays, including layouts and lettering; mounting techniques; copying techniques, as Thermofax, Polaroid, photography, and Xerography; laminating and color lifting.

MATHEMATICS DEPARTMENT**— Melvin R. Woodard, Chairman****Math 101 Foundations of Mathematics 3 cr.**

Designed to familiarize students with some of the ideas underlying the development of mathematics and an elementary treatment of problem solving and decision making. The primary objective is not to develop "computational" skills but to study mathematics in its role as both an art and a science. Topics to be studied include: numeration and number systems with special emphasis on recognizing patterns and structure; intuitive set theory and applications, including probability and statistics; and informal logic in its relation to mathematics, both in algebra and geometry.

Math 011 Elementary Functions 3 cr.

Designed to prepare those students who desire to major in mathematics but who do not have the background to begin the study of the calculus. Topics to be studied include: polynomials, exponential, logarithmic and trigonometric functions; an introduction to three dimensional analytic geometry.

Math 013 Calculus I for the Natural and Social Sciences 4 cr.

Prerequisite: Two years of high school mathematics. Introduces the student who is not majoring in mathematics to analytic geometry, elementary functions (which include trig functions), the central ideas of the calculus (limit, derivative and integral), applications of these central ideas to the social and natural sciences and numerical methods which involve series.

Math 111 Calculus I 4 cr.

Stresses the theory of the calculus as well as the applications in problem solving. Topics to be included are: Calculus I: sets and functions, two-dimensional analytic geometry, limits, and derivatives with applications.

Math 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.

Math 231 Introduction to Algebraic Structures 3 cr.

Topics include mathematical logic, fundamentals of group theory, and a development of number systems from naturals to integers to rationals to reals to complex numbers. Methods of proof in the area of abstract mathematics stressed. Three hours lecture per week.

Math 233 Introduction to Linear Algebra 3 cr.

An introduction to vector spaces, linear transformations and matrix theory. The course begins concepts studied in a more theoretical setting in Math 371. Three hours lecture per week.

EI 313 Teaching Mathematics in the Elementary School 3 cr.

Prerequisite: Math 101. Emphasis will be given to the place of arithmetic in the elementary school and to the recent changes in curriculum and method; to techniques for developing concepts and processes; to recent research in the field of arithmetic; and to books and materials helpful to prospective teachers. Observation of master teachers at

work will be planned.

Math 341 Theory of Numbers 3 cr.

Prerequisite: Math 115.

Divisibility, congruences, primitive roots, number theoretic functions, diophantine equations, continued fractions, quadratic residues. Three hours lecture per week.

Math 362 Probability and Statistics 3 cr.

Intended for non-mathematics majors. The course emphasis is on applications as opposed to theoretical developments of principles and formulas. The topics covered in this course are: frequency distributions, measures of central tendency, variation, elementary probability, sampling, estimation, testing hypothesis, and linear correlation and regression.

Math 363 Introduction to Probability 3 cr.

Prerequisite: Math 257.

Probability theory necessary for an understanding of mathematical statistics will be developed in this course. Applications of the theory will be given with emphasis on the binomial, the Poisson, and the normal distributions. Distributions of sums and a central limit theorem will be developed. Statistical applications will include point and interval estimation and testing statistical hypotheses.

Math 381 Advanced Calculus I 3 cr.

Prerequisite: Math 357.

Topics from Calculus are treated with a more rigorous point of view. Consists of a study of set theory, the real number system, functions, the topology of Cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity.

Math 452-460 Seminar in Mathematics 2 cr.

Requires the student to do independent study in some areas of mathematics beyond the scope of the courses he has taken. The course is conducted in one of two ways. In the first method the student chooses the area for investigation upon the approval of the instructor. Upon completion of the study, the student gives an oral presentation of his findings to other members of the group. In the second method the various instructors offer seminars in selected topics. The student chooses the topic of interest to him and the class studies the particular topic in depth.

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.

MILITARY SCIENCE DEPARTMENT

— Colonel John P. Burke, Chairman

MS 101 Military Science I 2 cr.

Male and female students have the option of taking Military Science (ROTC) for two credit hours for two semesters or of taking a combination of Health for two credit hours and Physical Education for two semesters for one credit each semester. One semester of Military

Science is given during Main Session. Cadets are furnished uniforms, equipment and texts. A deposit of \$10.00 is required against possible loss of uniform components. A refund of the deposit is made at the completion of Main Session.

The Military Science course is designed to give students an appreciation of the role the U.S. Army has played in the evaluation of history. Other subject material includes Leadership Laboratory, Marksmanship and vital Selective Service information. Two, Three, and Four Year Scholarships are available through the ROTC program. Many extra-curricular activities offer the student an opportunity to further his leadership training.

Even when the all-volunteer force is established, the Selective Service System will remain in operation in a standby capacity. Under a standby draft, men would still be required to register with local draft boards within 30 days of their 18th birthday for classification. Men with low random sequence numbers might be examined for acceptability to the service.

It should be noted that a 1-D deferment can be granted by the Department of Military Science.

MUSIC DEPARTMENT

— James H. Wildeboor, Acting Chairman

Mus. 101 Introduction to Music 3 s.h.
Presumes no technical background, but does utilize as fully as possible the varied musical experiences of each individual to help him extend his interest as far as possible.

Mus. 111 Sight Singing I 2 s.h.

Designed to develop the student's skill at interpreting written music by the use of his own voice. Areas of study include: all major and minor scales; treble, alto, tenor, and bass clefs; all diatonic intervals; duple and triple meter with rhythmic dictation drills; and elementary form analysis. The "sol-fa" syllables with moveable "do" are used.

Mus. 113 Ear Training I 1 s.h.

Involves dictation skills and notation in the following areas: primary harmonies in all inversions, and melodic dictation with implied and actual harmonies.

Mus. 115 Theory I 3 s.h.

Includes the playing and writing of primary harmonies in all inversions, using the chorale style of harmonization; and the study of phrase and period through the analysis and study of melodies to be harmonized.

Mus. 155 Class Strings I 1 s.h.

Mus. 157 Class Percussion I 1 s.h.

Mus. 159 Class Brass I 1 s.h.

Mus. 161 Class Woodwinds I 1 s.h.

Mus. 220 Music Literature I 2 s.h.

Major works of the Eighteenth Century will be studied and analyzed as to form, style, and historical placement.

Mus. 221 Music Literature II 2 s.h.

Prerequisite: Music Literature I.
Major works of the Nineteenth Century will be covered in the same manner as Music Literature I.

Mus. 301 History of Music I 3 s.h.

Prerequisite: Music Literature II.

A study of the development of music from the ancient Greek and Roman cultures through the Baroque period. Although the approach is an historical one, considerable analytic listening is required.

Mus. 302 History of Music II 3 s.h.

Starting with the Eighteenth Century with Haydn and Mozart, History of Music II is the study of the development of music to the present. Analytic listening is required through all available sources.

Mus. 312 Choral Conducting 2 s.h.

Prerequisite: Fundamentals of Conducting with a mark of C or better.

Will provide the opportunity for the student to apply his basic conducting techniques to the choral area. Each student will conduct the rest of the class in many of the standard choral works of the literature. Also a survey of suitable literature, organizational problems, voice testing, rehearsal techniques, program building, interpretation, and diction will be included.

Mus. 313 Instrumental Conducting 2 s.h.

Prerequisite: Fundamentals of Conducting with a mark of C or better.

Will provide the student with the opportunity to apply his basic conducting skills to the various instrumental ensembles. Each student will conduct the rest of the class as well as the available instrumental ensembles in the department. Also a survey of suitable literature, organizational problems, audition procedures, rehearsal techniques, program building, and interpretation will be considered.

Mus. 331 Elementary Methods 2 s.h.

Included are the following topics: analytical study of texts, recordings, equipment, instruments, and other material suitable to musical development of elementary pupils; proper treatment of the 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.

Mus. 333 Secondary Methods 2 s.h.

The following topics will be treated: the General Music Class, choral organizations, the 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 observations.

Mus. 334 Instrumental Methods 2 s.h.

A treatment of the necessary understandings, techniques, equipment, and materials necessary to develop an effective instrumental music program in the public schools. Demonstrations and laboratory work are designed to give the student the competencies needed to meet successfully the various teaching situations in instrumental music from the grades through the high school. Guided observations are required.

Mus. 408 Marching Band Techniques 2 s.h.

The following topics are considered: 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.

Applied Music

Students will be allowed to enroll for private applied lessons for nine (9) weeks, to include Pre and Main or Main and Post sessions, for a total of two (2) hours credit. A student will receive a total of eighteen (18) half-hour lessons or nine (9) one hour lessons. A student may enroll for Main Session only for a total of one hour credit and receive twelve (12) half-hour lessons or six one hour lessons.

An Applied Music Fee of \$26 in the Pre or Post Sessions, and \$44 in the Main Session will be assessed **in addition** to the prevailing fee per credit hour to those students enrolled in applied music courses.

Ensembles

Mus. 123 Concert Band 0 cr.

Mus. 128 University Chamber Orchestra 0 cr.

Mus. 134 Oratorio Chorus 0 cr.

One of the above ensembles is required of all Music Majors — Open to all students.

Elementary Education

EI. 211 Music for the Elementary Grades 2 cr.

This required course for all Elementary Students includes the following: review of music fundamentals, keyboard knowledge, the teacher's voice, care and development of the child voice, problems of the non-singers, rhythmic activities, listening activities; creative activities, rote to note process, special days, and lesson planning. To get practical application of class activities,

students will be assigned observations in the University School. Emphasis is placed on the primary grades.

DEPARTMENT OF NURSING

— **Marian A. Murray, Chairman**

NU 300 Nursing I 8 cr.

