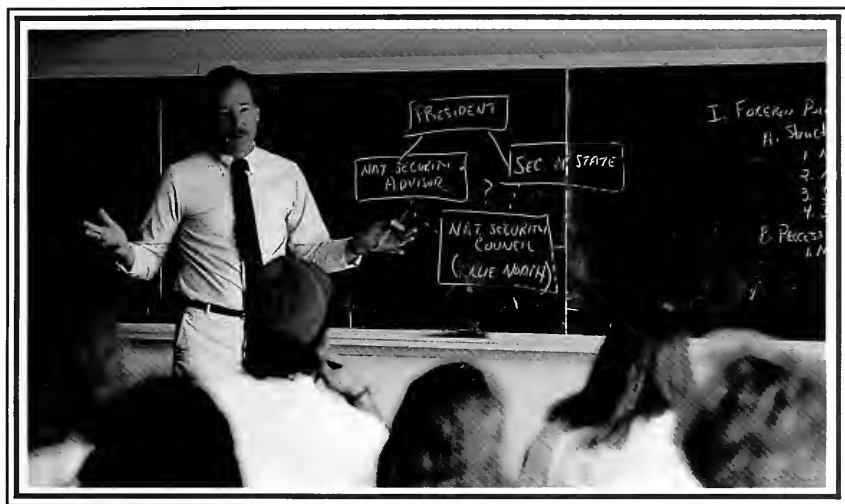
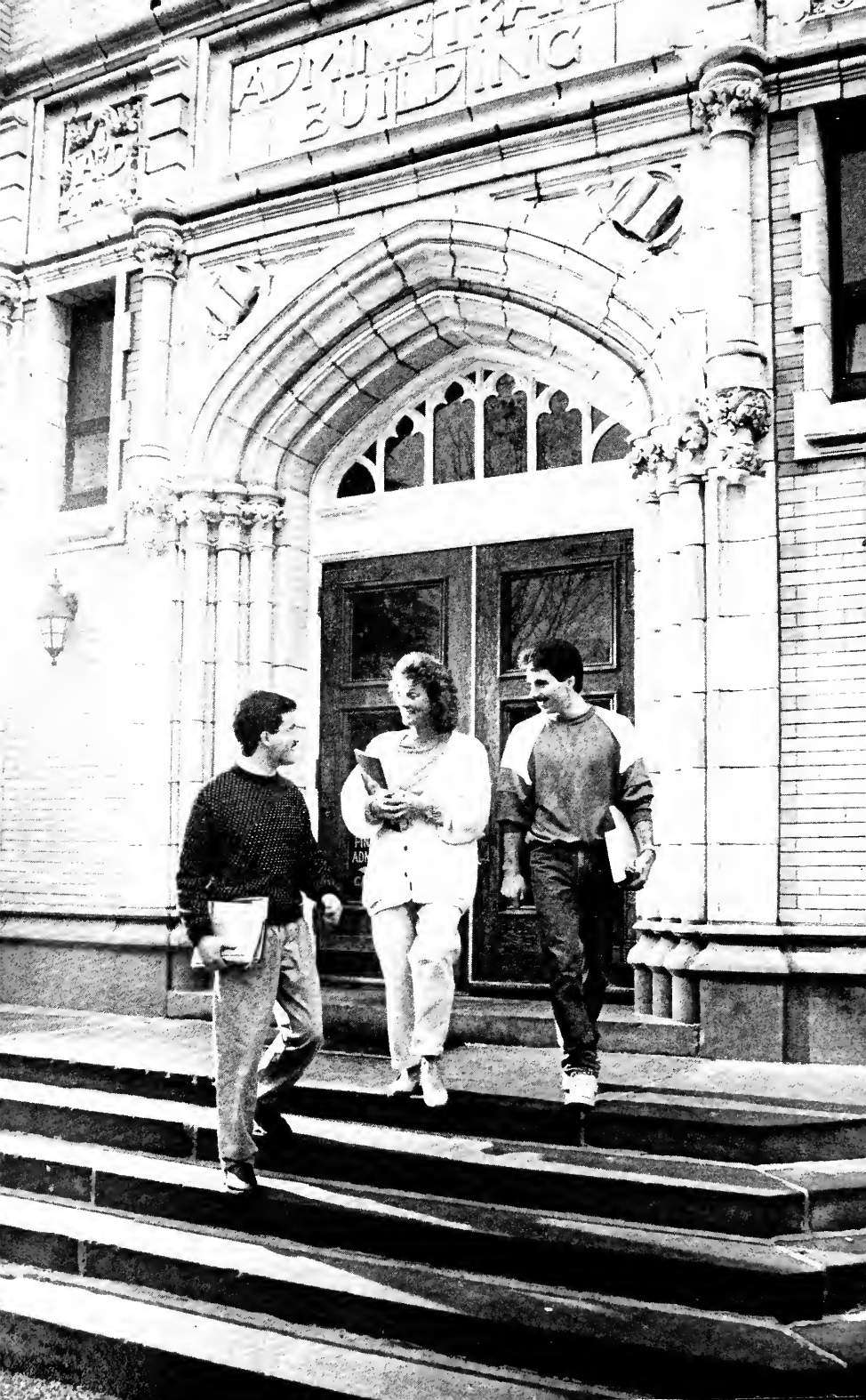


Lebanon Valley College of Pennsylvania



Undergraduate and Graduate Catalog 1989 - 1990

Annville, Pennsylvania 17003-0501



Lebanon Valley College
of Pennsylvania

Undergraduate
and
Graduate
Catalog
1989 - 1990

Annville, Pennsylvania 17003-0501



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1989-1990 ACADEMIC CALENDAR

FIRST SEMESTER

August	24	Thursday, 8:00 a.m.	Residence halls open new students
	24	Thursday, 10:00 a.m.	Freshman Experience
	24	Thursday, 2:00 p.m.	Opening Convocation
	27	Sunday, Noon	Residence halls open
	28	Monday, 9:00 a.m.	Add/Drop Day
	28	Monday, 6:00 p.m.	Classes begin
October	9	Monday, 5:00 p.m.	Mid-term grades due
	20	Friday, 5:00 p.m.	Change of registration deadline
November	17	Friday, 5:00 p.m.	Thanksgiving vacation begins
	27	Monday, 8:00 a.m.	Classes resume
December	8	Friday, 9:30 p.m.	Classes end
	11-15	Monday-Friday	Final examinations
	15	Friday, 9:30 p.m.	Semester ends

SECOND SEMESTER

January	14	Sunday, Noon	Residence halls open
	15	Monday, 8:00 a.m.	Classes start
	15	Monday, 8:30-Noon,	Add/Drop at
		1:00-4:00 p.m.	Registrar's office
February	26	Monday, 5:00 p.m.	Mid-term grades due
March	9	Friday, 5:00 p.m.	Change of Registration Deadline
	9	Friday, 9:30 p.m.	Spring vacation begins
	19	Monday, 8:00 a.m.	Classes resume
April	11	Wednesday, 9:30 p.m.	Easter vacation begins
	16	Monday, 7:00 p.m.	Classes resume
May	3	Thursday, 9:30 p.m.	Classes end
	5-10	Saturday-Thursday	Final examinations
	10	Thursday, 9:30 p.m.	Semester ends
	12	Saturday, 9:00 a.m.	Baccalaureate Service
	12	Saturday, 11:00 a.m.	121st Annual Commencement

1990-1991 ACADEMIC CALENDAR

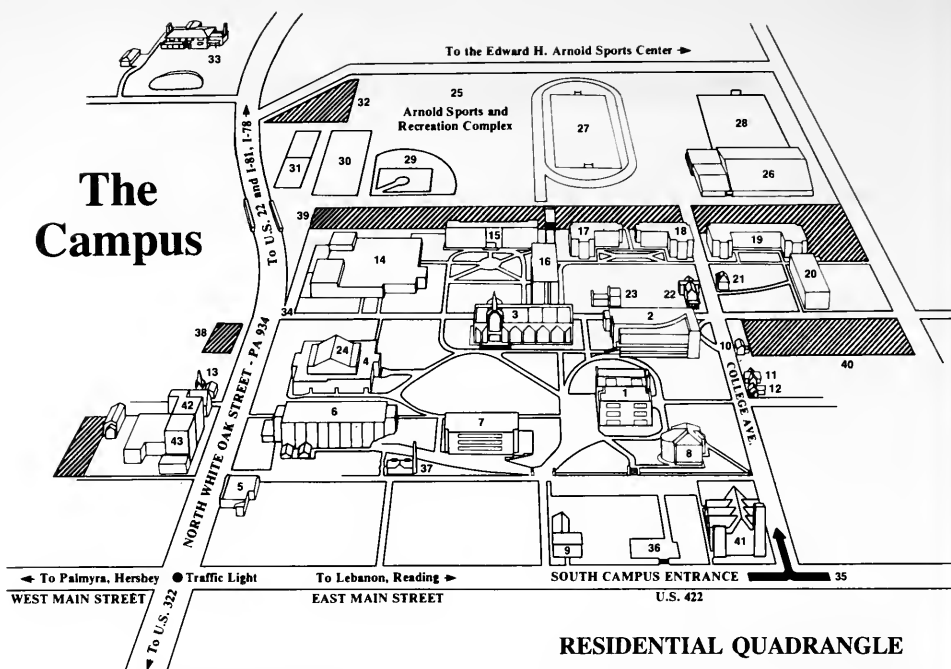
FIRST SEMESTER

August	23	Thursday, 8:00 a.m.	Residence halls open
	23	Thursday, 10:00 a.m.	Freshman Experience
	23	Thursday, 2:00 p.m.	Opening Convocation
	26	Sunday, Noon	Residence halls open
	27	Monday, 9:00-11:00 a.m.	Add/Drop Day
	27	Monday, 6:00 p.m.	Evening classes begin
	28	Tuesday, 8:00 a.m.	Day Classes begin
October	8	Monday, 5:00 p.m.	Mid-term grades due
	19	Friday, 5:00 p.m.	Change of registration deadline
November	23	Friday, 9:30 p.m.	Thanksgiving vacation begins
December	3	Monday, 8:00 a.m.	Classes resume
	7	Friday, 9:30 p.m.	Classes end
	10-14	Monday-Friday	Final examinations
	14	Friday, 9:30 p.m.	Semester ends

SECOND SEMESTER

January	13	Sunday, Noon	Residence halls open
	14	Monday, 8:00 a.m.	Classes begin
	14	Monday, 8:30-noon,	Add/Drop at
		1:00-4:00 p.m.	Registrar's office
February	25	Monday, 5:00 p.m.	Mid-term grades due
March	8	Friday, 5:00 p.m.	Change of registration deadline
	15	Friday, 9:30 p.m.	Spring vacation begins
April	2	Tuesday, 8:00 a.m.	Day classes resume
May	2	Thursday, 9:30 p.m.	Classes end
	3-9	Friday-Thursday	Final examinations
	9	Thursday, 9:30 p.m.	Semester ends
	11	Saturday, 9:00 a.m.	Baccalaureate Service
	11	Saturday, 11:00 a.m.	122nd Commencement

The Campus



ACADEMIC AND ADMINISTRATIVE QUADRANGLE

1. Classroom and Administration Building: Business Office, Continuing Education Center. Dean of Faculty, History and American Studies, Media Services, Political Science and Economics, President, Registrar's Office, Secretary of the College, Vice President for Administration, and Women's Counselling Center (Management and Mathematical Sciences, Fall Semester, 1989)
2. Blair Center: Dance, Education, Music, Music Education, and Sound Recording Technology Studios
3. Miller Chapel: Chaplain, Philosophy and Religion, and Student Activities
4. Academic Center: Computer Services, Management and Mathematical Sciences (Spring Semester, 1990)
5. Art Studios
6. Garber Science Center: Biology, Chemistry, Physics, Psychology, and ROTC
7. Gossard Library
8. Carnegie Building: Admissions, Career Planning and Placement, Dean of Students, and Financial Aid Office
9. Laughlin Hall: Advancement, Alumni and Parents Services, and Communications
10. Wagner House: First Year Experience, Leadership Studies, Sociology and Social Work (124 College Avenue)
11. English House (112 College Avenue)
12. Foreign Language House (104 College Avenue)
13. Fencil Building: Business and Industry Center

RESIDENTIAL QUADRANGLE

14. Allan W. Mund College Center: Conference Services, Dining Halls, Little Theatre, Residential Life Programs, Snack Shop, and Student Activities
15. Mary Capp Green Residence Hall
16. Vickroy Residence Hall
17. Keister Residence Hall
18. Hammond Residence Hall
19. Funkhouser Residence Hall
20. Silver Residence Hall
21. North College Residence Hall
22. Shroyer Health Center
23. Centre Residence Hall

SPORTS AND RECREATION COMPLEX

24. Lynch Memorial Intercollegiate Athletics and Physical Education Center
25. Arnold Sports and Recreation Complex
26. Edward H. Arnold Sports Center: Athletics, Recreation, and Pool
27. Football Stadium and All-Weather Track
28. Soccer Field
29. Baseball Field
30. Field Hockey Field
31. Tennis Courts
32. Arnold Parking Lot

OTHER FACILITIES

33. Kreiderheim: President's Residence
34. Main Campus Entrance
35. South Campus Entrance
36. Bollinger Plaza
37. Heating Plant
38. West Parking Lot
39. Mund Parking Lot
40. East Parking Lot (Tour)
41. Annville United Methodist Church
42. Special Services (Security) Office
43. Maintenance Center

THE MISSION OF THE COLLEGE

The Mission of Lebanon Valley College arises directly from its origins as a church related college. We emphasize that fact by maintaining affiliation with the United Methodist Church and by affirming the Judeo-Christian tradition as the perspective for our policies.

The best way to understand the mission of Lebanon Valley College is to focus on what it is we hope for our students. We want our students:

- to develop a genuine concern for cooperative living and community service;

- to attain a heightened sense of moral and spiritual values through a deepened awareness of how people have thought of themselves in relation to nature, to society, and to God;

- to appreciate the close and unmistakable relationship among rational thought, creative imagination, and moral commitment; and

- to deal candidly and intelligently with the past, the present, and the future and their interrelationship.

This assertion of hope for our students possesses three distinctive characteristics. (1) While this is not a list of priorities in rank order, neither is it a mere coincidence that cooperation with and service to others comes first. (2) Moral commitment is not affirmed as one of a laundry list of qualities nor does it appear as an afterthought. Rather it is inherent or explicit in all the desired outcomes. (3) The broad description of our program which these objectives implies identifies qualities which we attempt to achieve through both general education and major study, but the stress throughout is on interrelationships, not on knowledge in isolation, skills in isolation, individual achievement or development in isolation. We want our students to be as knowledgeable, as aesthetically sensitive, as skillful as possible, but we want more than that for them.

The motto of the College, taken from the Gospel of John is "You shall know the truth and the truth shall make you free." But our aim is not merely to free our students *from* ignorance, superstition, prejudice, narrowness of vision. It is also to free them *for* a life of service to others. That purpose we affirm in the concept of leadership which gives focus to the ideals of education by reiterating the central value of the liberal arts tradition in a democratic society: to prepare people to make a difference, to contribute significantly to their various communities.

UNDERGRADUATE INFORMATION

Admissions For Day Students

High School Preparation

All admission candidates should have completed 16 credit units and graduated from an accredited secondary school, or present an equivalency certificate (G.E.D.). Of the 16 units, 4 should be in English, 2 in foreign language, 2 in mathematics, 1 in science and 1 in social studies.

Application Procedure

A candidate for admission to Lebanon Valley College must submit a completed application form with the required application fee, Scholastic Aptitude or American College Test results and an official transcript of high school grades. Students planning to transfer to Lebanon Valley must submit official transcripts of completed college or university work. Lebanon Valley College does not require the College Board Achievement Test. However, Achievement Tests in foreign language are recommended for students seeking advanced placement.

All candidates are required to visit campus for a personal interview. Applicants for admission into music, sacred music or music education programs are required to audition on campus; audition applications are available from the Admissions Office.

Early Decision Admissions Policy

An Early Decision applicant will be expected to complete an application stating his/her intention to seek consideration as an Early Decision candidate. The application must be accompanied by the required non-refundable application fee no later than November 15. An Early Decision applicant will be notified of the Admissions Committee decision by December 1. A student accepted as an Early Decision candidate must confirm his/her acceptance by submitting a non-refundable deposit no later than January 1. An applicant not accepted under the Early Decision program will be considered for admission under the regular admission program.

For further information contact:

Admissions Office
Lebanon Valley College
Annville, PA 17003-0501
(717) 867-6181

Student Finances

Payment for tuition, room, board, and other charges is due by a published deadline prior to the beginning of each semester. Students failing to meet this deadline will be required to make special arrangements with the Business Office before their course registrations will be processed. Questions about student finances should be addressed to the Business Office.

Refund Policy

Students withdrawing from a course, or the school, will receive a refund prorated according to the following schedule.

Time Period	Refund
During the first week of classes	100%
During the second week of classes	80%
During the third week of classes	50%
After the third week of classes	0%
Summer School	
During the first week of classes	100%
During the second week of classes	50%
After the second week of classes	0%

No refund is allowed on room charges.

Deferred Payment

Lebanon Valley College offers a deferred payment plan for those families who, after exploring other options, are unable to meet the College's prepayment requirements. Two agents have been appointed to process deferred payment applications for Lebanon Valley College:

Academic Management Services
Pawtucket, Rhode Island 02861
Phone: 1-800-556-6684

IPP/HES Trust
c/o Municipal Services Dept.
Dauphin Deposit Bank and Trust Co.
P.O. Box 2937
Harrisburg, PA 17105

The College has no financial interest in either of these plans and offers them as a convenience to students and parents. Students who are receiving monthly Social Security or Veteran's Education Benefits may defer the amount covered by these benefits.

Continuing Education Center

Lebanon Valley College's Continuing Education Center offers credit programs on four levels: certificate, associate, baccalaureate, and diploma. Certificates are starter programs that approximate the beginning of a four-year college experience, ideal spring-boards from which to go on for an associate or bachelor's degree. Diploma programs are intended for persons who have already been awarded a bachelor's degree in one discipline and desire to study another discipline in some depth and breadth.

A second bachelor's degree may be awarded to adult students who already have received a bachelor of arts or sciences from LVC or another accredited college or university. In such cases, students only must complete the major requirements for the second degree or a minimum of thirty credits, whichever is greater.

Courses in the Continuing Education Center are offered on the Annville campus in evenings, on weekends and in summer sessions.

The Continuing Education Center publishes course schedules twice yearly in June and October. The summer session schedule is distributed annually in March. To obtain copies of course schedules or get detailed information on all academic programs for adults call 717-867-6213 or write Continuing Education Center, Lebanon Valley College, Annville, PA 17003-0501.

A candidate for admission to any of Lebanon Valley College's Continuing Education degree programs must submit a completed application form with the required application fee. An official high school transcript is required. Adult students planning to transfer to Lebanon Valley also must submit official transcripts of any completed college or university courses. Official transcripts relating to military or business courses also may prove to be useful. Personal interviews are not required, but are strongly recommended. To arrange an admissions interview call 717-867-6213, or 1-800-445-6181. Decisions on all adult student applications usually are made within one month after the last required transcript is received.

UNDERGRADUATE ACADEMIC REGULATIONS AND PROCEDURES

Attendance at Lebanon Valley College is a privilege not a right. To provide the necessary atmosphere in which teaching and learning can occur, the College expects that the conduct of all campus citizens will conform to accepted standards. The College has the right to require the withdrawal of any student whose actions are inimical to the purposes of the institution. The following academic regulations are announcements and do not constitute a contract between the student and the College. The College reserves the right to change these regulations and procedures as it deems necessary for the accomplishment of its purposes, but wherever possible, a student will proceed to graduation under the regulations in effect at the time of his/her entrance at the College.

Degrees

Baccalaureate Degrees

Lebanon Valley College confers eight baccalaureate degrees. Bachelor of Arts for students completing requirements in the following major programs: American studies, economics, English, foreign language, French, general studies, German, history, music, philosophy, political science, psychology, religion, sociology, Spanish and certain individualized majors.

Bachelor of Science for students completing requirements in the following major programs: accounting, actuarial science, health care management, biochemistry, biology, chemistry, computer information systems, computer science, cooperative engineering, cooperative forestry, economics, elementary education, general studies, hotel management, international business, management, mathematics, music education, physics, psychobiology, and certain individualized majors. Bachelor of Science in Chemistry, Bachelor of Science in Medical Technology, Bachelor of Music, Bachelor of Music in Sacred Music, Bachelor of Music in Sound Recording Technology, and Bachelor of Social Work for students completing requirements for the appropriate major program.

Associate Degrees

Through the Continuing Education Center adult students may earn the Associate of Science degree in accounting, general studies or management or the Associate of Arts degree in general studies.

Academic Procedures

Limit of Hours

To be classified as full time, a student must take at least twelve credit hours in a semester. Seventeen credit hours is the maximum permitted without approval from the student's advisor and permission of the Registrar. Audited courses are counted in determining the course load, but physical education and music organizations are not. To be permitted to take more than 17 credits the student should have a cumulative grade point average of 3.0 or higher, or be enrolled in the Honors Program, or be a senior. Students shall pay the prevailing tuition rate for each credit hour beyond 17 (not counting physical education and music organizations).

Transfer Credit

A student applying for advanced standing after having attended another accredited institution shall send an official transcript to the Dean of Admissions. If requested, the student must provide copies of the appropriate catalogs for the years of attendance at the other institution or institutions.

Credits are accepted for transfer provided the grades are C- (1.7) or better and the work is equivalent or similar to work offered at Lebanon Valley College. Grades thus transferred count for credit hours only, not for quality points.

A candidate for admission holding an associate degree from a regionally accredited college can be admitted with full acceptance of coursework at the previously attended institution. Coursework in the major field, however, for which the applicant has received a D shall not be counted toward fulfilling the major requirement.

Because Lebanon Valley College is a liberal arts institution, consideration of full acceptance of the associate degree will be granted with the understanding that the candidate has followed a basic course of study compatible with the curriculum and academic programs of the College and has been enrolled in a transfer program.

Registration and Preregistration

Students are required to register for courses on designated days of each semester. Students who register later than the designated times shall be charged a fee. Students desiring to register later than one week after the opening of the semester will be admitted only by special permission of the Registrar.

Change of Registration

Change of registration, including pass/fail elections, changes of course hours credit, changes from credit to audit and vice versa, must be approved by signature of the advisor. In most instances, registration for a course shall not be permitted after the course has been in session for one full week. With the permission of the advisor, a student may withdraw from a course at any time through the last day of semester classes (see grading policy). A fee is charged for every change of course made at the student's request after Add/Drop Day.

Auditing Courses

Students may register to audit courses with the approval of their academic advisor. Audited courses are counted in considering the course load relative to the limit of hours. No grade or credit is given for an audited course, but the registrar will record the audit on the transcript if the student attends regularly. A change of registration from credit to audit or from audit to credit must be accomplished by the end of the eighth week of semester classes.

Pass/Fail

After attaining sophomore standing (28 credit hours) a student may elect to take up to two courses per semester and one per summer session on pass/fail basis; however, only six such courses can be counted toward graduation requirements. No courses taken pass/fail may be used to meet either general education, major requirements, or pre- or co-requisites for classes. A student may select or cancel a pass/fail registration any time during the first eight weeks of a semester.

Repetition of Courses

A student receiving a grade of D+ or lower in a course may repeat that course once for a higher grade. For purposes of graduation requirements semester hours credit count only once. For purposes of cumulative point average only the higher grade counts; but the lower grade remains on the permanent record card. If a course failed at Lebanon Valley is repeated at another institution the credit may be transferred, but the original grade remains part of the cumulative point average.

Concurrent Courses

A student enrolled for a degree at Lebanon Valley College may not carry courses concurrently at any other institution without prior consent of his or her advisor and the Registrar.

External Summer Courses

A student registered at Lebanon Valley College may not obtain credit for courses taken during the summer in another college, unless such courses have prior approval of his or her advisor and the Registrar.

Attendance Policy

Each student is responsible for knowing and meeting all requirements for each course, including regular class attendance. At the opening of each semester the instructors shall clearly inform students of class attendance regulations. Violations of those regulations shall make the student liable to receive a grade of F in the course. Upon the recommendation of the instructor and the approval of the Registrar a grade of W will be assigned during the eight weeks of the semester, and an F will be assigned after that date.

Excused absences do not absolve students from the necessity of fulfilling all course requirements.

Advanced Placement

Advanced Placement with credit for appropriate courses shall be granted to entering students who make scores of 4 or 5 on College Board Advanced Placement examinations. For scores of 3, final determination is made by the appropriate department. Advanced Placement without credit may be granted on the basis of the Achievement Tests of the College Board examinations or such other proficiency tests as may be determined by the Registrar and by the chairperson of the department.

Second Bachelor's Degrees

A person who has earned a bachelor's degree from Lebanon Valley College or another accredited college or university may earn a second bachelor's degree by meeting the following requirements:

1. A minimum of 30 additional undergraduate credits must be completed successfully at Lebanon Valley.
2. All graduation requirements for the major of the second degree must be met satisfactorily.
3. Course work completed successfully as part of the first degree program may be used to satisfy the graduation requirements of the second major.

4. No course already taken in the first degree program may be repeated in the second degree program.
5. Teacher Certification credits may not be counted toward a second degree.
6. Graduates from other accredited colleges or universities shall not be required to meet any Lebanon Valley general education requirements.
7. No courses in the second degree program may be met satisfactorily through such non-traditional means as Challenge Examinations, CLEP, or Credit for Life Experience.
8. No internships may be used to satisfy the 30 credit rule, unless such internship is required in the second degree major program.
9. No courses in the second degree program may be taken Pass/Fail.

Undergraduate Non-Traditional Credit

Lebanon Valley College recognizes the ability of superior students to master specific areas of study on their own initiative and provides programs to allow these students the opportunity to gain credit. Any matriculated student may earn a maximum of 30 credits toward a bachelor's degree or a maximum of 15 credits toward an associate's degree through non-traditional means (experiential credit, advanced placement, CLEP, challenge examinations).

Challenge Exams Policy

Only the courses listed in the College curriculum may be challenged for credit. Full-time students should request challenge examinations through their academic advisors. Part-time students and those students enrolled through the Continuing Education program should make application or challenge exams through the Continuing Education Center. All requests must be approved by the Registrar and the chairperson of the department in which the course is listed.

Challenge exams are considered to be comprehensive examinations in the subject area and are graded Pass/Fail. The grading criteria for passing a challenge exam shall be determined by each department. There is a fee for each challenge examination. This fee is for preparation and grading of the examination and is charged without regard to the test results. Challenge exams may not be taken by students who have received any grade in a course equivalent to or more advanced than the course for which the student is requesting credit by examination. Challenge exams may not be used for the purpose of acquiring credit for a course previously failed. Practicums, internships, seminars, research courses, independent study, and courses with required laboratory components are not subject to credit by examination.

CLEP (College Level Examination Program) Policy

Credit shall be granted to those students who score well on CLEP examinations that are approved by the College. To receive credit, a student must score above the 50th percentile on the objective section and above a C, as determined by the appropriate academic department, on the essay section.

A maximum of 6 credits shall be awarded for each examination; of these credits, only 3 may be applied to the general education requirements in the appropriate area. Credit shall be granted only to students who have matriculated at Lebanon Valley College. Requests for CLEP credit must be approved by the Registrar before the student has completed 30 credits.

Credit for Life Experience Policy

Lebanon Valley College provides for the awarding of undergraduate academic credit for knowledge acquired through non-academic experience in subjects in the College curriculum. The experience should have a direct relation to the material taught in a course in the College curriculum and should extend over a sufficient period to provide substantive knowledge in the relevant area. Matriculated students who believe they qualify for such credit may petition the appropriate department through their academic advisors. Students enrolled in the Continuing Education program must petition through the Continuing Education Center. This petition must (1) detail the relevant experience in question, (2) provide appropriate supporting evidence, (3) note the equivalent College course by department and number, and (4) state the number of credit hours sought. The appropriate department will consult with the academic advisor or the Continuing Education Center to determine the best means (interview, examination, portfolio, etc.) for evaluating the experience.

Approval of experiential credit for full-time students must be made in writing over the signatures of the academic advisor, the appropriate department chairperson, and the Dean of the Faculty. Approval of experiential credit for students enrolled through the Continuing Education program must be made in writing over the signatures of the Director of Continuing Education, the appropriate department chairperson, and the Dean of the Faculty.

Experiential credit cannot exceed six credit hours in one academic year and cannot exceed a maximum of twelve credit hours in the degree program.

Grading Systems and Grade Point Averages

Student work is graded A (distinguished performance), B (superior work), C (satisfactory achievement), D (requirements and standards met at a minimum level), F (course requirements not met). For each credit hour in a course, students receive the following quality points:

A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
D-	.7
F	0

F carries no credit or quality points, but grades of F are used in calculating the grade point averages. The cumulative grade point average is calculated by dividing the quality points by the credit hours completed.

Candidates for a degree must obtain a cumulative grade point average of 2.0, and a major grade point average of 2.0. Only grades in courses taken at Lebanon Valley College, and the LVC-Washington Semester programs are used to determine grade point averages.

Students in the classes of 1990, 1991 and 1992 and all continuing education degree candidates admitted before July 1, 1989 must meet graduation requirements by earning a cumulative grade point average of 1.75 and a major grade point average of 2.0. Students in the class of 1993 and all continuing education candidates admitted after July 1, 1989 meet graduation requirements of earning a grade point average of 2.0.

A student may not take a course that has a prerequisite course he/she has failed.

In addition to the above grades, the symbols I, W, WP, and WF are used. I indicates that the work is incomplete (certain required work postponed by the student for substantial reason with the prior consent of the instructor), but otherwise satisfactory. This work must be completed within the first eight weeks of the next semester, or the I will be changed to an F. Appeals for an extension of time must be presented to the registrar by the first week of the next semester. W indicates withdrawal from a course through the eighth

week of semester classes. In case of withdrawal from a course thereafter through the last day of semester classes, the symbol WP is used if the work has been satisfactory and WF if unsatisfactory. The grade of WF is calculated as an F in the grade point averages. For physical education a grade of either S (satisfactory) or U (unsatisfactory) is recorded.

Once a grade has been recorded it may not be changed without the approval of the instructor and the Registrar. Students who feel the grade may be inaccurate should contact the instructor at once, but in no case later than the end of the semester following the course in question.

Academic and Graduation Honors

The Dean's List

Students achieving a 3.40 grade point average while carrying at least 12 credit hours for grade shall be named to the Dean's List at the end of each semester.

Graduation Honors

After completing a minimum of 60 credit hours of residence work a student may qualify for graduation honors. The honors to be conferred are Summa Cum Laude for grade point averages of 3.75 - 4.0, Magna Cum Laude for grade point averages of 3.60 - 3.74, and Cum Laude for grade point averages of 3.40 - 3.59.

Phi Alpha Epsilon

Students graduating with grade point averages of 3.50 are eligible for induction into Phi Alpha Epsilon, provided they have earned a minimum of 60 credit hours of residence work.

Academic Dishonesty

Students are expected to uphold the principles of academic honesty. Academic dishonesty shall not be tolerated.

For the first academic dishonesty offense, no action shall be taken beyond failure from the course, at the option of the faculty member. A letter of warning shall be sent to the student by the Dean of the Faculty, explaining the policy regarding further offenses, and the right of appeal.

For a second offense, failure in the course is mandatory, and the Dean shall so inform the faculty member(s) involved. Additionally, the Dean of Faculty has the authority to take further action, up to and including expulsion from the College.

For a third offense, failure in the course and expulsion from the College are mandatory.

The Dean of Faculty has the authority to make a determination of whether actions or reasonable suspicions of actions by a student constitute academic dishonesty "offenses" as above.

Information related to academic dishonesty offenses must be passed by the faculty member to the Dean of the Faculty. The Dean shall retain the information for at least as long as the student involved is enrolled at the College. Information and evidence concerning academic dishonesty are the property of the College.

All actions against a student for academic dishonesty offenses can be appealed to the Dean of the Faculty, who will serve as final arbiter.

Probation and Suspension

Students in Classes of 1990, 1991, 1992 can be placed on academic probation, suspended or dismissed if their academic standing fails to come up to the grade point average shown in the following table:

	Probation	Suspension or Dismissal
1st semester	1.25	
2nd semester	1.50	1.25 cumulative
3rd semester	1.65	
4th semester	1.75	1.50 cumulative
5th semester	1.75	
6th semester	1.75	1.65 cumulative
7th semester	1.75	in all courses
8th semester	1.75	

Students in the Class of 1993 can be placed on academic probation, suspended or dismissed if their academic standing fails to come up to the grade point average shown in the following table:

Semester Hours	Probation	Suspension or Dismissal
1 - 18	1.50	
19 - 36	1.60	1.50 cumulative
37 - 54	1.70	
55 - 72	1.80	1.70 cumulative
73 - 90	1.90	
91 or more	2.00	1.90 cumulative

A student placed on academic probation is notified of such status by the Dean of the Faculty and informed of the College regulations governing probationers. Students on probation are expected to regulate their work and their time in a most determined effort to bring their performances up to the required standard. A student on probation who desires to begin a new activity or continue in an activity already begun, shall submit an appeal to the Vice President for Student Affairs. After consultation with the student's major advisor and parents, the Vice President for Student Affairs will render a binding decision.

A student suspended for academic reasons normally is not eligible for reinstatement for one semester. A student seeking reinstatement must petition in writing to the Dean of the Faculty.

A student twice suspended shall be considered for readmission only after completing appropriate academic work at an accredited college.

Withdrawal from College and Readmission

To withdraw from College a student must complete an official withdrawal form obtained from the Registrar. Continuing Education students must complete an official withdrawal form obtained from the Continuing Education Director. Readmission of a student requires written permission from the Dean of the Faculty.

Veterans' Services

Veterans who are eligible to receive educational benefits must report their enrollment to the Registrar after they register for each semester or summer session. The Registrar will then submit certification to the Veterans Administration.

Veterans who are attending Lebanon Valley College for the first time must complete the appropriate forms in the Registrar's Office before certification will be sent to the Veterans Administration.

Veterans with questions about the College or their status with the College should contact the Registrar.

Serviceman's Opportunity Colleges

Lebanon Valley College has been designated as an institutional member of Serviceman's Opportunity Colleges (SOC), a group of over 400 colleges providing postsecondary education to members throughout the world. As an SOC member, Lebanon Valley College recognizes the unique nature of the

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military lifestyle and has committed itself to easing the transfer of relevant course credits, providing flexible residency requirements, and crediting learning from appropriate military training and experiences.

Teacher Certification for Non-Matriculated Students

Lebanon Valley College offers teacher certification to a variety of special students. Students with degrees from other colleges, or teachers seeking certification in other fields, or Lebanon Valley College alumni seeking certification for the first time may receive certification. All students must present official transcripts of college work, or their previous teacher certification to the Registrar. The Education Department, the Registrar and the appropriate academic department shall evaluate the record and recommend the appropriate course of action. A fee shall be charged for this service.

Off-Campus Programs

The College offers several off-campus experiences for which students may register and receive credit.

Study Abroad

Students have opportunity for study abroad through the College's membership in the International Student Exchange Program, which consists of a network of more than 150 colleges and universities in 24 countries. Details are available from the Registrar. The College also assists students in locating and gaining admission to other foreign study programs; however participation in programs other than the International Student Exchange Program may affect the level of financial aid provided. In all cases, the proposed course of study must be approved by the appropriate department chairperson and the Registrar.

Washington Semester Program

Juniors and seniors in any major field, who have at least a 2.5 grade point average and have had basic courses in American national government, are eligible to participate in this program with approval of their department chairperson. This program is offered in cooperation with The American University in Washington, DC. Information is available from the chairperson of the Department of Political Science and Economics.

UNDERGRADUATE ACADEMIC PROGRAMS

General Education Program and Requirements

Through the General Education Program, the College most directly expresses its commitment to the ideal of liberal education that underlies its statement of purpose. The Program consists of three elements: Leadership Studies, the Core, and Distributive Requirements. The program's chief goals are to provide the essential foundation for the growth of knowledge and for making the connections between experience and learning. All degree students must complete the program outlined below.

Leadership Studies

In keeping with its commitment to fostering an understanding and enhancing the development of leadership the College requires all students to complete successfully a course in this area.

Area 1. Leadership Studies. 3 credit hours. To introduce all students to theories of leadership and to analyze practical applications of those theories. LC 100 or LC 111 (for Leadership Award students and other students as approved by the Director of Leadership Programs).

Core

The College requires that all students successfully complete the following interdisciplinary courses.

GE 120. The Western Experience: Our Cultural Heritage. A study of how life in the late Twentieth Century has been influenced by historical developments in Europe and America, including the growth of science, the rise of national states, social classes and values, and changing views of the world. 3 credits.

GE 140. Human Culture and Behavior. Culture as a context of human behavior. The nature and definition of culture. The biological and social sources of culture. Culture, language, personality. The impact of culture on social life and on the individual; examples from Western and non-Western sources. 3 credits.

GE 160. The Aesthetic Experience. The artist's achievement. Interrelationships among the arts. The creative process. Questions of form versus content. Art as the product of a specific socio-historical context. 3 credits.

Distributive Requirements

By requiring students to study a variety of academic areas the distribution requirement encourages each student to acquire an understanding of the broad spectrum of ideas and patterns of thinking that constitute the liberal arts. No course taken pass/fail or required for the first major may be used to meet the distribution requirement. Mathematics and computer science majors are exempt from the requirements of Area 3.

Area 2. Communications. 6 credit hours. To develop effective speaking and writing skills. Two sequential courses in English composition. EN 111, 112, or HC 201.

Area 3. Mathematics and Computers. 3-6 credit hours. To understand mathematics as a way of thinking and as a tool for problem solving. One integrated mathematics/computer course (MA 100) or one mathematics course and one computer course. Eligible courses are CS 147 or 170 plus one from MA 111, 150, 160, 161, 170. MA 100 fulfills entire requirement.

Area 4. Foreign Language. 6 credit hours. To gain perspective on the role of language in human affairs. Two sequential courses in a foreign language (or exemption by examination). All foreign language courses numbered 101, 102, 201, 202 are eligible.

Area 5. Historical and Cultural Contexts. 6 credit hours. To establish and explore the nature of human society. GE 120 and GE 140; or HC 202.

Area 6. Science and Technology. 7-8 credit hours. To discover scientific principles and discuss related moral and ethical questions. Two laboratory courses in biology, chemistry, physics or psychology (the two courses need not be in the same science). Eligible courses are BI 101, 102, 111, 112, CH 100, 111, 112, 113, 114, PHY 100, 103, 104, 111, 112, or PSY 120.

Area 7. Aesthetic Experience. 6 credit hours. To learn to appreciate works of art and gain insight into creative process. GE 160 and one course in art, music or literature. Eligible courses are AR 110, 201, 203, EN 200, 227, 228, FR 311, 312, GR 311, 312, MU 100, 341, 342, SP 311, 312; or HC 204.

Area 8. Values, Persons and World Views. 6 credit hours. To explore the relationship between world views and value systems. Two courses in religion or philosophy (the two courses need not be in the same discipline). PH 110, 220, 230, 240, RE 110, 111, 112, 140, 222; or HC 203.

Area 9. Physical Activity. 2 credit hours. To develop an interest in physical activity as a part of total fitness. Two courses in physical education involving conditioning or life-long sports. Any physical education course is eligible.

The Leadership Program

Leadership Studies are a vital component of the education of every Lebanon Valley College student. In addition to the priority on leadership in various disciplinary courses, an interdisciplinary course involving the study of leadership theories and processes (LC 100 or LC 111) is required as part of the General Education program for all students. Beyond these basics, Lebanon Valley offers two advanced programs in Leadership Studies.

Leadership Studies Program for Presidential Leadership Award Recipients provides a thorough grounding in the fundamentals of leadership, in both theory and application. This program consists of a four-course sequence spread over the four years of undergraduate study.

A voluntary program in Leadership Studies is available to all students in the College who wish to continue their study of leadership, both to broaden their understanding of leadership theories and processes and to increase their self-awareness in their roles as leaders and followers.

The Leadership Studies Program seeks to achieve the following outcomes for all participating students:

1. An understanding of the theories and models of leadership.
2. Knowledge of how people in diverse social and cultural contexts have assumed leadership roles and performed as leaders.
3. A critical awareness of how ethics and values help determine whether responsible leadership or mere manipulation (the irresponsible use of power and authority) will occur.
4. Increased self-awareness and understanding of how a person's behavior affects relationships in leader/follower situations.
5. Awareness and appreciation of the responsibilities and difficulties inherent in leadership.
6. Enhanced potential to assume a role as leader or responsible follower within a group, organization or community.

Leadership Studies Program for Presidential Leadership Award Recipients

LC 111; Ethics: RE 222 or PH 220; LC 350 and LC 400.

Leadership Studies Voluntary Program

LC 100 or 111; one course in communications: (EN 210 or 218); one course in organizational leadership (MG 330 or PSY 337 or SO 340); LC 330, 350 and 400.

Leadership Studies Courses

100, 111. Theories and Applications of Leadership Processes. Theories and concepts of leadership, power and authority. Analysis of their practical applications. Specific areas to be covered include group dynamics, communication skills, conflict resolution, motivation, decision making, and values clarification and ethics. Prerequisite: For LC 111 permission of instructor. 3 credits.

330. Ethical Issues and Values in Leadership. A critical examination of the ethical and valuational questions that reside at the core of both leadership and leadership theories. Prerequisite: LC 100 or 111. 3 credits.

350. Advanced Leadership Studies. Models and theories of leadership as exemplified in selected case studies. Analysis of leadership in other cultures and assessment of the student's own leadership style are also included. Prerequisite: LC 100 or 111; PH 220 or RE 222. 3 credits.

400. Leadership Internship. Prerequisite: LC 350. 3-12 credits.

Faculty:

Carolyn R. Hanes, Professor of Sociology and Social Work and Leadership Studies. Ph.D., University of New Hampshire. (See Department of Sociology and Social Work.)

Daniel B. McKinley, Director of Leadership Studies. Assistant Professor of Leadership Studies. M.A., University of Maryland. M.A.L.S. Wesleyan University. Mr. McKinley maintains an interest in small group development and offers leadership labs for communication skills development.

Leon E. Markowicz, Professor of Leadership Studies. Ph.D., University of Pennsylvania. He teaches courses in the Leadership Studies Program and assists in developing and coordinating Leadership internships. He serves local business as communications consultant. Dr. Markowicz is a Fellow of the Pennsylvania Writing Project and is active in the Lancaster-Lebanon Writing Council.

Barbara Jones Dension, Adjunct Assistant Professor of Leadership Studies. Ph.D., Northwestern University. She is interested in leadership and group interaction, especially in voluntary organizations, and acts as a consultant for religious and women's groups.

In addition to the appointed faculty, leadership studies courses are offered by faculty members from other disciplines within the College.

Honors Program

The honors program is designed for superior students who are keenly motivated to expand their intellectual horizons, develop their originality and curiosity, and challenge their intellectual abilities.

The program seeks to sharpen critical and analytical thinking, develop verbal and written expression, encourage intellectual independence, and foster sensitive and informed investigation of human values.

To achieve these goals, the program offers a demanding, stimulating and integrated alternative to the general requirements of the College.

Entering students and first semester freshman are selected on the basis of interviews and scholastic records.

Requirements: Students graduate with college honors after they have completed the honors program with a 3.0 grade point average or better overall and in the honors courses.

Honors Courses

201. Honors Communication. Writing and speaking clear, grammatical and articulate English. Listening and reading well. Searching information sources and applying those sources ethically. Analyzing and drawing conclusions. 3 credits.

202. The Individual and Society. An investigation into the structures of society, their origins, and their impact upon human values. Emphasis on the interaction of the individual and the socio-cultural environment. Evaluation of the approaches of the various social sciences. 6 credits.

203. Human Existence and Transcendence. A close examination of questions and issues pertaining to human existence and the ways in which mankind has attempted, religiously and philosophically, to rise above the conditions of human existence. This course seeks to describe and examine the commonalties and differences between religion and philosophy as each discipline addresses itself to existence and transcendence. 6 credits.

204. Human Creativity. A study of the major forms of literature, music, and plastic art, designed to acquaint students with functions, values, and aesthetic and cultural contexts of art, as well as to enhance their responses to art works. 6 credits.

Honors Seminars

The honors seminars are intensive studies of topics offered for junior and senior honors students. The honors students choose the topics for the seminars, help select the instructors and assist in the design of the seminars with the instructors. Each participant in the honors program shall complete two honors seminars.

Honors Independent Study

An independent study project, the capstone of the honors program, provides the opportunity to carry out an extensive academic study of the student's own design. The project, overseen by a faculty member, must be approved by the Honors Director. When acceptable to an academic department such independent study may serve as the basis for departmental honors. Upon completion, the project will be presented publicly. 3 credits.

Graduation Requirements

In addition to the honors program and major requirements, honors students take: one leadership course; two (2) one-semester courses in science; two (2) sequential courses in a foreign language or exemption by examination or one foreign language course at the 300 level; a one-semester integrated course in mathematics and computer science (MA 100) or one course in mathematics and one course in computer science; and two (2) courses in physical education.

Departmental Honors

All major programs provide the opportunity for departmental honors work during the junior and senior years. For specific information, interested students should contact the appropriate department chairperson. Generally, departmental honors consists of a reading and/or research project producing a thesis or essay. This project is undertaken on a subject of the student's own choosing under the supervision of a faculty advisor. Opportunity also exists to do creative work. A maximum of 9 hours credit may be earned in departmental honors.

UNDERGRADUATE PROGRAMS OF STUDY

Internships

An internship is a practical and professional work experience that allows students to participate in the operations of business, industry, education, government, or not for profit organizations. Internships provide students with the opportunity to integrate their classroom learning with on the job experience. Students test the practical application of their liberal arts learning in a variety of professional, service, and occupational settings.

For one semester hour of credit, the intern should invest at least 45 clock hours of time in the internship. The internship essentially involves a contract between the student, the faculty advisor, and the on-site internship supervisor. In addition to the practical on-site experience, internships typically require special readings, reports, journals and faculty conferences.

Students may enroll for three to twelve credit hours of internship in any one semester. A maximum of fifteen credit hours in internships may be used towards the graduation requirements. All internships have a course number of 400. The adjacent is a summary of departmental internship policies.

Additionally, Elementary Education and Secondary Education majors are required to complete successfully a student teaching field experience. Hotel management majors are also required to complete successfully three supervised field experiences for a total of 9 credits. There are no internships in art, music, or philosophy.

Internships

Discipline	Eligible Students	Prerequisite	Hrs.Per Sem.	Other Requirements
Accounting	Jr/Sr Mjr.		1 - 12	2.75 GPA
Actuarial Science	Jr/Sr Mjr.		1 - 12	
American Studies			3 - 6	
Biochemistry	Jr/Sr Mjr.		1 - 12	2.00 GPA
Biology	Jr/Sr Mjr.		1 - 4	
Chemistry	Jr/Sr Mjr.		1 - 12	2.00 GPA
Computer Science	Jr/Sr Mjr.		1 - 12	
Economics	Jr/Sr Mjr.		1 - 12	2.75 GPA
English	Communications Majors only		1 - 12	
French			1 - 12	
German			1 - 12	
History			3 - 6	
International Business	Jr/Sr Mjr.			2.75 GPA
Leadership		LC 350	3 - 12	
Management	Jr/Sr Mjr.		1 - 12	2.75 GPA
Mathematics	Jr/Sr Mjr.		1 - 12	
Physics			1 - 12	
Political Science		PS 111 & 112	1 - 12	
Psychobiology	Jr/Sr Mjr.	PSY 100 or 120	1 - 12	
Psychology	Jr/Sr Mjr.	PSY 100 or 120	1 - 12	
Religion			1 - 6	
Social Work		SW 341 or 342	1 - 12	2.20 GPA & 40 hr. vol.
Sociology			1 - 12	18 cr. in Soc.
Sound Recording Technology		SRT 388 & 487	3 - 6	
Spanish			1 - 12	

Independent Study

Independent Study provides students with an opportunity to undertake a program of supervised reading, research, or specialized teaching methods, usually on subjects not incorporated in existing formal courses. Independent Study shall not be used to approximate an existing course for a single student or to cover projects more properly described as Internships.

For one semester hour of credit, the Independent Study student should invest at least 45 clock hours of time in reading, research, or report writing. The Independent Study essentially involves a contract between the student and the faculty advisor.

Students may enroll for one to nine credit hours of Independent Study in any one semester. A maximum of nine credit hours in Independent Study may be used toward the graduation requirements. All Independent Studies have a course number of 500. The following is a summary of departmental Independent Study policies.

Independent Study

Discipline	Eligible Students	Prerequisite	Hrs.Per Sem.	
Accounting	Jr/Sr Mjr.	CH 311 & 312	1 - 6	
Actuarial Science			1 - 3	
American Studies			1 - 9	
Biochemistry			2 - 3	
Biology			1 - 9	
Chemistry			1 - 9	
Computer Science			1 - 9	
Economics			FR 316	1 - 6
Education				1 - 3
Elementary Education				1 - 3
English	1 - 3			
French	1 - 6			
German	1 - 6			
History	1 - 3			
International Business	Jr/Sr Mjr.	1 - 6		
Leadership Studies	Jr/Sr Standing	LC 100 or 111	3 - 15	
Management	Jr/Sr Mjr.		1 - 6	
Mathematics			1 - 6	
Philosophy			1 - 3	
Physics			1 - 3	
Political Science			1 - 3	
Psychobiology			1 - 9	
Psychology		PSY 100 or 120	1 - 6	
Religion			1 - 3	
Social Work	Jr/Sr Mjr.	2.50 GPA & contract inst. & student	1 - 3	
Sociology	Jr/Sr Mjr.	2.50 GPA & contract inst. & student	1 - 3	
Spanish			1 - 6	

There are no independent study courses in art, hotel management, music and sound recording technology.

Tutorial Study

Tutorial Study provides students with a special opportunity to take an existing formal course in the curricula that is not scheduled that semester or summer session. Students desiring a Tutorial Study must have an appropriate member of the faculty agree to supervise the study on a one on one basis.

For one semester hour of credit, the student should invest at least 45 clock hours of time in the Tutorial Study. The Tutorial Study essentially involves a contract between the student and the faculty advisor. The typical Tutorial Study involves readings, research, report writing, faculty conferences, and examinations. All Tutorial Study courses have the same course number as the existing formal catalog course.

Special Topics Courses

From time to time, departments may offer Special Topics courses using the following course numbers: 290-298, 390-398, and 490-498. Special Topics courses are formal courses that are not listed permanently in the curricula and that are offered infrequently. These courses examine comparatively narrow subjects that may be of topical or special interest. Several different topics may be taught in one semester or academic year. A specific course title shall be used in each instance and shall be so noted on the student record.

Department Of Art

The Art Department, through course work and the minor program, provides an opportunity for creative expression and a richer understanding of accomplishments in the visual arts.

No major is offered in Art. For the minor and course descriptions, see page 66.

Faculty:

Richard A. Iskowitz, Associate Professor of Art. Chairperson. M.F.A., Kent State University. He teaches art history, aesthetics and studio, and is director of the Mund Center art exhibits. Professor Iskowitz' special interest is photography and his work is exhibited frequently in juried competition.

Marie F. Riegle, Lecturer in Art, M.F.A., The Pennsylvania State University. Her teaching interests are art history, printmaking, painting and drawing.

Donald Winer, Adjunct Assistant Professor of Art, M.A.F.A., University of Missouri. Mr. Winer is curator emeritus of The Pennsylvania Collection of

Fine Arts, William Penn Museum. His teaching specialties include art history especially Pennsylvania arts and crafts.

R. Gordon Wise, Adjunct Professor of Art, Ed.D., University of Missouri. Dr. Wise is a Professor of Art at Millersville University and specializes in art education.

Department Of Biology

The aims of the program for biology majors are: (1) to provide a thorough understanding of the principles of biology and background in disciplines basic to biology; (2) to develop skills in the application of the scientific method and in the retrieval and communication of technical information; and (3) to train students for employment at the baccalaureate level and to provide preparation for those interested in graduate, professional and medical programs.

The department offers a major program in biology, and joint majors in biochemistry and psychobiology. For the major and course descriptions in biology, see page 68. For those in psychobiology, see page 117.

Cooperative Programs

Forestry and Environmental Studies

Students completing a three-year program at Lebanon Valley College studying the liberal arts and the sciences basic to forestry and environmental sciences may apply for admission to the cooperative forestry program with Duke University. Upon completion of the first year of the two-year (plus one summer) program at Duke University, the student will receive the Bachelor of Science degree from Lebanon Valley College. After completion of the program at Duke, the student will receive the professional degree of Master of Forestry (M.F.) or Master of Environmental Management (M.E.M.) from Duke University. Students may major in biology, economics, political science, or mathematics at Lebanon Valley College. For specific program requirements in forestry, see page 83. For those in environmental studies, see page 83.

Medical Technology and Nuclear Medicine Technology

The College has its own major in medical technology. The student takes three years of courses to fulfill the requirements of the College and of the National Accrediting Agency for Clinical Laboratory Sciences. Before or during the third year of the program, a student applies to a hospital with a CAHEA approved school of medical technology where he/she spends the

fourth year in training. Admission is not automatic and depends upon the academic record, recommendations and an interview. Upon satisfactorily completing the clinical year, the student is awarded the degree of Bachelor of Science in Medical Technology by Lebanon Valley College. The College is affiliated with the following hospitals: Sacred Heart Hospital (in Allentown), Harrisburg Hospital, Polyclinic Medical Center of Harrisburg, Jersey Shore Medical Center-Fitkin Hospital, Lancaster General Hospital, and Reading Hospital and Medical Center. However, the student is not limited to these affiliations and may seek acceptance at other approved hospitals. (Refer to the Allied Health Professions section for additional programs in medical technology.)

The College offers a program for students interested in nuclear medicine technology ("3 + 1"). The College is affiliated with the schools of nuclear medicine technology at the University of Virginia Medical Center and J.F. Kennedy Medical Center, Edison, NJ. Admission is not automatic and depends upon the academic record, recommendations and an interview. Application may also be made to other accredited programs. Upon successful completion of the program, students are awarded the baccalaureate degree by Lebanon Valley College.

Allied Health Professions

Lebanon Valley College has established a cooperative program ("2+2") with Thomas Jefferson University in Philadelphia, PA for students interested in the allied health professions. The College of Allied Health Sciences of Thomas Jefferson University offers baccalaureate programs in cytotechnology/cytogenetics, dental hygiene, diagnostic imaging (radiography/ultrasound), medical technology, and occupational therapy, and also offers an entry-level master's program in physical therapy.

Students spend two years at Lebanon Valley College taking required courses in the basic sciences and other disciplines. During the second year, application is made to Thomas Jefferson University. Admission to Thomas Jefferson University is not automatic, and depends upon the academic record, recommendations and an interview. If accepted, the student spends two years (three years for physical therapy) at Thomas Jefferson University taking professional and clinical courses. Upon successful completion of the program, the student is awarded a baccalaureate degree (or masters, for physical therapy) by Thomas Jefferson University.

Lebanon Valley College also maintains a cooperative program with Hahnemann University in Philadelphia for students interested in medical technology ("2+3"). Students spend two years at Lebanon Valley and three

years at Hahnemann University. The program at Hahnemann University combines both classroom/laboratory study and off-campus salaried work experience. Admission procedures are similar to those described above. Upon successful completion of this program, the student is awarded the baccalaureate degree by Hahnemann University.

Faculty:

Dale J. Erskine, Associate Professor of Biology. Ph.D., University of Oklahoma. He teaches animal physiology, introduction to immunology, human biology, and participates in general biology. He believes in introducing his students to a wide range of laboratory experiences including modern instrumentation and computer-assisted data collection. His research interests are in temperature regulation and thermal tolerance, heat energy budgets, and computer analysis and simulation of animal-environment interactions. He is also director of the Summer Youth Scholars Institute.

Sidney Pollack, Professor of Biology. Ph.D., University of Pennsylvania. He teaches courses in genetics, microbiology, human biology, and general biology. He is the academic advisor for students preparing for the allied health professions. His research interests include paramecium genetics.

Susan Verhoek, Professor of Biology. Ph.D., Cornell University. She teaches plant form and function at the general biology level, and form, interrelationships and systematics of non-vascular and vascular plants at the advanced level. Her research is on the pollination biology and systematics of members of the Agave family. A past president of the Society for Economic Botany, she has a long standing interest in the interactions of plants and humans; and, as author of a field identification book, a continuing interest in plants that flower in the spring.

Stephen E. Williams, Professor of Biology. Ph.D., Washington University, St. Louis. He teaches molecular biology, plant physiology and the biochemical portions of general biology. He is a plant and cell physiologist who, working together with Lebanon Valley College students and scientists at other institutions, has made most of the major contributions to the understanding of the physiology of carnivorous plants during the past twenty years, including the discovery of the mechanism of Venus flytrap closure. He has five years of experience automating laboratory instruments with microcomputers and manages a project at Lebanon Valley College in this area.

Paul L. Wolf, Professor of Biology. Chairperson. Ph.D., University of Delaware. He teaches courses in general biology, comparative vertebrate anatomy, and ecology. His research interests focus on the ecology of

wetlands with particular emphasis on the saltmarshes of Eastern United States and Nova Scotia. He also holds the position of Adjunct Professor of Marine Biology in the College of Marine Studies, University of Delaware.

Allan F. Wolfe, Professor of Biology. Ph.D., University of Vermont. He teaches comparative histology, developmental biology, invertebrate zoology, general biology, parasitology, and directs independent study in cell biology using electron microscopic and histological techniques. His current research utilizes the brine shrimp, *Artemia*, to study the cell and tissue levels of organization of the digestive, reproductive, and neurosensory systems.

Anna F. Tilberg, Lecturer in Biology, B.A., University of Pennsylvania. She is on the staff of the Milton Hershey Medical Center and teaches introductory biology.

Department Of Chemistry

Chemistry is the "central science" that provides the fundamental understanding needed for protecting our environment, maximizing the yield from limited natural resources, improving our health, and creating new materials for tomorrow's products. Indeed, chemistry is essential to understanding life itself.

Career opportunities in chemistry are numerous and diverse. Many students enter industrial or governmental laboratories where they find positions in environmental analysis, quality control, or research and development. Possibilities outside of the laboratory include teaching, sales, marketing, technical writing, business, and law. Many chemistry students continue their education in graduate school in chemistry or biochemistry, or in professional schools in the areas of medicine, dentistry, or veterinary medicine.

At Lebanon Valley College the Department of Chemistry is located on the upper two floors of the Garber Science Center. Major scientific equipment available to students includes a nuclear magnetic resonance spectrometer, a liquid scintillation counter, a fourier transform infrared spectrometer, a high performance liquid chromatographic system, a diode-array UV-visible spectrophotometer, and a gas chromatograph-mass spectrometer, and an atomic absorption spectrophotometer. Computers available to students in the department include Apple, Macintosh, and IBM-compatible machines.

The Department encourages students to discover the excitement and challenge of laboratory research. Research programs are conducted during both the academic year and the summer. Students are paid for summer research either from College funds or from grants that professors receive to support their projects.

Two degrees are available to those interested in chemistry, and one for those interested in biochemistry. The Bachelor of Science in Chemistry is the more demanding of the two degrees in chemistry, and is recognized by the American Chemical Society. This degree has a required research component and is recommended for students who wish to become practicing chemists or enroll in graduate school. Other students opt for the standard Bachelor of Science degree, majoring in chemistry.

For the major programs and course descriptions in chemistry, see page 71.

The major in biochemistry is offered jointly with the Biology department. For the major program and course descriptions in biochemistry, see page 67.

Faculty:

Richard D. Cornelius, Professor of Chemistry. Chairperson. Ph.D., University of Iowa; postdoctoral research, University of Wisconsin. Inorganic Chemistry. Professor Cornelius works at the border of inorganic chemistry and biochemistry. He has interests both in the fundamental mechanisms of phosphoryl transfer reactions and in the development of platinum compounds that hold promise for anti-cancer activity. He and his students synthesize new compounds containing phosphates and study the rates of reactions of these compounds. Studying the nature of the new compounds provides insight into the manner in which enzymes catalyze related reactions in nature. He also has earned a national reputation for his work with computers in chemical education.

Donald B. Dahlberg, Associate Professor of Chemistry. Ph.D., Cornell University; postdoctoral work, University of Toronto. Physical chemistry. Dr. Dahlberg does research on the mechanism of elimination reactions in organic chemistry. An important question to be answered in mechanistic organic chemistry is when and how a reaction changes from a concerted mechanism to a multistep mechanism. Does one mechanism evolve into another as the substrate is modified, or do two distinct pathways exist at all times where each substrate chooses the path of lowest energy? He is also interested in applying the most recent developments in computers and electronics to the construction of chemical instrumentation.

Owen A. Moe, Jr., Professor of Chemistry. Ph.D., Purdue University postdoctoral study, Cornell University. Biochemistry. Professor Moe is interested in applying the array of new techniques in biotechnology to practical problems. He is currently working on the use of immobilized enzymes for the synthesis of bio-organic compounds. Processes that he is developing are designed to use stable, inexpensive polyphosphates for the regeneration of

ATP. ATP regeneration is a required, but currently an expensive, step in the use of enzyme reactors for organic synthesis.

Stephen R. Sexsmith, Assistant Professor of Chemistry. Ph.D., State University of New York at Binghamton. Organic Chemistry. Professor Sexsmith is interested in the interaction of main-group and transition metal organometallic compounds as it relates to Ziegler-Natta polymerization catalysts. Of specific interest are the reactions of organoaluminum compounds with zero-valent nickel species. He is also interested in utilizing organometallic compounds in the study of coal liquefaction.

H. Anthony Neidig, Professor and Chairperson Emeritus. Ph.D., University of Delaware. Recipient of the Chemical Manufacturers' Association College Chemistry Teacher Award in 1970 and the E. Emmet Reid Award for excellence in teaching in a small college in 1978. Professor Neidig's pursuits include the development and publication of laboratory experiments for introductory chemistry.

Department Of Education

The Department of Education prepares students for both elementary and secondary teaching.

The Education Department is committed to preparing elementary education majors who have a thorough grounding in the disciplines they will teach within the context of a strong liberal arts foundation. The program includes intensive training in the content and methodologies of all elementary school subjects.

The field-centered component in the program provides extensive and carefully sequenced opportunities to work with teachers and children in a variety of school settings during all four years of preparation for teaching. Majors spend an average of two hours per week each semester in various public school classrooms, observing teachers and children, aiding, tutoring, providing small-group and whole-class instruction, and completing tasks on increasingly challenging levels of involvement. Seniors spend the fall semester in full-time student teaching with cooperating teachers who have been carefully chosen for that role. Additional opportunities are provided for our students to work in nursery schools, child care centers, Head Start programs, middle schools, and in classes for exceptional children.

Students pursuing secondary teacher certification are prepared for teaching by completing an intensive program in the departmental major(s) of their choice in conjunction with a carefully sequenced professional education component

within the Education Department. Both the major program and the professional education component are completed within the context of a strong foundation in the liberal arts.

Departmental majors may seek certification in biology, chemistry, English, French, German, Spanish, mathematics, physics, and social studies.

Opportunities are provided candidates to observe and to teach in junior high and high school settings prior to the full-time student teaching semester. Cooperating teachers are selected through a process involving college faculty, public school personnel, and the student teachers, thus assuring the most beneficial placements possible.

Dual certification, at both the elementary and secondary levels, or in more than one secondary area, is possible; however, such certification requires meticulous attention to scheduling and often requires an additional semester or two.

Post-baccalaureate certification is also available for those who wish to become elementary school teachers or for those already certified who want to add elementary education to an existing certificate.

The Education Department is intent on preparing well-rounded and qualified graduates who will exercise genuinely professional and personal leadership roles in the schools and communities where they will work.

The major and course descriptions in Elementary Education are on page 78. The program and course descriptions in Secondary Education are on page 124. The descriptions of courses in Education are on page 77.

Faculty:

Madelyn J. Albrecht, Associate Professor of Education. Ph.D., Michigan State University. She teaches courses in social, historical, and philosophical foundations of education, curriculum and methods, educational psychology and cultural geography. She supervises student teachers. She is an active scholar in the field of teacher education and an advisor for professional programs leading to secondary teacher certification.

Susan L. Atkinson, Assistant Professor of Education. Ed.D., Temple University. She teaches educational methods courses in mathematics, science, social studies, and language arts, plus courses in the social, historical, and philosophical foundations of education and physical geography. She coordinates field practicum in the public schools and supervises student teachers. Her research interests are in the area of matching student/teacher learning styles to increase academic achievement. She holds Pennsylvania certifica-

tions in Elementary Education, English Second Language, Special Education, and Library Science. Her areas of interest include multidisciplined curricula, classroom management, leadership strategies, and early childhood education. She believes in exposing her students to the "real world" of teaching through extensive hands-on educational activities and experiences. She is the advisor for the College's professional teaching organization, which includes secondary, elementary, and music education majors.

Michael A. Grella, Professor of Education. Chairperson. Ed.D., West Virginia University. He teaches courses in children's literature, reading, the language arts, social studies, early childhood education, and exceptional children. He coordinates early field practica in the public schools and supervises student teachers. He serves as the department's chief liaison with public school personnel and with the Pennsylvania Department of Education. He maintains a special interest in the acquisition of literacy at the primary grade levels and in learning disabilities.

Department of English

The major in English introduces students to the humanistic study of literature or to the humanistic practice of writing. While English majors may choose to concentrate either in literature or communications, the basis for both concentrations is the systematic and analytic study of literature. All majors also learn clear, concise, and coherent expression as well as effective collection, organization, and presentation of material. Such study prepares the student for more advanced work in many fields. Graduates of the Department of English are prepared to work in such fields as journalism, teaching, editing, public relations, publishing, advertising, government, industry, the ministry, and law.

The English department offers a major program with concentrations in literature, communications, and secondary education, as well as minors in both literature and communications. For program and course descriptions, see page 80.

Faculty:

Philip Billings, Professor of English. Ph.D. Michigan State University. He teaches courses in contemporary literature and aesthetics as well as creative writing. His publications include poems in various magazines and a book of poems based on people living in the region.

Phylis Dryden, Assistant Professor of English. D.A. State University of New York at Albany. She is a specialist in composition theory, linguistics,

and American Studies and has experience in journalism and in industry. She publishes poetry, fiction, and non-fiction and has conducted poetry workshops as well as presented readings of her own poetry.

Arthur L. Ford, Professor of English, Ph.D. Bowling Green State University. He has published books on several American authors, including Thoreau and Creeley, as well as articles on composition theory and the computer in composition. Recent Fulbright lectureships in Syria and China have resulted in several research projects.

John Kearney, Professor of English, Department Chairperson. Ph.D. University of Wisconsin. He is a Nineteenth Century British literature scholar working on a book on Dickens, who also teaches technical writing and directs the department internship program.

Jacqueline Vivelo, Assistant Professor of English. M.A., University of Tennessee. She has worked as a technical writer and has published award-winning fiction for children.

Glenn Woods, Associate Professor of English. M.Ed. Temple University. In addition to composition, his areas of interest include linguistics, speech, and the teaching of secondary English.

Paul Baker, Lecturer in English. B.A. Lebanon Valley College. He is city editor of the Lebanon Daily News and teaches journalism.

Marie Bongiovanni, Lecturer in English. M.B.A., Drexel University. Experienced in journalism and business, she teaches management communications.

Richard J. Goedkoop, Adjunct Associate Professor of English, Ph.D., The Pennsylvania State University. Dr. Goedkoop's teaching speciality is mass communications. Currently he is researching the process and product of local television news reporting.

Agnes O'Donnell, Professor Emerita of English. Ph.D. University of Pennsylvania. Recently retired, she teaches literature courses.

Department Of Foreign Languages

The study of a foreign language has three aims: to develop fluency in the basic communication skills, to provide an understanding of the cultural heritage of the people who use the language, and to understand language as the fundamental medium by which humankind thinks and interacts.