An introduction to historical, ethical and legal aspects of the nursing profession; includes clinical practice in the hospital setting, where basic nursing techniques are integrated with principles of natural and social sciences, and nutrition. Study of common nursing problems; theory and skills necessary for nursing intervention; diagnostic techniques, surgery, and pharmacology as they affect nursing care; includes clinical practice. (Latrobe Hospital)

PHILOSOPHY DEPARTMENT

— **Robert M. Hermann, Chairman**

Basic Courses

Phil. 110 World Religions* 3 cr.

History, comparative theology, ritual, and contemporary influence of the world's major forms of worship. A non-sectarian study of those faiths upon which the majority of men have built their world-views.

*World Religions may be used toward the satisfaction of the "humanities electives" segment of the general education requirement, but not toward the philosophy major. (See general bulletin.)

Phil. 120 Introduction to Philosophy 3 cr.

Designed to acquaint the beginning student with philosophical problems and attitudes, the course puts its primary emphasis on basic metaphysics, epistemology, methodology, religious thought and ethics.

Electives**Phil. 221 Logic I, General Logic 3 cr.**

The Art of Reasoning The Science of Critical Thinking. Verbal symbols and the problem of meaning; propositional types, their relationships and valid deductive combinations; analogy, probability and induction; fallacy.

Phil. 222 Ethics 3 cr.

Man's efforts to rationally justify his moral judgments. What is the "moral?" Are moral notions cultural, rational, divine, or innate in origin? Are they relative or absolute? Are they intuitive, cognitively meaningless, or supportable by "good reasons?"

Phil. 327 American Philosophic Thought 2 cr.

Prerequisite: Phil. 120.

A study of the more original and influential philosophic postures developed in America from the colonial period to the present, and of the men who gave them their most complete expressions.

PHYSICS DEPARTMENT

— **Richard E. Berry, Chairman**

***Phys. 111-112 Physics I and II 3 cr. each**

A two-semester non-calculus course in general college physics. It is intended to supply the student with a

sufficiently broad coverage of physics and to help them appreciate physics, including its recent advances. In Physics I, mechanics, heat and sound are studied; in Physics II, electricity and magnetism, light, atomic and nuclear physics, and an elementary introduction to relativity and quantum mechanics. The mathematical sophistication is at the level of elementary algebra and trigonometry. Three hours lecture per week.

***Phys. 121-122 Physics Laboratory I and II 1 cr. each**

This is a two-semester sequence of physics laboratory at the same level as Physics I and II. Physics 121 is comprised of experiments in mechanics, wave motion and sound. Physics 122 is comprised of experiments in optics, electricity and magnetism, and radioactivity. Three hours laboratory per week.

***Phys. 131-132 Physics I C and II C 3 cr. each**

Prerequisites: Must have completed or be concurrently taking Math. 017 for Phys. 131 and Math. 019 for Phys. 132.

This is a two-semester calculus-level course in general college physics. The topics covered in this course are the same as Physics 111-112. Use of calculus greatly simplifies the presentation and eliminates memory of formulas replacing them with a small set of physical laws. Calculus-level physics would normally be required of upperclass students in mathematics and chemistry and elected if desired by students in biology, geology, oceanography, earth science and the various social sciences. Students should consult their department's requirements and their advisor for additional guidance in choosing between Physics 111-112 and calculus level Physics 131-132.

*Phys. 141-142 Physics Laboratory 1 cr. each
1-C and II-C

This is a two-semester sequence of physics laboratory at the same level as Physics I-C and II-C. Physics 141 is comprised of experiments in mechanics, wave motion, sound and kinetic theory. Physics 142 is comprised of experiments in optics, electricity and magnetism, and radioactivity. Three hours laboratory per week.

Phys. 322 Electricity and Magnetism I 2 cr.
Prerequisite: Phys. 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.

Phys. 323 Electricity and Magnetism II 3 cr.
Prerequisite: Phys. 322.

Time-dependent form of Maxwell's equations, electromagnetic induction, vector potential, magnetism, radiation fields, and poynting vector. Three hours lecture per week.

Phys. 498 Problems in Physics 1-4 cr.
Prerequisites: Phys. 111, 112, Math. 157.

Students may select from a wide variety of experimental and theoretical areas. Van de Graaff operation, cosmic ray physics, analog computer applications, cryogenics, digital data acquisition, signal averager and many other areas are available. In addition, there is offered an opportunity for advanced students to study, in vigorous mathematical detail, special topics in Physics such as Fourier Series, Vibrating String Theory, Vector Analysis and others which the student or staff member might propose. The amount and quality of the work done would determine the number of credit hours earned. In

general the idea is to have the student deal in a more sophisticated manner with topics which receive elementary treatment in the regular courses.

*Note: The completion of the Physics 111-112 and Physics 121-122 sequences or the Physics 131-132 and Physics 141-142 sequences will satisfy the requirement of eight hours of a laboratory science in the General Education program.

General Education Courses

Sci. 105 Physical Science I 4 cr.

A study of the physical world, focusing on the fundamental concepts of matter and energy. Emphasis is placed on what science is, how scientific knowledge is acquired, and the emergence of the more fundamental physical laws. Topics include those often associated with astronomy, chemistry, geology and physics. Three hours lecture and two hours laboratory.

POLITICAL SCIENCE DEPARTMENT

— Richard F. Heiges, Chairman

Pol S 111 American Politics 3 cr.
(formerly Am. Cit.)

An introduction to American national government and politics, emphasizing the constitution, the party system, the Congress, the presidency, the courts, and problems in national-state relations, civil rights, foreign policy, and social and economic policies.

Pol S 250 Contemporary Political Problems 3 cr.

Explores contemporary crises in American domestic ideology, political institutions, and urban society with a view to their alleviation through the political process.

Pol S 251 State and Local Political Systems 3 cr.

Institutions and processes of state and local governments with special attention to Pennsylvania. Emphasis is placed on the nature of federalism, state constitutions, parties and interest groups, the legislature, office of governor, the judiciary, and role of state and local government in an urban society.

Pol S 280 Comparative Government 3 cr.

Analyzes the major foreign political systems, with emphasis upon Contemporary Europe including the Soviet Union. Authoritarian and democratic systems are compared, with the emphasis upon institutions and processes.

Pol S 352 Public Opinion 3 cr.

A study of the nature of public opinion within the political system. Attention is given to the formation of public opinion, expression, propaganda, mass media, and interest groups.

Pol S 353 American Political Parties 3 cr.

The role of people, parties, and pressure groups in the politics of American democracy. Attention is devoted to sectional and historic roots of national politics, voting behavior, pressure group analysis, and campaign activities.

Pol S 381 Political Systems Latin America 3 cr.

Suggested prerequisite: Pol S 280.

Intensive, comparative study of the government and politics of a selected region.

Pol S 401 Readings: United Nations 3 cr.

Studies and brief written assignments. May include trip to United Nations.

Pol S 458/459 Political Science Internship 3 cr. each

Prerequisite: Must have approval of instructor and Political Science Department Chairman. Course is offered only when arrangements for internship can be made with cooperating agencies.

Prerequisites: 9 s.h. in Political Science with at least 2.0 average; Pol S 111. Contact instructor in advance.

Practical experience in government and politics. Students are individually assigned to a cooperating local or state government agency, political party, or interest group, or to a federal or international agency when arrangements can be made. Course credit hours will be determined by Department Chairman and by Professor in charge. Course grade will be determined by the Professor.

SAFETY SCIENCES DEPARTMENT

— Robert J. Firenze, Chairman

The Department offers the degree of Bachelor of Science in Safety Management (occupational safety and health) and a certification program in driver education.

SafS 101 Occupational Safety and Health Management 3 cr.

Concerned with the theory and logic of industrial hazard control, the 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 the control of safety and health hazards, acquiring hazard data, hazard analytical tools, human factors considerations, communication techniques in safety and health management, measuring the effectiveness of hazard control practices, and the role of interfacing management systems in hazard control.

SafS 111-211 Principles of Industrial Safety 3 cr. each
Engineering I, II

Stressed here is understanding the complexity of the industrial hazard control problem by thoroughly examining the elements of safety and health enumerated in the OSHA Act promulgated standards. Emphasis is 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, and protective equipment.

SafS 251 Introduction to Safety Education 3 cr.
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.

SafS 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 stu-

dent to teach driver education in a high school. Three hours lecture, two hours laboratory.

*In order that the certification be properly recorded, students must include Education for Safe Living on the application for teaching certification prior to graduation. For those students who have already graduated, contact the office of the Dean, School of Health Services, for the correct procedure.

SafS 253 Methods and Materials in Safety 3 cr.
Education in the Secondary Schools

Prerequisites: HPE 251, 252.

Emphasizes the use of correlation and integrating safety with many different subjects and school activities, teaching as a separate subject and centering safety education around pupil organization and special projects.

SafS 254 Organization and Administration 3 cr.
of Safety Education

Prerequisites: HPE 251, 252.

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.

SafS 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.

SafS 301-302 Principles of Industrial Hygiene I and II 3 cr. each

Introduces the concepts of occupational health as they pertain to appraising and controlling environmental health hazards. The course includes a study of occupational diseases, chemical, biological, and physical agents that produce organic or systemic damage to the human organism, problems in toxicology (including the derivation and use of threshold limit values), evaluating health hazards (including sources of air contaminants and physical agents and effectiveness of control measures), methods of collecting atmospheric samples, methods of controlling harmful environmental factors or stresses, use of analytical instruments to measure industrial contaminants, industrial hygiene aspects of radiant energy (including ultraviolet, visible light, infra-red, micro-wave, ultra-sonics, lasers, ionizing radiation, and heat), industrial noise, evaluation of thermal stress, industrial ventilation, personal protective equipment, and air pollution control.

SafS 311 Fire Protection Engineering 3 cr.

The basic theories on fire and fire behavior, common fire hazards, fire codes and regulations, structural effects of occupancies on fire spread, fire detection and alarm systems, design, selection, and placement of fixed and portable fire extinguishing systems, principles of fire attack planning and training, fire prevention and inspection methods.

SafS 412 Measuring Program Effectiveness 3 cr.

The 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.

SafS 421 Systems Safety Analysis 3 cr.

The approach of systems analysis in accident prevention, economics of system safety, information acquisition, analytical approaches, systems safety methodology, mathematics of systems analysis (including statistical methods, boolean algebra, testing and reliability), comparison of various analytical methods in engineering design, inductive and deductive analytical techniques (including preliminary hazard study, Fault Hazard Analysis, Failure Mode and Effect Analysis, Fault Tree Analysis), and exercises in the application of Fault Tree Analysis to hardware and man/machine systems.

SOCIOLOGY-ANTHROPOLOGY DEPARTMENT

— David M. Azimi, Chairman

Soc. 151 Principles of Sociology 3 cr.

Sociology is the science of the structure and functioning of human groups. Taking culture concepts and social institutions as its basic materials, it explores the content, methodology, and interrelationships of those studies seeking to record and explain man's social behavior in the modern world. Problems of social change, and the attendant efforts to direct and control such change, are integral parts of the course.

Soc. 231 Contemporary Social Problems 3 cr.

Prerequisite: Principles of Sociology.

Explores pressing social issues and the solutions offered for their alleviation. Within its scope fall race and minority discrimination, juvenile delinquency, crime, family disintegration, personal maladjustment, population

shifts, the role of culture, the nature of social change, and the possibility of social planning. Problems are defined and solutions are explored in the light of historical, political, economic, social, and anthropological data.

Soc. 238 Introduction to Social Work 3 cr.

Prerequisite: Principles of Sociology.

The principles of social work; their application to problems of family and child welfare; casework and group techniques.

Soc. 332 Racial and Cultural Minorities 3 cr.

Prerequisite: Soc. 151.

Study of national, racial and religious minorities and divergent heritages in our national life.

Soc. 333 Juvenile Delinquency 3 cr.

Prerequisite: Principles of Sociology.

A study of some of the social and cultural factors which relate to delinquency. Special emphasis is placed on the consequences of societal reaction to delinquency by proscription and law enforcement, as well as the effects of the consequent labeling of acts and actors. Included is an inquiry into efforts intended to reduce juvenile delinquency in general, violence and collective juvenile delinquency (gangs) in particular, through various kinds of preventive and rehabilitative measures.

Soc. 335 Social Stratification 3 cr.

Prerequisite: Soc. 151.

Study of social status patterns and social mobility; determinants of social class divisions and the consequences of class distinction for individuals and society are discussed.

Soc. 336 Sociology of the Family 3 cr.

Prerequisite: Soc. 151.

Sociological study of the family from various theoretical view points; emphasis is on the interrelation between structure and function of the family and the existing and emerging social environment.

Soc. 339 The Community 3 cr.

Prerequisite: Soc. 151.

Analysis of the social structure of communities of the local level in relation to the national community structure; examination of current problems and future trends.

Soc. 341 Sociology of Education 3 cr.

Prerequisite: Soc. 151.

A sociological approach to understanding the role of educational institutions in American society, with special emphasis on the status and role of the public school teacher.

Soc. 343 Development of Sociological Theory 3 cr.

Prerequisite: 9 hours in Sociology-Anthropology.

An overview and discussion of the development of concepts and theories of human social behavior. Prominent contributors to the mainline of sociological thinking will be examined. Individual reports on particular theorists will be required.

Soc. 344 Introduction to Social Research 3 cr.

Prerequisite: Soc. 151.

Overview of basic quantitative methods, survey and interview techniques, and general problems of research design. Brief problems and projects are assigned.

Soc. 346 The History and Philosophy of Social Welfare Policies 3 cr.

Beginning with the Elizabethan Poor Laws of early seventeenth century England and culminating in an examination of the "war on poverty," this course will appraise the manner by which competing philosophical perspectives have served to inform and have been informed by the development of social welfare policies intended to remedy conditions of poverty in Western society.

Soc. 347 Theories and Principles of Social Work Practice 3 cr.

The development of casework, group work and community organization practices will be examined both as regards the history of concerns that have informed the utilization of these modes of activity as well as the various theories of individual behavior and interpersonal relations that underlie them.

Soc. 471-472 Fieldwork Proseminar in Sociology 3 cr. each

Prerequisite: 9 credits (2.0 QPA or better) in Sociology, including Soc. 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

Anth. 110 Introduction to Anthropology 3 cr.

Following a brief survey of man's place in nature, the course focuses on the concept of culture and on the divergent answers that cultures give to the basic questions of man's existence.

Anth. 211 Cultural Anthropology 3 cr.

Survey of problems and theories in the science of culture. Each student makes a study of a particular major anthropologist or theoretical approach.

Anth. 222 Introduction to Physical Anthropology 3 cr.

Biological evolution and principles of human genetics; evolution of the primates and the fossil record for the evolution of man stressed; relationship between race and culture discussed.

Anth. 244 Basic Archaeology 3 cr.

Investigates the nature of archaeological data, goals of archaeology, models for history and prehistory, and significant archaeological contributions to knowledge. Includes a survey of excavation methods.

Anth. 314 Ethnology of North American Indians 3 cr.

Prerequisite: Anth. 110 or 211.

Survey of the culture history and culture area characteristics of the Indians of North America; detailed study of representative groups, related to historical, functional, and ecological concepts.

Anth. 320 Archaeological Field School 6 cr.

Prerequisite: Anth. 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.

Anth. 371 Cultural Area Studies – China 3 cr.

Prerequisite: Anth. 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 the peoples, and their world view examined. The course may be repeated under different letter designations according to selection of culture areas by instructors responsible for the course.

SPECIAL EDUCATION AND CLINICAL SERVICES

– Morton Morris, Chairman

SpE 215 Child Development 3 cr.

Childhood foundations of human growth and development are considered. Research from various disciplines are studied in terms of understanding physical, mental, social and emotional factors and how these interrelate throughout childhood development. Implications of growth and development are considered in aspects to adjustment to home, school, and community life.

SpE 216 Mental Health in the Schools 3 cr.

Aims to acquaint the student with the advantages and ideals of education for mental health and human relations. The concept of mental health is 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 the school setting is emphasized.

SpE 220 Introduction to Exceptional Children 3 cr.

Deals with the different types of exceptional children. This survey course is designed to aid the student in identifying those children who deviate from the average in areas of physical, mental, emotional, and educational development. This will enable the teacher to identify for referral or to plan for those pupils who need special class placement or a special instructional program with the regular classroom.

SpE 255 Development of Language in Children 3 cr.

Explores not only the levels and sequences of the child's linguistic acquisition at various ages but also his burgeoning sensitivity to extra-language information by which he must operate with others, and the complex processes instrumental in the formulation of his responses.

SpE 320 Psychology of Mentally Retarded Children 3 cr.

Prerequisite: SpE 220 Introduction to Exceptional Children.

Will point up the importance of viewing 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. The importance is stressed of the ways in which the retarded develop, learn, and adapt in various home, school, community, or sheltered settings.

SpE 362 Developmental Reading 3 cr.

Will assist the participating student to understand the developmental reading process. The study will include such areas as objectives, background knowledge and understandings of the reading process, an overview of

the elementary program, the preadolescent and the adolescent and their needs in reading, finding and providing for instructional needs, and special problems. Specific helps, experiences, techniques, and materials will be considered.

SpE 411 Health and Physical Education for Exceptional Children 3 cr.

Prerequisite: SpE 220.

Will provide an opportunity for the prospective teacher of the mentally retarded to gain a thorough understanding of a program of health, physical education and recreation as it applies to individuals with mental and physical handicaps. Special attention will be given to the needs of children with physical handicaps or developmental problems which may accompany mental retardation.

SpE 421 Student Teaching of the Mentally Retarded 3 cr.

Students will be required both to observe and to participate in the teaching of mentally retarded students. Ordinarily this course will be offered in conjunction with SpE 451.

SpE 451 Special Class Methods for the Mentally Retarded 3 cr.

The chief emphasis will be upon practical and workable methods and materials which can be used effectively with slow-learning children. It is intended to be offered in conjunction with SpE 421 as well as to serve as a course in specific techniques which the classroom teacher will find to be valuable in actual classroom teaching of the mentally retarded.

SpE 452 Psychology Practicum 3 cr.

Prerequisite: 6 hours of psychology.

In the summer of 1973 Indiana University of Pennsylvania will offer as in the past years, an unusual work-study practicum in psychology for twenty selected students at the Torrance State Hospital. Those chosen will work a 40-hour week as attendants at the Torrance State Hospital concurrent with a planned lecture and demonstration course taught by members of the hospital staff. They will earn full pay as hospital attendants in addition to earning three credits in psychology. If interested, write immediately to: Mrs. Marion M. Geisel, Director of the Psychological Clinic, Indiana University of Pennsylvania, Indiana, Pennsylvania, 15701.

SpE 466 Teaching the Trainable Mentally Retarded 3 cr.

Prerequisite: Open to qualified juniors and seniors, and certified teachers.

Provides for an analysis of curriculum and program content for TMR children and adults. Directed toward students who plan to teach the trainable retarded in public schools, institutional facilities, or sheltered workshops.

SpH 111 Fundamentals of Speech and Hearing 3 cr.

(Prerequisite for all other required courses in the division except Phonetics.)