The Department of Foreign Languages prepares the language major for a career in a variety of fields: teaching, diplomatic and government service,

foreign trade, business and social service. For many of these careers the study of a foreign language is often combined with majors in other disciplines.

The Department encourages students to avail themselves of the College's opportunities for foreign travel and study, including the International Student Exchange Program.

The Department of Foreign Languages offers majors in French, German, and Spanish, and in Foreign Language, as well as minors in the three languages. In addition, coursework, but no major or minor, is offered in Greek. The department also offers the major in International Business jointly with the Management department.

The major, minor and course descriptions in French are on page 84. Those in German are on page 87. Those in Spanish are on page 131. The major in Foreign Languages and the descriptions of general courses in foreign language are on page 87. The course descriptions in Greek are on page 88. The major in International Business is on page 95.

Faculty:

Susan L. Egner, Instructor of Spanish. B.A., Lebanon Valley College; M.A., Middlebury College. She teaches the beginning level Spanish courses and is interested in pursuing Teaching Methodology at post graduate level.

Diane M. Iglesias, Professor of Spanish. Chairperson. Ph.D., City University of New York. She teaches courses in Spanish language, Spanish and Latin American culture, civilization and literature. She has presented research papers in medieval balladry and the theater of the Spanish Golden Age at scholarly conferences. Her current research is in the area of the modern Latin American novel. She is particularly interested in the concept of "magical realism" as it applies to the works of Gabriel García Márquez.

James W. Scott, Professor of German. Ph.D., Princeton University. He teaches the language, literature and culture of German speaking areas. One continuing scholarly interest is medieval hagiography. His recent research and writing has focused on contemporary German literature and film. Past summers have taken him to Bonn on a Fulbright grant, to the Carl Duisberg Institute to study business German and to Leipzig to attend a seminar on the German Democratic Republic. He serves as secretary-treasurer of the Central Pennsylvania Association of Teachers of German and coordinates their annual testing program for high school students.

Joëlle L. Stopkie, Assistant Professor of French. Licence, Sorbonne, Paris (France), M.A., New York University, Ph.D., Bryn Mawr College. She is a member of the American Association of Teachers of French (AATF), and the American Council on the Teaching of Foreign Languages (ACTFL) and also Phi Sigma Iota, the National Foreign Language Honor Society.

Department Of History and American Studies

By examining human behavior in the past, the study of history can help people better understand themselves and others. Students of history also learn how to gather and analyze information and present their conclusions in clear, concise language.

An undergraduate degree in history or American Studies can lead to a career in teaching at the college or high school level, law, government, politics, the ministry, museum or library work, journalism or editing, historical societies and archives, private foundations, business, or a number of other professions.

For the major, minor, and courses in history, see page 90. For those in American Studies, see page 65.

Faculty:

James H. Broussard, Professor of History, Chairperson. Ph.D., Duke University. He teaches American history and historiography. His research and publications concentrate on the Jefferson-Jackson era, the South, and American politics. He is also Executive Director of the Society for Historians of the Early American Republic.

Donald E. Byrne, Jr., Professor of History and Religion and Director of American Studies Program. Ph.D., Duke University. His teaching centers on the history of Christianity and religion in America, and he participates in the Honors and Leadership Studies programs. His scholarship has focused on American folk religion; other interests include religion and literature, peace studies, and mysticism.

Richard A. Joyce, Associate Professor of History. M.A., San Francisco State College. He teaches ancient, medieval, and modern European history. He is particularly interested in social and intellectual history.

Howard L. Applegate, Adjunct Professor of History, Secretary of the College. Ph.D., Syracuse University. He teaches business history and American military history. His current research interest is the American automotive industry.

Elizabeth Radford, Lecturer in History. ABD, University of Virginia. She teaches Western civilization and American political history. Her research interest is American politics.

John Abernathy Smith, Adjunct Associate Professor of History and Religion. Ph.D., The Johns Hopkins University. His teaching interests are social and intellectual history. Dr. Smith currently is researching the history of United Methodist higher education.

The Department Of Management

The Department of Management offers programs leading to the bachelor of science degree in accounting, hotel management, management, and international business (jointly with Foreign Languages Department). The Department also offers a minor in hotel management.

The Department's programs are designed to provide students with a sound, integrated knowledge of accounting and management principles, and related courses from supporting disciplines. The Department's programs are enhanced by the liberal arts and leadership studies core required of all students, and by the extensive application of computers in relevant courses. This interdisciplinary knowledge base is essential for assuming leadership and management positions in the changing world of the Twenty-First Century.

Management students are provided with a common body of knowledge in close conformity with the national standards for the study of business administration as recommended by the American Assembly of Collegiate Schools of Business. As a result, our graduates are well prepared for admittance to M.B.A. programs.

Opportunities are available for qualified and interested students to undertake an independent study project or an internship in consultation with a member of the Department faculty.

The major and course descriptions in Accounting are on page 63; those in Hotel Management are on page 93; those in International Business are on page 95; and those in Management are on page 96.

Faculty:

Donald C. Boone, Assistant Professor of Hotel Management. Mr. Boone holds a bachelor degree in Restaurant Management and an MBA degree in Hotel Administration from Michigan State University. He has 18 years of hotel industry experience and has taught several years in Hotel Management programs. Mr. Boone serves as Coordinator of the Hotel Management Program and teaches Hotel Management, Management and Accounting.

Sharon F. Clark, Associate Professor of Management and Department Chairperson. Dr. Clark holds a bachelor degree and a juris doctorate degree from the University of Richmond. She has several years experience in private law practice and several years as a Supervisory Tax Attorney with the Internal Revenue Service. Dr. Clark teaches corporate income tax and a variety of management courses including Personnel Management, Business Law, Labor and Industrial Relations, and Hotel Law.

Robert W. Leonard, Assistant Professor of Management. Mr. Leonard holds a master's degree in Business Administration from Ohio State University, a masters degree in Industrial Relations from St. Francis Graduate School of Industrial Relations, and a bachelor's degree in Psychology with a minor in Business Administration from Ohio University. Mr. Leonard teaches Managerial Finance, Principles of Management, Productions Operations Management, Organizational Behavior and Development, and Labor and Industrial Relations.

Fred Maidment, Associate Professor of Management. Dr. Maidment holds an Ed.D. in Higher Education in Business from the University of South Carolina, an MBA degree from the Bernard M. Baruch College of the City University of New York and a bachelor's degree in Business from New York University. Dr. Maidment teaches courses in Marketing, Consumer Behavior, Business Policy, Principles of Management, Marketing Research, and International Business Management.

Gail Sanderson, Assistant Professor of Management. Ms. Sanderson has a bachelor's degree from Hobart & William Smith Colleges, and an MBA degree (with honors) from Boston University; CPA. Ms. Sanderson has professional experience in accounting (public and private sectors); income tax; computer systems analysis and design.

Barbara S. Wirth, Assistant Professor of Accounting. Ms. Wirth holds an MBA degree and a bachelor's degree in Economics from Lehigh University; CPA. Ms. Wirth has worked in the public sector as a CPA for six years. Ms. Wirth teaches Auditing, Governmental and Non-Profit Accounting, Principles of Accounting, and Managerial Accounting.

Robert W. Biddle, Jr., Adjunct Assistant Professor of Hotel Management, Ed.M., Pennsylvania State University. Mr. Biddle is Culinary Arts Instructor at Milton Hershey School.

David L. Broderic, Adjunct Assistant Professor of Health Care Management, M.B.A., University of Chicago. Mr. Broderic is President of Good Samaritan Hospital and specializes in teaching health care management.

Nelson L. Ebersole, Lecturer in Real Estate. Mr. Ebersole is a broker with Suburban Realty Company and past president of the Lebanon County Board of Realtors. He specializes in real estate education.

Dennis N. Eshleman, Adjunct Assistant Professor of Management, M.B.A., Columbia University. Mr. Eshleman is a manager for New Product Development at Hershey Foods. His teaching interests include marketing, marketing research and management.

V. Carl Gacono, Adjunct Assistant Professor of Real Estate, B.S., Susquehanna University. Mr. Gacono is a broker with Prudential Gacono Real Estate and past president of the Lebanon County Board of Realtors. He specializes in real estate education.

Department Of Mathematical Sciences

The Lebanon Valley College Department of Mathematical Sciences has long offered a rigorous mathematics program within the context of a liberal arts education. Today an increasing national need for mathematically prepared individuals has made our program even more attractive. Computer scientists, secondary school mathematics and computer science teachers, college professors in mathematical sciences, actuaries, operations research analysts, and statisticians are in high and continuing demand. In addition, the mental discipline and problem solving abilities developed in the study of mathematics have long been recognized as excellent preparation for numerous and varied areas of work or study.

The department offers majors in actuarial science, computer science, computer information systems, and in mathematics, and minors in computer science and in mathematics.

Five students from this department have earned Fulbright Scholarships in recent years for graduate study abroad. Departmental graduates have earned Ph.D. degrees in physics and computer science as well as mathematics. Other graduates have completed law school. Many graduates are Fellows of the Society of Actuaries and the Casualty Actuarial Society. Regularly, more than a quarter of the Lebanon Valley students named to the Who's Who in American Colleges and Universities will be students from this department.

Actuarial Science

The actuarial profession defines an actuary as “a business professional who uses mathematical skills to define, analyze and solve financial and social problems.” Actuaries are employed by insurance companies, consulting firms, large corporations, and the federal and state governments. The Society of Actuaries and the Casualty Actuarial Society establish and monitor the professional qualifications of actuaries through a series of rigorous examinations. In recent years, the demand for actuaries has far exceeded the supply and indications are that the situation will continue.

The Lebanon Valley College Actuarial Science program is coordinated by Professor Hearsey, an Associate of the Society of Actuaries. The program consists of coursework selected to provide a solid foundation in mathematics and to prepare students for courses 100-150 of the Society of Actuaries syllabus and Parts 1-4 of the Casualty Actuarial Society syllabus. A student may prepare for additional examinations through independent study. The Actuarial Science program at Lebanon Valley College was established in the mid 1960's and now boasts over 60 alumni in the actuarial profession. Lebanon Valley College is one of the few small liberal arts colleges east of the Mississippi River offering an actuarial science major. This program has a record of 100% placement of graduates and most students are able to find summer employment in the actuarial field during their sophomore and junior summers.

Computer Science

Although it has been over 40 years since the development of the first electronic computer, Rear Admiral Grace Murray Hopper said at the 1987 Lebanon Valley College graduation exercises that “we are still in the Model T or DC-3 age so far as computers are concerned.” All of us will be working in a computer environment and must be able to use computers to assist us rather than have computers control us. The United States is the world leader in most phases of the computer industry, from the silicon chip to operating systems and other software and applications.

The department's approach to computer science is to broaden the program by supporting it with a strong theoretical perspective, and by embedding it in the values of liberal education. The program is also designed to appropriately reflect the rapidly changing technology and applications in the computer field. Therefore, courses and equipment are constantly modified to optimize the student's computer education and experience. New facilities with the

latest technology, planned for 1990, and an innovative major program will provide the students with unique opportunities to tailor their studies to their individual knowledge and interests.

The computer equipment ranges from representatives of all major microcomputers to a DEC VAX system, all connected by networks. All major operating systems and languages are available and immediately accessible for course work or independent study.

Mathematics

The recent identification by a graduate student of an error in Sir Isaac Newton's work and the recent development of a revised linear programming algorithm are but two examples that clearly demonstrate that mathematics is alive and vibrant. National concerns have been expressed concerning mathematics education in elementary schools and the decrease in graduate studies in mathematics. Management schools continually are increasing the quantitative component in their curriculum, and business and industry continually are looking for mathematically trained individuals. The demand for teachers is well publicized. A bright and rewarding future awaits one choosing mathematics as a field.

The program gives the student a broad selection of courses, theoretical and applied, from which to choose after completing the core program. Students may choose preparation for graduate programs, business and industrial preparation, preparation for secondary school teaching, or such concentrations as statistics or operations research. Students often combine mathematics with another major or minor.

The major and courses in actuarial science are on page 65. Those in computer science and computer information systems are on page 73. Those in mathematics are on page 99.

Faculty:

Michael D. Fry, Assistant Professor of Mathematical Sciences. Ph.D., University of Illinois. An avid student of computer science, he is interested in operating systems and in networking, computer interfacing and peripheral equipment. He teaches a broad range of computer science courses, upper level algebra and geometry and other mathematics courses.

Bryan V. Hearsey, Professor of Mathematical Sciences. Director, Actuarial Science Program. Ph.D., Washington State University. An Associate of the Society of Actuaries, he has many contacts within the actuarial profession. Dr. Hearsey is interested in approaches to providing mathematics education

to the liberal arts student not majoring in mathematical sciences, and teacher education as well as actuarial science. He teaches upper level actuarial science courses and a broad range of mathematics courses.

Joerg W. P. Mayer, Professor of Mathematical Sciences. Ph.D., University of Giessen. He has extensive experience in undergraduate and graduate teaching, and in government and industrial consulting. His publications range from mathematical research to educational philosophy, including numerous reviews in mathematical and computer sciences, and two textbooks on Algebraic Topology and in Computer Assembly Language. His teaching interests lie in advanced mathematics and basic computer science.

Horace W. Tousley, Assistant Professor of Mathematical Sciences, Chairman. M.S.I.E. (OR), University of Alabama. A career military logistician and operations research practitioner. Interested in mathematical modeling, quantitative methods, and applications. Teaches operations research, selected upper division courses, and a broad range of other courses.

Mark A. Townsend, Assistant Professor of Mathematical Sciences. Ed.D., Oklahoma State University. His academic interests include numerical analysis and teaching methods and classroom innovation. Teaches a variety of mathematics courses, and a selection of computer science courses.

Deborah R. Fullam, Lecturer in Computer Science. Assistant to the President for Budget and Planning, M.B.A., Philadelphia College of Textiles and Science. Interested in computer applications for business and management. She teaches COBOL and Basic Languages.

James S. Hume, Adjunct Assistant Professor of Mathematical Sciences, M.S., Virginia State College. Mr. Hume is a financial consultant with Merrill Lynch. His teaching specialty is applied mathematics.

Edward Peters, Adjunct Instructor in Computer Science, B.A., Lehigh University. Manager Data Administration, Hershey Chocolate Corporation. He teaches Data Base Management.

Military Science Program

The Military Science Program adds another dimension to a Lebanon Valley College liberal arts education by offering courses that develop a student's ability to organize, motivate, and lead others.

Participation in military science courses during the freshman and sophomore years results in no military obligation. Courses during these years orient students on the various roles of Army officers. Specifically, these courses

stress self development: written and oral communication skills, leadership, bearing, and self-confidence.

Individuals who elect to continue in the program during the junior and senior years shall receive a commission as a second lieutenant in the United States Army upon graduation. They shall be required to serve three months to four years in the active Army, depending upon the type of commission.

Options are available for those individuals who encounter scheduling conflicts or who desire to begin participation after their freshman year. Contact the department chairperson for further information.

Program participants may take part in various enrichment activities during the academic year: rappelling, rifle qualification, cross-country skiing, white-water rafting, leadership exercises, land navigation, orientation trips, and formal social functions. Program participants may also apply for special training courses during the summer: Russian language, flight orientation, airborne, air assault, and northern warfare schools.

Financial Assistance: Books and equipment for military science courses and the ROTC program are provided free of charge to all cadets. However, all cadets do pay an activity fee of \$15 per semester. All juniors and seniors in the ROTC program (Advanced Course) and scholarship cadets are paid a tax-free subsistence allowance of \$100 per month and receive certain other benefits.

Scholarships: Army ROTC scholarships based on merit are available. Recipients receive full tuition, academic fees, a semester allowance for books and supplies, and a \$100 per month subsistence allowance. Cadets and other Lebanon Valley students may compete for three-year (starts in sophomore year) and for two-year (starts in junior year) scholarships. Recipients agree to a service obligation. Scholarships are also available for students entering medical school or pursuing graduate studies in the basic health sciences. Selected ROTC graduates also are eligible for scholarships to pursue graduate studies in other academic disciplines. For additional information, contact the department chairperson.

Corresponding Studies Program: Students participating in an off-campus study program in the United States or abroad may continue participation in either the Army ROTC Basic Course or Advanced Course and receive the same course credit and benefits as a student enrolled in the on-campus program. Scholarship students also are eligible to participate in this program.

Advanced Leadership Practicum: The practicum consists of a six-week summer training program at an Army installation that stresses the application

of military skills to rapidly changing situations. Participants are evaluated on their ability to make sound decisions, to direct group efforts toward the accomplishment of common goals and to meet the mental and physical challenges presented to them. Completion of this practicum is required prior to commissioning and it normally is attended between the junior and senior years. Participants receive room, board, travel expenses, medical care, and pay.

The requirements and course descriptions in Military Science are on page 102.

Faculty:

Michael A. DiGennaro, Instructor in Military Science. B.S., United States Military Academy, West Point. Captain, U.S. Army, Aviation. Instructs third year Military Science and Tactics. His assignments include command and staff positions in Attack Helicopter, Air Cavalry, and Infantry units.

Nelson M. Martin, Instructor in Military Science. M.B.A., University of Arizona. Major, U.S. Army, Field Artillery. His assignments include company command and staff positions at battalion, division, and Headquarters U.S. Army Europe.

David W. Wilgus, Professor of Military Science. M.A., Webster University. Lieutenant Colonel, U.S. Army, Aviation. Assignments include staff positions at various levels with emphasis in Transportation Management. Academic directions have been in the Management Field.

Department Of Music

Students in the Department of Music may major in one of five areas: music, music performance, sacred music, sound recording technology or music education. Each student, regardless of major, is required to take a core of courses in theory and music history. Each student also completes additional course work particular to his/her area of interest.

Attendance at some faculty and student recitals is compulsory. All students in the department are required to take private instruction on campus in their principal performance medium. Students whose major applied instrument is organ are required also to study piano, continuing until they have attained a level of proficiency satisfactory to the organ faculty.

Students registered for private instruction in the music department are not permitted to study in that instructional area on a private basis with another instructor, on or off campus, at the same time.

Participation in music organizations may be required of all majors.

The **music major** (B.A.) is designed for those students desiring a liberal arts context in their preparation for a career in applied music. All majors are required to take an hour lesson per week in their principal performance medium and expected to perform a half recital in the junior year and a full recital in the senior year.

The **music performance major** (B.M.) is designed for those students desiring a maximum concentration in music courses in preparation for a career as a performing musician. All majors are required to take a weekly one hour lesson in the principal performance medium; they are also required to perform a half recital in the junior year and a full recital in the senior year. Majors whose performance medium is a band or orchestral instrument are required to study voice and piano as well.

The **sacred music major** (B.M.) prepares students for careers as directors of church music, ministers of music, or college teachers. The program is open to those individuals whose interests are voice or organ. All majors are required to acquire sufficient skill to assume responsibilities as a qualified parish church musician. Majors whose principal performance medium is organ are required to study piano and voice for at least two years. One of the years of voice study may be a class experience. Majors whose principal performance medium is voice are expected to show sufficient keyboard proficiency upon admission to the program so that after two additional years of piano study (normally by the end of the sophomore year) they may benefit from a year of organ study.

The **sound recording technology major** (B.M.) is designed for students who wish to gain the theoretical and practical knowledge necessary for careers with responsibility for recording technology in the fields of radio and television, film, and audio production.

The **music education major** (B.S.), approved by the Pennsylvania Department of Education and the National Association of Schools of Music, is designed for the preparation of public school music teachers, kindergarten through twelfth grades, instrumental and vocal. The music education curriculum requires voice instruction (class or private) for a minimum of one year and piano instruction (class or private) for a minimum of two years. A competency jury must be passed in each area. Students participate in student teaching in area elementary and secondary schools. In all field experiences as well as the student teaching semester, each student is responsible for transportation arrangements.

For the majors in music, music education and sacred music, the minor in music, and course descriptions in music, see page 103. for the major in sound recording technology, see page 129.

Faculty:

George D. Curfman, Professor of Music Education, Interim Chairman. Ed.D., Pennsylvania State University. He teaches music education methods courses and coordinates music student teaching. He serves as a consultant/clinician for the Pennsylvania Music Educators Association and advises the campus Pennsylvania Collegiate Music Education Association.

Scott H. Eggert, Assistant Professor of Music. D.M.A., University of Kansas. He teaches theoretical subjects, composition, class and applied piano. He is active as a composer, having premiered major works on the campus.

William H. Fairlamb, Professor of Music. B.Mus., Philadelphia Conservatory. Artist Diploma, Philadelphia Musical Academy. He teaches applied piano as well as courses in music history, aesthetics and piano literature. He has performed numerous recitals on campus as well as serving as accompanist for various soloists and in chamber ensembles.

Pierce A. Getz, Professor of Music. D.M.A., Eastman School of Music. He teaches applied organ and related subjects in history and literature of the instrument, choral conducting, hymnology and sacred choral literature. He conducts the Concert Choir and College Chorus. He is active as a recitalist, organ consultant to churches, guest conductor, and is the Director of Music at Market Square Presbyterian Church, Harrisburg. He serves as advisor to the Guild Student Chapter of the American Guild of Organists.

Klement M. Hambourg, Associate Professor of Music. D.M.A., University of Oregon. He teaches applied violin and viola and courses in string methodology, coaches chamber ensembles and is the conductor of the College-Community Orchestra. He performs frequently in solo recitals and is a member of the Reading Symphony, and guest conducts at the Allegheny Summer Festival of Music.

Robert H. Hearson, Assistant Professor of Music. Ed.D., University of Illinois. A low brass specialist, he teaches courses in instrumental music education and brass pedagogy, and supervises music student teaching activities. He is founder/director of the LVC Summer Music Camp and host conductor/coordinator of the LVC Honors Band. He maintains a special interest in brass ensemble music, and is active as a performer, clinician, adjudicator, and guest conductor.

Michael R. Kohler, Instructor of Music and Admissions Counsellor. B.S., Lebanon Valley College. M.M., Bowling Green State University. Mr. Kohler teaches voice and has served in three operatic apprenticeships with the Michigan Opera, Sarasota Opera and the Chautauqua Opera. He has appeared in a number of musicals and operas.

Philip G. Morgan, Assistant Professor of Voice. M.S., Pittsburg State University. He teaches applied voice with specialization in vocal technique, vocal pedagogy and vocal literature. He performs frequently in solo recitals, oratorios, chamber recitals in the United States and Europe. He serves as vocal advisor for Hershey Entertainment.

Suzanne Caldwell Riehl, Instructor of Music and Director of Special Music Programs. M.M., Westminster Choir College. She teaches applied organ and piano, sacred music courses, and theory classes for the Community Music Institute. She performs frequently in solo organ and harpsichord recitals. She is director of music at Grace Lutheran Church, Lancaster.

C. Robert Rose, Associate Professor of Music. D.M., Indiana University. He teaches applied clarinet and courses in music theory, literature, orchestration, and woodwind methods. He conducts the Symphonic Band and maintains an active schedule as clarinetist in solo and chamber music recitals and as an instrumental conductor.

Dennis W. Sweigart, Associate Professor of Music. D.M.A., University of Iowa. He teaches applied piano and courses in keyboard harmony, form and analysis and piano pedagogy. He regularly performs as a soloist and as an accompanist. He serves as the faculty advisor to Phi Mu Alpha Sinfonia, the men's music fraternity.

Teresa R. Bowers, Adjunct Instructor in Music. M.M., Ohio State University. She teaches applied flute, double reeds, flute pedagogy and chamber music. She also conducts the flute ensemble. She is a member of Duo Francais Flute-Harp Duo, and frequently appears as a recitalist and clinician.

Erwin P. Chandler, Adjunct Assistant Professor of Music. M.M., Indiana University. He teaches applied horn and is active as a composer/arranger and conductor.

James A. Erdman, II, Adjunct Instructor in Music. Retired solo trombonist "The President's Own" United States Marine Band, Washington, D.C. He teaches low brass instruments and is founder and director of the LVC Low Brass Ensemble. He is active as a performer on the trombone and appears nationally as a soloist and clinician.

Timothy M. Erdman, Adjunct Instructor in Music. Formerly trumpet soloist "The President's Own" The United States Marine Band, Washington, D.C.; principal trumpet, Harrisburg and Reading Symphonies. Presently, member, Classic Brass Quintet, and instructor of applied trumpet.

Wesley Fisher, Adjunct Instructor of Music. His teaching specialty is string bass.

Robert C. Lau, Adjunct Professor of Music. Ph.D., The Catholic University of America. He teaches courses in music history. In addition to performing, he regularly appears as a conductor/adjudicator of instrumental and choral festivals. He is published in areas of sacred choral and organ literature, and serves as Organist/Choirmaster at Mt. Calvary Episcopal Church, Camp Hill.

Nevelyn J. Knisley, Adjunct Associate Professor in Music. M.F.A., Ohio University. She teaches applied piano and performs extensively as a soloist, accompanist and chamber music performer. She serves as the faculty advisor for Sigma Alpha Iota, the women's music fraternity.

Lawrence Oncley, Adjunct Instructor in Music. Ph.D., Indiana University. He teaches applied cello and performs with the Reading Symphony and the Susquehanna String Quartet.

David S. Stafford, Adjunct Instructor in Music. B.M., Combs College of Music. He teaches applied guitar. He maintains a private guitar studio and is active as a performer in the area.

William F. Stine, Lecturer in Sound Recording Technology. B.S., Music Education, Lebanon Valley College, 1969, M.A., West Chester University, 1975. Mr. Stine's teaching specialty is Sound Recording Technology. He has spent a number of years in International Business and in audiovisual marketing.

Thomas M. Strohman, Adjunct Instructor in Music. B.S., Lebanon Valley College. He directs the college jazz band and teaches jazz improvisation. A founding member of the jazz ensemble "Third Stream," he has recorded for Columbia Artists. He maintains an active career performing as well as teaching in the Central Pennsylvania area.

John J. Uhl, Lecturer in Sound Recording Technology, Director of the Sound Recording Technology Program. B.S., Lebanon Valley College, Professional Certificate, Institute of Audio Research. His teaching interest is sound recording technology.

Department Of Physical Education

Although the College does not offer a major in physical education, two courses are required for graduation. The program encourages attitudes and habits of good health, while developing physical capacities and skills that will enrich life.

Course descriptions in physical education are on page 112.

Faculty:

O. Kent Reed, Associate Professor of Physical Education. Chairperson. M.A. in Ed. Eastern Kentucky University. He instructs the fitness and weight training classes and utilizes body fat percentages, pulse rate and recovery, strength testing devices and workout charts. He also instructs team activities such as softball and volleyball. Responsibilities in the athletic department are track and field and cross country.

Department Of Physics

The program in physics is designed to develop an understanding of the fundamental laws of physical science dealing with motion, forces, energy, heat, sound, light, electromagnetism, electronics, atomic and nuclear structure, and the properties of matter. Physics gives an appreciation of the extent and limitations of a mathematical description of the physical world.

Students major in physics as a preparation for professional careers in physics, engineering, secondary teaching, and careers for which a physical science background is useful.

The facilities of the Physics Department are located on the fourth floor of the Garber Science Center. In addition to the introductory physics laboratory, the department maintains an x-ray laboratory, optics laboratory, atomic laboratory, electronics laboratory, and nuclear laboratory. The department also houses a reading room, student shop, and darkroom.

Students majoring in physics take advantage of close contact with faculty, work as a lab assistant, pursue independent study or research, and participate in the local chapter of the Society of Physics Students.

Engineering (Cooperative)

In the cooperative "3+2" engineering program a student earns a B.S. degree from Lebanon Valley College and a B.S. degree in one of the fields of engineering from another institution. Lebanon Valley College has

cooperative agreements with Case Western Reserve University, University of Pennsylvania, and Widener University. Students who pursue this cooperative engineering program take three years of work at Lebanon Valley College and then usually take two additional years of work in engineering.

Faculty:

Michael A. Day, Associate Professor of Physics. Ph.D., University of Nebraska. He has two doctorates: one in physics, one in philosophy, and publishes in both areas. His interests are theoretical physics (specializing in anharmonic solids) and philosophy of science. Director of the College Honors Program.

Barry L. Hurst, Associate Professor of Physics. Chairperson. Ph.D., University of Delaware. His background in sputtering involves investigating the material ejected from ion bombarded surfaces using the technique of secondary ion mass spectrometry. Other interests include electronics and experimental design.

J. Robert O'Donnell, Professor Emeritus of Physics. M.S., University of Delaware. He is interested in the physics of music, including the acoustical properties of the guitar.

Jacob L. Rhodes, Professor Emeritus of Physics. Ph.D., University of Pennsylvania. His background is nuclear physics with interests in the relationship of physics and society.

Department of Political Science and Economics

The department consists of two independent disciplines, political science and economics, which have separate majors and curricula.

Political scientists study government and politics with a particular interest in the political behavior of individuals, groups, and institutions. Many pre-law students major in this discipline (see page 117 for offerings in the pre-law program). Other majors have gone on to graduate school or careers in politics.

Economists study the factors which explain the behavior of the economic system and economic factors in that system. Graduates in one of the two economics majors may go on to graduate school or to jobs in the private sector or government.

Both disciplines emphasize an understanding of the public policy process. They are designed to provide a sound knowledge of essential principles and problems within a broad liberal arts education.

For the major and minor requirements and course offerings in political science, see page 115. For those in economics, see page 75.

Faculty:

D. Eugene Brown, Professor of Political Science. Ph.D., State University of New York at Binghamton. He teaches principally in the area of international studies, including courses in United States foreign policy, international relations, comparative politics, and modern communism.

Jeanne C. Hey, Assistant Professor of Economics. Ph.D., Lehigh University. Ms. Hey's specialty areas are in economics theory, money and banking, corporate and personal finance, and health economics. Her professional affiliations include the American Economic Association, the American Finance Association, and the Association for Evolutionary Economics.

Edward H. Krebs, Assistant Professor of Economics. M.B.A., Michigan State University. He previously served as an Economic Assistant to the Secretary of Agriculture and as a private consultant. His interests are in environmental and resource economics.

John D. Norton, Professor of Political Science. Ph.D., American University. He teaches courses in American government, constitutional law, political theory, and research methods. He is the pre-law advisor for the College. His professional and research interests are in the areas of American constitutionalism, United States defense and security policy, and political economy.

Francis T. Deyo, Lecturer in Political Science. M.P.A., The Pennsylvania State University. His teaching specialty is public administration.

Department Of Psychology

It is the human psyche which permits and defines human endeavors. All people have similar sensory and perceptual processes, motivations, emotions, personality traits, and developmental sequences. These factors, the major explanatory constructs in psychology, form the structure which defines a human and at the same time makes an individual unique from others. The study of psychology is, thus, the study of how you are the same as other people as well as how you are different. Psychology focuses on your behavior, as opposed to mental events, to make its explanations objective and scientific.

The goal of psychology is, thus, the scientific explanation of behavior. The objective is advanced in diverse ways: from laboratory experiments on animal behavior at one extreme to clinical settings having therapeutic goals at the

other. This diversity makes psychology integral to business, education, and medicine, and makes it the focus of any liberal arts education.

The undergraduate major in psychology at Lebanon Valley College is well rounded. It includes elements of a general education in psychology as well as elements more specially tailored to each student's specific career training. Some students completing the major have gone on to prestigious graduate schools while others have utilized their undergraduate training to take jobs in their specialty areas immediately after graduation. The departmental degree requirements are sensitive to this career diversity.

The general education in psychology, required of all psychology majors, includes course work in The Individual and Society (Psy 100), Experimental Psychology (Psy 120), Advanced General Psychology (Psy 200), Psychological Statistics (Psy 216), Learning and Memory (Psy 236), Personality (Psy 343), and the History of Psychology (Psy 443). These courses provide a firm foundation for specialization in any of the content areas of psychology.

The student majoring in psychology is also required to specialize in one of psychology's five content areas: (1) clinical, counseling and school psychology; (2) experimental psychology; (3) developmental psychology; (4) industrial/organizational psychology; or (5) social psychology. The three required courses in an area of specialization are intended to link the liberal arts to specific career goals.

In addition to these general and specialized courses, all psychology majors are encouraged to participate in the educational process beyond the classroom through individual studies, laboratory research, and internships. The department is committed to providing opportunities for work experiences as a component of the psychology major.

The major, minor and course descriptions in psychology are on page 118. The major and course descriptions in psychobiology, jointly offered with the Biology Department, are on page 117.

Faculty:

Salvatore Cullari, Associate Professor of Psychology. Ph.D., Western Michigan University. His teaching interests are in clinical psychology, abnormal, personality, and social psychology. His current research is in schizophrenia, personality assessment and eating disorders.

David Lasky, Professor of Psychology. Chairperson. Ph.D., Temple University. Organizational behavior, research design, and career counseling are the focus of his teaching interests. Current research is in organizational change in the public sector and patients' rights.

Jan Pederson, Assistant Professor of Psychology. Ph.D., State University of New York at Stonybrook. Interests cover a broad area of developmental psychology including cognition, socialization, genetic identity and research methods. Current research interests are problem solving strategies in children and parent-child relations as they relate to internalizing values in children.

Steven M. Specht, Assistant Professor of Psychology. Ph.D., State University of New York at Binghamton. His primary teaching interests are in the experimental analysis of behavior, physiological psychology, and psychopharmacology. His current research is in physiological and neurochemical mechanisms associated with ingestive behavior.

Michael Asken, Adjunct Associate Professor of Psychology. Ph.D., University of West Virginia. His teaching interests are in sport psychology and health psychology. His current research interests are in sport psychology and the management of stress in surgery. He is in private practice as a health psychologist.

D. Rodney Chamberlain, Adjunct Assistant Professor of Psychology. D.Ed., The Pennsylvania State University. His teaching interests are in developmental psychology. He currently works for the Milton Hershey Schools.

Jonathon R. Davis, Adjunct Assistant Professor of Psychology. Psy.D., Rosemead School of Psychology. He is currently in private practice, and his teaching interests are in clinical psychology.

Joseph Peters, Adjunct Associate Professor of Psychology. Ph.D., Pennsylvania State University. He supervises the internship students. His research interests are in clinical psychology and computer applications to patient management. He is a clinical psychologist at a veterans administration hospital.