Introduction to the study of the physiological, acoustical, and scientific processes involved in the production and reception of speech. The genetic development of speech sounds, and factors that hinder or facilitate speech and language acquisition.

Sph 222 Introduction to Audiology 3 cr.

The auditory function, anatomy of the auditory mechanism, the psychophysics of sound, types and causes of hearing loss, measurement of hearing, and educational considerations for the hearing handicapped child.

Sph 251 Anatomy and Physiology of the Speech and Hearing Mechanism 3 cr.

Consideration of the genetic development, structure, and function of the organs of speech and hearing. Anatomical systems involved in respiration, phonation, articulation, and hearing, and the relationships between the systems in the production and reception of speech.

Sph 310 Speech Clinic I 2 cr.

Orientation to theory and technique of speech and hearing therapy as applied to specific clients. Diagnosis of problems and planning programs of treatment. Introduction to lesson planning and writing of case history and reports. Observation of clients.

Sph 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 the public schools. Techniques of screening and other case finding methods, scheduling, and record keeping, teacher and parental counseling, and coordination with other school activities.

Sph 320 Speech and Hearing Clinic II 2 cr.

Prerequisite: Sph 310.

Advanced practicum with children or adults presenting speech and hearing problems. Students are expected to assume greater responsibility and self-direction in the handling of clients, than in Clinic I. Lesson planning, writing of reports and case histories of a detailed nature.

Sph 331 Speech Pathology II (Organic) 3 cr.

A study of the etiologies, diagnosis, and symptoms of speech defects associated with structural anomalies and physiological dysfunction. Voice disorders, cleft palate, cerebral palsy, and defects of symbolization will be treated.

Sph 354 Audiometry for Public School Nurses 3 cr.

An intensive review of the physiology of hearing; the etiologies and classifications of hearing loss; the use of audiometric testing equipment in the schools; interpretation of the audiogram; and the role of the nurse in public health hearing programs.

Sph 416 Stuttering 2 cr.

Study of the nature of the stuttering disorder and its effects on the dynamics of personality development, evaluation of prevalent causal theories and their implications for both symptomological and psychological methods of treatment as adapted to individuals or group situations. Review of pertinent and recent research topics.

SpH 440 Advanced Audiology

2 cr.

Identification of types of hearing loss by special audiological tests—speech audiometry, Bekesy, S.M.L., tone decay, PGSR; interpretation of the audiogram and its relevancy to diagnosis and remedial procedures; functions and characteristics of hearing aids with respect to speech reception and discrimination.

PSN 301 Public School Nursing

2 cr.

A study of the role of the nurse in the public schools. This course offers information on the organization, development, implementation, and evaluation of school health services. Students are given the opportunity for practical experience in performing school nursing procedures and functions. Programs, policies, and procedures presented in this course are in conformity with the Pennsylvania School Health Law, Regulations of the State Departments of Health and Education, and standards adopted by national health and education authorities.



PRE-SESSION June 4 — June 27	Begins June 25 — MAIN SESSION — Ends August 3 8:15 a.m. to 9:40 a.m. 9:50 a.m. to 11:15 a.m. 11:25 a.m. to 12:50 p.m. 1:00 p.m. to 2:25 p.m.				POST SESSION Aug. 6 — Aug. 24
Art 1 Art 115 Art History I (Summer January) 1 Art 101 Intro to Art (sec. 1) 1 El 213* Art for El Gr 2 Art 211* Painting (WC) 2 Art 101 Intro to Art (sec. 2) *2 cr	Art 112* Drawing (C.F.D.) (Summer January) Art 217* Printmaking I or Art 315* Printmaking II Art 101 Intro to Art (sec. 1) Art 459 Fabrics HE 213* Prin of Design	Art 115 Art History I Art 330 Art for Mentally Ret Intro to Art (sec. 2) Art 214* Ceramics I or Art 312* Ceramics II Art 317 Arts & Crafts in El Ed Art 318 Arts & Crafts in Sec. Ed *2 cr.	Art 212* Painting II or Art 311* Painting III El 213* Art for El Grades Art 216* Metalry I or Art 316* Metalry II	Art 116 Art History II (Summer-January)	1 Art 101 Intro to Art (sec. 1) 1 Art 113* Design I or 1 Art 114* Design II 2 Art 101 Intro to Art (sec. 2) 2 Art 111* Drawing I (Summer January) *2 cr
Biology 1 Bio 103 Gen Bio I* (sec. 1) 1 Bio 103 Gen Bio I* (sec. 2) 1 Bio 103 Gen Bio I* (sec. 3) 1 Bio 103 Gen Bio I* (sec. 4) 1 Bio 105 Cell Bio* (sec. 1) 1 Bio 105 Cell Bio* (sec. 2) 1 Bio 105 Cell Bio* (sec. 3) 1 Bio 241 Microbio (sec. 1) 1 Bio 241 Microbio (sec. 2) 1 Bio 241 Microbio (sec. 3) 1 Bio 311 Envir Bio* (sec. 1) 1 Bio 311 Envir Bio* (sec. 2) 1 Bio 311 Envir Bio* (sec. 3) 1 Bio 498 Prob in Bio** (1 3 cr) 1 Bio 499 Research in Bio** *4 cr **By appointment	Bio 103 General Biology I (sec. 1 — June 25 to July 14, 6 days/wk — 4 cr) Bio 103 General Biology I (sec. 2 — June 25 to July 14, 6 days/wk — 4 cr) Bio 104 General Biology II (sec. 1 — July 16 to August 4, 6 days/wk — 4 cr) Bio 104 General Biology II (sec. 2 — July 16 to August 4, 6 days/wk — 4 cr) Bio 263 Genetics Bio 311 Environ Bio (4 cr.) Bio 498 Problems in Bio* (sec. 1)[1 3 cr] Bio 499 Research in Biology*	Bio 151 Human Physiology Bio 498 Problems in Bio* (sec. 2) [1 3 cr] *By appointment	Bio 151 Human Physiology Bio 498 Problems in Bio* (sec. 3) [1 3 cr] El 312 Tch of Elem Sci		1 Bio 104 Gen Bio II* (sec. 1) 1 Bio 104 Gen Bio II* (sec. 2) 1 Bio 104 Gen Bio II* (sec. 3) 1 Bio 104 Gen Bio II* (sec. 4) 1 Bio 241 Microbiology (sec. 1) 1 Bio 241 Microbiology (sec. 2) 2 Bio 311 Envir Bio* (sec. 1) 2 Bio 311 Envir Bio* (sec. 2) 2 Bio 498 Prob in Bio* (sec. 1)[1 cr] 2 Bio 498 Prob in Bio** (sec. 2)[2 cr] 2 Bio 498 Prob in Bio** (sec. 3)[3 cr] 2 Bio 499 Research in Bio** *4 cr. **By appointment

Classes in Pre and Post Sessions will be scheduled as follows. Classes with numeral "1" before them will meet from 8:00 to 9:30 A.M. and from 11:00 to 12:30 P.M. Those with the numeral "2" before them will meet from 9:30 to 11:00 A.M. and from 12:30 to 2:00 P.M. All classes are 3 credits unless otherwise indicated.

PRE SESSION June 4 – June 27	Begins June 25 8 15 a.m. to 9 40 a.m.	~ MAIN SESSION 9 50 a.m. to 11 15 a.m.	Ends August 3 11 25 a.m. to 12 50 p.m. 1 00 p.m. to 2 25 p.m.	POST SESSION Aug 6 – Aug 24	
Business					
1 Bus 101 Bus Org & Mgt 1 Bus 333 Prin of Selling 1 Bus 221 Intro to Acctg (8 9 30 cont'd 3 wks in Main) 1 Bus 235 Business Law I (11 12 30 cont'd 3 wks in Main) 2 Bus 352 Corp Acctg (9 30 11 cont'd 3 wks in Main) 1 BM 383 Insurance II 2 BM 201 Personnel Mgt 2 BM 380 Prin of Invest 2 BE 311 Meth of Tchg Bus Courses (12 30 2 00 cont'd 3 wks in Main)	Bus 221 Intro to Acctg (fr Pre to July 13) Bus 101 Bus Org & Mgt Bus 131 Prin of Typing (2 cr) Bus 132 Intermed Typing (2 cr) Bus 271 Advanced Typing (2 cr) Bus 251 Intermed Acctg (sec 1) (fr 7 16 to 8 24) BE 433 Supervised Work Exp (by arrangement) 6 cr OE 434 Supervised Work Exp in Distr Ed (by arrangement) 6 cr BM 111 Found of Math (Mgt) BM 215 Bus Statistics BM 380 Prin of Investments BM 434 Advertising	Bus 251 Corp Acctg (fr Pre to July 13) Bus 251 Intermed Acctg (sec 2) (fr 7 16 to 8 24) Bus 353 Cost Acctg (fr 7 16 to 8 24) BM 241 Finance BM 331 Consumer Behavior	Bus 235 Business Law I (fr Pre to July 13) Bus 233 Marketing Bus 335 Office Math Bus 454 Federal Taxes Bus 336 Business Law II (fr 7 16 to 8 24) BE 111 Found of Math (Bus) BE 212 Bus Math II BM 400 Decision Making	Bus 321 Bus Comm BE 311 Methods of Tchg Bus Crs (cont'd fr Pre to 7 13) BE 312 Eval Tech in Bus Crs (fr 7 16 to 8 24) BM 201 Personnel Mgt BM 480 Pract & Proc of Collective Barg	1 BU 101 Bus Org & Mgt 1 BU 251 Intermed Acctg fr Main 8 9 30 1 BU 336 Bus Law II fr Main 11 12 30 2 BU 353 Cost Acctg fr Main 9 30 11 1 BM 382 Prin of Real Estate 2 BM 111 Found of Math Mgt 2 BM 201 Personnel Mgt 2 BE 312 Eval Tech in Bus Crs fr 12 30 21
Chemistry					
1 Chem 101 Chem for HE & Health Prof I* (sec 1) 1 Chem 101 Chem for HE & Health Prof I* (sec 2) 1 Chem 101 Chem for HE & Health Prof I* (sec 3) 1 Chem 103 Prin of Chem* 1 Chem 111 Gen Chem I* 1 Chem 302 Indust Chem 1 Chem 306 New Appr to Tchg HS Chem II 1 Chem 351 Biochemistry* 1 Chem 355 Biochem & Nutr 1 Sci 106 Phys Sci II* (sec 1) 1 Sci 106 Phys Sci II* (sec 2) *Meets 6 days wk 4 cr	Chem 101 102 Chemistry for Home Ec & Health Professions I & II 8 cr * (sec 1) Chem 101 102 Chemistry for Home Ec & Health Professions I & II 8 cr * (sec 2) Chem 101 102 Chemistry for Home Ec & Health Professions I & II 8 cr * (sec 3) Chem 111 112 General Chemistry I & II 8 cr * (sec 1) Chem 111 112 General Chemistry I & II 8 cr * (sec 2) Chem 111 112 General Chemistry I & II 8 cr * (sec 3) Chem 231 232 Organic Chemistry I & II 8 cr * (sec 1) Chem 231 232 Organic Chemistry I & II 8 cr * (sec 2) Chem 321 322 Quantitative Anal & Inst Anal 8 cr * Sci 106 Physical Science II (1st 3 wks) 4 cr (sec 1) Sci 106 Physical Science II (2nd 3 wks) 4 cr (sec 2) * First half of course June 25 July 14 * Second half of course July 16 to Aug 4 6 days wk			1 Chem 102 Chem for HE & Health Prof II* sec 1 1 Chem 102 Chem for HE & Health Prof II* sec 2 1 Chem 102 Chem for HE & Health Prof II* sec 3 1 Chem 103 Prin of Chem* 1 Chem 112 Gen Chem II* 1 Chem 351 Biochem* 1 Chem 305 New Appr to Tchg HS Chem I 1 Sci 106 Phys Sci II* *Meets 6 days wk 4 cr	