David Rogers, Adjunct Assistant Professor of Psychology. Ph.D., Rosemead School of Psychology. His teaching interests are in child and adolescent psychology. He is a private practitioner.

Ford Thompson, Adjunct Assistant Professor of Psychology. M.A., George Washington University. His teaching interests are in organizational behavior. He is the Hospital Director of a state psychiatric hospital.

Richard Tushup, Adjunct Assistant Professor of Psychology. Ph.D., University of Delaware. His teaching interests are in experimental psychology. Some of his areas of interest are human sexuality, client cognitions between therapeutic encounters, and religion's impact upon personality development and therapeutic process. He is currently employed at The Veterans Administration Medical Center.

Department Of Religion And Philosophy

The study of religion is designed to give students insight into the meaning of the religious dimension of human experience. Coursework introduces students to various historical and contemporary expressions of the Judaeo-Christian heritage as well as to the diverse religious traditions of humankind. In general, students major in religion to ready themselves for theological seminary, for careers in Christian education, or to acquire the theological maturity which, in combination with another major, will enable them to function as lay ministers in their chosen profession.

The study of philosophy directly involves the student in the process of sharpening critical and analytical abilities. In all classes emphasis is placed upon the writing of critical and analytical essays dealing with various aspects of philosophical thought as it pertains to the questions and issues of knowledge, human values and conduct, history, politics, religion, science, society, and the nature of human beings.

The study of philosophy may prepare the student for postgraduate activities such as legal studies, business, or theological and seminary training.

The major, minor, and course requirements in philosophy are on page 111. Those in religion are on page 122.

Faculty:

Donald E. Byrne, Jr., Professor of Religion and History, Director of American Studies Program. Ph.D., Duke University. His scholarship has focused on American folk religion, particularly as expressed in the Methodist and Roman Catholic communities. Other interests include religion and literature, peace studies, and mysticism. His teaching centers on the history of Christianity and religion in America, and he participates in the Honors and Leadership Studies programs.

Voorhis C. Cantrell, Professor of Religion and Greek. Ph.D., Boston University. His teaching interests in Biblical literature, Near Eastern archaeology, and Greek have been enhanced by on-site study and work in classical lands. Recent scholarly activity includes study and use of innovative pedagogical methods for teaching Scripture, particularly storytelling, memorization, and role-playing.

John H. Heffner, Professor of Philosophy, Chairperson. Ph.D. Boston University. His teaching interests include logic, philosophy of religion, metaphysics, and history of philosophy. He has published articles in major journals and contributed chapters to books in his research specialization, the

philosophy of perception. His recent interest in the philosophy of religion has focused on biblical literature and nineteenth century philosophical theology.

Warren K.A. Thompson, Associate Professor of Philosophy and Leadership Studies. M.A., University of Texas. His teaching specialties are philosophical ethics and business and organizational ethics. He has a particular interest in the ethical implications of the Holocaust, and has recently contributed a chapter for an anthology devoted to philosophy and the Holocaust.

Perry J. Troutman, Professor of Religion. Ph.D., Boston University. His areas of teaching specialization include world religions, religion in America, and the theory and practice of Christian education. He has particular interests in English cathedrals, and he is organizer and Chair of the American Friends of Durham Cathedral.

John Abernathy Smith, Adjunct Associate Professor of Religion and History. Ph.D., The Johns Hopkins University. Dr. Smith currently is researching the history of United Methodist higher education.

Department Of Sociology And Social Work

The major in sociology gives students an understanding of human behavior. By examining the social and cultural forces that shape our lives, students gain a richer understanding of themselves and contemporary social issues. Sociology explores how and why people behave as they do as well as the effects of their behavior on others. In an economy that is moving from a manufacturing base to a service orientation, graduates in sociology are prepared to work in fields where an understanding of the dynamics of human relationships is important.

The social work major prepares students for beginning professional practice in a variety of social work settings. The major emphasizes the generalist approach by offering a solid foundation of core courses based on social work theory and practice. The program also provides students the opportunity to focus upon areas of personal and professional interest by choosing a concentration in such areas as criminal justice, family intervention, and the aged and aging/death and dying.

The major, minor, and course descriptions in Social Work are on page 125. Those in sociology are on page 120.

Faculty:

Sharon Darmofall Arnold, Associate Professor of Sociology. M.A., University of Akron. Among her teaching interests are sociology of the

family, intercultural communication, small groups, and medical sociology. Her research interests are achievement orientation of female students and the use of telecommunications in higher education.

Eileen Frankland, Assistant Professor of Social Work. M.S.W., Barry University. Her teaching interests include direct service clinical skills, systems theory interventions, and treatment dynamics with a special interest in substance abuse. Her current area of career development is the integration of macro level concepts in undergraduate social work education.

Carolyn R. Hanes, Professor of Sociology and Social Work and Leadership Studies. Chairperson. Ph.D., University of New Hampshire. Her areas of interest include family and marriage, criminology, criminal justice, mass media, and leadership. She is currently doing research on leadership.

Jan Edwards, Lecturer in Social Work, M.A., Ohio University. His teaching interests include child abuse and juvenile delinquency.

Robert D. Gingrich, Lecturer in Social Service, M.S., Moravian College. His teaching specialties include child abuse, juvenile delinquency and sexual abuse.

Holly L. Preston, Lecturer in Sociology and Social Work. B.A., Shippensburg University, M.S.W., Marywood College.

Undergraduate Degree Requirements and Course Descriptions

Accounting (AC)

The Management Department is described on page 44.

Degree: Bachelor of Science degree with a major in accounting.

Major: AC 151, 152, 162, 233, 251, 252, 353, 451, 455, one 3 credit hour accounting elective; EC 110, 120; MG 222, 330, 361, 371, 460, 485; EN 210; CS 147 (or 170); MA 150 (or 111 or 160 or 161); MA 170 (or 270 or 372); PH 260 (69 credits).

Courses in Accounting

151. Principles of Accounting I. Fundamental principles and concepts of accounting encompassing business transactions, the accounting cycle, and classified financial statements including discussion of various topics relating to balance sheet and income statement items. For accounting majors. Credit not awarded for both AC 151 and AC 161. 3 credits.

152. Principles of Accounting II. A continuation of Principles of Accounting I focusing upon accounting concepts, partnerships, and business transactions related to corporate liabilities, equity, and investments. Includes basic financial analysis. For accounting majors. Prerequisite: AC 151; or AC 161 with minimum grade of B and permission. 3 credits.

161. Financial Accounting. Basic concepts of accounting including accounting for business transactions, preparation and use of financial statements, and measurement of owners' equity. An introductory course for non-accounting majors. Credit not awarded for both AC 151 and AC 161. 3 credits.

162. Managerial Accounting. Cost-volume-profit relationships, cost analysis, business segment contribution, profit planning and budgeting as a basic for managerial decision making. Prerequisite: AC 151 or AC 161. 3 credits.

233. Personal Computer Applications in the Business and Economic Environment. An introduction to personal computers and their use as a business management tool. Through classroom instruction and laboratory exercises the student learns commonly used business applications. Topics covered include word processing, electronic spreadsheets, database management, business graphics, decision support systems, and integrated accounting packages. Prerequisite: AC 151 or 161, EC 110 or 120, or permission. 3 credits.

251. Intermediate Accounting I. An advanced course in accounting principles stressing the environment and the conceptual framework of financial accounting, statement presentation, revenue recognition, and valuation problems in accounting for assets. Prerequisite: AC 152. 3 credits.

252. Intermediate Accounting II. An analysis of financial statements, effects of errors and changes on statements, preparation of funds flow statement, and valuation problems in accounting for leases and pensions and stockholders' equity. Prerequisite: AC 251. 3 credits.

351. Advanced Accounting. Study of theory and standards with application to such special topics as income presentation, interim reporting, and per-share disclosures. Emphasis on business combinations and consolidated financial presentations. Prerequisite: AC 252. 3 credits.

352. Governmental and Non-Profit Accounting. Basic concepts of fund and budgetary accounting used for financial activities of governmental units and other not-for-profit organizations. Prerequisite: AC 152. 3 credits.

353. Cost Accounting. The accumulation and recording of the costs associated with the manufacturing operation including job-order, process and standard cost systems, and joint and by-product costing. Prerequisite: AC 152. 3 credits.

451. Individual Income Tax. Analysis of the federal income tax laws as applied to individuals; case problems, preparation of returns. Prerequisite: AC 152 or 161. 3 credits.

452. Corporate Income Tax. Analysis of the federal income tax laws as applied to corporations, partnerships and fiduciaries; case problems, preparation of returns. Prerequisite: AC 451. 3 credits.

455. Auditing. A study of the process of evaluation of internal controls and interpretation of financial information to permit an auditor to express a professional opinion on financial reports. Prerequisite: AC 252. 3 credits.

Actuarial Science (AS)

The Mathematical Sciences Department is described on page 46.

Degree: Bachelor of Science degree with a major in actuarial science.

Major: AS 385,481,482; CS 147; MA 111,112,202,211,222,335,371,372, 463,471; EC 110,120; AC 161,162. (58 credits) The examination for course 100 of the Society of Actuaries, Casualty Actuarial Society must be passed by the fall of the senior year.

Courses in Actuarial Science

385. The Theory of Interest. Measurement of interest, the time value of money, annuities, amortization and sinking funds, bonds and related securities, depreciation and capitalized cost. Prerequisite: MA 211. 3 credits.

481,482. Actuarial Mathematics I and II. Survival distributions and life tables; life insurance; life annuities; net premiums; premium reserves; multiple life functions; multiple decrement models; valuation theory for pension plans; the expense factor; and nonforfeiture benefits and dividends. Prerequisite: AS 385 and MA 372. 3 credits per semester.

American Studies (AM)

The interdisciplinary program in AM is coordinated by the History Department which is described on page 43.

Degree: Bachelor of Arts Degree with a major in American Studies.

Major: AM 111, 211, 311, 313, 485; AR 205 or MU 200; EN 221, 222; GO 211; HI 261, 262, 311, 312; PH 240 or RE 120 (39 credits).

Courses in American Studies

111. Introduction to American Studies. An interdisciplinary approach to the study of America's heritage and the distinguishing features of the American mind and character. 3 credits.

211. American Folklore. A study of the historical growth of American folklore; such genres as folk art, folk music, and folk speech; contemporary expressions, including regional and ethnic variations; and the dynamics of folk performance in socio-cultural context. 3 credits.

311. American Science and Technology. A study of American science and technology and their interrelations with economic, cultural, political and intellectual developments. Prerequisite: Any laboratory science course. 3 credits.

313. Applied American Studies. An introduction to non-teaching careers in American Studies. Students examine the basics of archival management, museum curatorship, editing, oral history and specialized work in government, corporation, historical societies, libraries, preservation agencies, research agencies, foundations, higher education. 3 credits.

485. American Studies Seminar. A capstone course organized around a major theme or issue in the American experience. Themes and issues vary from year to year as the seminar rotates among faculty in several academic departments. Students are able to integrate their educational experience and implement further the interdisciplinary methodology in an holistic approach to a topic or subject. 3 credits.

Art (AR)

The Art Department is described on page 32.

Minor: AR 110,140,201,203, 1 elective course in art (15 credits).

Courses in Art

110. Introduction to Art. An exploration of meaning in the visual arts. The subject is approached through discussions of perception, the aesthetic experience, and form/content analyses of painting, sculpture, and architecture. 3 credits.

- 140. Drawing and Painting.** An introduction to the materials and processes of drawing and painting. Spatial perception, composition, light and dark as well as color relationships are major areas of study. 3 credits
- 201. Art History I.** Prehistoric through Medieval Art. A survey of painting, sculpture and architecture beginning with prehistoric sites in Europe and the Near East, followed by studies of ancient Egypt, Mesopotamia, Greece, Rome and Europe in the Middle Ages. 3 credits.
- 203. Art History II.** Renaissance to Twentieth Century. A survey of individual masters and their major schools, the course covers the period from the close of the medieval era to the modern day and includes stylistic analyses and historical contexts for painting, sculpture, and architecture of each period. 3 credits.
- 205. American Art History.** An examination of the architecture, painting, sculpture, and the decorative arts from the colonial period to the present day with emphasis on the Twentieth Century. 3 credits.
- 401. Art in the Elementary School.** Introduction to creative art activity for children in elementary school. Topics covered include philosophical concepts, curriculum, evaluation and studio activity involving a variety of art media, techniques, and processes. 3 credits.

Biochemistry (BC)

The program in biochemistry is offered jointly by the Biology Department, described on page 33 and the Chemistry Department, described on page 36.

The major in biochemistry is an interdisciplinary program that provides an opportunity for interested students to engage in a comprehensive study of the chemical basis of biological processes. It is designed to prepare students for advanced study in medical, dental, and other professional schools, for graduate programs in a variety of subjects including biochemistry, clinical chemistry, pharmacology, molecular biology, genetics, microbiology, and physiology, and for research positions in industrial, academic, and government laboratories.

Degree: Bachelor of Science degree with a major in biochemistry.

Major: BI 111, 112, 201; CH 111, 112, 113, 114, 213, 214, 215, 216; BC 401, 421, 422, 430, 499; MA 161; PHY 103, 104 or 111, 112 (51 credits); 9 credits from BI 305, 306, 307, 322, 323, 404 and CH 305, 306, 307, 308, 311.

Courses in Biochemistry

401. Molecular Biology. Gene structure, function and regulation at the molecular level in prokaryotic and eukaryotic organisms. Recombinant DNA techniques (genetic engineering) and gene sequencing are covered in detail. Prerequisite: three semesters of chemistry and BI 201 or permission of the instructor. 4 credits.

421,422. Biochemistry I,II. The study of the chemistry of proteins, lipids, and carbohydrates. Topics covered include amino acid chemistry, protein structure, molecular weight determination, ligand binding, enzyme kinetics, enzyme and coenzyme mechanisms, membrane systems, membrane transport, intermediary metabolism, metabolic control, electron transport, and oxidative phosphorylation. Prerequisites: CH 214, 216 and 312 or permission. 3 credits per semester.

430. Biochemistry Laboratory. Investigations of the properties of proteins, nucleic acids, carbohydrates, and lipids. Prerequisites: CH 214, 216. 1 credit.

499. Biochemistry Seminar. Readings, discussions, and reports on special topics in biochemistry. 1 credit.

Biology (BI)

The Biology Department is described on page 33.

Degree: Bachelor of Science degree with a major in biology.

Major: BI 100,111,112,201,302 or 307,499; one course each in the general areas of physiology, cellular and subcellular biology, and morphology; and 4 additional hours of biology (34 credits). CH 111,112,113,114,213,214, 215,216 (16 credits). PHY 103,104 or 111,112; MA 161 or 111 (61-63 total credits).

Courses in Biology

BI 111 and 112 are prerequisite for all upper-level courses in biology unless otherwise noted.

101. Human Biology I. The human organism is utilized as the primary focus to elucidate physiological principles for non-science majors. Topics include nutrition, homeostasis, major organ systems, immunity, and exercise physiology. Laboratory exercises include sensory physiology, respiration, blood pressure, exercise physiology, and ECG. 4 credits.

102. Human Biology II. Also designed for the non-science major, this course emphasizes the mastery of certain biological principles as applied primarily to humans. Topics include reproduction, development, classical and molecular genetics, and ecology. Laboratory exercises supplement lecture topics and include an examination of mitosis and meiosis, Drosophila genetics, population genetics, and development. 4 credits.

111. General Biology I. A rigorous study of basic biological principles, which is designed for science majors. Topics emphasized include cell biology, genetics, taxonomy, histology, and evolution. Laboratory exercises include enzyme kinetics, carbohydrate analysis, isolation and identification of plant pigments, histological techniques, and animal taxonomy. 4 credits.

112. General Biology II. This course, also rigorous and designed for science majors, covers concepts in physiology, embryology, botany and ecology. Laboratory exercises include shark anatomy, invertebrate dissection, animal development, plant development in angiosperms, and stomate response to environmental changes. 4 credits.

201. Genetics. A study of the principles, mechanisms and concepts of classical and molecular genetics. The laboratory stresses key concepts of genetics utilizing both classical and molecular approaches. Laboratory exercises include analysis of nucleic acids, genetic crosses, and studies of bacteria, bacteriophages and plasmids. Prerequisites: one year of chemistry or permission. 4 credits.

221. Comparative Vertebrate Anatomy. The comparative anatomy of vertebrates with emphasis on the evolutionary relationships among the various lines of vertebrates. Intensive laboratory work involves dissections and demonstrations of representative vertebrates. 4 credits.

302. Survey of the Plant Kingdom. The development and diversity of plants and the relationships between them. Field and laboratory work will familiarize the student with the structure of plants and with the identification of flowering plants in the local flora. Prerequisite: Biology 112 or permission. 4 credits.

304. Developmental Biology. The study of basic descriptive phenomena in the development of typical invertebrate and vertebrate embryos, with a consideration of modern embryological problems. 4 credits.

305. Vertebrate Histology and Microtechnique. A study of the microscopic anatomy of vertebrate tissues, with illustrations of basic tissue similarities and specialization in relation to function. The laboratory work includes the preparation of slides utilizing routine histological and histochemical techniques. 4 credits.

- 306. Microbiology.** A study of the morphology, physiology, and biochemistry of representative microorganisms. The laboratory emphasizes basic bacteriological techniques and procedures. Prerequisite: three semesters of chemistry or permission. 4 credits.
- 307. Plant Physiology.** A study of the functioning of plants, with emphasis on vascular plants. Prerequisite: three semesters of chemistry or permission. 4 credits.
- 312. Fundamentals of Ecology.** An examination of the basic concepts of ecology with extensive laboratory work and field experiences in freshwater, marine, and terrestrial ecosystems. Prerequisites: BI 112 or permission. 4 credits.
- 322. Animal Physiology.** A study of the principles of vertebrate body function, with emphasis on the mechanisms by which cells and organs perform their functions and the interactions of the various organs in maintaining total body function. Prerequisites: BI 101 or 112 and one semester of chemistry, or permission. 4 credits.
- 323. Introduction to Immunology.** An introduction to the anatomical, physiological, and biochemical factors underlying the immune response. The course begins with a discussion of non-specific immunity, cellular immunity, and antibody-mediated immune responses. The course then moves into a study of contemporary immunological topics which are discussed with respect to major research papers in each area. Topics include auto-immunity, histocompatibility, immunogenetics, and acquired immune deficiencies. A research paper is required. Prerequisites: BI 111,112 and CH 111,113 or equivalent or permission. 4 credits.
- 402. Invertebrate Zoology.** A study of most of the invertebrate phyla, concentrating on movement, metabolism, information and control, reproduction and association between animals. 4 credits.
- 404. Electron Microscopy.** An introduction to the use of techniques for scanning and transmission electron microscopic studies. Through laboratory experience the students will learn the proper use, application, and limitations of the appropriate instruments. Prerequisite: BI 305 or permission of instructor. 4 credits.
- 409. Quantitative Ecology.** An intensive study of ecological processes emphasizing the quantitative aspects of ecology at the population and community levels. Prerequisite: permission of the instructor. 4 credits.
- 451. Student Lab Instruction.** A course designed for students seeking certification to teach biology in secondary education. Topics include evaluation of laboratory experiments, demonstrations and textbooks. 1 credit.

499. Seminar. Each senior student is required to do independent library research on an assigned topic and to make an oral presentation to the biology faculty and students. This course may be repeated. 1 or 2 credits.

Chemistry (CH)

The Chemistry Department is described on page 36.

Degrees: Bachelor of Science in Chemistry, Bachelor of Science with a major in chemistry.

Majors: (B.S. in Chemistry) CH 111,112,113,114,213,214,215,216,222, 305,306,307,308,311,312,321,322,411; 6 Credits from CH 421,422,491,498; 4 credits of CH 500; MA 161,162; PHY 111,112 (63-64 credits).

(B.S., major in chemistry) CH 111,112,113,114,213,214,215,216,222,305, 306,307,308,311,312,321,322; MA 161,162; PHY 111,112; (50-51 credits).

Minor: CH 111, 112, 113, 114; 12 Credits from CH 213, 214, 222, 305, 306, 311, 312, 411, 421, 422; 3 Credits from CH 215, 216, 307, 308, 321, 322, 430.

Courses in Chemistry

100. Introduction to Chemistry. An introduction to the principles of chemistry including mathematical tools, atomic structure, stoichiometry, elementary concepts of equilibrium, bonding, and organic chemistry. Intended for non-science majors. Laboratory experience included. 4 credits.

109. Chemical Skills. A step-by-step approach to solving chemical problems. Topics include the application of mathematical tools in introductory chemistry and techniques for finding the proper approach to solve problems. The course is designed to be taken concurrently with CH 111. 1 credit

111, 112. Principles of Chemistry I,II. An introduction to chemistry for the science major. First semester topics include atomic and molecular structure, chemical reactions, calculations involving chemical concentrations, gas laws, and bonding. Second semester covers kinetics, acids and bases, equilibrium, oxidation-reduction chemistry, thermodynamics, electrochemistry, and nuclear chemistry. 3 credits per semester.

113, 114. Introductory Laboratory I,II. Laboratory courses to accompany 111 and 112. Experiments cover stoichiometry, gas laws quantitative analysis, equilibrium, electrochemistry, chemical synthesis, and the use of computers for collecting data. Students are introduced to instrumentation including infrared, UV-visible, and atomic absorption spectrometers. 1 credit per semester.

213, 214. Organic Chemistry I,II. An introduction to the principles of organic chemistry. The focus of the course is on the structure of organic molecules and how the structure of various functional groups affects their reactivity. The concepts of reactivity, structure and mechanism are applied to organic synthesis. 3 credits per semester.

215, 216. Organic Laboratory I,II. An introduction to the practice of classical organic chemistry and modern instrumental organic chemistry. The techniques of organic synthesis are taught along with instrumental methods including infrared, nuclear magnetic resonance, and mass spectrometry. 1 credit per semester.

222. Introductory Inorganic Chemistry. The application of elementary principles of chemistry to provide a basis for understanding the physical and chemical properties of the elements. Topics include periodicity, acidity or basicity of metal cations and oxoanions, precipitation reactions, oxidation-reduction chemistry, the structures of solids. 3 credits.

305. Analytical Chemistry. Gravimetric, volumetric, and electro-chemical methods of chemical analysis are covered. Included are statistical methods of data treatment and rigorous considerations of complex chemical equilibria. Prerequisites: CH 112 and MA 161. 3 credits.

306. Instrumental Analysis. Basic types of chemical instrumentation, and their applications in analytical chemistry are examined. These include: gas and liquid chromatography; infrared, UV-VIS, fluorescence, atomic absorption, and plasma emission spectrophotometry; nuclear magnetic resonance and mass spectrometry; and radiochemical methods. Prerequisites: CH 112 and MA 161. 3 credits.

307. Quantitative Analysis Laboratory. Techniques of gravimetric, volumetric, and electrochemical analysis are applied to the analysis of unknowns. Prerequisite or corequisite: CH 305. 1 credit.

308. Instrumental Analysis Laboratory. Chemical instrumentation is utilized in analytical method development and analysis. Prerequisite or corequisite: CH 306. 1 credit.

311. Physical Chemistry I. The study of thermodynamic laws and functions, including phase and reaction equilibria. Systems under study include ideal and real gases, ideal and non-ideal solutions, and multi-component phase transitions. 3 credits.

312. Physical Chemistry II. The study of chemical systems from a molecular perspective. Basic concepts of quantum chemistry and statistical theory applied to atomic and molecular structure. Also included are electrochemistry, kinetics, and transport processes. 3 credits.

321, 322. Physical Laboratory I,II. Application of chemical instrumentation to a study of the principles of physical chemistry. Experimental work involves calorimetry, refractometry, conductivity, viscometry, and atomic absorption, FTIR, UV-VIS, and NMR spectroscopy applied to the study of phase and reaction equilibria, kinetics, and atomic and molecular structure. 1 credit per semester.

411. Advanced Inorganic Chemistry. A study of bonding theories, molecular structure, spectroscopy, and reaction mechanisms with special emphasis on transition metal complexes. Prerequisite: CH 312. 3 credits per semester.

451. Methods of Teaching Chemistry. A course designed for students seeking certification to teach chemistry in secondary education. Topics include valuation of laboratory experiments, demonstrations, textbooks, and computer software. 3 credits.

Communications

See English, page 80.

Computer Science (CS)

The Mathematical Sciences Department is described on page 46.

Degree: Bachelor of Science degree with a major in computer information systems; Bachelor of Science degree with a major in computer science.

Major: (Computer Information Systems) CS 147,243,244,248,345,342 or 346; one CS course numbered above 400 or 6 hours of CS 400, (21-24 credits). MA 150,170; MA 111,160 or 161; EN 210 or 216. Five courses numbered above 200, approved by the advisor, in an applications field of interest (48-53 total credits).

Major: (Computer Science) CS 147,248, one from 242,243, or 244; three additional computer science courses numbered above 300 including at least one numbered above 400. MA 111,112,202,211, 222,322 or 371; 335 or 463. EN 216. PSY 337 (49 credits).

Minor: CS 147,248,242 or 243 or 244, two CS courses numbered above 300, MA 111 or 161, one additional Mathematics (MA) course numbered above 200 (22-23 credits).

Courses in Computer Science

130. Microcomputers, Hardware and Software. The components of a microcomputer, introduction to operating systems, languages and software packages. 3 credits.

147. Computers and Programming in Pascal. Introduction to the basic concepts and terminology of computer hardware, software, operating systems and languages. Programming in Pascal. 3 credits.

170. Computers and Programming in Basic-Plus. Introduction to the basic concepts and terminology of computer hardware, software, operating systems and languages. Programming in Basic-Plus. 3 credits.

242. Mathematical Computing with FORTRAN. The use of the computer in executing mathematical algorithms such as: implication of floating point computation, solution of nonlinear equations, numerical integration, and acceleration methods. FORTRAN is introduced and used throughout the course. Prerequisites: CS 147 or CS 170, MA 112 or MA 161. 3 credits.

243. Interactive Systems with Basic-Plus. Time-sharing systems, microcomputers and Basic; arrays, strings, virtual arrays, random access files, elementary graphics. Prerequisite: CS 147 or CS 170. 3 credits.

244. Business Computing with COBOL. Processing of data, the storing and manipulating of files; sorting, and merging of records. Prerequisite: CS 147 or CS 170. 3 credits.

248. Advanced Programming with Pascal. Advanced features of Pascal. Developing large programs. Libraries, units, etc. Prerequisite: CS 147. 3 credits.

250. Survey of Computers and their Impact. Computer hardware and software from the microcomputer to the mainframe. The social, economic and ethical impact of computers. 3 credits.

341. Computer Architecture with MACRO. The organization of computers, the CPU, memory, disks, interfaces, interrupts, macros, device drivers. Prerequisite: CS 248. 3 credits.

342. Data Structures. Discrete mathematical structures and their use in computer software. Stacks, lists, queues, hash tables, sorts, linked lists. Prerequisite: CS 248, MA 222 or permission. 3 credits.

345. Business Computer Systems. An overview of computer hardware and software from micro to mainframe. Batch processing, time sharing, word processing, spreadsheets. Data processing and communication. Management of and with computers. Prerequisite: CS 147. 3 credits.

346. Data Algorithms. Methodology of data processing. Representation, storage, and retrieval of data. Methods to sort, merge, and match data. Sequential, random, indexed, and hash files. Prerequisite: One 200 level language course. 3 credits.

441. Computer Languages and Compilers. Syntax and semantics of languages. Lexical analysis, parsing, and translation. Compiler design. Prerequisite: CS 342. 3 credits.

442. Microcomputer Systems. The architecture of microcomputers. Programming in assembly language. Interfacing microcomputer components. The design of microcomputer operating systems. Prerequisite: CS 147. 3 credits.

445. Database Management. The organization of files. Database structure and implementations. Integrity and security of databases. Major DBM systems. Prerequisite: two 300 level courses. 3 credits.

446. Computer Systems Analysis and Design. Principles of computer management. Design tools and techniques. Hardware, operating systems, languages and their interrelations. Implementation and evaluation of computer systems. Prerequisite: CS 345 or MA 335 and two level 300 courses. 3 credits.

Economics (EC)

The Political Science and Economics Department is described on page 57.

Degree: Bachelor of Science degree and Bachelor of Arts degree with a major in economics.

Major: Bachelor of Science: EC 110,120,201,203,233,312, 6 elective hours in economics; AC 161,162; CS 147 or 170; EN 210; MA 150 or 160 or 161 or 111; MA 170 or 270 or 372; MG 222,330,485; PH 260 (54 hours).

Major: Bachelor of Arts: EC 110,120,201,203,312, and four additional elective courses in economics, AC 161, MA 150 or MA 160 or MA 161 or MA 111, MA 170 or MA 270 or MA 372 (36 credits).

Minor: Bachelor of Science: EC 110,120,201,203,312; one from AC 161, MG 100, or one elective course in economics (18 credits).

Minor: Bachelor of Arts: EC 110,120,201,203,312, and one additional elective economics course (18 credits).

Courses in Economics

110. Principles of Economics I. An introductory study of macroeconomic principles, with emphasis on national income determination, the price level, employment, economic growth, money and banking, and government monetary and fiscal policies. 3 credits.

120. Principles of Economics II. An introductory study of microeconomic principles, with emphasis on price, production, and distribution theories under conditions of varying market structures. Factor market analysis as well as implications for welfare economics and public policy are considered. 3 credits.

130. Economics of Public Issues. A survey and economic analysis of current public issues. 3 credits.

201. Intermediate Microeconomic Analysis. Managerial and economic decision-making of business firms, with emphasis on sales, costs, profit, and resource allocation. The course provides a study of the tools of analysis, including the use of computers. Prerequisites: EC 110 and 120. 3 credits.

203. Intermediate Macroeconomic Analysis. A study of national income and employment theory, with primary emphasis on determination of the levels of employment and prices. The problems of unemployment and inflation are analyzed and appropriate monetary and fiscal policies considered. Prerequisites: EC 110 and 120. 3 credits.

233. Personal Computer Applications in the Business and Economic Environment. An introduction to personal computers and their use as an economic analytical and business management tool. Topics include economic data analysis, economic graphics, and decision support systems. Prerequisites: EC 110 and 120, or permission. 3 credits.

312. Money and Banking. Nature and functions of money and credit, including the development and role of commercial and central banking, structure and functions of the Federal Reserve System, and monetary and banking theory, policy, and practice. Prerequisites: EC 110 and 120. 3 credits.

315. Health Care Finance and Economics. Analysis of the economic problems of health and medical care to determine how to provide the best health care to the most people in a cost-effective manner. Examination of the principle elements of health care, including the physician, the hospital, and the pharmaceutical industry, as well as the influence of government and the insurance industry. All economic analysis will be considered within the context of medical ethics and societal values. Prerequisite: EC 110 and 120.

321. Public Finance. A study of the economic functioning of government, including principles of taxation, public expenditures, debt, and fiscal policy. Prerequisites: EC 110 and 120. 3 credits.

332. International Economics. A study of theories and empirical analysis of international economic relations. Topics include analyses of free exchange of goods, factors, and money, restrictive trade policies, and freer economic practices. Prerequisites: EC 110 and 120. 3 credits.

401. History of Economic Thought. The evolution of economic thought through the principal schools from mercantilism to the present. Attention is given to the analysis of the various theories of value, wages, interest, rent, profit, price level, business cycles, and employment, and to the influences of earlier economic ideas upon current thinking and policy-making. Prerequisites: EC 110 and 120. 3 credits.

411. Economic Growth and Development. Theoretical and empirical analysis of problems of economic development in both underdeveloped and advanced countries. Prerequisites: EC 110 and 120. 3 credits.

EDUCATION (ED)

The Education Department is described on page 38.

The program in Elementary Education is described on page 78 and that in Secondary Education on page 124.

Minor: ED 110, GO 112; one of EE 270, 341, 361; one of EE 250, 332, GO 111; one of ED 346, 391, SE 420, ED 442; EE 280 or SE 280, 1-3 credits (16-18 credits).

Courses in Education

110. Foundations of Education. A study of the social, historical and philosophical foundations of American education correlated with a survey of the principles and theories of influential educators. 3 credits.

346. Educational Technology and Instructional Media. A study of the preparation and use of instructional technology, media, and equipment. 3 credits.

442. The Education of the Exceptional Child. An introduction to current research and practices concerning exceptionalities in children, including the handicapped and gifted. The course includes attention to policies, legislation, programs, methods and materials. Various resource personnel are invited to address pertinent issues. The course includes a minimum of one hour per week field experience in local programs designed to meet the needs of exceptional children. Prerequisites: ED 110, PSY 100 or PSY 120, or permission of instructor. 3 credits.

ELEMENTARY EDUCATION (TEACHER CERTIFICATION) (EE)

The Education Department is described on page 38.

DEGREE: Bachelor of Science degree with a major in elementary education.

MAJOR: Elementary education majors must take: ED 110; EE 220,250, 270,332,341,342,344,361,362,440,499; AR 401; GO 111; HI 125 or 126; MA 100 or equivalent; PSY 100,220,321 (66 credits).

The minor in education is described on page 77.

Courses in Elementary Education

220. Music in the Elementary School. A course designed to aid elementary education majors in developing music skills for the classroom, including the playing of instruments, singing, using notation, listening, movement, and creative applications. 3 credits.

250. Mathematics in the Elementary School. A study of basic preschool to eighth grade mathematical concepts with major emphasis on problem solving, estimating, and computers. The course is designed to view mathematics as a multidisciplinary subject. Attention is given to the development of hands-on teaching activities, simulations, and experiences which can be utilized effectively with any classroom population. 3 credits.

260. Principles and Practices in Early Childhood Education. An introduction to contemporary research, theories, programs, curricula, methods, and materials in early childhood education, nursery school through grade 2. Includes required field experience in a local early childhood center. 3 credits.

270. Children's Literature. A study of literature for children from infants through grade 8, including extensive classroom examination of books, poetry, storytelling, and audiovisual resources in children's literature. 3 credits.

280. Field Practicum in the Elementary School. Supervised field experiences in appropriate school settings. Prerequisite: Permission. 1-3 credits.