Classes in Pre and Post Sessions will be scheduled as follows: Classes with numeral 1 before them will meet from 8 00 to 9 30 A.M. and from 11 00 to 12 30 P.M. Those with the numeral 2 before them will meet from 9 30 to 11 00 A.M. and from 12 30 to 2 00 P.M. All classes are 3 credits unless otherwise indicated.

PRE-SESSION June 4 - June 27	Begins June 25 8:15 a.m. to 9:40 a.m.	- MAIN SESSION - 9:50 a.m. to 11:15 a.m.	- Ends August 3 11:25 a.m. to 12:50 p.m.	1:00 p.m. to 2:25 p.m.	POST SESSION Aug. 6 - Aug. 24
Computer Science 2 Comp Sci 200 Intro to Computers	Comp Sci 300 Assembly Language Prog Comp Sci 495 Special Projects in Comp Sci (by appt) (1.4 cr)	Comp Sci 250 Intro to Num Methods		Comp Sci 110 Intro to Computer Sci (1.00 to 2.50 p.m.)	
Consumer Services 1 CS 417 Tailoring	CS 414 Home Mgt (Resident) (by arrangement)	CS 112 Clothing Const. & Fitting CS 315 Cons Ec & Family Finance		CS 314 Textiles	CS 408 Europe Study Tour in Cloth., Textiles & Furnishings (2-4 cr) (by arrangement)
Criminology 1 Crmn 101 Gen. Adm of Justice (sec. 1) 1 Crmn 350 Techniques of Interview 2 Crmn 101 Gen. Adm of Justice (sec. 2) 2 Crmn 495 Seminar in Adm. of Justice Crmn 432 Treatment & Control of Delinquents (by arrangement) Crmn 497 Internship (by arrangement)	Crmn 101 Gen. Adm of Justice (sec. 1) Crmn 490 Crime in Modern Society (sec. 1) Crmn 302 Criminal Law II Crmn 497 Internship* (by arrangement) *6 cr	Crmn 101 Gen. Adm of Justice (sec. 2) Crmn 301 Criminal Law I Crmn 490 Crime in Modern Society (sec. 2)	Crmn 102 Criminology (sec. 1) Crmn 102 Criminology (sec. 2) Crmn 310 Criminal Invest	Crmn 492 Correctional Admin 1 Crmn 101 Gen. Adm of Just. (sec. 1) 1 Crmn 495 Seminar 2 Crmn 101 Gen. Adm of Just. (sec. 2) Crmn 370 Community Relations (by arrangement) Crmn 497 Internship (by arrangement)	
Economics 2 Econ 121 Prin of Econ I 2 Econ 241 Contemp Econ Issues	Econ 121 Prin of Econ I Econ 121 Prin of Econ I* *(Evening class 6:15-8:00 p.m. MTWR)	Econ 101 Basic Economics Econ 122 Prin of Econ II Econ 330 Labor Economics			2 Econ 121 Prin of Econ I 2 Econ 325 Monetary Econ I

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Educational Psychology 1 Ed Psy 302 Ed Psych (sec 1) 1 Ed Psy 302 Ed Psych (sec 2) 1 Ed Psy 305 Eval Methods (2 cr) 1 Ed Psy 373 Psych of Adol Educ 1 Ed Psy 376 Behavior Prob 1 Ed Psy 377 Ed Tests & Measurements* 2 Ed Psy 450 Indep Study (by permission of chrm) * Incl Ed Psy 305	Ed Psy 302 Ed Psych (sec 1) Ed Psy 305 Eval Meth* (sec 1) Ed Psy 372 Psy of Childhood Educ Ed Psy 377 Ed Tests & Meas (sec 1)(Incl Ed Psy 305) Ed Psy 378 Learning	Ed Psy 302 Ed Psych (sec 2) Ed Psy 302 Ed Psych (sec 3) Ed Psy 305 Eval Meth* (sec 2) Ed Psy 305 Eval Meth* (sec 3) Ed Psy 373 Psy of Adol Educ Ed Psy 376 Behavior Prob Ed Psy 377 Ed Tests & Meas (sec 2) Incl Ed Psy 305 *2 cr	Ed Psy 302 Ed Psych (sec 4) Ed Psy 305 Eval Meth* (sec 4) Ed Psy 377 Ed Tests & Meas (sec 3) Ed Psy 380 Mental Health in Classroom	Ed Psy 450 Indep Study (by permis sion of Chrm)	1 Ed Psy 302 Ed Psych 1 Ed Psy 305 Eval Meth (2 cr) 1 Ed Psy 376 Behavior Prob 1 Ed Psy 377 Ed Tests & Meas Incl Ed Psy 305) 2 Ed Psy 450 Indep Study (by permission of chrm)
Elementary 1 El 314 El Health & P Ed 2 El 413 Tchng Lang Arts 1 El 451 Tchng Reading in Prim Grades	El 222 Teaching of Reading (sec 1) El 330 Problems in El Ed El 314 El Health & Phys Ed (sec 1)	El 221 Children's Lit (sec 1) El 222 Teaching of Reading (sec 2) El 312 Teaching of El Sci El 314 El Health & Phys Ed (sec 2) El 463 Workshop in Elem Teaching Psy 215 Child Dev	El 221 Children's Lit (sec 2) El 355 Guid in El Sch	El 411 Teaching of Social Studies El 452 Teaching Social Studies in Primary Grades	1 El 351 Creative Act in El Sch 1 Psy 215 Child Dev

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English 1 Eng 201 English III (sec 1) 1 Eng 222 Journalistic Writing 1 Eng 247 Poetry & Its Forms 1 Eng 359 Black Am. Lit 1 Eng 379 Romantic Movement 2 Eng 103 Intro to Theater 2 Eng 201 English III (sec 2) 2 Eng 246 Contemp Short Fiction 1 2 Eng 312 Drama Workshop	Eng 101 English I (sec 1)* Eng 101 English I (sec 2)* Eng 101 English I (sec 3)* Eng 101 English I (sec 4)* Eng 101 English I (sec 5)* Eng 101 English I (sec 6)* Eng 101 English I (sec 96)* Eng 103 Intro to Theater (sec 1) Eng 206 Nature of Drama Eng 311 Public Speaking Eng 321 Feature Writing Eng 102 English II (sec 1) Eng 201 English III (sec 1) Eng 312 Drama Workshop – 6 cr *4 cr	Eng 101 English I (sec 7)* Eng 101 English I (sec 8)* Eng 101 English I (sec 9)* Eng 101 English I (sec 10)* Eng 101 English I (sec 11)* Eng 101 English I (sec 97)* Eng 102 English II (sec 2) Eng 103 Intro to Theater (sec 2) Eng 201 English III (sec 2) Eng 201 English III (sec 3) Eng 202 Intro to Literary Analysis Eng 230 History of Eng Lang Eng 352 American Lit 1915-1945 Eng 366 Shakespeare	Eng 101 English I (sec 12)* Eng 101 English I (sec 13)* Eng 101 English I (sec 14)* Eng 101 English I (sec 15)* Eng 101 English I (sec 98)* Eng 102 English II (sec 3) Eng 201 English III (sec 4) Eng 222 Journalistic Writing Eng 310 Oral Interpretation Eng 330 Structure of English	Eng 101 English I (sec 16)* Eng 101 English I (sec 17)* Eng 101 English I (sec 99)* Eng 358 Mod Am Fiction Eng 452 Teaching of Eng & Speech	1 Eng 201 English III (sec 1) 1 Eng 305 Modern Drama 1 Eng 371 Eng Bible as Literature 2 Eng 201 English III (sec 2) 2 Eng 358 Modern Am Fiction
Food Service 1 FS 111 Intro to Foods 1 FS 357 Special Problems in Foods 1 FS 362 Experimental Food 1 FS 313 Quantity Food Service & Manag 1 FS 402 Nutrition & Comm Health	FS 406 Educ Food Tour – Europe* FS Food Service Institute** (July 8-13, 0 cr) FS Food Service Institute** (July 15-20, 0 cr) *2.6 cr **See write up, page 30				1 FS 211 Advanced Foods
FOREIGN LANGUAGES Germanic & Slavic Languages 1 Ger 151 German I 2 Ed 453 Teaching Foreign Lang in Secondary Schools	Ger 152 German II		Ger 430 Culture in Contemp German Lit* *2 cr	Ger 251 German III	Ger 252 German IV

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Romance and Classical Languages 1 Sp 251 Spanish III 2 Fr 251 French III	Sp 151 Spanish I Fr 252 French IV Fl 421 Linguistics Sp 055 Advanced Oral Practice I* *Argentinian exchange program students only (also must register for SS 390)	Fr 151 French I Sp 252 Spanish IV			1 Fr 152 French II 1 Sp 152 Spanish II
Foundations of Education 1 Fd Ed 302 History & Phil of Ed (sec 1) 1 Fd Ed 458 Orientation of Teaching in Urban Centers 2 Fd Ed 302 Hist & Phil of Ed (sec 2)	Fd Ed 302 Hist & Phil of Ed (sec 1) Fd Ed 440 Field Experience in Urban Centers (6 cr)	Fd Ed 302 Hist & Phil of Ed (sec 2) Fd Ed 455 Comparative Educ	Fd Ed 454 Public School Admin	Fd Ed 457 Secondary Sch Curriculum	1 Fd Ed 456 Issues & Trends in Ed 2 Fd Ed 482 Interpret of Urban Field Exp
Geography 1 Geog 101 World Geog (sec 1) 1 Geog 101 World Geog (sec 2) 1 Geog 251 Geog US & Canada 2 Geog 422 Aero Space (non majors) 2 Geog 154 Cultural Geog SS 390 India: A Nation in Transition Institute (Pre and Main Sessions - See write up on page 30 - 9 cr)	Geog 101 World Geography (sec 1) Geog 101 World Geography (sec 2) Geog 149 Economic Geog Geog 253 Geog & Society	Geog 251 Geog US & Canada	Geog 101 World Geog (sec 3) Geog 492 Elements of Research in Geog and Planning		1 Geog 251 Geog US & Canada 1 Geog 462 Field Tech in Geog & Planning 2 Geog 101 World Geog
Geoscience 1 GS 461 Field Techniques in Geoscience 2 GS 110 Gen Astronomy GS 498 Problems in Geosci (trip to Florida - by arrangement) GS 498 Problems in Geosci (on campus, 1.2 cr) (by arrangement) MSci 110 Intro to Oceanography (see write up on page 55 for this course and other marine science related courses)	GS 335 Economic Geology GS 341 Solar System GS 132 Gen Geo II Lab (1 cr) (by arrangement)	GS 330 Paleontology	GS 327 Geomorphology GS 342 Stellar Astronomy	GS 122 Gen Geology II	

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Health & Physical Education				
1 HP 101 Personal and Comm Health (sec 1)**	HP 101 Personal & Comm Health (sec 1)**	HP 101 Personal & Comm Health (sec 3)**	HP 101 Personal & Comm Health (sec 5)**	HP 101 Personal & Comm Health (sec 7)**
1 HP 142 Intro to HPER**	HP 101 Personal & Comm Health (sec 2)**	HP 101 Personal & Comm Health (sec 4)**	HP 101 Personal & Comm Health (sec 6)**	HP 101 Personal & Comm Health (sec 8)**
1 HP 321 Elem Health and Phys Ed	HP 106 Inter Swim Tennis (sec 1)* (M)	HP 106 Inter Swim Tennis (M) (sec 1)*	HP 115 Softball Cond Badminton (sec 1)* (M)	HP 115 Softball Cond Badminton (sec 3)* (M)
2 HP 101 Personal and Comm Health (sec 2)**	HP 341 Tests and Measurements**	HP 106 Inter Swim Tennis (M) (sec 1)*	HP 120 Begin Swim (W)(sec 2)*	HP 115 Softball Cond Badminton (sec 4)* (M)
2 HP 260 Sr. Lifesaving*	HP 321 Elem Health & Phys Ed (sec 1)	HP 106 Tennis Inter Swim (M) (sec 2)*	HP 133 Golf Bowling (W)(sec 2)*	HP 121 Inter Swim Badminton (W)*
	HP 106 Tennis Inter Swim (sec 2)* (M)	HP 120 Begin Swim (W) (sec 1)*	HP 262 Scuba Diving*	HP 123 Swim
		HP 133 Golf Bowling (sec 1)*	HP 336 Org & Adm of Recreation**	HP 133 Golf Bowling (W)* (sec 3)
		HP 261 Water Safety Instruction**	HP 346 First Aid Instructor's*	HP 344 Adapted Phys Ed**
		HP 333 Psych of Coaching**	HP 404 School of Health Programs	
		HP 343 Phys of Exercise**	HP 115 Softball Cond Badminton (sec 2)* (M)	
		HP 345 Sports Injuries**		
		HP 405 Adm & Tech of Camping**		
		HP 321 Elem Health & Phys Ed (sec 2)		
*1 cr	*1 cr			
**2 cr.	**2 cr			
History				
1 His 101 History of Civ I	His 101 History of Civ I	His 104 History of US & Pa II (sec 2)	His 104 Hist of US & Pa II (sec 3)	1 His 101 Hist of Civ I
1 His 102 History of Civ II	His 102 History of Civ II	His 352 History of England to 1688	His 353 History of England since 1688	1 His 102 Hist of Civ II
1 His 103 History of US & Pa I	His 103 History of US & Pa I			1 His 104 Hist of US & Pa II (sec 1)
1 His 104 History of US & Pa II (sec 1)	His 104 History of US & Pa II (sec 1)			1 His 391 Econ & Social Hist of US Since 1875
1 His 104 History of US & Pa II (sec 2)	Ed 445 Teaching of Social Stud in Secondary School			1 His 347 Civil War & Reconstruction
2 His 104 History of US & Pa II (sec 3)	His 368 Hist US, 1900 1929			2 His 104 Hist of US & Pa II (sec 2)
2 His 354 History of Russia to 1917				2 His 355 Hist of Soviet Russia

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Home Economics Education 1 HE Ed 451 Workshop in Home Ec Ed	HE 213 Prin of Design (2 cr) HE Ed 411 Family Relations HE Ed 412 Nursery School (by arrangement)*	NOTE See Chemistry Dept. for Home Economics Chemistry courses and Biology Dept. for Human Physiology and Microbiology courses. *Open only to students enrolled in the School of Home Economics	HE Ed 218 Child Development		
International Studies SS 390 Contemporary Europe (off campus tour by arrangement) (see write up, page 29)	IS 101 World Politics (sec 1) SS 390 Argentine Exchange (off campus tour by arrangement) (see write up, page 28)	IS 101 World Politics (sec 2)			
Learning Resources 1 LR 482 Prep of Instructional Materials (sec 1) 2 LR 482 Prep of Instructional Materials (sec 2)	LR 482 Prep of Instructional Materials (sec 1)	LR 482 Prep of Instructional Materials (sec 2)	LR 482 Prep of Instructional Materials (sec 3) LR 371 Photography in Educ	LR 482 Prep of Instructional Materials (sec 4) LR 481 Television Production	1 LR 482 Prep of Instructional Materials (sec 1) 1 LR 482 Prep of Instructional Materials (sec 2)
Mathematics 1 Ma 101 Foundations of Math (sec 1) 1 Ma 233 Intro to Linear Algebra 1 Ma 362 Probability & Statistics 2 Ma 101 Foundations of Math (sec 2) 2 Ma 160 Math for Elem Teachers I 2 Ed 313 Teaching Math in Elem Grades 2 Ma 363 Intro to Probability	Ma 011 Elem Functions (sec 1) Ma 381 Advanced Calculus I	Ma 111 Calculus I* Ma 362 Probability & Statistics *4 cr	Ma 011 Elem Function (sec 2) Ma 013 Calc I for Natural & Social Sciences* Ma 101 Foundations of Math Ma 231 Intro to Algebraic Structures Ed 313 Teaching Math in the Elem Schools (Special Ed Majors)	Ma 452 460 Seminar in Math (2 cr)	1 Ma 101 Foundations of Math (sec 1) 1 Ma 341 Theory of Numbers 1 Ed 456 Teaching Math in Secondary Schools 2 Ma 101 Foundations of Math (sec 2) 2 Ma 160 Math for Elem Teachers I 2 Ed 313 Teaching Math in Elem Schools