332. The Physical Sciences in the Elementary School. A study of basic concepts in general science, earth and space science, physical and biological science, and environmental studies. The course emphasizes the experiential nature of science in the elementary classroom with special attention to the materials and methodologies appropriate to young children. 3 credits.

341,342. Teaching of Reading I,II. The fundamentals of teaching children to read from the readiness programs of early childhood education to the more comprehensive techniques required to teach reading in all subject areas of the curricula in elementary and middle schools. Effective reading programs, methods, and materials are examined first hand. Attention is given to the classroom teacher's diagnosis of reading difficulties with an eye to preventive and prescriptive teaching. Includes during each semester one hour per week of tutoring of selected elementary school students. Prerequisite: EE 270. 3 credits per semester.

344. Health and Safety Education. A study of basic health and safety practices and procedures as applied to the elementary school, including a program of physical education for elementary school children, an American Red Cross-approved program of first aid, and an evaluation of sources and use of materials. Prerequisites: ED 110; PSY 220. 3 credits.

361. Language Arts in the Elementary School. The content, methods and materials for teaching oral and written language beginning with early childhood: listening, speaking, creative and practical writing, as well as the related skills of creative dramatics, handwriting, grammar and usage. The course is designed to assist teachers in helping children to communicate effectively and responsibly in a creative manner. 3 credits.

362. Social Studies in the Elementary School. An examination of the content, methods and role of social studies in the elementary school, beginning with early childhood. The curriculum is examined from two vantage points: the daily lives of children as they relate to developing values and attitudes and the planned study of people as they live and have lived in our world. The development of a teaching unit and the examination of learning resources contribute to a sound instructional program. 3 credits.

440. Student Teaching. Each student spends an entire semester in a classroom of an area public school under the supervision of a carefully selected cooperating teacher. Open to seniors only. A cumulative grade point average of 2.0 during the first six semesters of college is required. Prerequisites: ED 110; PSY 220; EE 250,270,332,341,342,361,362, and permission. 3-12 credits.

499. Senior Seminar. Special topics related to pertinent issues in education are researched and discussed by the participants in the course. Issues relating to problems in student teaching or to further professional growth in the profession are explored. 3 credits.

Engineering

The co-operative ("3 + 2") Engineering program is described under the listing for the Physics department on page 56.

English (EN)

The English Department is described on page 40.

DEGREE: Bachelor of Arts with a major in English.

MAJOR: Core requirements: EN 200; three from 221-228; 331; 341 or 342; 499 (21 credits). Students must choose one of the concentrations below in addition to the core.

Literature concentration: Three additional survey courses (EN 221-228 three additional major authors (EN 340-349) or special topics courses (EN 390-399) or genre (EN 335-339) courses (39 total credits).

Communications concentration: EN 213; four additional communications courses; 3 credits of EN 400 (39 total credits).

Secondary Education concentration: Two additional survey courses from EN 221-228 (must include both 221, 222); three additional major authors (EN 340-349) or special topics (EN 291-299, 390-399) or genre (EN 335-339) courses; EN 218; EN 332; FL 250; and either EN 213 or EN 336 (48 total credits).

MINOR (Literature): EN 200; EN 221 or 222; two from EN 225, 226, 227, 228; two additional literature courses (18 credits).

MINOR (Communications): EN 200, 213, 221 or 222; three additional communications courses (18 credits).

Courses in English

111,112. English Composition I,II. Both semesters help the student find her or his own voice within the demands and expectations of public expression. Both courses emphasize the development of clear, organized, and rhetorically effective prose. 112 also emphasizes reading and research skills. Prerequisite for 112: 111 or permission of chairperson. 3 credits per semester.

200. Introduction to Literary Studies. An introduction to genres and to the basic methodology, tools, terminology, and concepts of the study of literature. 3 credits.

210. Management Communications. The development of reading, writing, speaking and listening skills for business management. Prerequisites: EN 111,112 or permission. 3 credits.

213. Journalism. The development of the basic skills of journalistic writing such as interviewing, covering meetings, gathering and reporting news and features according to standard formats and styles; the course also discusses legal and ethical aspects of journalism. 3 credits.

216. Technical Writing. The development of writing skills within the context of specialized, usually technical or scientific, subject matters, with emphasis on style and forms. Prerequisite 111 and 112 or permission. 3 credits.

218. Oral Communication. Introduction to oral communication, both formal and informal. 3 credits.

219. Creative Writing: Fiction. A workshop in writing short fiction. 3 credits.

220. Creative Writing: Poetry. A workshop in writing poetry. 3 credits.

221. Survey of American Literature I. A survey of selected major American authors from the colonial period to about the Civil War. 3 credits.

222. Survey of American Literature II. A survey of selected major American authors from about the Civil War to the present. 3 credits.

225. Survey of English Literature I. A survey of selected major English authors to about 1800. 3 credits.

226. Survey of English Literature II. A survey of selected major English authors from about 1800 to the present. 3 credits.

227. World Literature I. A survey of selected major writers from the early Hebrews and Greeks to the Renaissance. 3 credits.

228. World Literature II. A survey of selected major writers from the Renaissance to the present. 3 credits.

311. Feature Writing. Instructions and practice in writing feature articles for newspapers, trade journals, and magazines; free lance marketing and market analysis. Prerequisite: EN 213. 3 credits.

312. Radio and TV Writing. Theory and technique of writing news and features for broadcast media. Editing and rewriting press association dispatches, gathering local news, recording interviews, and preparing newscasts and feature programs. Prerequisite: EN 213. 3 credits.

313. Advertising Copy and Layout. Principles and techniques of copy-writing; selection and presentation of sales points; creative strategy in production of layouts. Prerequisite EN 213. 3 credits.

314. Public Relations. Purposes and methods of modern public relations as practiced by business and industry, organizations and institutions, trades and professions. Public opinion evaluation. Planning of public relations programs. Prerequisite: EN 213. 3 credits.

315. Editing. Editing theory and exercises in copyreading, rewriting, and headlining. Prerequisite: EN 213. 3 credits.

331. History and Traditional Grammar of English. An examination of the evolution of English sounds, grammatical forms, and vocabulary, as well as a survey of conventions and current usage. 3 credits.

332. Theory of Composition. A study of ancient and modern ideas on the writing process and the teaching of writing. 3 credits.

335. The Novel. A study of the development of the English novel from Richardson to Joyce. 3 credits.

336. Theatre Workshop. A workshop in the elements of theatre with classroom practice in production of scenes and whole plays. 3 credits.

338. Dramatic Literature I. A survey of dramatic literature from the Greeks to about 1850, with attention to theater modes and techniques. 3 credits.

339. Dramatic Literature II. A survey of dramatic literature from about 1850 to the present, with attention to theater modes and techniques. 3 credits.

341. Shakespeare I. A concentrated study of early Shakespearean drama, especially the comedies and the histories. 3 credits.

342. Shakespeare II. A concentrated study of late Shakespearean drama, especially the tragedies and the romances. 3 credits.

343-349. Major Authors. An examination of works of major authors in American, English, and World literature. 3 credits each.

499. Seminar

Enviromental Studies

Students interested in pursuing career preparation in environmental studies through the cooperative program (“3+2”) with Duke University may major in biology, economics, political science or mathematics at Lebanon Valley. All such students shall take BI 111,112,302; EC 110,120; MA 161 or 111; MA 170, regardless of major, and shall meet the general requirements of the College. See also page 33.

Foreign Language (FL)

(See also French, German, Greek, and Spanish)

The Foreign Languages Department is described on page 41.

DEGREE: Bachelor of Arts with a major in foreign language.

MAJOR: FL 250, 24 credits above the intermediate level in one language, 12 credits above the intermediate level in a second language (39 credits). For teaching certification FL 440 is also required.

Courses in Foreign Language

250. Introduction to Linguistics. An introductory study of language as a communication system, designed for majors and non-majors and taught in English. 3 credits.

260. Approaches to Culture. A survey of contemporary life in French, German and Spanish speaking countries. Topics may include customs, values, social structures, geography, and current issues. Taught in English. 3 credits.

440. Methods of Teaching Foreign Language. A comprehensive study of modern teaching methods, with emphasis on basic skills for secondary school level instruction. Prerequisite: FR 316, or SP 316, or GR 316. 2 credits.

Forestry

Students interested in pursuing career preparation in forestry through the cooperative program (“3+2”) with Duke University may major in biology, economics, political science or mathematics at Lebanon Valley. All such students shall take BI 111,112,302; EC 110,120; MA 161 or 111; MA 170, regardless of major, and shall meet the general requirements of the College. See also page 33.

French (FR)

The Foreign Languages Department is described on page 41.

DEGREE: Bachelor of Arts degree with a major in French.

MAJOR: 24 credits in French above the intermediate level, FL 250 (27 credits).

MINOR: 18 credits in French above the intermediate level. Courses in advanced conversation and composition as well as in culture are strongly recommended.

Courses in French

101,102. Elementary French I,II. Introductory courses in French. 3 credits per semester.

201,202. Intermediate Conversational French I,II. A review of French grammar, emphasizing practice in conversation, comprehension, reading, and writing. Prerequisite: FR 102 or equivalent. 3 credits.

311. Introduction to French Literature. Practice in the close reading of literary texts and in the basic language skills. Prerequisite: FR 202 or equivalent. 3 credits.

312. Contemporary Literature. Readings in the works of living French authors. Attention both to individual style, innovations in form, and the relationship of the writer to current problems. Prerequisite: FR 202 or equivalent. 3 credits.

315. French Culture. A study of modern France. Special attention is given to those qualities, characteristics, and traditions that are uniquely French. Prerequisite: FR 202 or equivalent. 3 credits.

316. Advanced Conversation and Composition. Intensive practice in spoken and written French. An advanced grammatical and stylistic level with emphasis on the use of language in practical situations. Prerequisite: FR 202 or equivalent. 3 credits.

320. Business French. An introduction to the language of business and business practices. Prerequisite: FR 202 or equivalent. 3 credits.

410. French Literature of the Middle Ages and Renaissance. A study of medieval French literature to 1600. Prerequisite: FR 311 or 316 or permission. 3 credits.

420. French Literature of the Age of Louis XIV. A study of major French authors of this era, the apogee of French civilization, including Corneille, Racine, Moliere. Prerequisite: FR 311 or FR 316 or permission. 3 credits.

430. French Literature of the Enlightenment. A study of the main literary and philosophical currents of the Eighteenth Century. Emphasis on the works of Montesquieu, Diderot, Voltaire, and Rousseau. Prerequisite: FR 300 or FR 316 or permission. 3 credits.

440. The Modern French Novel. A study of the French novel. Limited to the study of novels of the Nineteenth and Twentieth Centuries. Prerequisite: FR 311 or FR 316 or permission. 3 credits.

450. Modern Theatre and Poetry of France. A study of theatre and poetry of the Nineteenth and Twentieth Centuries. Prerequisite: FR 311 or FR 316 or permission. 3 credits.

General Education (GE)

120. The Western Experience: Our Cultural Heritage. A study of how life in the late Twentieth Century has been influenced by historical developments in Europe and America, including the growth of science, the rise of national states, social classes and values, and changing views of the world. 3 credits.

140. Human Culture and Behavior. Culture as a context of human behavior. The nature and definition of culture. The biological and social sources of culture. Culture, language, personality. The impact of culture on social life and on the individual; examples from Western and non-Western sources. 3 credits.

160. The Aesthetic Experience. The artist's achievement. Interrelationships among the arts. The creative process. Questions of form versus content. Art as the product of a specific socio-historical context. 3 credits.

GENERAL STUDIES

Bachelors Degree

The bachelors degree program in General Studies is intended for students who desire the widest possible choice in selecting a program of study. Students may choose their courses freely from among the arts, humanities, sciences, and social sciences.

DEGREE: Bachelor of Arts or Bachelor of Science with a major in General Studies.

REQUIREMENTS: The general requirements of the College; 24 or more credits selected from courses at the 300 level or above; free electives to complete the number of credits required for graduation; a cumulative grade point average of 2.00 or better.

Associate Degree

The associate degree program in general studies is intended for students who do not wish to concentrate in a single area. In this program students select their courses freely from among the arts, humanities, sciences, and social sciences.

DEGREE: Associate of Arts or Associate of Science with a major in General Studies. Open only to students matriculated through the Continuing Education Center.

REQUIREMENTS: 27 credits from the general requirements including EN 111, 112, LC 100 or 111, and one course from each of the other General Requirement areas, except physical education; 33 credits of free electives; a cumulative grade point average of 2.00.

Geography (GO)

Courses in geography are offered to acquaint students with the physical and cultural aspects of the world in which they live and to introduce them to geography as a discipline. The courses are recommended for all students who wish to broaden their understanding of the world.

Courses in Geography

111. Physical Geography and Its Impact. A survey of the physical aspects of the earth and its impact on life. Attention is given to the solar system, the earth's movements, climate, weather, landforms, ecology, environmental awareness, and the processes that form and change the earth's surface. Students explore through current events, geographic searches, slides, lectures, and discussions the impact that physical geography has on their everyday lives. Requirement for elementary education certification. Prerequisite: Elementary Education major or permission of instructor. 3 credits.

112. Cultural Geography. A survey of the various geographic regions of the world and their cultural features, including their natural resources, economy, social and religious customs, food supply, populations, ecology, and topical geography. Students explore the events and forces that have divided the globe into two basic sets of countries, those of the technological world and those of the developing world. Special attention is given to heightening students' international awareness and appreciation for diverse cultures. 3 credits.

211. American Cultural Geography. A study of how the natural environment has influenced the historic development of American culture, including the geographic distribution of population groups, religious denominations and practices, language patterns, architectural styles, and the like. 3 credits.

German (GR)

The Foreign Languages Department is described on page 41.

DEGREE: Bachelor of Arts degree with a major in German.

MAJOR: 24 credits in German above the intermediate level; FL 250. (27 credits).

MINOR: 18 credits in German above the intermediate level. Courses in advanced conversation and composition as well as in culture are strongly recommended.

Courses in German

101,102. Elementary German I,II. Introductory courses in German. 3 credits per semester.

201,202. Intermediate Conversational German I,II. A review of German grammar, with practice in conversation, comprehension, reading and writing. Prerequisite: GR 102 or equivalent. 3 credits per semester.

210. Scientific German. An introduction to scientific writing in German. The vocabulary and syntax of scientific writing with emphasis on the accurate translations of texts. Taught in English. Prerequisite: GR 102. 3 credits.

311. Introduction to German Literature. Practice in the careful reading of literary texts and in the four basic language skills. Prerequisite: GR 202 or equivalent. 3 credits.

312. Contemporary Literature. Readings in the works of living German authors. Attention both to individual style and the relationship of the writer to current problems. Prerequisite: GR 202 or equivalent. 3 credits.

- 315. German Culture.** Study of the major features of contemporary German life. Prerequisite: GR 202 or equivalent. 3 credits.
- 316. Advanced Conversation and Composition.** Intensive practice in spoken and written German on an advanced grammatical and stylistic level, with emphasis on the use of the language in practical situations. Prerequisite: GR 202 or equivalent. 3 credits.
- 320. Business German.** An introduction to the language of business and business practices. Prerequisite: GR 202 or equivalent. 3 credits.
- 410. The German Heritage.** A survey of German culture and civilization including history, music, art, literature, and philosophy. Prerequisite: GR 311 or 316 or permission. 3 credits.
- 420. The Age of Heroes.** An exploration of the idea held by writers from the medieval through the baroque periods that an exemplary individual is the proper measure and focus of human aspiration and achievement. Prerequisite: GR 311 or 316 or permission. 3 credits.
- 430. Goethe and Schiller.** A detailed study of these literary figures, with an examination of their society and artistic achievements. Prerequisite: GR 311 or 316 or permission. 3 credits.
- 440. The German Novelle.** The novelle as a literary genre as well as its development through the Nineteenth and Twentieth Centuries. Prerequisite: GR 311 or 316 or permission. 3 credits.
- 450. German Literature of the Twentieth Century.** A study of representative works by leading authors of the century and current literary movements. Prerequisite: GR 311 or 316 or permission. 3 credits.

Greek (GK)

- 101,102. Elementary Greek I,II.** Introductory study in the basics of ancient Greek. 3 credits per semester.
- 201,202. Intermediate Greek I,II.** Readings from Greek literature. First semester includes readings from the New Testament Gospels. Second semester includes readings from Xenophon's *Anabasis*. Prerequisite: GK 102. 3 credits per semester.
- 321. Readings from the Book of Acts.** Prerequisite: GK 202. 3 credits.
- 322. Readings in Hellenistic Greek.** Prerequisite: GK 202. 3 credits.
- 431. Readings from the Epistles of Paul.** Prerequisite: GK 202. 3 credits.
- 432. Readings from the Greek Philosophers.** Prerequisite: GK 202. 3 credits.

Health Care Management

The Management Department is described on page 41.

The major in health care management is designed for people in health care fields who possess an associate degree or diploma and professional certification. These qualifications are required for admission to the program. The program combines studies in the liberal arts and management, plus business practices common to the health care industry.

DEGREE: Bachelor of Science degree with a major in health care management.

MAJOR: AC 161,162, CS 147 or 170, EC 110,120,315, EN 111,210, LC 100, MG 330,487, PH 260; SO 324; 9-12 credits in sociology, psychology, or other disciplines approved by the Director of Continuing Education; and any four of the following courses (12 credits): MA 170, MG 222,340,350,361,371,372,384,420,425.

Admission to this degree program is open only to adults who have completed successfully an accredited diploma or associate degree program also with certification by a state governmental agency or a national professional accrediting organization in the following fields: Clinical Medical Assistant, Cytotechnologist, Dental Hygienist, Emergency Medical Technician, Medical Laboratory Technician, Nuclear Medicine Technologist, Occupational Therapy Assistant, Physical Therapy Assistant, Radiologic Technologist, Registered Nurse, Respiratory Therapist.

Health Professions

Lebanon Valley College offers pre-professional education in the medical (medicine, osteopathy, optometry, podiatry, pharmacy, chiropractic, and dentistry) and veterinary fields. Students interested in one of these careers usually follow a science curriculum with a major in biochemistry, biology or chemistry.

In addition to the basic natural sciences suited to advanced professional study, the student who is interested in veterinary medicine may participate in a cooperative program between the College and local veterinarians, specializing in both small and large animal medicine. Students not only receive credit for the work, but also gain valuable experience in the field.

For those students interested in podiatry, Lebanon Valley College and the Pennsylvania College of Podiatric Medicine have established an accelerated curriculum consisting of a minimum of 90 undergraduate semester hours and four years of podiatric medical education. Following three years of study at

Lebanon Valley College a student may be recommended for further study at the Pennsylvania College of Podiatric Medicine. Lebanon Valley College then awards the baccalaureate degree, with a major in biochemistry, biology or chemistry, to those students who complete successfully one year of basic science education at the Pennsylvania College of Podiatric Medicine.

A health professions committee coordinates the various plans of study in addition to offering advice and assistance to those persons interested in health professions careers.

Lebanon Valley College graduates have been admitted to some of the nation's finest schools including Johns Hopkins University Medical School, The University of Pennsylvania, The University of Pittsburgh, Jefferson Medical School, The Milton S. Hershey Medical Center, Temple University, The University of Maryland, The Philadelphia College of Osteopathic Medicine, The Pennsylvania College of Podiatric Medicine and the Pennsylvania College of Optometry.

History (HI)

The History Department is described on page 43.

DEGREE: Bachelor of Arts with a major in history.

MAJOR: History is a two-track major.

For students seeking secondary education certification to teach Social Studies, a history major requires HI 125,126,213,499, two upper-level courses in U.S. history and three in non-U.S. history (27 credits).

For all other students, the history major requires HI 125,126,213,313,499, two upper-level courses in U.S. history and three in non-U.S. history, and two elective courses in history (36 credits).

MINOR: HI 125,126,213; one upper-level course in U.S. history and two in non-U.S. history (18 credits).

Courses in History

125. Survey of United States History I. The story of America from Columbus to the Civil War. 3 credits.

126. Survey of United States History II. The story of America from Reconstruction through the Reagan years. 3 credits.

201. Ancient History: Greece and Rome. The beginnings of civilization with particular emphasis upon the cultural developments of the Greeks and Romans. 3 credits.

- 203. The Middle Ages.** A study of the thousand-year period that saw the emergence of a Christian European civilization. Political, social, economic, and intellectual aspects are emphasized. 3 credits.
- 205. Early Modern Europe.** The Renaissance, Reformation, Scientific Revolution, and the development of national political states, especially in the 17th and 18th centuries. 3 credits.
- 206. Revolution & Nationalism, 1789-1914.** A study of the effects of the French Revolution and the Industrial Revolution on Europe. Particular attention is paid to the rise of class antagonisms and national rivalries. 3 credits.
- 207. Europe in the 20th Century.** Developments in Europe from 1914 to the present, with particular attention to the impact of the world wars. 3 credits.
- 210. European Social History.** An inquiry into the lives and experiences of ordinary folk. Topics include women, laboring classes, and popular culture. 3 credits.
- 213. History and Historians.** The lives and ideas of the great historians from ancient Greeks to recent America. 3 credits.
- 225. The Colonies and the American Revolution.** A study of how Europeans seized the New World, transformed themselves into Americans, and fought to build a republic in a hostile world of monarchies. 3 credits.
- 226. Age of Jefferson & Jackson.** How the old republican ideal of a virtuous agrarian society struggles to confront the new age of economic modernization, social diversity, and sectional tension. 3 credits.
- 227. Civil War and Reconstruction.** A study of how sectional divisions over slavery led to a bloody war and a bitter postwar effort to reshape Southern society. 3 credits.
- 229. America in the Atomic Age.** The impact of World War II, the cold war, social change, and international responsibilities upon America since 1941. 3 credits.
- 241. Pennsylvania History.** The story of Pennsylvania's founding, settlement, expansion, and development from William Penn to the present. 3 credits.
- 261. American Intellectual History.** A survey of American intellectual life from the European discovery to the present, concentrating on the way in which developments in religion, politics, education, science, social science, and the arts, have affected Americans' thinking about themselves, their communities, and their role in the world. 3 credits.

262. American Social History. A survey of American social history from the colonial period to the present, focusing on the transformation of European culture by American conditions. Special attention will be paid to such developments as religious diversity, slavery, the achievement of independence, westward expansion, changing patterns of immigration, social organization, industrialization, urbanization, and involvement in international affairs. 3 credits.

311. American Business History I. An examination of the lives and ideas of American business leaders and entrepreneurs, the development of the American economy, and the relationships between business, society, and government, from the colonial period to 1890. Special emphasis on the following industries: communications, energy, finance, fur, manufacturing, retailing, steel and transportation. 3 credits.

312. American Business History II. An examination of the lives and ideas of American business leaders and entrepreneurs, the development of the American economy, the growth and decline of the trade union movement, and the relationships between business, society and government from 1890 to the present. Special emphasis on the following industries: communications, energy, entertainment, finance, manufacturing, meat packing, recreation, and transportation. 3 credits.

313. Public History. An introduction to non-teaching careers in history. Students examine the basics of archival management, museum curatorship, editing, oral history, and specialized work in government, corporations, historical societies, libraries, preservation agencies, research agencies, foundations, and higher education. 3 credits.

331. Nazi Germany and World War II. A look in depth at the nature of totalitarianism, the German experience, the growth of the Nazi party, the emergence of Hitler, and the Holocaust. 3 credits.

335. Intellectual History Since the Renaissance. A survey of the ideas that have dominated the development of Western Civilization, and the political, social, and economic context that gave them meaning. 3 credits.

341. Survey of Russian History. The development of Russia and the Soviet Union from Kievan beginnings to the present, with emphasis upon the period since 1600. 3 credits.

344. History of the Far East. A survey of the political, economic, and cultural institutions of China and Japan, with special emphasis given to the Western impact on these institutions after 1500. 3 credits.

360. American Military History. A survey of American military institutions from Old World tradition to the post Vietnam era, with particular emphasis on the development of the United States Army. The course features leadership case studies. 3 credits.

499. Seminar. Readings, discussions, and evaluations of important works of history. Open to history majors and minors, and to others by permission of instructor. 3 credits.

Honors (HC)

The Honors program and courses are described on page 26.

Hotel Management (HM)

The Management Department is described on page 44.

DEGREE: Bachelor of Science with a major in hotel management.

MAJOR: HM 111,112,211,222,231,311,322,331,411,422,431; AC 161,162; EC 120; MG 330,340,420,485; EN 210; PH 260 (60 credits).

MINOR: HM 111,112,211,222,231,311; AC 161 (21 credits).

Courses in Hotel Management

111. Introduction to the Hotel Industry. History, development and operation of the hotel industry. Emphasis on current organization, problems, opportunities and trends. Overview of how the hotel industry functions in the world economy. Management orientation stressed. 3 credits.

112. Front Office Management. An analysis of the integrated functions of the front office and housekeeping departments. Topics include work and information flow within and between departments, demand forecasting, pricing strategies, reservations and control, front desk responsibilities, guest services, emergency procedures, night auditing, and a general introduction to the art of innkeeping. Materials, equipment and techniques involved in the housekeeping function will also be analyzed. Prerequisite: HM 111. 3 credits.

211. Hotel Law. Fundamentals of hotel law including innkeeper laws and dramshop laws. The case study method develops an awareness and understanding of the legal problems confronting hotel managers. Prerequisite: HM 111. 3 credits.

221. The Psychology and Sociology of Leisure. An analysis of the fundamental psychological and sociological concepts and theories related to the motivation for travel. Review of consumer behavior in the hotel industry. Evaluating customer needs and services. Prerequisite: HM 111 and permission. 3 credits.

222. Food and Beverage Management I. Introduction to the food and beverage functions with emphasis on menu planning and purchasing. Includes fundamentals and language, systems, equipment, operational responsibilities, management organizational patterns, nutrition, storage, and sanitation. Prerequisite: HM 111. 3 credits.

231. Supervised Field Experience: Front Office Management. Emphasizes selected aspects of front office management. Accompanied by readings, reports, journals, and faculty conferences. One hundred thirty-five (135) hours of field work in the hotel industry. Prerequisite: HM 112 and permission. 3 credits.

311. Advanced Hotel Management. An analysis of the following aspects of hotel organizations: health, safety and security; building and grounds; equipment purchase, repair and maintenance; facilities design; renovation and maintenance; internal controls; and energy management. Prerequisite: HM 112. 3 credits.

322. Food and Beverage Management II. Analysis of the food and beverage functions with emphasis on production and services. Prerequisite: HM 112. 3 credits.

331. Supervised Field Experience: Marketing. Emphasizes selected aspects of marketing techniques and research. Accompanied by readings, reports, journals, and faculty conferences. One hundred thirty-five (135) hours of field work in the hotel industry. Prerequisite: HM 112, MG 340 and permission. 3 credits.

411. Hotel Financial Management. To develop an understanding of common techniques and methods by which management in the hospitality industry, can interpret, analyze, and make decisions based on information provided by the accounting system. Prerequisites: AC 161, 162. 3 credits.

422. Food and Beverage Management III. Advanced analyses of the food and beverage functions with emphasis on cost control and profit planning. Relevant computer software applications are reviewed in depth. Prerequisite: HM 322. 3 credits.

431. Supervised Field Experience: Accounting and Finance. Emphasizes selected aspects of accounting and financial management concepts and techniques. Accompanied by readings, reports, journals, and faculty conferences. One hundred thirty-five (135) hours of field work in the hotel industry. 3 credits.

International Business

The program in International Business is offered jointly by the Foreign Languages department which is described on page 41, and the Management department, which is described on page 44.

The program in international business provides an opportunity to integrate the study of business with the knowledge of a foreign language and culture. It is designed to equip students with the background and skills necessary to work with foreign corporations within the United States and with American corporations abroad. While acquiring a strong liberal arts background, students who elect this major will receive training in accounting, management, economics and political science. They also will become familiar with a foreign culture and will acquire proficiency in French, German or Spanish. International business majors are encouraged to apply for internships to gain valuable field experience.

DEGREE: Bachelor of Science degree with a major in international business.

MAJOR: AC 161,162; EC 110,120,332; MG 330,340,361,376,485; PS 210,230,312; RE 140; CS 147 or 170; MA 150 or 160 or 161 or 111; MA 170 or 270, or 372; FR, GR, SP 315,316; and two other courses in the selected foreign language above the intermediate level (63-65 credits).

LEADERSHIP STUDIES (LC)

The program in Leadership Studies is described on page 24.

Courses in Leadership

100, 111. Theories and Applications of Leadership Processes. Theories and concepts of leadership, power and authority. Analysis of their practical applications. Specific areas to be covered include group dynamics, communication skills, conflict resolution, motivation, decision making, and values clarification and ethics. Prerequisite for LC 111, permission of instructor. 3 credits.

330. Ethical Issues and Values in Leadership. A critical examination of the ethical and valuational questions that reside at the core of both leadership and leadership theories. Prerequisite: LC 100 or 111. 3 credits.

350. Advanced Leadership Studies. Models and theories of leadership as exemplified in selected case studies. Analysis of leadership in other cultures and assessment of the student's own leadership style are also included. Prerequisite: LC 100 or 111, PH 220 or RE 222. 3 credits.

400. Leadership Internship. Prerequisite: LC 350. 3-15 credits.

Management (MG)

The Management Department is described on page 44.

DEGREE: Bachelor of Science with a major in management.

MAJOR: AC 161,162; EC 110,120; EN 210; CS 147 (or 170); MG 222, 233,330,340,361,371,460,483,485; MA 150 (or 111 or 160 or 161); MA 170 (or 270 or 372); PH 260 (54-56 credits).

Courses in Management

100. Business and Its Environment. An overview of business operations for the non-business major. Specialized fields within business organizations are analyzed. The environment and the role of business in modern society are examined. Not open to accounting, economics, management, or international business majors. 3 credits.

222. Quantitative Methods. An introduction to some of the quantitative methods used in modern management and economics. Topics include probability concepts, forecasting, decision theory, linear programming, queuing theory, network models, and Markov analysis. Prerequisites: MA 150 and 170. 3 credits.

233. Personal Computer Applications in the Business and Economic Environment. An introduction to personal computers and their use as a business management tool. Through classroom instruction and laboratory exercises the student learns commonly used business applications. Topics covered include word processing, electronic spreadsheets, database management, business graphics, decision support systems, and integrated accounting packages. Prerequisite: AC 151 or 161, EC 110 or 120, or permission. 3 credits.

- 250. Real Estate Fundamentals and Practice.** This course acquaints the student with aspects of listing, selling, and leasing property. Includes listing and selling techniques; contracts; financing including FHA and VA; qualifying the customer; settlement procedures including prorations; and special fields of real estate such as development and construction. 4 credits.
- 330. Principles of Management and Organizations.** A study of management principles, organizational theory, and administrative techniques as applied to the effective and efficient operation of both profit and nonprofit organizations. Emphasizes the organization's structure, leadership, interpersonal relationships, and managerial functions. 3 credits.
- 340. Principles of Marketing.** An overview of marketing from the management perspective. Topics include marketing strategies; marketing research; consumer behavior; selecting target markets; developing, pricing, distributing, and promoting products and services and non-profit marketing. Prerequisite: junior standing or permission. 3 credits.
- 341. Consumer Behavior.** Analysis of factors affecting purchase decisions in the marketplace; application of behavioral and social science concepts to the study of consumer behavior. Emphasis on use of knowledge of consumer behavior for marketing decisions. Prerequisite: MG 330 and MG 340, or permission. 3 credits.
- 350. Organizational Behavior and Development.** A detailed study of theories and models of organizational behavior and development, with emphasis on the practical application of these models in the workplace to improve individual, group, and organizational performance. Prerequisite: junior standing and MG 330, or permission. 3 credits.
- 361. Managerial Finance.** A study of financial management covering analysis of asset, liability and capital relationships and operations; management of current assets and working capital; capital planning and budgeting; capital structure and dividend policy; short and intermediate term financing; internal and external long term financing; mergers and acquisitions; multinational operations; and corporation failures and liquidation. Prerequisite: AC 152 or AC 162; EC 110, 120; MG 222. 3 credits.
- 362. Investments.** An analysis of investment and its relation to other economic, legal, and social institutions. The course includes discussion of investment principles, machinery, policy, management investment types, and the development of portfolios for individuals and institutions. Prerequisite: MG 361. 3 credits.

364. Advertising. The role advertising plays in American life and its effect upon consumer behavior. Analysis of media strategies, functions of advertising agencies, creation of successful advertisements, and the legal and ethical restraints on advertising. Prerequisite: MG 340. 3 credits.

371. Business Law I. Elementary principles of law relating to the field of business. The course covers contracts, government regulation of business, consumer protection, bankruptcy, personal property, real estate, bailments, insurance and estates. Prerequisite: AC 152 or 162 highly recommended. 3 credits.

372. Business Law II. Elementary principles of law relating to business. Includes agency, employment, commercial paper, security devices, insurance, partnerships, corporation, estates, bankruptcy. Prerequisite: AC 152 or 162 highly recommended. 3 credits.

376. International Business Management. A study of the management techniques and procedures in international and multinational organizations. Prerequisite: MG 340. 3 credits.

380. Small Business Management. A study of small business, including organization, staffing, production, marketing, and profit planning. Cases are used extensively in presenting the course material. Prerequisite: AC 152 or 162, MG 330, or permission. 3 credits.

384. Marketing Research. An introduction to the methodology of marketing research. Specific topics covered include problem formulation, research design, sample design, data collection, analysis and interpretation of data, and presentation of research findings. Prerequisite: MG 330 and MG 340. 3 credits.

420. Personnel Management. This course examines the problems in effectively recruiting, selecting, training, developing, compensating, and disciplining human resources; it includes both equal employment opportunity and labor-management relations. Prerequisite: MG 330 or permission. 3 credits.

425. Labor and Industrial Relations. Emphasis on the origin, growth, and development of labor organizations and the impact of such organizations on management practices. Topics included are: legislation affecting industrial relations; collective bargaining process; contract administration; industrial jurisprudence; and arbitration. Prerequisite: MG 330 or permission. 3 credits.