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Military Science		MS 101 Military Science 101 (2 cr)		MS 101 Military Science 101 (2 cr) MS 999 Leadership Lab (2 35 4 30) (no cr)	
Music 1 Mus 408 Tech. of March. Band* 1 El 211 Music for Elem. Grades* 2 Mus 101 Intro to Music 2 Mus 111 Sight Singing* 2 Mus 334 Inst. Methods* *2 cr	Mus 115 Theory I (sec 1) Mus 161 Class Woodwinds I* (8 40 9 40) Mus 220 Mus Lit I** Mus 331 Elem. Methods** Mus 313 Inst. Conducting**	Mus 115 Theory I (sec 2) Mus 159 Class Brass I* (9 50 10 50) Mus 333 Sec. Methods** Mus 301 Music Hist I *1 cr **2 cr	Mus 302 Music Hist II Mus 312 Choral Conducting** Mus 155 Class Strings I* (11 30 12 30)	Mus 157 Class Percus I* (1 00 1 50) Mus 221 Music Lit. II** Mus 113 Ear Training I* (2 00 2 50) Mus 123 Concert Band (no cr) (3 00 4 00) Mus 128 Chamber Orch. (no cr.) (3 00 4 00) Mus 134 Chorus (3 00 4 00) (no cr)	2 Mus 101 Intro to Music
Nursing	Nurs 300 Nursing I – 8 cr (Letrobe Area Hospital)				
Philosophy 1 Phil 110 World Religions 1 Phil 221 Logic I 2 Phil 120 Intro to Phil	Phil 110 World Religions (sec 1) Phil 221 Logic I	Phil 222 Ethics Phil 327 Am Phil Thought (2 cr)	Phil 110 World Religions (sec 2) Phil 120 Intro to Phil		1 Phil 110 World Relig 1 Phil 221 Logic I 1 Phil 120 Intro to Phil
Physics 1 Phys 131 Physics I (Calc) 2 Phys 141 Physics I Lab* (Calc) (1 cr) 2 Phys 322 Elect & Magn I (2 cr) 2 Sci 105 Phys Sci I (4 cr) (sec 1) 2 Sci 105 Phys Sci I (4 cr) (sec 2) 2 Sci 105 Phys Sci I (4 cr) (sec 3) *2-3 days per wk	Phys 111 Physics I (Non Calc) Phys 498 Prob in Phys I (4 cr) [Arranged] Sci 105 Phys Sci I – June 25 to July 13 – 4 cr Sci 105 Phys Sci I – July 16 to August 3 – 4 cr NOTE A one credit lab course may be taken concurrently with lecture. LAB continues for 3 hours from the scheduled starting period. Applies to PRE, MAIN, and POST sessions. *From 1-4 p.m. 2-3 days per wk	Phys 132 Physics II (Calc) Phys 323 Elec & Magn II (2 cr)		Phys 121 Physics I Lab* (Non Calc) (1 cr) Phys 142 Physics II Lab* (Calc) (1 cr)	1 Phys 112 Physics II (Non Calc) 1 Sci 105 Phys Sci I (4 cr)(sec 1) 1 Sci 105 Phys Sci I (4 cr)(sec 2) 2 Phys 122 Physics II* Lab (Non-Calc)(1 cr) *2-3 days per wk

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Political Science					
1 PS 111 American Politics (sec 1)	PS 111 American Politics	PS 111 American Politics (sec 2)	PS 111 American Politics (sec 3)		1 PS 111 American Politics (sec 1)
1 PS 401 Studies: United Nations	PS 250 Cont. Political Problems (sec 1)	PS 353 American Political Parties	PS 280 Comparative Government		1 PS 251 State & Local Polit. Problems
1 PS 381 Latin America	PS 458 Political Science Internship* (sec 1)	PS 250 Cont. Political Problems (sec 2)			1 PS 352 Public Opinion
2 PS 111 American Politics (sec 2)	PS 459 Political Science Internship* (sec 2)				2 PS 111 American Politics (sec 2)
	*To be Arranged				2 PS 250 Cont. Political Problems
Psychology					
1 PC 101 General Psychology (sec 1)	PC 101 Gen Psychology (sec 1)	PC 101 Gen Psych (sec 3)	PC 101 Gen Psych (sec 5)		1 PC 101 Gen Psych (sec 1)
1 PC 101 General Psychology (sec 2)	PC 101 Gen Psychology (sec 2)	PC 101 Gen Psych (sec 4)	PC 356 Personality (sec 4)		1 PC 101 Gen Psych (sec 2)
1 PC 358 Social Psychology	PC 358 Social Psychology	PC 354 Developmental Psych	PC 400 Industrial Psychology		1 PC 200 Psych of Adjustment
1 PC 370 Child Psychology	PC 361 Motivation	PC 357 Abnormal Psychology	PC 451 Psych Practicum*		1 PC 357 Abnormal Psychology
1 PC 373 Adolescent Psychology		PC 366 Human Learning & Memory	PC 472 Ind Study in Psychology*		2 PC 101 Gen Psych (sec 3)
2 PC 101 General Psychology (sec 3)					
PC 471 Spec. Topics in Psych*					
*To be arranged					
Public School Nurse					
1 Ed Psy 302 Educ Psy	Ed Psy 302 Educ Psych	Ed Psy 302 Educ Psych	Eng 102 Eng II	LR 482 Prep of Instr Materials	1 Ed Psy 302 Educ Psy
1 Eng 201 Eng III	Eng 102 Eng II	Eng 102 Eng II	Eng 201 Eng III	Soc 151 Prin of Soc	1 Eng 201 English III
1 Ed Ed 302 Hist & Phil of Ed	Eng 201 Eng III	Ed Ed 302 Hist & Phil of Ed	Ed Ed 454 Pub School Adm		1 Hist 101 Hist of Civ I
1 His 101 Hist of Civ I	Ed Ed 302 Hist & Phil of Ed	Hist 101 Hist of Civ I	Hist 104 Hist of US & Pa II		1 Hist 102 Hist of Civ II
1 His 102 Hist of Civ II	Hist 101 Hist of Civ I	Hist 102 Hist of Civ II	LR 482 Prep of Instr Mat		1 LR 482 Prep of Instr Mat
1 His 104 Hist of US & Pa II	Hist 102 Hist of Civ II	Hist 104 Hist of US & Pa II	PS 111 Amer Politics		1 PS 111 Amer Politics
1 Soc 151 Prin of Soc	LR 482 Prep of Instr Materials	PS 301 Pub School Nursing	PS 111 Amer Politics		1 PC 200 Psych of Adj
1 PSN 402 Nutr & Comm Health	PS 111 Amer Politics	Soc 151 Prin of Soc	SpH 354 Audio of Pub Sch Nurses		2 Eng 201 English III
1 LR Prep of Instr Materials	Soc 151 Prin of Soc		Soc 151 Prin of Soc		2 Hist 104 Hist of US & Pa II
					2 Soc 151 Prin of Soc

(See department headings for section numbers)

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Safety Sciences 1 SA 251 Intro to Safety 1 SA 255 Psy of Accident Prev 1 SA 412 Meas Saf & Hlth 2 SA 311 Fire Protec Engr	SA 251 Intro to Safety SA 252 Driver Ed SA 421 Syst Saf Analysis	SA 254 Org & Adm of Saf SA 111 Prin Saf Engr I	SA 254 Org & Adm of Safety		1 SA 251 Intro to Saf 1 SA 253 Meth & Matis of Saf 1 SA 302 Indus Hyg II 1 SA 101 Occ Saf & Hlth Mgt
Sociology-Anthropology 1 Anth 110 Intro to Anth (sec 1) 1 Soc 151 Prin of Soc (sec 1) 1 Soc 231 Contemp Soc Problems 1 Anth 244 Basic Archaeology 1 Soc 366 Soc of Family 12 Soc 471 Field Work Pro Seminar 2 Anth 110 Intro to Anth (sec 2) 2 Soc 151 Prin of Soc (sec 2) 2 Soc 238 Intro to Soc Work 2 Anth 371 Cultural Area Studies China	Anth 110 Intro to Anth (sec 1) Soc 151 Prin of Sociology (sec 1) Soc 151 Prin of Sociology (sec 5) Anth 320 Archaeological Field School — 6 cr (See write up page 27) Soc 339 Community Soc 471 Field Work Pro Sem (sec 1) Soc 472 Field Work Pro Sem.	Anth 110 Intro to Anth (sec 2) Soc 151 Prin of Sociology (sec 2) Anth 221 Cult Anthro pology Soc 335 Soc Strati fication Soc 341 Soc of Ed Soc 343 Dev of Soc Theory	Anth 110 Intro to Anth (sec 3) Soc 151 Prin of Soc (sec 3) Soc 238 Intro to Soc Work Soc 333 Juvenile Delinquency Soc 344 Social Research	Soc 151 Prin of Soc (sec 4) Soc 231 Contemp Soc Prob Soc 336 Sociology of the Family Soc 346 Hist & Phil of Soc Welfare Pol	1 Anth 110 Intro to Anth (sec 1) 1 Soc 151 Prin of Soc (sec 1) 1 Soc 231 Contemp Soc Prob 1 Anth 314 Ethn of North Am Indian 12 Soc 472 Field Work Pro Seminar 2 Soc 151 Prin of Soc (sec 2) 2 Soc 332 Racial & Cult Minorities 2 Soc 347 Theory & Prin of Soc Welfare Practices
Special Education & Clinical Services 1 SpE 220 Intro to Excep Children 1 SpH 312 Org & Adm of Sp & Hrg Prog 1 SpH 440 Adv Audiology (2 cr) 2 SpE 362 Devel Reading SpE 452 Psychological Practicum (10 wk course at Torrance State Hospital)	SpE 216 Ment Health in Sch SpH 331 Sp Pathology II SpE 451 Spec Class Meth for MR SpE 466 Tchg Trainable MR	SpH 111 Fund of Sp & Hrg SpH 222 Intro to Audio SpE 320 Psy of the Ment Ret SpH 416 Stuttering (2 cr) SpE 421 Stud Tchg of MR* (sec 1) SpE 421 Stud Tchg of MR* (sec 2) PSN 301 Pub School Nursing *9 30 to noon	SpH 251 Anat & Physiology of Sp & Hrg Mech SpE 255 Devel of Lang in Chil SpH 354 Audiology for Pub Sch Nurses SpH 320 Sp Clinic II (2 3 cr)(plus hrs arranged)	SpE 215 Child Develop SpH 310 Sp Clinic I (1 2 cr)(plus hrs arranged)	1 SpE 220 Intro to Excep Chil 1 SpE 411 Health, Phys Ed & Rec for Excep Chil

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JOHN C. PITTENGER, Secretary

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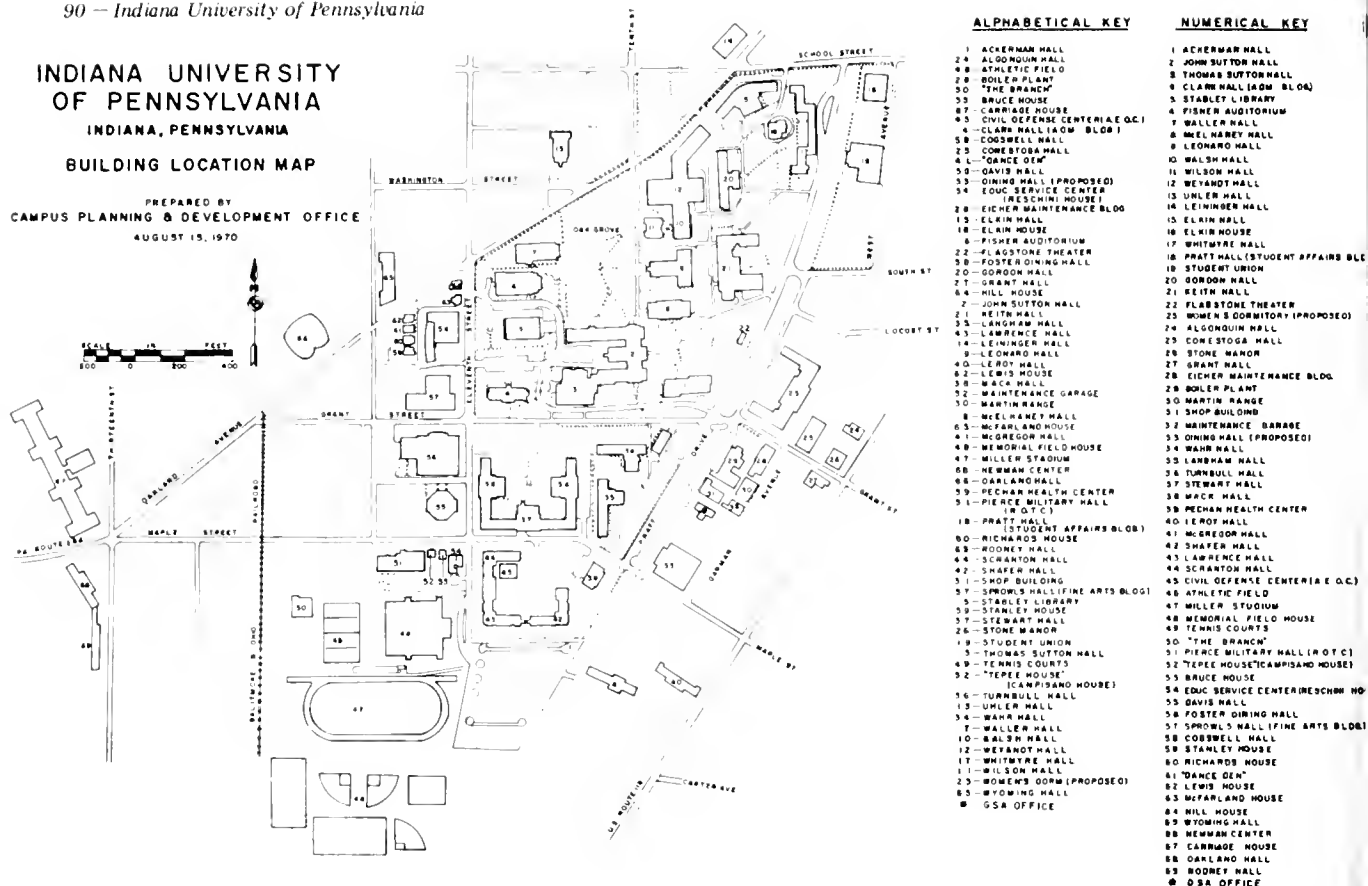
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INDIANA UNIVERSITY OF PENNSYLVANIA

INDIANA, PENNSYLVANIA

BUILDING LOCATION MAP

PREPARED BY
CAMPUS PLANNING & DEVELOPMENT OFFICE
AUGUST 15, 1970



ALPHABETICAL KEY

- 1 ACERMAN HALL
- 2 ALGORN HALL
- 3 BOILER PLANT
- 4 "THE BRANCH"
- 5 BRUCE HOUSE
- 6 CARRIAGE HOUSE
- 7 CIVIL DEFENSE CENTER (A.E.C.)
- 8 CLARK HALL (ADM BLDG)
- 9 COSWELL HALL
- 10 CORSTOGA HALL
- 11 "DANCE DEH"
- 12 DAVIS HALL
- 13 DINING HALL (PROPOSED)
- 14 EDUC SERVICE CENTER (FRESHMAN HOUSE)
- 15 EICHER MAINTENANCE BLDG
- 16 ELKIN HALL
- 17 ELKIN HOUSE
- 18 FISHER AUDITORIUM
- 19 FLAGSTONE THEATER
- 20 FOSTER DINING HALL
- 21 GORDON HALL
- 22 GRANT HALL
- 23 HILL HOUSE
- 24 JOHN SUTTON HALL
- 25 KEITH HALL
- 26 LANGHAM HALL
- 27 LAWRENCE HALL
- 28 LEININGER HALL
- 29 LEONARD HALL
- 30 LEROY HALL
- 31 LEWIS HOUSE
- 32 MACA HALL
- 33 MAINTENANCE GARAGE
- 34 MARTIN RANGE
- 35 MELNAREY HALL
- 36 MCFARLAND HOUSE
- 37 MCGREGOR HALL
- 38 MEMORIAL FIELD HOUSE
- 39 MILLER STADIUM
- 40 NEWMAN CENTER
- 41 OAKLAND HALL
- 42 PECHAN HEALTH CENTER
- 43 PIERCE MILITARY HALL (ROT C)
- 44 PRATT HALL (STUDENT AFFAIRS BLDG)
- 45 RICHARDS HOUSE
- 46 ROONEY HALL
- 47 SCRANTON HALL
- 48 SHAFER HALL
- 49 SHOP BUILDING
- 50 SPROWLS HALL (FINE ARTS BLDG)
- 51 STANLEY LIBRARY
- 52 STANLEY HOUSE
- 53 STEWART HALL
- 54 STONE MANOR
- 55 STUDENT UNION
- 56 THOMAS SUTTON HALL
- 57 TENNIS COURTS
- 58 "TENNIS HOUSE"
- 59 CAMPUS HOUSES
- 60 TURNBULL HALL
- 61 WARR HALL
- 62 WALLER HALL
- 63 WALSH HALL
- 64 WEYANT HALL
- 65 WHITNEY HALL
- 66 WILSON HALL
- 67 WOMEN'S DORM (PROPOSED)
- 68 WYOMING HALL
- 69 GSA OFFICE

NUMERICAL KEY

- 1 ACERMAN HALL
- 2 JOHN SUTTON HALL
- 3 THOMAS SUTTON HALL
- 4 CLARK HALL (ADM BLDG)
- 5 STABLE - LIBRARY
- 6 FISHER AUDITORIUM
- 7 WALLER HALL
- 8 MELNAREY HALL
- 9 LEONARD HALL
- 10 WALSH HALL
- 11 WILSON HALL
- 12 WEYANT HALL
- 13 UNLER HALL
- 14 LEININGER HALL
- 15 ELKIN HALL
- 16 ELKIN HOUSE
- 17 WHITNEY HALL
- 18 PRATT HALL (STUDENT AFFAIRS BLDG)
- 19 STUDENT UNION
- 20 GORDON HALL
- 21 KEITH HALL
- 22 FLAGSTONE THEATER
- 23 WOMEN'S DORMITORY (PROPOSED)
- 24 ALGORN HALL
- 25 CORSTOGA HALL
- 26 STONE MANOR
- 27 GRANT HALL
- 28 EICHER MAINTENANCE BLDG
- 29 BOILER PLANT
- 30 MARTIN RANGE
- 31 SHOP BUILDING
- 32 MAINTENANCE GARAGE
- 33 DINING HALL (PROPOSED)
- 34 WARR HALL
- 35 LANGHAM HALL
- 36 TURNBULL HALL
- 37 STEWART HALL
- 38 SHOP HALL
- 39 PECHAN HEALTH CENTER
- 40 LEROY HALL
- 41 MCGREGOR HALL
- 42 SHAFER HALL
- 43 LAWRENCE HALL
- 44 SCRANTON HALL
- 45 CIVIL DEFENSE CENTER (A.E.C.)
- 46 ATHLETIC FIELD
- 47 MILLER STADIUM
- 48 MEMORIAL FIELD HOUSE
- 49 TENNIS COURTS
- 50 "THE BRANCH"
- 51 PIERCE MILITARY HALL (ROT C)
- 52 "TENNIS HOUSE" (CAMPUS HOUSE)
- 53 BRUCE HOUSE
- 54 EDUC SERVICE CENTER (FRESHMAN HOUSE)
- 55 DAVIS HALL
- 56 FOSTER DINING HALL
- 57 SPROWLS HALL (FINE ARTS BLDG)
- 58 COSWELL HALL
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- 63 MCFARLAND HOUSE
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- 66 NEWMAN CENTER
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- 68 OAKLAND HALL
- 69 ROONEY HALL
- 70 GSA OFFICE