460. Management Information Systems. Examines data sources and the role of information in the organization for purposes of management planning, operations, and control in various types of business environments. Treats information as a key organizational resource parallel to people, money, materials, and technology. Views information and its uses within general systems framework. Prerequisite: AC 152 or 162, CS 147 or 170, MG 330, or permission. 3 credits.

483. Production and Operations Management. An overview of the production/operations management function as applied to both manufacturing and service organizations. It provides a background of the concepts and processes used in the production/service operations area. Integrated throughout are considerations of the information systems, the people involved, the quantitative techniques employed, and the international implications. Prerequisite: MG 222 and MG 330, or permission. 3 credits.

485. Business Policy. A capstone course to study administrative processes under conditions of uncertainty, integrating prior studies in management, accounting, and economics. Uses the case method and a computer simulation. Prerequisite: senior standing or permission. 3 credits.

487. Health Care Management. A capstone course to study the administrative processes of American's health care industry including institutional infra-structure, governance systems, financial systems, personnel systems, quality controls, nursing and clinical services, and marketing. The course integrates prior study in health care, management, accounting, and economics. Students will develop problem solving skills and an appropriate management style. Prerequisite: senior standing or permission. 3 credits.

Mathematics (MA)

The Mathematical Sciences Department is described on page 46.

DEGREE: Bachelor of Science with a major in mathematics.

MAJOR: MA 111,112,202,211,222,499, CS 147, five courses in mathematics (15 credits) numbered above 300, as approved to include a balance between abstract and applied courses (40 credits).

MINOR: MA 111,112 or 161,162,211; MA 202,222, CS 147 and one mathematics course (3 credits) numbered above 300, approved by the advisor (22 credits).

Courses in Mathematics

100. Basic Concepts of Mathematics with Computers. A study of a variety of topics from mathematics, the computer, and the use of the computer as a tool. Topics may include: patterns and inductive reasoning, calculators, number systems, nature of algebra, interest, installment buying, metric system, geometric concepts, computer word processing, and writing a computer program. 3 credits.

102. Pre-Calculus, Algebra and Trigonometry. A review of college algebra and trigonometry. Algebraic expressions and equations, inequalities, absolute value, exponents, logarithms, functional notation, graphs of functions, systems of equations, modeling and word problems, angular measurement, trigonometric functions, identities, formulas, radian measure, graphs of trigonometric and inverse functions. 3 credits.

111,112. Analysis I,II. A rigorous calculus sequence for departmental majors. Prerequisite: placement testing or MA 102. 5 credits per semester.

150. Finite Mathematics. Introduction to finite mathematics with emphasis on economic and business applications. Topics include: sets, lines and systems of equations, matrices, linear programming, probability, statistics, Markov processes, mathematics of finance. 3 credits.

160. Calculus for Business. Introduction to differential and integral calculus with emphasis on concepts and techniques most applicable to business and economics. Prerequisite: placement testing or MA 102. 3 credits.

161. Calculus I. The first course of a calculus sequence with emphasis on applications. Topics include: functions and limits, differentiation, integration, introduction to logarithm and exponential functions. Prerequisite: placement testing or MA 102. 3 credits.

162. Calculus II. Continuation of topics from MA 161. Additional applications of differentiation and integration, logarithm and exponential functions, inverse trigonometric and hyperbolic functions, improper integrals, l'hospital's rule, infinite series, and conic sections. Prerequisite: MA 161. 4 credits.

170. Elementary Statistics. Elementary descriptive and inferential statistics. Topics include: graphical representation, measures of central tendency, probability, binomial distribution, normal distribution, hypothesis testing, estimation, comparison testing, linear models and correlation, and contingency tables. 3 credits.

202. Foundations of Mathematics. Introduction to logic, set theory and real and complex numbers. Prerequisite: MA 112. 3 credits.

- 211. Analysis III.** Continuation of Analysis I,II. Prerequisite: MA 112 or MA 162. 3 credits.
- 222. Linear Algebra.** Vectors, matrices, and systems of equations. Prerequisite: MA 112. 3 credits.
- 261. Calculus III.** Continuation of Calculus I,II. Topics include: polar coordinates, parametric equations, vectors in the plane, three-dimensional space, partial derivatives, multiple integrals, and vector calculus. Prerequisite: MA 111 or 162. 3 credits.
- 266. Differential Equations.** First and second order differential equations, partial differential equations. Prerequisite: MA 211 or MA 261. 3 credits.
- 270. Intermediate Statistics.** An advanced version of MA 170. Prerequisite: MA 112 or MA 162. 3 credits.
- 322. Abstract Algebra.** Fundamentals of groups, rings, fields. Prerequisite: MA 222. 3 credits.
- 325. Geometry.** Axiomatic development of Absolute, Euclidean and non-Euclidean geometries. Prerequisite: MA 112. 3 credits.
- 335. Operations Research I.** Linear programming, dynamic programming, integer programming, queueing theory, project scheduling, stochastic simulation, and decision analysis. Prerequisite: MA 222, 371. 3 credits.
- 336. Operations Research II.** Continuation of topics from MA 335, and selected topics from goal programming, network analysis, game theory, stochastic processes, inventory theory, forecasting, and reliability. Prerequisite: MA 335. 3 credits.
- 371. Mathematical Probability.** Random variables, probability law and distributions. Prerequisite: MA 211. 3 credits.
- 372. Mathematical Statistics.** Generating functions, decision theory, tests of hypotheses. Prerequisite: MA 371. 3 credits.
- 412. Functions of a Complex Variable.** Analytic functions. Cauchy theorem, conformal mapping. Prerequisite: MA 202. 3 credits.
- 452. Seminar for Teachers.** Issues of concern for the prospective secondary school mathematics teacher. 1 credit.
- 463. Numerical Analysis I.** Iteration, interpolation, numerical integration, and linear systems. Prerequisite: MA 266, CS 147. 3 credits.
- 464. Numerical Analysis II.** Continuation of MA 463, and differential equations, and matrix methods. Prerequisite: MA 463. 3 credits.
- 471. Applied Statistics.** Linear regression and correlation analysis, analysis of variance, sampling, time series analysis. Prerequisite: MA 372. 3 credits.

499. Seminar. Problem solving techniques and other selected topics. Prerequisite: MA 211. 3 credits.

Medical Technology

In addition to the degree described below, Lebanon Valley College also offers a "2+2" cooperative program in medical technology with Thomas Jefferson University and a "2+3" program with Hahnemann University, both in Philadelphia. These Programs are described on page 33.

DEGREE: Bachelor of Science in Medical Technology.

MAJOR: BI 100,111,112,306,322, eight additional credits in biology; CH 111, 112,113,114,213,214,215,216; PHY 103,104; MA 170 (52 credits). The senior year is spent off-campus at an accredited hospital School of Medical Technology. It is the student's responsibility to apply and become accepted into a hospital program. Thirty (30) semester hours of credit are awarded for the successful completion of this year.

Military Science (MI)

The Military Science program is described on page 49.

REQUIREMENTS: MI 101,102,201,202,301,302,401,402; HI 360, an advanced writing course, and a course in human behavior.

Courses in Military Science

101,102. Introduction to Military Science. Emphasis on developing self-confidence and bearing. Instruction and weekly practical training in such basic skills as map reading, rappelling, weapons, communications, first aid, tactical movements, customs and courtesies, public speaking, and leadership. Meets one hour per week each semester. Also four to six Saturdays of voluntary adventure training and one formal social event each semester. 1 credit each semester.

201,202. Application of Military Science. Advanced instruction in topics introduced in the first year. Participation in operations and basic tactics to demonstrate leadership problems and to develop leadership skills. Meets two hours per week each semester. Also four to six Saturdays of voluntary adventure training and one formal social event each semester. 1 credit each semester.

301,302. Advanced Application of Military Science. Emphasis on leadership. Situations require direct interaction with other cadets and test the student's ability to meet set goals and to get others to do the same. Students master basic tactical skills of the small unit leader. Meets two hours per week and selected weekends each semester. Prerequisite: Open only to Advanced Course cadets. 1 credit each semester.

401,402. Command and Staff. Emphasis is placed on developing planning and decision-making capabilities in the areas of military operations, logistics, and administration. Meets two hours per week and selected weekends each semester. Prerequisite: Open only to Advanced Course cadets. 1 credit each semester.

Music (MU)

The Music Department is described on page 51.

DEGREES: Bachelor of Arts with a major in music; Bachelor of Music; Bachelor of Music with a major in sacred music; Bachelor of Science with a major in music education; Bachelor of Music with a major in sound recording technology.

MAJORS: Core courses in all music degree programs are: (Area I) MU 115,116,117,118,215,217,226,316; (Area V) MU 341,342; (Area VI) MU 246; (Area VII) MU 530 [B.S.], or 540 [B.A.], or 550 [B.M.].

Music (B.A.): Core courses plus (Area I) MU 224,315,329; (Area II) MU 132,326,327 for voice majors; (Area IV) ensembles; (Area V) MU 306 for piano majors, MU 462; (Area VII) MU 510 or 530-piano for voice majors, MU 540-piano/voice depending upon performance area.

Orchestral and Band Instruments (B.M.): Core courses plus (Area I) MU 224,315,329,416; (Area II) MU 403,480; (Area III) MU 123,124-brass or 231,232-woodwinds or 127,228-percussion; (Area IV) ensembles; (Area V) MU 462; (Area VII) MU 510 or 530-piano, 520 or 530-voice, MU 550-orchestral/band instrument depending upon performance area.

Piano (B.M.): Core courses plus (Area I) MU 224,315,329,416; (Area II) MU 406,411,480,600 maximum 6 credits; (Area IV) ensembles-6 credits; (Area V) MU 306,462; (Area VI) MU 345 or 347; (Area VII) MU 520 or 530-voice, MU 550-piano.

Sacred Music (B.M.): Core courses plus (Area I) MU 224,315,329; (Area V) MU 462; (Area VI) MU 347. Organ track: (Area II) MU 132,422; (Area IV) ensembles; (Area V) MU 321,322,351,352,354,421; (Area VII) MU 520 or 530-voice, 530-piano, MU 550-organ. Voice track: (Area II) MU 132, 326,327,422; (Area IV) ensembles; (Area V) MU 321,322,351,421; (Area VII) MU 530-piano, 530-organ, 550-voice.

Music Education (B.S.): Core courses plus (Area I) MU 416; (Area II) MU 333,334,335,336,441,402 or 404; (Area III) MU 123,124,127,228,231,232, 337,338; (Area IV) ensembles; (Area V) MU 341,342; (Area VI) MU 345 or 347; ED 110; PSY 100 or 120; PSY 220. Students whose principal performance medium is piano are required to study 1 year of voice. Students whose principal performance medium is voice are required to complete 2 years of piano. Students whose principal performance medium is a band or orchestral instrument are required to complete 2 years of piano study and 1 year of voice study. All study includes class or private instruction. Music education majors are permitted to register for only the half-hour lesson in their principal performance medium during the student teaching semester. All students may earn up to 12 credits for ensemble participation.

MINOR: MU 115,116,117,341 or 342, 6 credits of Private Instruction (MU 530) and 4 credits in music ensembles or elective courses. All programs must be approved by the Chairperson.

Student Recitals

The student recitals are of inestimable value to all students in acquainting them with a wide range of the best musical literature, in developing musical taste and discrimination, in affording the experience of appearing before an audience, and in gaining self-reliance as well as nerve control and stage demeanor. Students at all levels of performance appear in these student recitals.

Courses in Music Theory (Area D)

Enrollment in all music courses above the 100 level requires the permission of the Chairperson of the Department.

115. Harmony I. A study of the rudiments of music and their notation. Harmonization of melodies and basses with fundamental triads. Analysis. 2 credits.

116. Harmony II. A study of inversions of triads, seventh chords, the principles of modulation and figured bass. Analysis of hymns and standard literature. 2 credits.

117. Ear Training and Sight Singing I. The singing and aural recognition of intervals, scales triads and simple harmonic progressions. 2 credits.

118. Ear Training and Sight Singing II. A continuation of 117, emphasizing clef reading, modality, modulation and more complicated rhythmic devices and harmonic patterns. 2 credits.

215. Harmony III. The writing and analysis of exercises and literature that include secondary dominant, diminished seventh chords and substitutes for diatonic harmony. Analysis and discussion of Twentieth Century compositional techniques. 2 credits.

217. Basic Concepts of Structure and Style. An advanced ear training course using literature representing various stylistic periods and performance media as the basis for analysis, discussion and aural recognition. 2 credits.

224. Counterpoint. Introductory work in strict counterpoint through three- and four-part work in all the species. 2 credits.

226. Form and Analysis I. A study through analysis and listening of simple and compound forms, variations, contrapuntal forms, rondo and sonata forms. Emphasis is placed primarily upon structural content. The course provides experience and skill in both aural and visual analysis. 2 credits.

215. Harmony IV. Elementary Composition. Exposure to the composition of various forms, including theme and variation, rondo, song and dance forms; exploration of Twentieth Century compositional techniques. 2 credits.

216. Keyboard Harmony. Score reading and the realization of figured bass at the keyboard, transposition, and improvisation. The successful completion of a piano jury is required for admission to the course. 2 credits.

229. Form and Analysis II. A study through analysis and listening of fugue forms, suite, complex sonata forms and techniques for analysis of certain contemporary styles of music. 2 credits.

216. Orchestration. A study of instrumentation and the devices and techniques for scoring transcriptions, arrangements and solos for orchestra and band, with special emphasis on practical scoring for mixed ensembles as they occur in public schools. Laboratory analysis and performance. Scoring of original works. 2 credits.

Materials and Methods Courses (Area II)

232. Diction for Singers. An introduction to the pronunciation of singer's English, German, French, Italian, and Latin, utilizing the International Phonetic Alphabet. Required for sacred music majors and for voice students majoring in music; open to other students with permission of the instructor. 1 credit.

220. Music in the Elementary School. A course designed to aid elementary education majors in developing music skills for the classroom, including the playing of instruments, singing, notation, listening, movement, and creative applications. 3 credits.

280. Field Practicum in Music Education. Supervised field experiences in appropriate settings. Required pass/fail. Prerequisites: ED 110 and permission. 1-3 credits.

326. Vocal Literature. A survey of solo vocal literature, with emphasis on teaching repertoire. Extensive listening is required. Students may have opportunities to perform works studied. 2 credits.

327. Vocal Pedagogy. This course prepares the advanced voice student to teach private lessons at the secondary school level. Students in the class are expected to develop vocal exercise procedures, become familiar with suitable teaching repertoire and apply teaching procedures in a laboratory situation. Selected writings in vocal pedagogy and voice therapy are studied. 2 credits.

333. Methods and Materials, General Music: Elementary. A comprehensive study of general music teaching at the elementary school level, the philosophy of music education, varied approaches for developing conceptual learning and music skills, creative applications, and analysis of materials. 3 credits.

334. Methods and Materials, General Music: Junior High/Middle School. A study of materials and approaches appropriate for general music classes in the junior high/middle school, including adolescent voices, musically-oriented learning experiences, and planning a general curriculum. 3 credits.

335. Methods and Materials: Instrumental. A comprehensive study of methods and materials applicable to the teaching of band and orchestral instruments and instrumental groups from elementary through high school levels. Topics include: an overview of the historical and philosophical perspectives of music education, development of organizational skills and administrative responsibilities and a review of the playing and teaching techniques of all instruments. 3 credits.

336. Music Education Field Practicum. Students are placed in schools one hour per week where they are involved in teaching/learning environment. 1 credit.

402. Seminar in Advanced Instrumental Problems. A lecture/discussion course highlighting the typical problems confronting the school instrumental music teacher. Topics include: marching band charting and show design techniques, instrument repair and maintenance, selection of beginners, rehearsal scheduling, budgeting, evaluation, literature selection, and organization of festivals, contests, trips, and public performances. Individual research projects and student presentations. 2 credits.

403. Pedagogy. Orchestral and Band Instruments. A survey of literature and teaching materials that relate to the student's performance area. Students may be expected to apply teaching procedures in a laboratory situation. 2 credits.

404. Music Education Seminar, Secondary Level. A study of the high school vocal music curriculum and related course offerings. 2 credits.

406. Piano Pedagogy. A practical course that explores fundamental principles necessary to be an effective piano teacher. Subjects include practice techniques, memorization and the selection of appropriate technical materials for both beginners and advanced students. Laboratory teaching may be required of the student. 2 credits.

411. Piano Ensemble. A course that acquaints students with problems related to piano ensemble performance. Practical experience will be gained through study and performance of appropriate literature. 2 credits.

422. Church Music Methods and Administration. A course that acquaints students with the total church music program. Topics include the development of a choir program, methods and techniques of rehearsal, budget preparation, and committee and pastoral relationships. 2 credits.

441. Student Teaching. Music education majors spend a semester in the music department of a school district under the supervision of cooperating teachers. Prerequisites: (1) a cumulative grade point average of 2.0 during the first six semesters in college; (2) successful completion of piano and voice juries; (3) completion of Music 333,334,335,336 including field experiences; (4) approval of the music faculty. Students are responsible for transportation; the college cannot insure that student teaching placement can be in a local geographical area.

480. Chamber Music. Under the guidance of an instructor, the student studies and performs chamber works appropriate to his/her performance medium. Prepared works may be presented in recital. 1-2 credits.

600. Accompanying. Under the guidance of a piano instructor the piano major prepares accompaniments for recital performance. One credit per semester is given for one solo recital or two half recitals. A maximum of six credits, usually distributed over the last three years, may be earned.

Instrumental Courses (Area III)

Class Instruction in Band and Orchestral Instruments. Practical courses in which students, in addition to being taught the fundamental principles underlying the playing of all band and orchestral instruments, learn to play

on instruments of each group: string, woodwind, brass, and percussion. Problems of class procedure in public schools are discussed; transposition of all instruments is taught. Ensemble playing is an integral part of these courses. Bibliographical materials are surveyed.

Brass Instruments (trumpet, horn, trombone, baritone, tuba)

123. Brass I. A study of the trumpet and trombone. Emphasis on pedagogical techniques. 1 credit.

124. Brass II. A study of the remainder of the brass family (horn, baritone, tuba). Emphasis on pedagogical techniques. Mixed brass ensemble experience. 1 credit.

Percussion Instruments (snare drum, timpani, bass drum, and others)

127. Percussion I. A study of the snare drum. 1/2 credit.

128. Percussion II. A study of the remainder of the above instruments. 1/2 credit.

Woodwind Instruments (clarinet, flute, oboe, saxophone, bassoon)

231. Woodwind I. A study of the clarinet. 1 credit.

232. Woodwind II. A study of the remainder of the above instruments. 1 credit.

String Instruments (violin, viola, cello, string bass)

337. String I. A study of all the above instruments. 1 credit.

338. String II. A continuation of the study of all the above instruments. 1 credit.

Music Organizations (Area IV)

Opportunities for individual performance in a group experience are provided by music organizations. Membership in the organizations is open on an audition basis to all students.

601. Symphonic and Marching Band. The symphonic band performs original literature as well as arrangements of standard repertoire. During the football season it presents half-time performances. Membership is by audition and is dependent upon the instrumentation needs of the organization. All music education majors, regardless of performance medium, are required to be in marching band for a minimum of two semesters. 1 credit.

603. Symphony Orchestra. A wide variety of symphonic literature is studied and performed. In the second semester the orchestra accompanies soloists in a concerto-aria concert and on occasion combines with choral organizations for the performance of a major work. 1 credit.

- 604. Concert Choir.** The Concert Choir is composed of approximately fifty voices, selected by audition. All phases of choral literature are studied intensively. In addition to local concerts, the choir tours annually. 1 credit.
- 605. College Chorus.** The College Chorus offers the opportunity to study and perform literature of various styles and composers including major choral works. Choral experience is preferred but not required. Required of all majors in the department. 1/2 credit.
- 613. Clarinet Choir.** 1/2 credit.
- 614. Woodwind Quintet.** 1/2 credit.
- 615. Brass Ensemble.** 1/2 credit.
- 616. Percussion Ensemble.** 1/2 credit.
- 621. Flute Ensemble.** 1/2 credit.
- 623. String Ensemble.** 1/2 credit.
- 624. Woodwind Ensemble.** 1/2 credit.
- 625. Low Brass Ensemble.** 1/2 credit.
- 626. Jazz Band.** 1 credit.
- 628. Small Jazz Ensemble.** 1/2 credit.
- 630. Chamber Ensemble.** 1/2 credit.
- 635. Handbell Choir.** 1/2 credit.

The History and Appreciation of Music Courses (Area V)

- 100. History and Appreciation of Music.** For the non-music major, a survey of Western music from ancient to modern times. The course is designed to increase the individual's musical perception. May not be taken if the student has completed MU 341 and/or 342. 3 credits.
- 200. American Music History.** A historical survey of American music, emphasizing stylistic developments and illustrative musical examples. The course emphasizes the Twentieth Century including jazz, pop, rock and American musical theatre. 3 credits.
- 306. History and Literature of the Piano.** A survey of the development of the piano and its literature with emphasis on piano methods books and related materials. 2 credits.
- 321. Hymnology.** A study of the historical development of hymns and hymn singing, as well as an in-depth analysis of the current hymnodical practices of the Christian churches. 2 credits.

322. Sacred Choral Literature Seminar. A study of standard oratorios, requiems, cantatas and anthems with emphasis on the development of aesthetic judgement in selecting literature for various liturgical settings. 2 credits.

341. History and Literature of Music I. A survey course in the history of Western Music, with emphasis on stylistic developments and illustrative musical examples. Ends with Bach. May not be taken if student has completed MU 100. 3 credits.

342. History and Literature of Music II. A survey course in the history of Western Music, with emphasis on stylistic developments and illustrative musical examples. Covers Handel to the present. May not be taken if student has completed MU 100. 3 credits.

351,352,354. Organ Seminar I,II,IV. Three semesters of study, preferably in sequence, based on the investigation of the following: 351-Organ Design and Tonal Evolution; 352-Organ History and Literature (A survey from early periods through contemporary times); 354-Church Service Playing. 2 credits per semester.

421. Liturgy. A study of the music and its form as related to the historical development of the current practice of the service of the Christian churches. 2 credits.

462. Music Literature Seminar. A study of music literature to extend the student's familiarity with selected works. Application of accumulated knowledge of theory, music history, form, and twentieth-century music. Each student pursues an individual project of particular interest. 2 credits.

Conducting Courses (Area VI)

246. Principles of Conducting. The principles of conducting and baton technique. Students conduct ensembles derived from class personnel. 2 credits.

345. Instrumental Conducting. Emphasis on practical work with instrumental groups. Rehearsal techniques are applied through individual experience. 2 credits.

347. Choral Conducting. Basic conducting techniques applied to the choral idiom. Rehearsal procedures, materials and specific problems of the choral conductor are stressed through laboratory experience. 2 credits.

Applied Music Instruction (Area VII)

Private instruction in the principal performance medium as required by the degree program is included in the base tuition charge for full-time students. Other private instruction elected by the student is subject to additional fees.

510. Class Piano Instruction. 1 credit.

520. Class Voice Instruction. 1 credit.

530. Individual Instruction (Voice, Piano, Orchestra I and Band Instruments). Piano study (private or class) is required for a minimum of two years. 1 credit.

540. Individual Instruction (Voice, Piano, Organ, Orchestra I and Band Instruments). A charge is made for the second half-hour of instruction except where required by the degree. 2 credits.

550. Individual Instruction. Private lessons in the principal performance medium, as required by the degree, are included in the tuition. Private lessons in areas other than the principal performance medium are subject to extra fees. 3 credits.

Sound Recording Technology Courses

See page 129.

Philosophy (PH)

The Religion and Philosophy Department is described on page 61.

DEGREE: Bachelor of Arts with a major in philosophy.

MAJOR: PH 120,220,300; at least one course from PH 301-336; 12 additional credits in philosophy (24 credits).

MINOR: PH 220,300; at least one course from PH 301-336; 9 additional credits in philosophy (18 credits).

Courses in Philosophy

110. Problems of Philosophy. Examination of major philosophical issues and the ways major philosophers have dealt with them. 3 credits.

120. Basic Logic. An introduction to the rules of clear and effective thinking. Attention is given to the logic of meaning, the logic of valid inference, and the logic of factual inquiry. Main emphasis is upon deductive logic. Students are introduced to the elements of symbolic logic as well as to traditional modes of analysis. 3 credits.

220. Ethics. An inquiry into the central problems of values applied to human conduct, with an examination of the responses of major ethical theories to those problems. 3 credits.

230. Philosophy of Religion. A study of the issues raised for philosophy by contemporary religious and theological thought. The course includes critical examinations of such problems as faith and reason; the meaning of revelation, symbolism, and language; the arguments for the existence of God; faith and history; religion and culture. 3 credits.

240. American Philosophy. A survey of philosophical thought in the United States from the colonial period to the present, with emphasis on the work of Peirce, James, and Dewey. 3 credits.

260. Ethical Issues in Organizations. An examination of ethics and values within the context of modern corporate organizations. The course considers issues pertinent to corporate responsibility, whistle-blowing, the profit motive, consumerism, bribery, conflict of interest, and cost/benefit analysis. Some attention is given to classical ethical theories; a considerable portion of the course is devoted to case analysis. Prerequisite: MG 330 or PH 110 or by permission. 3 credits.

300. History of Philosophy. The development of philosophical thought from the pre-Socratics through the nineteenth century, with emphasis on philosophy as a discipline of systematic inquiry. 3 credits.

336. Twentieth Century Philosophy. An examination of representative American, British, and Continental philosophers from 1900 to the present. Prerequisite: PH 300 or permission. 3 credits.

340-349. Major Authors. Intensive studies of individual great philosophers or principal schools. Prerequisite: PH 300 or permission. 3 credits.

Physical Education (PE)

The Physical Education Department is described on page 56.

The College does not offer a major or minor in Physical Education.

Courses in Physical Education

102. Aerobic Exercises. A combination of exercise and dance steps in rhythmic movements. The course promotes the value of a total fitness program, including diet and weight control and heart rate monitoring. 1 credit.

107. Badminton. Instruction in the tactics, techniques and rules of badminton. 1 credit.

110. Basketball. Instruction in the tactics, techniques and strategies of the game. 1 credit.

113. Bowling. Instruction in the techniques, etiquette, history and method of scoring. 1 credit.

122. Fitness. Examination of varied programs for fitness, with emphasis on diet and weight control, cardiovascular efficiency, strength improvement, and flexibility training. 1 credit.

125. Golf. Instruction in the techniques, tactics, rules and etiquette of golf. 1 credit.

131. Racquetball. Instruction in the tactics, techniques and different forms of competition used in racquetball. 1 credit.

146. Tennis. Instruction in the techniques, rules and tactics, with extensive practice in singles and doubles. 1 credit.

160. Beginning Swimming. Instruction in the fundamentals of swimming. 1 credit.

165. Intermediate Swimming. Advanced instruction in swimming. 1 credit.

180. Softball and Volleyball. Instruction in the techniques and tactics of softball and volleyball and varied forms of competition.

Physics (PHY)

The Physics Department is described on page 56.

DEGREE: Bachelor of Science with a major in physics.

MAJOR: PHY 111,112,211,311,312,321,322, plus 6 additional semester hours (at least 2 in experimental physics); MA 161,162, 261 and 266 or MA 111,112,211 and 266 (43-46 credits).

Courses in Physics

100. Physics and Its Impact. A course that acquaints the student with some of the important concepts of physics, both classical and modern, and with the scientific method, its nature and its limitations. The role of physics in the history of thought and its relationships to other disciplines and to society and government are considered. The weekly two-hour laboratory period provides experience in the acquisition, representation, and analysis of experimental data, and demonstration of the physical phenomena with which the course deals. 4 credits.

103,104. General College Physics I,II. An introduction to the fundamental concepts and laws of the various branches of physics, including mechanics, heat, sound, electricity, magnetism, optics, and atomic and nuclear structure, with laboratory work in each area. 4 credits per semester.

- 110. The Physics of Music.** The study of wave motion, analysis and synthesis of waves, resonance, physical characteristics of music sounds, musical instruments, the reproduction and amplification of sound, and the acoustical properties of rooms. A working knowledge of algebra is required. 3 credits.
- 111,112. Principles of Physics I, II.** An introductory course in classical physics, designed for students who desire a rigorous mathematical approach to college physics. Calculus is used throughout. The first semester is devoted to mechanics and heat, and the second semester to electricity, magnetism, and optics, with laboratory work in each area. Prerequisite or corequisite: MA 111 or 161. 4 credits per semester.
- 211. Atomic and Nuclear Physics.** An introduction to modern physics, including the foundation of atomic physics, quantum theory of radiation, the atomic nucleus, radioactivity, and nuclear reactions, with laboratory work in each area. Prerequisite: PHY 104 or 112, or permission. 4 credits.
- 212. Introduction to Electronics.** The physics of electrons and electronic devices, including diodes, transistors, power supplies, amplifiers, oscillators, switching circuits, and integrated circuits, with laboratory work in each area. Prerequisite: PHY 104 or 112, or permission. 4 credits.
- 311,312. Analytical Mechanics I,II.** A rigorous study of classical mechanics, including the motion of a single particle, the motion of a system of particles, and the motion of a rigid body. Damped and forced harmonic motion, the central force problem, the Euler description of rigid body motion, and the Lagrange generalization of Newtonian mechanics are among the topics treated. Prerequisites: PHY 111 and MA 266. 3 credits per semester.
- 321,322. Electricity and Magnetism I,II.** Theory of the basic phenomena of electromagnetism together with the application of fundamental principles of the solving of problems. The electric and magnetic properties of matter, direct current circuits, alternating current circuits, the Maxwell field equations, and the propagation of electromagnetic waves are among the topics treated. Prerequisites: PHY 112 and MA 266. 3 credits per semester.
- 327,328. Experimental Physics I,II.** Experimental work selected from the area of mechanics, AC and DC electrical measurements, optics, atomic physics, or nuclear physics, with emphasis on experimental design, measuring techniques, and analysis of data. Prerequisite: PHY 211. 1 credit per semester.
- 350. Audio Electronics.** A study of electronics as used in audio engineering. The course examines RC and LC circuits, filters, impedance, audio frequency amplifier circuits, and basic digital theory. Laboratory work is included. Prerequisite: PHY 212. 3 credits.

421,422. Modern Physics I,II. A study of selected topics in modern physics, utilizing the methods of quantum mechanics. The Schrodinger equation is solved for such systems as potential barriers, potential wells, the linear oscillator, and the hydrogen atom. Perturbation techniques and the operator formalism of quantum mechanics are introduced where appropriate. Prerequisites: PHY 211 and MA 266, or permission. 3 credits per semester.

430. The Teaching of Physics in Secondary Schools. A course designed to acquaint the student with some of the special methods, programs, and problems in the teaching of physics in secondary schools. Required for secondary certification in physics. 1 credit.

Political Science (PS)

The Economics and Political Science Department is described on page 57.

DEGREE: Bachelor of Arts with a major in political science.

MAJOR: PS 111,112,210,220,230 and eight additional elective courses in political science (one of these elective courses may be from another social science with the approval of the student's major advisor).

MINOR: PS 111,112,210,220,230, and one additional elective course in political science.

Courses in Political Science

111. American National Government I. The nature of American democracy, constitutional foundations of American government, the federal system, civil rights and liberties, political behavior, political parties, and campaigns and elections. 3 credits.

112. American National Government II. The structures and functions of American government (Presidency, Congress, courts, and bureaucracy), and the foreign and domestic policy making process. 3 credits.

210. Comparative Government. A comparative study of important political systems of the world, including an introduction to the basic methodologies. PS 111 and 112 strongly recommended as preparation. 3 credits.

216. Quantitative Methods. See PSY 216. 3 credits.

220. Political Theory. A survey of the different philosophies and theories of government, ancient and modern, but especially since the Sixteenth Century. Prerequisite: PS 111 and 112. 3 credits.

230. International Politics. The origin, forms, dynamics, and prospects of the international political pattern, with emphasis on current developments and changing concepts in world politics. 3 credits.

240. Public Administration. An examination of the structures through which governments try to carry out their policies. The course covers both the practical matters of accountability and efficiency, and the analytical concerns of organizational theory and bureaucratic culture. 3 credits.

250. Public Policy Analysis. This course gives students an understanding of the public policy process and of policy analysis at the national level of government. The course includes theories of policy-making as well as an examination of such substantive policy areas as foreign, defense, subsidy, and redistributive policies. Prerequisites: PS 111 and 112, or permission of the instructor. 3 credits.

310. Scope and Methods of Political Science. A course in the conduct and interpretation of research in political science. Topics include formulation of a research problem, research design, techniques of scaling and measurement, data collection and analysis, and writing the research report. Prerequisite: permission; MA 170 is strongly recommended. 3 credits.

312. American Foreign Policy. A survey of the external relations of the American government, emphasizing Twentieth Century developments. Subjects include diplomacy, military affairs, geographic and regional problems, trade and aid, technology and underdevelopment, alliances, nuclear problems, and opposing ideologies. PS 111 and 112 strongly recommended as preparation. 3 credits.

315. American Constitutional Law I. The development of American constitutional law from 1776 to 1947. Topics include judicial review, national supremacy, private property, contracts, commerce powers, equal rights, and civil liberties. 3 credits.

316. American Constitutional Law II. The development of American constitutional law from 1947 to the present. Emphasis is given to civil liberties, equal rights, and rights of the accused, with some treatment of presidential powers, the commerce clause, and the contract clause. 3 credits.

320. Electoral Politics. The dynamics of the electoral process, with emphasis on presidential and congressional elections and including the role of parties, public opinion, and interest groups. 3 credits.

330. State and Local Government. This course covers the governmental institutions and characteristics of state and local political systems and the major inter-governmental problems in state and local relations with the federal government. 3 credits.

- 340. The Third World.** A survey of the developing nations of Latin America, Asia, Africa, and the Middle East. The political economy of development, in both its domestic and international dimensions emphasized. Prerequisites: PS 210 and 230, or permission of the instructor. 3 credits.
- 350. Select Problems.** A course to give students a chance to explore in depth a topic of special interest. 3 credits.
- 360. Modern Communism.** A survey of the communist world, stressing the development of Marxist thought and its evolving application in the Soviet Union, China, and other communist states. Prerequisite: PS 210 and 230, or permission of the instructor. 3 credits.
- 415. Foundations of American Law.** A historical survey of the Western legal tradition from classical times through the Eighteenth Century. The course examines conceptions of English common law and its relationship to the evolution of American law. Strongly recommended for pre-law students. Prerequisite: permission. 3 credits.
- 420. Seminar in World Politics.** A consideration of significant theories of international relations and their applicability to such selected contemporary issues as superpower relations, conflict resolution, arms control, and economic interdependence. Prerequisites: PS 230, or permission of the instructor. 3 credits.

Pre-Law Program

Although there is no Pre-Law major or department, a Pre-Law student is advised to take certain courses which will help prepare him or her for law school and a legal career. Each student should confer with the Pre-Law advisor in selecting a specific pattern of courses appropriate to that student's objectives. Generally recommended courses are as follows: AC 161, MA 371,372, PS 111,112,315,316, and 415.

Pre-Medical, Pre-Dentistry, Pre-Veterinary

See Health Professions on page 89.

Psychobiology (PSB)

The major in psychobiology is offered jointly by the departments of Biology, described on page 33 and Psychology, described on page 58.

This cross-disciplinary major emphasizes the physiological determinants and consequences of behavior. Consisting of a balance of psychology and biology course work, the program prepares students for graduate study in medicine, veterinary medicine, graduate programs in psychology, animal behavior, physiological psychology, psychopharmacology, behavior genetics, and neuroscience, as well as research positions in industry, universities, hospitals, and government laboratories.

DEGREE: Bachelor of Science with a major in psychobiology.

MAJOR: PSY 200,335,444 plus two from the following: PSY 120,216,236, 431 (15 credits); BI 111,112,201,322 (16 credits); PSY 491 or BI 491, BI 499, BI 500 or PSY 500 (8 credits); CH 111,112,113,114, MA 161, CS 170 (14 credits); plus 8 additional credits in the sciences, in consultation with advisor. Recommended CH 213,214,215,216, PHY 103,104 or 111,112 (8 credits) 61 total credits.

Courses in Psychobiology

444. Physiological Psychology. A study of physiological explanations of behavior. The laboratory includes sheep eye and brain dissections, stereotaxic surgery, and histological examination of the brain. Prerequisite: PSY 100 or 120 or permission. 3 credits.

499. Psychobiology Seminar. Readings, discussions, and reports on selected topics in psychobiology. This course may be repeated. 1 credit.

Psychology (PSY)

The Psychology Department is described on page 58.

DEGREE: Bachelor of Arts with a major in psychology.

MAJOR: PSY 100,120,200,216,236,343,443; and three additional courses from a single specialty area (30 credits).

MINOR: PSY 100,120,200,216 and three elective courses in psychology (21 credits). For an emphasis in clinical/counseling psychology two of the electives should be from 332,343,431,432. For an emphasis in experimental/physiological psychology two of the electives should be from 225,236,335,346,443,444. For an emphasis in organizational psychology two of the electives should be from 332,335,337,339,346. For an emphasis in developmental psychology two of the electives should be from 321,322,326,343.

Courses in Psychology

100. Psychology: The Individual and Society. An introduction to psychology as a social science. The emphasis is on the interactions of the individual and society that influence development, learning, motivation, sexuality, and identity, as well as social and emotional adjustment. 3 credits.

120. Psychology: By Experiment. This introductory course focuses on psychology as a science. It emphasizes laboratory research, and includes topics relevant to science in general (eg. research design, experimental methods, data analysis and interpretation, and scientific ethics) and content topics of experimental psychology (eg. sensory and perceptual processes, learning and memory, psychological testing, and social behaviors). 3 credits.

200. Advanced General Psychology. A survey course examining the relationship between research and theory in the field of psychology. The course is intended to give the student an overview of all areas of specialization within psychology. 3 credits.

216. Quantitative Methods in Behavioral Science. Evaluation of behavioral research emphasizing the descriptive and inferential statistics used in experiments and correlational studies. Prerequisite or corequisite: PSY 100 or 120. 3 credits.

220. Educational Psychology. Studies of cognitive, behavioral, emotional and social processes in the school; required for certification in elementary and music education. Prerequisite: PSY 100 or 120. 3 credits.

235. Sensory and Perceptual Processes. This course focuses on the structures and functions of sensory systems. It utilizes the visual system as a model to delineate information processing strategy differences in the eye, the optic nerve, and the brain. The course will delineate sensory from perceptual processes. The perception of color, space, movement, objects, and patterns will be discussed from experimental, physiological, and philosophical perspectives. Prerequisite: PSY 100 or 120 or permission. 3 credits.

236. Learning and Memory. This course will survey psychological research on learning and memory. Topic areas covered will include classical and instrumental conditioning, verbal learning, problem solving, basic memory processes, and models of learning and memory. Prerequisite: PSY 100 or 120 or permission. 3 credits.

237. Laboratory Investigations I: Research Investigations of Psychological Phenomena. This course involves hands-on empirical investigations in psychology. Students design and conduct individual research projects. Prerequisite: permission. 1-3 credits.

238. Laboratory Investigations II: Research Investigations of Psychological Phenomena. This course involves hands-on empirical investigations in psychology. Students design and conduct individual research projects. Prerequisite: permission. 1-3 credits.

321. Psychology of Child Development. A study of the patterns of cognitive, social and emotional developmental changes occurring during childhood. Special attention is given to research studies, developmental mechanisms and theories of development. Prerequisite: PSY 100 or 120. 3 credits.

322. Psychology of Adolescent Development. A study of the psychological characteristics and changes occurring during adolescence. Topics include psychological development, social influences, cognitive and intellectual development, emotional development, identity and self-concept, sexual development, values, and transition to adulthood. Prerequisite: PSY 100 or 120. 3 credits.

326. Psychology of Adult Development. A study of research literature and theories concerned with psychological change in the adult, from late adolescence to death. The course includes the works of such theorists as Maslow and Erikson. Prerequisite: PSY 100 or 120. 3 credits.

332. Psychological Testing and Assessment. An introduction to the principles of psychological measurement, methods of test design and construction, and applications and interpretations of existing psychological tests. Prerequisite: PSY 100 or 120. 3 credits.

335. Research Design and Statistics. A survey of experimental designs utilized in psychological investigations. Designs include factorial experiments, field studies, correlative designs and multivariate techniques. The primary readings are selected from current research in clinical, educational, organizational, and laboratory settings. Prerequisites: PSY 100 or 120, 216 or permission. 3 credits.

337. Organizational Psychology. A study of psychological principles as applied to problems of organizational behavior, with emphasis on personnel selection, human engineering, group dynamics, systems design, training, leadership, and performance evaluation. Prerequisite: PSY 100 or 120. 3 credits.

339. Career Counseling. The course surveys assessment of skills and competencies, occupational research, decision-making, and job search strategies. Students are encouraged to apply the theories of career counseling to their own vocational decisions and goals. Prerequisite: PSY 100 or 120 or permission. 3 credits.

- 343. Personality.** A study of the major theories of personality, with emphasis on psychoanalysis, humanistic psychology, behaviorism, social learning, and trait theory. Prerequisite: PSY 100 or 120; junior or senior standing, or permission. 3 credits.
- 346. Social Psychology.** A study of the inter- and intra-personal relationships between individuals and groups, with emphasis on theories and research studies. The topics covered may include attitude development and change, conformity, persuasion, person perception, attribution, attraction, and group processes. Prerequisites: PSY 100 or 120; junior or senior standing, or permission. 3 credits.
- 348. Investigations of Social Psychological Processes.** Laboratory exercises and demonstrations of social psychological phenomena, as well as independent and group research projects, are included. Prerequisite: PSY 100 or 120; PSY 216 highly recommended. Co-requisite: PSY 346. 1 credit.
- 431. Abnormal Behavior and Experience.** A study of mental, emotional and behavioral problems, including alcohol and drug abuse, brain disorders, criminal and psychopathic behavior, neuroses, psychophysiological reactions, psychoses, sexual deviations, subnormal intelligence, and suicide. Prerequisites: PSY 100 or 120; junior or senior standing or permission. 3 credits.
- 432. Introduction to Clinical Psychology.** A study of the ways psychologists assist persons and groups. Particular attention is given to assessment, individual and group therapy, marriage and family counseling, and community psychology. Prerequisites: PSY 100 or 120; PSY 431 or nursing training with psychiatric affiliation, or permission. 3 credits.
- 443. History and Theory.** A study of the history of psychology including philosophical concepts, early schools of psychology, important trends, and famous psychologists. Prerequisites: PSY 100, 120, 236; junior or senior standing; or permission. 3 credits.
- 444. Physiological Psychology.** A study of the biological underpinnings of behavioral processes. The course focuses on the physiology of reflexes, sensation and perception, learning and memory, sleep, and motivation and emotion. The laboratory portion of the course includes sheep brain dissection, rodent stereotaxic neurosurgery, and behavioral observation. Prerequisite: PSY 100 or 120. 3 credits.

Recording Technology

See Sound Recording Technology on page 129.

Religion (RE)

The Religion and Philosophy Department is described on page 61.

DEGREE: Bachelor of Arts with a major in religion.

MAJOR: RE 110,111,112,222,331,499; one from 202,211,212; three elective courses in religion including GK 321,431 (30 credits). The following courses, though recommended, are not required for a major in religion: BI 101; GK 101,102,111,112; PH 110,230; PSY 100; SOC 110,230. Christian Education Concentration: RE 110,111,112,120,211,202 or 212,222,241,242, 243,331, 3 credits of 400 (36 credits). Other courses in areas such as communication, education, and the social sciences are strongly recommended in consultation with the program advisor.

MINOR: RE 110,111 or 112,120 or 140,222, two elective courses in religion (18 credits).

Courses in Religion

110. Introduction to Religion. An exploration of the many dimensions of religion as a central human experience through an examination of such topics as: varieties of religious experience and expression, religious knowledge, the self and meaning, religion in its sociocultural context, religion and the natural order, and such universal issues as death, the End, evil, suffering, and the moral order. 3 credits.

111. Introduction to Biblical Religion. An examination of some of the basic themes of biblical religion in relation to their historical context and their contemporary implications. 3 credits.

112. Introduction to Christianity. A study of the rise and development of the major forms of Christianity (Roman Catholic, Eastern Orthodox, Protestant) in Europe and America, including doctrine and theological expression, ethics, worship, church structure, and relationship to culture. 3 credits.

120. Religion in America. A study of the origin and development of religious expression in America, with particular attention to Protestantism, Roman Catholicism, and Judaism. 3 credits.

140. World Religions. An examination of the rise and development of religion with a study of the ideas and cultic and ethical practices of the great world faiths. Special attention given to Asian religions. 3 credits.

202. The Prophets. A study of the lives and writings of the Old Testament prophets and an analysis of their contributions to Hebrew-Christian religious thought. 3 credits.

- 206. Near East Archaeology and the Bible.** An examination of archaeology in biblical lands, its methods, objectives, and contributions to history, culture, and religion. 3 credits.
- 211. Life and Teachings of Jesus.** An intensive study of the life and message of Jesus as set forth in the Gospels. 3 credits.
- 212. Life and Epistles of Paul.** A study of the life, writings, and theological thought of Paul and their relationship to the practices, problems, and beliefs of the early Church. 3 credits.
- 222. Christian Ethics.** A systematic analysis of the implications of the Christian faith, both for personal moral decision and for social policy in such areas as marriage and family, government and political life, work and the economic order. 3 credits.
- 230. American Folk Religion.** A study of the folk traditions of selected American denominations and sects and of the theological implications of secular folklore. Emphasis will be placed on field work as well as on analysis. 3 credits.
- 241. Principles of Christian Education.** A study of the overall structure and meaning of Christian education, including education as ministry, history of religious education, theoretical approaches, the impact of other disciplines (sociology, psychology, education), developmental theories, the role of Bible and theology, and contemporary concerns and expressions of Christian education. 3 credits.
- 242. Methods of Christian Education.** A study of elements involved in the implementation of a program of Christian education in the local parish, including planning, evaluation, leader development, teaching and learning, resources, skills, and work in the age levels. 3 credits.
- 243. Selected Problems in Christian Education.** A study of such important themes and issues in Christian education, as theology and education, conversion and nurture, indoctrination and reflection, developmental models and theological teachings, content-centered or student-centered approach, and the role of the professional. 3 credits.
- 331. Christian Tradition and Reform.** A study of the major and continuing strains in the history of Christianity and the principal reform movements. Required of majors and strongly recommended for all pre-theological students. 3 credits.

332. The Sacred in Modern Writing. Identification, analysis, and interpretation of issues of special theological import raised by thinkers representing non-theological disciplines. Prerequisite: RE 110 or permission. 3 credits.

403. Classical Christian Thinkers. An intensive study of the thought of such classical religious thinkers as Augustine, Aquinas, Luther, and others. 3 credits.

499. Seminar: Selected Religious Problems. A study of selected problems arising from recent theological efforts. Research methodology is stressed. Required of majors and strongly recommended for all pre-theological students; others by permission. Prerequisite: RE 111 and 112. 3 credits.

Secondary Education (Teacher Certification) (SE)

The Education Department is described on page 38.

There is no separate major for those interested in secondary education. Interested students major in a subject area and also enroll for courses in the Education Department.

DEGREE: Bachelor of Arts or Bachelor of Science degree in the chosen major.

Secondary Teacher Certification: Candidates must complete 21 credits in professional education courses and the approved program in the chosen major. ED 110 should be taken in the sophomore year and SE 430 in the junior year. SE 420 and 440 comprise the student teaching semester of the senior or postgraduate year.

The minor in education is described on page 77.

Courses in Secondary Education

280. Field Practicum in the Secondary School. Supervised field experiences in appropriate school settings. Designed to offer practical experiences for prospective secondary teachers or students planning an educational ministry. Prerequisites: Permission. 1 - 3 credits.

420. Human Growth and Development. A survey of human characteristics, research in developmental psychology and their implications for teaching and learning. Prerequisite: ED 110. 3 credits.

430. Practicum and Methods. A study of the basic principles and procedures for secondary classroom management and instruction. Prerequisite: ED 110. 3 credits.

431. Social Studies in Secondary Education. A study of curricular patterns for areas within the social studies. Students will prepare instructional objectives, select and organize subject matter, investigate a variety of learning activities and strategies for developing inquiry skills, decision-making ability and values. 1 - 2 credits.

440. Student Teaching. Students spend an entire semester in an appropriate area school under the supervision of a carefully selected cooperating teacher. Open to seniors only. Requirements are: (1) a grade point average of at least 2.0 in the major field; (2) completion of all courses required of the major for student teaching; (3) completion of professional education courses required for student teaching; (4) approval of the major advisor and of the director of secondary student teaching. Prerequisites: ED 110, 430. ED 420 is normally taken concurrently. 3 - 12 credits.

Social Work (SW)

The Sociology and Social Work Department is described on page 62.

DEGREE: Bachelor of Social Work.

MAJOR: SO 110,311; SW 262,272,331,341 or 342,499; 9 credits of SW 400; 4 additional courses in sociology or social work (42 credits).

MINOR: SO 110, SW 262,272,331,341; 6 credits of SW 400; one course from SO 210,230,261,278,324,331,333,351,362,372, SW 272,345,499.

Students majoring in sociology shall elect SW 499 and one course in sociology in addition to their major requirements (24 credits).

Courses in Social Work

262. Social Welfare. An introduction to social welfare policies and institutions including the evolution of the welfare system in our society and its approach to social problems. Focuses upon controversies relevant to public welfare. Prerequisite: SO 110. 3 credits.

272. Human Behavior in the Social Environment. An examination of the interrelation of biological, psychological and sociocultural systems and their effects on human development and behavior. A life span perspective is used to develop an understanding of the total person as he/she functions in relation to his/her environment at each stage in the developmental process. The impact of diversity in ethnic background, race, class, sexual orientation and culture in a pluralistic society will also be addressed. Prerequisite: SO 110. 3 credits.

331. Social Work Theory. A consideration of the theories that underlie social work intervention, introducing the social systems perspective with emphasis on the social work profession's knowledge base, values and skills. Prerequisite: SW 262. 3 credits.

341. Social Work Practice I. An examination of the knowledge, attitudes and skills required for social work practice with emphasis on social casework and group work dynamics. Prerequisite: SW 331. 3 credits

342. Social Work Practice II. An examination of the knowledge, attitudes, and skills required for social work practice with emphasis on modern organizations, administration, and communities issues. Prerequisite: SW 331. 3 credits.

345. Family Therapy. An introduction to family and small group intervention focusing upon the family as a system, group structure and dynamics, and theories and techniques of intervention. Prerequisite: SO 230 and SW 341 or permission. 3 credits.

499. Seminar. Detailed study of a selected social work area. Topics may vary. This course is conducted as a seminar requiring extensive student participation. Prerequisite: SW 341 or 342. 3 credits.

Sociology (SO)

The Sociology and Social Work Department is described on page 62.

DEGREE: Bachelor of Arts with a major in sociology.

MAJOR: SO 110,311,421,499, 15 additional credits in sociology (27 credits).

MINOR: SO 110,311,421; one course from SO 210,278,324, or 331; one course from SO 211,230,261,322,333,340,351,362,372,382; one elective course in sociology (18 credits).

Courses in Sociology

110. Introduction to Sociology. A study of the basic sociological perspective including the nature of society, the influence of culture, the development of the self, and group dynamics. Specific topics include deviance and social control, the family and other institutions, racism, sexism and poverty. 3 credits.

120. Introduction to Anthropology. Introduction to both physical and cultural anthropology including human evolution, human variation, and cross-cultural analysis, and comparison. 3 credits.

210. Social Problems. Contemporary social problems as seen through different analytical perspectives. Problems covered include war and peace, pollution and environmental exploitation, crime and delinquency, and emotional and physical illness. Prerequisite: SO 110 or GE 140, or HC 202. 3 credits.

211. Urbanology. An analysis of the city as a unique form of social organization. From a multi-disciplinary perspective, the course presents the nature of urbanization and the impact of urbanism on contemporary society. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

230. Sociology of Marriage and the Family. An overview of marriage and the family focusing upon love, mate selection, alternative life styles, marital communication, conflict resolution, parenting, divorce and widowhood. Utilizes a historical and cross-cultural perspective in addition to sociological analysis. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

261. The Aged and Aging. An investigation of the process of aging and contemporary issues related to the elderly. Topics covered include Alzheimer's disease, retirement, stereotypes of the elderly and contributions of the elderly to society. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

278. Juvenile Delinquency. An examination of the causes and effects of juvenile delinquency, the juvenile justice system and treatment programs for the juvenile offender. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

311. Research Methods. A study of the basic concepts and skills involved in critically evaluating and carrying out social scientific research. Topics include values and ethics of research on human behavior, research design, interviewing and questionnaire construction. Prerequisite: SO 110, junior standing or permission. 3 credits.

322. Sociology of Religion. The structure and functions of religious organizations and phenomena with emphasis on the varieties of religious expression in America. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

324. Medical Sociology. An examination of the societal bases of health, illness and health care. The course will include an examination of the three components of medicine: the patient, the medical professional and the health care organization. Specific topics will include: the role of the patient; doctor-patient relationships; the socialization of medical professionals; the hospital as a complex organization, cross-cultural comparisons of health care and current topics of concern such as the AIDS epidemic, new technologies, and social response to the terminally ill patient. 3 credits.

331. Criminology. An examination of the causes of crime. Special attention is given to violent crime, homicide, and rape. In addition, such property crimes as arson, robbery, burglary and shoplifting are covered. The question of whether or not such victimless crimes such as pornography, prostitution and drug use should be considered crimes is explored. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

333. Criminal Justice. A sociological, historical, and philosophical examination of punishment and the criminal justice system. Rights of the accused, victimology, prisons, and the death penalty are studied. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

340. Group Structure and Dynamics. An overview of the theory and research on small group organization and process including issues related to leadership, effective communication in groups, conformity and influence. Application of basic principles to practical situations. Exercises designed to improve group leadership and participation skills. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

351. Death and Dying. Exploration of the basic legal, medical, ethical and social issues related to contemporary understanding of death and dying. Examines the stages of dying, the grief process, euthanasia, suicide, the hospice movement and life after death. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

362. Social Inequality. An examination of the patterns of structured inequality in American society, including the class system and racial and ethnic groups. Prerequisite: SO 110, or GE 140, or HC 202. 3 credits.

372. Substance Abuse. An examination of the problems associated with substance abuse including a study of the prevalent myths concerning substance abuse, an exploration of the causes of substance abuse and an exploration of how it affects the individual, the family and society as a whole. In addition, the course will examine current methods of intervention and treatment. Prerequisites: SO 110, or GE 140, or HC 202. 3 credits.

- 382. Sociology of the Mass Media.** Seminar on how society shapes the mass media and the effects of the mass media on individuals and society. Topics include propaganda, television violence and aggression, and advertising. Special attention is given to values and images portrayed by the mass media. Prerequisite: 6 credits in sociology or permission. 3 credits.
- 421. Social Theory.** An intensive examination of the major sociological theorists and movements. Prerequisite: 12 credits in sociology. 3 credits.
- 499. Seminar.** A critical analysis of selected themes and issues in contemporary sociology. Topics may vary. This course is conducted as a seminar requiring extensive student participation. Prerequisite: SO 421. 3 credits.

Sound Recording Technology

The Music Department is described on page 51.

DEGREE: Bachelor of Music with a major in sound recording technology.

MAJOR REQUIREMENTS

Bachelor of Music: Sound Recording Technology

Recording Technology

SRT 277	Recording Technology I	3
SRT 278	Recording Technology II	3
SRT 377	Recording Technology III	3
SRT 386	Recital Recording Program	1
SRT 388	Audio Topics Practicum	3
SRT 487	Advanced Audio Topics Practicum	3
SRT 400	Internship	3-6

Physics (also fills Area 6 requirement)

PHY 103	General College Physics I	4
PHY 104	General College Physics II	4
PHY 110	Physics of Music	3
PHY 212	Electronics	3
PHY 350	Audio Electronics	3

Music

MU 115	Harmony I	2
MU 116	Harmony II	2
MU 117	Ear Training/Sight Singing I	2
MU 118	Ear Training/Sight Singing II	2
MU 123	Brass I	1
MU 127	Percussion I	.5
MU 215	Harmony III	2
MU 217	Basic Concepts	2

MU 226	Form and Analysis I	2
MU 228	Percussion II	.5
MU 231	Woodwinds I	1
MU 246	Principles of Conducting	2
MU 337	String I	1
MU 345**	Instrumental Conducting	2
MU 347**	Choral Conducting	2
MU 416	Orchestration	2
MU 510	Piano Class (3 semesters)	3
MU 520	Voice Class (2 semesters)	2
MU 530	Private Lesson (8 semesters)	8
MU 605	College Chorus (8 semesters)	
MU 6--	Performing Ensembles (8 semesters)	

Management

AC 161	Financial Accounting	3
MG 330	Principles of Management and Organization	3

Computer Science

CS ---		3
CS ---		3
CS ---		3

Mathematics (also fills Area 3 requirement)

MA ---		3
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**Students may choose either MU 345 or MU 347.

Courses in Sound Recording Technology

277. Recording Technology I. An introduction to the fundamentals of sound recording technology. Topics include sound and listening, the basic audio chain, microphones, analog tape machines, basic mixers, and equipment interface. Mastery of the fundamentals will facilitate students to engineer simple and multi-microphone two-track stereo recordings. Prerequisite for non-majors: permission of the instructor. 3 credits.

278. Recording Technology II. This course begins with multi-track consoles and tape machines, and continues study of multi-track techniques and mixdown, microphone placement, reverberation, equalization, compressors and expanders, noise reduction, and the decibel. Emphasis is on critical listening and practical applications. Students learn to engineer a multi-microphone, multi-track recordings and mixdown sessions. Prerequisite: SRT 277. 3 credits.

377. Recording Technology III. This course examines advanced techniques of recording and mixing, special effects and digital effects processors, and analog tape machine theory and alignment. Also studied are digital technologies, and time code usage. Mastery of these topics will facilitate students to engineer multi-microphone multi-track productions. Prerequisite: SRT 278. 3 credits.

386. Recital Recording Practicum. Students record a chamber music performance, applying researched techniques, and produce a recording comparable to commercial release standards. Prerequisite: SRT 377. 1 credit.

388. Audio Topics Practicum. Students study topics of individual interest, ranging from research to production, technique, and maintenance. Prerequisite: SRT 377; non-majors require permission of instructor. 3 credits.

400. Internship. The student works in a local recording, broadcasting, or production facility, learning special techniques in a professional environment. Prerequisites: SRT 388 and SRT 487; non-majors require permission of instructor. 3-6 credits.

487. Advanced Audio Topics Practicum. Students study senior level topics of individual interest including advanced research, applications, and production. Prerequisite: SRT 377; non-majors require permission of instructor. 3 credits.

Spanish (SP)

The Foreign Languages Department is described on page 41.

DEGREE: Bachelor of Arts with a major in Spanish.

MAJOR: 24 credits in Spanish above the intermediate level; FL 250 (27 credits). For teaching certification, FL 440 is required.

MINOR: 18 credits in Spanish above the intermediate level. Courses in advanced conversation and composition as well as in culture are strongly recommended.

Courses in Spanish

101,102. Elementary Spanish I,II. Introductory courses in Spanish. 3 credits.

201,202. Intermediate Conversational Spanish I,II. A review of Spanish grammar, and practice in conversation, comprehension, reading and writing. Prerequisite: SP 102 or equivalent. 3 credits.

311. Introduction to Spanish Literature. Practice in the careful reading of literary texts and in the four basic language skills. Prerequisite: SP 202 or equivalent. 3 credits.

312. Contemporary Literature. Readings in the works of living Spanish authors. Attention both to individual style and the relationship of the writer to current problems. Prerequisite: SP 202 or equivalent. 3 credits.

315. Hispanic Culture. A study of Hispanic culture and language, with emphasis on the culture as found in modern Spain and its reflection in America. Prerequisite: SP 202 or equivalent. 3 credits.

316. Advanced Conversation and Composition. Intensive practice in spoken and written Spanish on an advanced grammatical and stylistic level, with emphasis on the use of language in practical situations. Prerequisite: SP 202 or equivalent. 3 credits.

320. Business Spanish. An introduction to the language of business and business practices. Prerequisite: SP 202 or equivalent. 3 credits.

410. Spanish Literature of the Middle Ages and Renaissance. A study of the outstanding works of the period. Prerequisite: SP 311 or 316 or permission. 3 credits.

420. Spanish Literature of the Golden Age. A study of the major works of the period. Prerequisite: SP 311 or 316 or permission. 3 credits.

430. Spanish Literature and the Eighteenth and Nineteenth Centuries. Readings from the Enlightenment in Spain, and an examination of the major works of romanticism and realism. Prerequisite: SP 311 or 316 or permission. 3 credits.

440. Spanish Literature of the Twentieth Century. A study of the literary movements of the century, starting with the Generation '98 and modernism. Prerequisite: SP 311 or 316 or permission. 3 credits.

450. Spanish-American Literature of the Twentieth Century. A study of the important writers of the century, with emphasis on recent developments in the literature of Spanish-America. Prerequisite: SP 311 or 316 or permission. 3 credits.

Teacher Certification

See Elementary Education on page 78 or Secondary Education on page 124.

Graduate Academic Programs

MBA Program

The Lebanon Valley College MBA Program is an interdisciplinary program designed to prepare graduates for managerial responsibilities at various levels of business organizations. The program provides a strong theoretical foundation as well as operational expertise in the areas of finance, management, marketing, human resource management and production and service management.

The MBA Program at Lebanon Valley College is a unique program that combines liberal arts/general education coursework with career preparation in the field of business administration. The interdisciplinary nature of the curriculum includes standard MBA courses and courses in Corporate and Executive Communications, Executive Leadership and Organizational Ethics.

Every MBA candidate must complete 27 credits of core courses and 9 credits of electives. All courses in the undergraduate common body of knowledge also must be completed successfully.

MBA Faculty

Sharon F. Clark, Graduate Associate Professor of Business Law and Labor Relations. Dr. Clark holds a bachelor degree and a juris doctorate degree from the University of Richmond. She has several years experience in private law practice and several years as a Supervisory Tax Attorney with the Internal Revenue Service. Dr. Clark teaches corporate income tax and a variety of management courses including Personnel Management, Business Law, Labor and Industrial Relations, and Hotel Law.

Dennis N. Eshleman, Graduate Adjunct Assistant Professor of Marketing. MBA, Columbia University. Mr. Eshleman is a manager for New Product Development for Hershey Foods.

Bryan V. Hearsey, Graduate Professor of Quantitative Studies. Ph.D., Washington State University. An associate of the Society of Actuaries, he has many contacts within the Actuarial Profession. Dr. Hearsey is interested in approaches to providing mathematics education to the liberal arts student not majoring in mathematical sciences, and teacher education as well as actuarial science. He teaches upper level actuarial science courses and a broad range of mathematics courses.

Edward H. Krebs, Graduate Assistant Professor of Managerial Economics and Entrepreneurship. Ph.D., Michigan State University. He previously served as an Economic Assistant to the Secretary of Agriculture and as a private consultant. His interests are in environmental and resource economics.

David Lasky, Graduate Professor of Organizational Behavior. Chairperson. Ph.D., Temple University. Organizational behavior, research design, and career counseling are the focus of his teaching interests. His current research is in the area of organizational change in the public sector and patients' rights.

Robert W. Leonard, Graduate Assistant Professor of Management. M.B.A., Ohio State University. Mr. Leonard teaches Managerial Finance, Principles of Management, Productions Operations Management, Organizational Behavior and Development, and Labor and Industrial Relations.

Leon E. Markowicz, Graduate Professor of Communications and Leadership Studies. Ph.D., University of Pennsylvania. He teaches courses in the Leadership Studies Program and assists in developing and coordinating Leadership internships. He serves local business as communications consultant.

Daniel B. McKinley, Graduate Assistant Professor of Leadership. M.A., University of Maryland. M.A.L.S., Wesleyan University. Mr. McKinley maintains an interest in small group development and offers leadership labs for communication skills development.

Gail Sanderson, Graduate Assistant Professor of Managerial Accounting. M.B.A., Boston University; CPA. Ms. Sanderson has professional experience in accounting (public and private sectors); income tax; computer systems analysis and design.

Warren K. A. Thompson, Graduate Associate Professor of Organizational Ethics. M.A., University of Texas. His teaching specialties are philosophical ethics and business and organizational ethics. He has a particular interest in the ethical implications of the Holocaust, and has recently contributed a chapter for a forthcoming anthology devoted to philosophy and the Holocaust.

MBA Admissions

All candidates must have a bachelor's degree from an accredited college or university.

All candidates must submit a completed application form with the required application fee. They must take a GMAT examination and have the official

test results sent to the Continuing Education Center. They must ask two supervisors at their place of employment to complete and forward confidentially to the Continuing Education Center evaluation and recommendation forms. Official transcripts of all undergraduate work and any graduate courses to be considered for transfer must be sent by the respective colleges or universities to the Continuing Education Center.

All candidates are required to visit the campus for a personal interview prior to admission.

Graduate admissions are on a rolling basis; action will be taken quickly after all paperwork has been processed. Candidates must confirm their acceptance in writing within 30 days of the date of the admissions letter.

MBA ACADEMIC POLICIES

ACADEMIC ADVISING AND REGISTRATION

MBA students should meet with the MBA Academic Advisor as soon as possible after being accepted into the graduate program. The advisor will develop graduation plans with the student. All course registrations require the MBA advisor's signature.

VETERAN REGISTRATION

The College meets all of the criteria of Veterans Education under the provisions of Title 38, United States Code, Section 1775. The MBA program has been approved for payment assistance. Veterans pay the cost of tuition, fees, books and supplies directly to the College. They are reimbursed by the Veterans Administration on a monthly basis. Applicants having any questions concerning their veteran's benefits should contact the College's veterans representative in the Registrar's Office.

GRADUATION REQUIREMENTS

A candidate for the MBA must complete a minimum of 36 credits, of which 30 must be earned at Lebanon Valley College. There are nine required core courses (27 credits) and any three electives of the student's choice (9 credits) for a total of 36 credits. A candidate must achieve at least a 3.0 cumulative average with only one C within the 36 graduate credits to be certified for graduation.

TRANSFER CREDIT

A maximum of six credits may be transferred from another accredited graduate program with the approval of the Director of Continuing Education. No transfer credit shall be accepted if the grade earned at another institution was less than B. Students wishing to transfer credits may be asked to submit course outlines, textbook used, and any reading materials so proper credit may be given.

CONCURRENT COURSES

A student enrolled for the MBA degree may not take courses concurrently at any other educational institution without prior consent of the MBA Academic Advisor and the Registrar.

GRADING

Student achievement is graded A (distinguished performance), B (superior work), C (minimum passing grade, but unsatisfactory work), F (course requirements not met). No MBA courses may be taken pass/fail. A cumulative grade point average of 3.0 (4.0 = A) with only one C within the 36 graduate credits is required for graduation. Graduate courses are not graded plus or minus.

In addition to the above grades, the symbols I and W also are used. I indicates that student work is incomplete (certain required work postponed by the student for substantial reason with the prior consent of the instructor and the Registrar), but otherwise satisfactory. The work must be completed within the first eight weeks of the following semester including summer semesters or the I automatically becomes an F. W indicates withdrawal from a course.

REVIEW PROCEDURE

Every student's academic progress shall be reviewed at the end of each academic period by the MBA Academic Advisor. Any student whose average falls below 3.0 or who earns a C or F in three or more credit hours may be placed on academic probation. A student on academic probation may be required to retake courses or correct other academic deficiencies. Students who fail to correct deficiencies may be dropped from the program. A student may appeal any decision of the Director of Continuing Education to the MBA Operations Committee.

COURSE WITHDRAWAL AND TUITION REFUND

Any student who withdraws from courses for which he or she is registered must notify the Director of Continuing Education and the Registrar in writing. The effective date of withdrawal is the date on which the student notifies these offices. Failure to give notice of withdrawal will result in a grade of F.

Tuition charges shall be refunded for withdrawals according to the following schedule:

Fall & Spring Semesters

During the first week of classes:	100%
During the second week of classes:	80%
During the third week of classes:	50%
After the third week of classes:	0%

Summer School

During the first week of classes:	100%
During the second week of classes:	50%
After the second week of classes:	0%

A student who is absent from college because of sickness or any other reason and who retains his place in class pays in full during his or her absence.

TIME RESTRICTION

The maximum time for completion of the MBA program is seven years from the date of the admission letter. Students who have not earned the graduate degree during this period shall have their academic standing reviewed and may be asked to meet additional requirements in order to graduate.

ACADEMIC DISHONESTY

Students are expected to uphold the principles of academic honesty. Academic dishonesty shall not be tolerated.

For the first academic dishonesty offense, failure in the course is mandatory and the faculty member is required to inform the Director of Continuing Education in writing. A letter of warning shall be sent to the student by the Director of Continuing Education explaining the consequences and the right of appeal.

For the second offense, failure in the course and expulsion from the MBA program and College are mandatory and without appeal.

ADDRESS CHANGES

Any change of address must be reported to the Continuing Education Center as soon as possible. A forwarding address should also be given to the Postal Service.

PRIVACY OF STUDENT RECORDS

In accordance with the Family Educational Rights and Privacy Act of 1974 (P.L. 39-380) Lebanon Valley College releases no student education records without written consent and request of the student or as prescribed by the law. Each student has access to his or her education records with exclusions only as specified by the law.

FINANCIAL AID

Students may participate in the Guaranteed Student Loan Program, a low, simple-interest loan that is available from most lending institutions. A student can borrow up to \$3,750 as a half-time graduate student, which implies three credit hours. The loan is interest-free while attending college and payments do not become due until six months after graduation or enrollment as less than a half-time student.

Graduate students should contact the Financial Aid Office at 717-867-6181 to discuss alternative financial aid programs.

EMPLOYEE TUITION REIMBURSEMENT

Students are encouraged to inquire about tuition remission programs at their places of employment. Most employers of current students provide education subsidies of 50-100% of tuition. Students must pay 50% of tuition costs plus comprehensive fee at the time of registration.

WITHDRAWAL FROM PROGRAM AND COLLEGE AND READMISSION

To withdraw from Lebanon Valley College, an MBA student must complete an official withdrawal form obtained from the MBA Academic Advisor. To apply for readmission, an MBA student must have the written approval of the Director of Continuing Education.

Graduate Degree Requirements and Course Descriptions

Degree: MBA

Requirements:

Undergraduate Core (Common body of knowledge): AC 151 or 161, AC 152 or 162; EC 110, 120; MA 111 or 150 or 160 or 161, 170 or 270; MG 222, 233 or CS 170, 330, 340, 361, 460.

Graduate Core: GM 800, 805, 810, 815, 820, 825 830, 835, 895 (27 credits) and three of the following GM 850, 855, 860, 865, 870, 875, 880, 885 (9 credits). Total of 36 credits.

MBA Courses

800. Quantitative Analysis. A survey of management science. Topics include linear programming, transportation and assignment problems, decision and network analysis, stochastic processes, queueing, and simulation. Includes an introduction to appropriate computer software. 3 credits.

805. Financial Policy. A quantitative approach to managerial problems of long term financing, asset management, dividend policy, and ethics in the firm and marketplace. Emphasis placed on the application of experience to class discussion based on the use of the Wall Street Journal. Required presentation of a current topic. 3 credits.

810. Organizational Behavior. Systematic presentation of theory and research in areas of organizational behavior; including motivation, group dynamics, leadership, decision-making, organization-change, career planning, and communication. 3 credits.

815. Marketing Management. Seminar focusing on issues arising from the interplay between marketing and society. Examples include ethics of selling, advertising, marketing research and the social responsibility of marketers. Governmental intervention and regulations are analyzed. 3 credits.

820. Production and Service Management. The production and service functions cast in the systems framework, recognizing relationships among various components of the organization. Specific problems in analysis planning, design and control of operations, processes services, and human resources are examined. Models surveyed include process planning, product planning, scheduling and control. 3 credits.

825. Executive Communications. Organizational communications skills. Emphasis on writing, speaking, and interpersonal communication. Information sharing at group and organizational levels. 3 credits.

830. Corporate and Organizational Ethics. The ethical assumptions and implications of corporate and organizational policies and practices. Intensive readings in the literature of both theoretical and applied ethics. Case-study analyses. Topics include: corporate and organizational social and political responsibility, ethics and business, ethics and organizational life, governmental relations, and social auditing. 3 credits.

835. Executive Leadership. Theories and concepts of leadership. Examination of the forces in the leader-follower interaction. Analysis of the skills, behaviors, attitudes, and values of effective and ethical leaders and followers. Application of concepts, information, and experience to case studies. 3 credits.

850. Human Resource Management. A survey of personnel management activities in organizations including exploration of recent developments in the field of human resource management. Topics include human resource planning, recruitment, selection, training, equal employment opportunity, performance appraisal, discipline, career planning, compensation, safety and health. Instruction method includes case study, readings and classroom lecture. 3 credits.

855. Legal Environment of Business. Legal concepts and principles important to business decision making including employment law, labor-management relations and relevant legislation, tax consequences of business transactions, government regulation, contract law and application of the Uniform Commercial Code to business transactions. Case study, readings and classroom lecture. 3 credits.

860. International Business Management. Theories, concepts, practices and techniques of conducting business in foreign countries. The strategic issues, the operational practices, and the governmental relations of multinational companies are analyzed through use of case study, lecture and speakers. Topics include: economic, political and cultural integration; trade restrictions and barriers; overseas investment and financing; entry into foreign markets and marketing strategies. 3 credits.

865. Entrepreneurship. Entrepreneurship, intrapreneurship, small business, and acquisitions. Special attention to sources of funding, and the role of government in the development of new enterprises. 3 credits.

870. Labor Management Relations. Labor Management Relations is directed primarily to the understanding of the issues and alternatives arising out of the work place. The course provides both an overview of what has been identified as industrial relations as well as familiarity with the tools used by its practitioners. Also it will review closely some of the more interesting and developing areas of the subject matter. Students will study negotiation, administration, wage/fringe issues and contents of labor agreements. 3 credits.

875. Managerial Accounting. This course provides students previously exposed to basic financial and managerial accounting principles with an opportunity to study the structure and use accounting systems designed to aid management in controlling costs and profits. The course stresses the following: financial statement analysis, sources and uses of funds analysis, tax implications on managerial decisions, responsibility accounting and the impact of inflation. 3 credits.

880. Investments and Portfolio Management. This course will acquaint the student with the tools essential for sound money management. Investment management begins by considering the goals of the investor with respect to risk exposure, tax environment, liquidity needs and appreciation versus income potentials. Strategies will be developed to satisfy these objectives. Mathematical models of portfolio selection to help reduce risk through diversification will be developed. Special attention will be paid to the theories of determinants of asset prices, including the capital-asset pricing model. 3 credits.

885. Managerial Economics. This course focuses on economic planning and decision-making in the firm. The study of actual problems is provided by means of case analysis and independent study. 3 credits.

895. Business Policy. The strategic management of large business entities, including the formulation and evaluation of missions, strategies, objectives and policies. Historical and current situations are discussed. Cases are used and outside research is required. Prerequisite: 24 hours of graduate credit. 3 credits.

DIRECTORY

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- MARTIN L. GLUNTZ; B.S., M.S., Ph.D.; Vice President, Manufacturing and Distribution Services, Hershey International Ltd., Hershey Foods Corporation, Hershey, PA (1990).
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- ELAINE G. HACKMAN, B.A.; Retired Business Executive; Akron, PA (1991).
- CAROLYN R. HANES, B.A., M.A., Ph.D.; Professor of Sociology and Social Work, Professor of Leadership Studies, Chairperson, Lebanon Valley College; Annville, PA (1991).
- SUSAN WOLFE HASSINGER, B.A., M.Div.; Conference Consultant, Eastern Pennsylvania Conference, United Methodist Church; Downingtown, PA (1991).
- ZEDNA M. HAVERSTOCK; Treasurer-Comptroller, Central Pennsylvania Conference, United Methodist Church; Harrisburg, PA (1990).
- BRYAN V. HEARSEY, B.A., M.A., Ph.D.; Professor of Mathematics, Lebanon Valley College; Annville, PA (1989).
- WILLIAM DAVID HUTCHINSON, B.A., J.D.; Circuit Judge, United States Court of Appeals; Schuylkill Haven, PA (1990).
- LOIS G. JOHNSON, B.S. M.Ed.; Chairperson, Department of English, Delaware Technical and Community College; Glen Mills, PA (1989).
- GERALD D. KAUFFMAN, A.B., B.D., D.D., Retired Pastor, United Methodist Church; Carlisle, PA (1989).
- CONSTANCE W. LEITNER, B.S.; Musician; Carlisle, PA (1989).
- LEON E. MARKOWICZ, A.B., M.A., Ph.D.; Professor of Leadership Studies, Lebanon Valley College; Annville, PA (1989).
- H. LEROY MARLOW, B.S., M.A., Ed.D.; Assistant Director of Continuing Education; Director of the Pennsylvania Technical Assistant Program; Head of Management Development Services, The Pennsylvania State University; State College, PA (1990).
- BRIAN K. MATLICK, B.S., M.S.; Director of Agribusiness, Hershey Foods Corporation, Hershey, PA (1990).
- FELTON E. MAY, B.A., M.Div., D.D.; Resident Bishop of the Harrisburg Area, United Methodist Church; Harrisburg, PA (1991).

JOAN C. MCCULLOH, A.B., M.A.T.; Chairperson, Department of English, Annville-Cleona High School; Mercersburg, PA (1989).

JOHN G. McELLHENNEY, A.B., B.D., D.D.; Pastor, First United Methodist Church; West Chester, PA (1990).

SUSAN M. MORRISON, B.A., M.Div.; Resident Bishop of the Philadelphia Area, United Methodist Church; Valley Forge, PA (1991).

GRANT T. NICHOLLS, B.A., B.S.; President, Personal Financial Advisors; Allamuchy, NJ (1990).

JOHN D. NORTON, III, A.B., M.A., Ph.D.; Professor of Political Science, Chairperson Political Science and Economics Department, Lebanon Valley College; Annville, PA (1989).

KENNETH H. PLUMMER; Retired President, E.D. Plummer Sons, Inc.; Chambersburg, PA (1990).

THOMAS C. REINHART, B.S.; President, T.C.R. Packaging, Inc., Albee-Campbell, Inc., and People Seekers; Wyomissing, PA (1990).

DONALD R. SHOVER, JR., B.A., M.Div., D.Min.; District Superintendent, United Methodist Church; Harrisburg, PA (1991).

JOHN J. SHUMAKER, B.A., J.D., Member, Pennsylvania State Senate; Grantville, PA (1990).

JOAN S. SOWERS, B.A., M.A.; Homemaker; Lebanon, PA (1991).

MORTON SPECTOR; Vice President and Treasurer, D & H Distributing Co.; Harrisburg, PA (1989).

PAUL E. STAMBACH, A.B., B.D., S.T.M., Ph.D.; Pastor, Asbury United Methodist Church; York, PA (1989).

E. PETER STRICKLER, B.S.; President, Strickler Insurance Agency, Inc.; Lebanon, PA (1989).

JOHN A. SYNODINOS, B.S., M.S.; President, Lebanon Valley College; Annville, PA.

KATHRYN SEIVERLING TAYLOR, B.A.; Supervisor, Derry Township; Hershey, PA (1991).

SUSAN E. VERHOEK, B.A., M.A., Ph.D.; Associate Professor of Biology, Lebanon Valley College; Palmyra, PA (1990).

JOHN A. WALTER, B.S., J.D.; Judge, Lebanon County Court of Common Pleas; Mt. Gretna, PA (1989).

ELIZABETH K. WEISBURGER, B.S., Ph.D., D.Sci.; Chief of Carcinogen Metabolism and Toxicology Branch, National Cancer Institute; Bethesda, MD (1991).

HARLAN R. WENGERT, B.S., M.B.A., D.Sci.; Chairperson, Wengert's Dairy; Lebanon, PA (1990).

E.D. WILLIAMS, JR., L.H.D.; Private Investor; Lebanon, PA (1990).

J. DENNIS WILLIAMS, B.A., M.Div., D.Min.; Pastor, District Superintendent, Anthracite District, United Methodist Church; Orwigsburg, PA (1991).

SAMUEL A. WILLMAN, B.S., M.Com.; Vice President, Marketing, York Container Company; Red Lion, PA (1990).

CHARLES W. WOLFE, B.A., M.Div.; Vice President for University Relations, Emeritus, Bucknell University; Denver, PA (1989).

HARRY B. YOST, Esq., LL.B., LL.M.; Attorney, Hassell, Yost and Sorrentino; Lancaster, PA (1991).

Emeriti

WILLIAM D. BOSWELL, Esq., Ph.B., LL.B.; Attorney, Berman and Boswell; Harrisburg, PA.

WILLIAM D. BRYSON, LL.D.; Retired Executive, Walter W. Moyer Company; Ephrata, PA.

CURVIN N. DELLINGER, B.S.; President, J.C. Hauer's Sons, Inc.; Lebanon, PA.

DEWITT M. ESSICK, A.B., M.S.; Retired Manager of Education and Training, Armstrong World Industries; Lancaster, PA.

EUGENE C. FISH, Esq., B.S., LL.B., J.D.; President, Peerless Industries, Inc.; Chairperson of the Board, Eastern Foundry Company; Attorney, Romeika, Fish and Scheckter; Senior Partner, Tax Associates; Jenkintown, PA.

THOMAS W. GUINIVAN, A.B., B.D., D.D.; Retired Pastor, United Methodist Church; Mechanicsburg, PA.

PAUL E. HORN, A.B., B.D., D.D.; Retired Pastor, United Methodist Church; Harrisburg, PA.

ALLAN W. MUND, LL.D.; Retired Chairperson, Ellicott Machine Corporation; Towson, MD.

HAROLD S. PEIFFER, A.B., B.D., S.T.M., D.D.; Retired Pastor, United Methodist Church; Lancaster, PA.

JESSIE A. PRATT, B.S.; Retired Administrative Assistant, Legal Division, City of Philadelphia; Philadelphia, PA.

EZRA H. RANCK, A.B., B.D., D.D.; Retired Pastor, United Methodist Church; Lancaster, PA.

MELVIN S. RIFE; Retired Executive, St. Regis Paper Company; York, PA.

F. ALLEN RUTHERFORD, Jr., B.S., LL.D.; Retired Principal, Arthur Young and Company; Richmond, VA.

DANIEL L. SHEARER, A.B., B.D., S.T.M., D.D.; Executive Assistant to the Bishop of the Harrisburg Area, United Methodist Church; Hummelstown, PA.

Honorary

JEFFERSON C. BARNHART, Esq., A.B., LL.B.; Attorney, McNees, Wallace and Nurick; Hershey, PA.

HORACE E. SMITH, Esq., A.B., LL.B.; Attorney, Smith and McCleary; York, PA.

ANNE B. SWEIGART, B.S.; Chairperson of the Board and Chief Executive Officer, Denver and Ephrata Telephone Company; Ephrata, PA.

WOODROW W. WALTEMYER, Business Executive; York, PA.

ADMINISTRATION

President

JOHN A. SYNODINOS, 1988-; B.S., Loyola College, 1959; M.S., Temple University, 1977.

MARY N. ESHLEMAN, 1979-; Executive Secretary to the President.

General College Officers

HOWARD L. APPLGATE, 1983-; Secretary of the College and Registrar, 1989-. B.A., Drew University, 1957; M.A. Syracuse University, 1960; Ph.D., 1966.

RICHARD F. CHARLES, 1988-; Vice President for Advancement, 1988-. A.B., Franklin and Marshall College, 1953.

DEBORAH R. FULLAM, 1982-; Assistant to the President for Budget and Planning, 1989-. B.S., Lebanon Valley College, 1981; M.B.A., Philadelphia College of Textiles and Science, 1988.

ROBERT E. HAMILTON, 1986-; Vice President for Administration and Controller, 1989-. A.B., Messiah College, 1962; M.Ed., Shippensburg University, 1966; D.Ed., Pennsylvania State University, 1972.

GEORGE R. MARQUETTE, 1952-; Vice President for Student Affairs, 1984-. A.B., Lebanon Valley College, 1948; M.A., Columbia University, 1951; Ed.D., Temple University, 1967.

WILLIAM J. MCGILL JR., 1986-; Vice President and Dean of the Faculty. A.B., Trinity College, 1957; M.A., Harvard University, 1958; Ph.D., 1961.

GREGORY G. STANSON, 1966-; Dean of Enrollment Management Services, 1980-. B.A., Lebanon Valley College, 1963; M.Ed., University of Toledo, 1966.

Administrative Staff

Academic Affairs

WILLIAM J. MCGILL, Vice President and Dean of the Faculty.

HOWARD L. APPLGATE, Registrar.

ELIZABETH A. CALVARIO, 1988-; Continuing Education Academic Advisor. B.S., University of Southern Colorado, 1984; M.B.A., Shippensburg University, 1986.

BARBARA JONES DENISON, 1987-; Continuing Education Academic Advisor. B.A., Lebanon Valley College, 1979; M.A., University of York, 1981; Ph.D., Northwestern University, 1985.

ALICE S. DIEHL, 1966-; Technical Processes Librarian. A.B., Smith College, 1956; B.S., Carnegie Institute of Technology, 1957; M.L.S. University of Pittsburgh, 1966.

DALE J. ERSKINE, 1983-; Director, Youth Scholars Institute, 1983-. B.A., University of Maine at Portland, 1974; M.A., State University of New York at Buffalo, 1976; Ph.D., University of Oklahoma, 1981.

JOYCE A. GUERRISI, 1980-; Assistant Registrar, 1989-.

ELAINE D. HAYDEN, 1989-; Director of Continuing Education. B.S., State University of New York College at Cortland, 1965; M.S., State University of New York College at Brockport, 1973.

WILLIAM E. HOUGH, III, 1970-; Librarian Associate Professor. A.B., King's College, 1955; Th.M., Dallas Theological Seminary, 1959; M.L.S., Columbia University, 1965.

DANIEL B. MCKINLEY, 1988-; Director of Leadership Studies Program. B.S., United States Coast Guard Academy, 1968; M.A.L.S., Wesleyan University, 1973; M.A., University of Maryland, 1982.

DONNA L. MILLER, 1986-; Readers' Services Librarian. B.S., Millersville University, 1984; M.L.S., Drexel University, 1986.

SUZANNE CALDWELL RIEHL, 1982-; Director of Special Music Programs, 1989-. B.A., Lebanon Valley College, 1979; M.M., Westminster Choir College, 1982.

JOHN J. UHL, 1980-; Director of Media Services. B.S., Lebanon Valley College, 1979.

VIRGINIA L. SOLOMON, 1987-; Assistant Director of Media Services. A.A., Pennsylvania State University-New Kensington, 1976. B.S., Slippery Rock, 1979; M.A.Ed., Western Carolina University, 1986.

Administrative Affairs

ROBERT E. HAMILTON, Vice President for Administration and Controller.
HAROLD L. FESSLER, 1984-; Director of Maintenance.

ROBERT E. HARNISH, 1967-; Manager of the College Store, B.A.,
Randolph Macon College, 1966.

MARGARET A. LAHR, 1988-; Director of Housekeeping.

GEORGE F. LOVELL, Jr., 1988-; Superintendent of Buildings and Grounds.

WALTER L. SMITH, 1961-1969; 1971-; Director of Special Services. B.S.,
Lebanon Valley College, 1961; M.S. in Ed., Temple University, 1967.

LINDA S. STRATTON, 1988-; Coordinator of Mail Services.

KEVIN R. YEISER, 1982-; Director of Grounds and Athletic Facilities.

ALLEN R. YINGST, 1988-; Grounds Supervisor.

Admissions and Financial Aid

GREGORY G. STANSON, Dean of Enrollment Management Services.

MELISSA J. ANDREWS, 1989-; Admissions Counselor. B.A., Lebanon
Valley College, 1989.

RUTH E. ANDERSEN, 1986-; Assistant Director of Financial Aid, 1988.
B.S., Lebanon Valley College, 1986.

MARK A. BREZITSKI, 1986-; Admissions Counselor, 1989. B.A., Ship-
pensburg University, 1985.

WILLIAM J. BROWN, Jr., 1980-; Associate Dean of Admissions 1984- and
Director of Financial Aid, 1986-. B.A., Lebanon Valley College, 1979;
M.B.A., Philadelphia College of Textiles and Science, 1989.

RONALD K. GOOD, 1983-; Assistant Dean of Admissions. B.S. in Ed.,
Millersville State University, 1959; M.Ed., 1966.

BARBARA A. LEER, 1988-; Admissions Counselor. B.A., Lebanon Valley
College, 1987.

JAMES P. MONOS, Jr., 1986-; Admissions Counselor. B.S., Shippensburg
University, 1972; M.Ed., Western Maryland College, 1978.

MICHAEL R. KOHLER, 1988-; Admissions Counselor. B.S., Lebanon
Valley College, 1980; M.M., Bowling Green State University, 1982.

Advancement

RICHARD F. CHARLES, Vice President for Advancement.

ELLEN H. ARNOLD, 1988-; Director of Annual Giving. B.A., Bucknell
University, 1964.

MARY JEAN BISHOP, 1987-; Director of Alumni and Parents Programs.
B.S., Lebanon Valley College, 1984; M.A., Millersville University, 1989.

- C. PAUL BRUBAKER, Jr., 1989-; Director of Planned Giving. B.S., Franklin and Marshall College, 1952; MBA, Wharton Graduate Div., University of Pennsylvania, 1955.
- JOHN B. DEAMER, Jr., 1986-; Director of Public Relations, 1989-. B.A., LaSalle University, 1985.
- TIMOTHY EBERSOLE, 1986-; Sports Information Director. B.S., Shippensburg University, 1983.
- MATTHEW A. HUGG, 1987-; Director of Development. B.S., Juniata College, 1983.
- MONICA E. KREISER, 1988-; Director of Special Events, Assistant Director of Annual Giving, 1988-. B.A., Lebanon Valley College, 1988.
- INGEBORG M. SNOKE, 1987-; Records and Research Assistant, 1989-. B.A., Marwitski Institute, Germany, 1948.
- DAWN T. THREN, 1987-; Director of Publications, 1989-. B.A., Bloomsburg University, 1986.

Computer Services

- ROBERT A. RILEY, 1976-1978, Director of Computer Services, 1988-. B.S., Elizabethtown College, 1976.
- ROBERT J. DILLANE, 1985-; Administrative Coordinator, Computer Services, 1986-. B.S., Lebanon Valley College, 1977.
- STEPHEN SHOOP, 1977-; Technical Coordinator, Computer Services, 1986-. B.S., Lebanon Valley College, 1974.

Financial Affairs

- DEBORAH R. FULLAM, Assistant to the President for Budget and Planning.
- DANE A. WOLFE, 1977-; Associate Controller. B.S., Lebanon Valley College, 1974; Basic Certification, American Institute of Banking, 1976.

Religious Affairs

- JOHN ABERNATHY SMITH, 1980-; College Chaplain and Church Relations Officer. B.A., Vanderbilt University, 1961; M.Div., Drew University, 1965; M.A., Johns Hopkins University, 1967; Ph.D., 1971.
- THOMAS H. SMITH, 1988-; Adjunct Catholic Chaplain. B.A., Saint Charles Seminary, 1953.

Student Affairs

- GEORGE R. MARQUETTE, Vice President for Student Affairs/Dean of Students.
- CAROL AMUNDSEN, 1989-; Assistant Director of Student Activities and Residential Life. A.A., Wesley College, 1979; B.A., High Point College, 1981.
- DAVID A. CALVARIO, 1987-; Director of Residential Life, 1989-. B.S., Shippensburg University, 1982; M.S., 1986.
- ROBERT F. EARLY, 1971-; College Physician. B.S., Lebanon Valley College, 1949; M.D., Thomas Jefferson University, 1952.
- DAVID C. EVANS, 1981-; Director of Career Planning and Placement. B.A., Slippery Rock University, 1969; M.Ed., Rutgers University, 1970.
- VERONICA FABIAN, 1984-; Staff Nurse, R.N., Diploma, Spencer Hospital, 1961.
- RUSSELL L. GINGRICH, 1971-; College Physician. B.S., Lebanon Valley College, 1947; M.D., Thomas Jefferson University, 1951.
- ROBERT M. KLINE, 1970-; College Physician. B.S., Lebanon Valley College, 1950; M.D., Thomas Jefferson University, 1955; B.A., Lebanon Valley College, 1971.
- LOUIS A. SORRENTINO, 1971-; Director of Athletics, 1981-; Assistant Coach, Basketball, 1986-; Head Coach, Golf, 1989-. B.A., Lebanon Valley College, 1954; M.A., Bucknell University, 1961.
- KATHLEEN TIERNEY, 1983-; Assistant Director of Athletics, Director of Summer Sports Camps, 1988-; Head Coach, Women's Field Hockey and Softball. B.S., University of New York at Brockport, 1979.
- JULIANA Z. WOLFE, 1975-1978; 1979-; Director of Health Center and Head Nurse. R.N., Diploma, St. Joseph's Hospital, 1963.
- ROSEMARY YUHAS, 1973-; Associate Dean of Students, 1983-. B.S., Lock Haven University, 1966; M.Ed., West Chester University, 1970.
- JEAN W. ZELEK, 1983-; Staff Nurse. R.N., Diploma, St. Anthony's Hospital, 1952.

Athletic Staff

- LOUIS A. SORRENTINO, Director of Athletics.
- JOHN W. BARNHART, 1987-; Assistant Football Coach. B.A., Hiram College.
- MARK A BREZITSKI, 1986-; Assistant Football Coach. B.A., Shippensburg University, 1985.
- LEWIS H. COOKE, Jr., 1975-; Equipment Manager, 1985-.

TIMOTHY M. EBERSOLE, 1986-; Assistant Football Coach. B.S., Shippensburg University, 1983.

PATRICK J. FLANNERY, 1989-; Men's Basketball Coach; Assistant Baseball Coach. B.A., Bucknell University, 1980; M.S., 1983.

JODI LYN FOSTER, 1985-; Women's Basketball and Track Coach. B.S., Milliken University, 1984; M.S., Eastern Illinois University, 1985.

CHRIS E. HORST, 1988-; Assistant Field Hockey Coach; B.S., West Chester University, 1972, M.Ed., 1974.

THOMAS E. JORDAN, 1986-; Assistant Football Coach, B.S., Millersville University, 1976.

LAWRENCE M. LARTHEY, 1988-; Wrestling Coach. B.S., Lebanon Valley College, 1972.

JAMES P. MONOS, Jr., 1986-; Football Coach. B.S., Shippensburg University, 1972; M.Ed., Western Maryland College, 1978.

RUSSELL J. OWENS, 1988-; Men's and Women's Swimming Coach; Director of the E.H. Arnold Sports Center. B.S., Lebanon Valley College, 1960.

WAYNE PERRY, 1987-; Men's and Women's Volleyball Coach. B.S., Lebanon Valley College, 1978.

O. KENT REED, 1971-; Men's Track and Field Coach; Men's and Women's Cross-country Coach. B.S., Otterbein College, 1956; M.A., Eastern Kentucky University, 1970.

FRANK J. REICH, 1986-; Assistant Football Coach. B.S., Pennsylvania State University, 1956.

EDWARD C. SPITTLE, Jr., 1985-; Baseball Coach.

HARRY A. SHIRK, Jr., 1987-; Soccer Coach.

JAMES E. STARK, 1986-; Athletic Trainer. B.S., Lock Haven University, 1983. M.Ed., Shippensburg University, 1986.

KATHLEEN M. TIERNEY, 1983-; Assistant Director of Athletics, 1988; Director of Summer Sports Camps; Field Hockey and Women's Softball Coach. B.S., State University of New York at Brockport, 1979.

THE CHRISTIAN R. AND MARY F. LINDBACK DISTINGUISHED TEACHING AWARDS

The Lindback Awards for distinguished teaching are supported by grants from the Christian R. and Mary F. Lindback Foundation. The Lindback Award recipients, who must be full-time members of the Lebanon Valley College faculty, are selected by the President of the College after appropriate consultation with alumni, students, faculty and staff.

Previous Awardees:

1985	Leon E. Markowicz, Ph.D., Professor of English
1986	Carolyn R. Hanes, Ph.D., Professor of Sociology and Social Work and Leadership Studies
1987	Donald E. Bryne, Jr., Ph.D., Professor of Religion
1987	Mark A. Townsend, Ed.D., Assistant Professor of Mathematical Sciences
1988	William H. Fairlamb, Mus. B., Professor of Music
1989	Paul L. Wolf, Ph.D., Professor of Biology

THE NEVELYN J. KNISLEY AWARD FOR INSPIRATIONAL TEACHING

In 1988, Lebanon Valley College created an award for part-time and adjunct members of the College faculty similar to the philosophy of the Lindback Award. The first awardee was Nevelyn J. Knisley. After the presentation of the first award, the President of the College named this series of awards for Mrs. Knisley in recognition for her twenty-four years of inspired teaching in music.

Previous Awardees:

1988	Nevelyn J. Knisley, M.F.A., Adjunct Associate Professor of Music
1989	Carolyn B. Scott, B.A., Lecturer in French

FACULTY

Active

- MADELYN J. ALBRECHT, 1973-; Associate Professor of Education. B.A., Northern Baptist College, 1952; M.A., Michigan State University, 1958; Ph.D., 1972.
- SHARON DARMOFALL ARNOLD, 1986-; Associate Professor of Sociology. B.A., University of Akron, 1964; M.A., 1967.
- SUSAN ATKINSON, 1987-; Assistant Professor of Education. B.S., Shippensburg University, 1972; M.Ed., (Elementary Education) 1973; M.Ed., (Special Education) 1979; D.Ed., Temple University, 1987.
- PHILIP A. BILLINGS, 1970-; Professor of English. B.A., Heidelberg College, 1965; M.A., Michigan State University, 1967; Ph.D., 1974.
- DONALD C. BOONE, 1988-; Assistant Professor of Hotel Management. B.A., Michigan State University, 1964; M.B.A., 1966.
- JAMES H. BROUSSARD, 1983-; Professor of History, Chairperson of the Department of History and American Studies. A.B., Harvard University, 1963; M.A., Duke University, 1965; Ph.D., 1968.
- DONALD EUGENE BROWN, 1983-; Professor of Political Science. B.S., Western Illinois University, 1969; M.A., State University of New York at Binghamton, 1973; Ph.D., 1982.
- DONALD E. BYRNE, JR., 1971-; Professor of Religion; Director of the American Studies Program. B.A., St. Paul Seminary, 1963; M.A., Marquette University, 1966; Ph.D., Duke University, 1972.
- VOORHIS C. CANTRELL, 1968-; Professor of Religion and Greek. B.A., Oklahoma City University, 1952; B.D., Southern Methodist University, 1956; Ph.D., Boston University, 1967.
- SHARON F. CLARK, 1986-; Associate Professor of Management. Chairperson of the Department of Management. B.A., University of Richmond, 1969; J.D., 1971.
- RICHARD D. CORNELIUS, 1985-; Professor of Chemistry; Chairperson of the Department of Chemistry. B.A., Carleton College, 1969; Ph.D., University of Iowa, 1974.
- SALVATORE CULLARI, 1986-; Associate Professor of Psychology. B.A., Kean College, 1974; M.A., Western Michigan University, 1976; Ph.D., 1981.
- GEORGE D. CURFMAN, 1961-; Professor of Music, Interim Chairperson of the Department of Music. B.S., Lebanon Valley College, 1953; M.M., University of Michigan, 1957; D.Ed., Pennsylvania State University, 1971.

- DONALD B. DAHLBERG, 1980-; Associate Professor of Chemistry. B.S., University of Washington, 1967; M.S., Cornell University, 1969; Ph.D., 1971.
- MICHAEL A. DAY, 1987-; Associate Professor of Physics, Director of the Honors Program. B.S., University of Idaho, 1969; M.A., 1975, Ph.D., 1977, University of Nebraska (Philosophy). M.S., 1978, Ph.D., 1983, University of Nebraska (Physics).
- PHYLIS DRYDEN, 1987-; Assistant Professor of English. B.A., Atlantic Union College, 1976; M.A., State University of New York at Albany, 1985; Ph.D., 1988.
- SCOTT H. EGGERT, 1983-; Assistant Professor of Music. B.F.A., University of Wisconsin (Milwaukee), 1971; M.A., University of Chicago, 1974; D.M.A., University of Kansas, 1982.
- SUSAN L. EGNER, 1988-; Instructor in Spanish. B.A., Lebanon Valley College, 1982; M.A., Middlebury College, 1987.
- DALE J. ERSKINE, 1983-; Associate Professor of Biology. Director of the Youth Scholars Institute. B.A., University of Maine at Portland, 1974; M.A., State University of New York at Buffalo, 1976; Ph.D., University of Oklahoma, 1981.
- WILLIAM H. FAIRLAMB, 1947-; Professor of Music. Mus.B., cum laude, Philadelphia Conservatory, 1949.
- ARTHUR L. FORD, 1965-; Professor of English. A.B., Lebanon Valley College, 1959; M.A., Bowling Green State University, 1960; Ph.D., 1964.
- EILEEN N. FRANKLAND, 1986-; 1987-; Assistant Professor of Social Work. B.A., Pennsylvania State University, 1973; M.S.W., Barry University, 1982.
- MICHAEL D. FRY, 1983-; Assistant Professor of Mathematical Sciences. B.A., Immaculate Heart College, 1975; Ph.D., University of Illinois, 1980.
- PIERCE A. GETZ, 1959-; Professor of Music. B.S., Lebanon Valley College, 1951; M.S.M., Union Theological Seminary School of Sacred Music, 1953; A.M.D., Eastman School of Music, 1967.
- MICHAEL A. GRELLA, 1980-; Professor of Education; Chairperson of the Department of Education. B.A., St. Mary's Seminary and University, 1958; M.A., West Virginia University, 1970; Ed.D., 1974.
- KLEMENT M. HAMBOURG, 1982-; Associate Professor of Music. A.T.C.M., Royal Conservatory of Music, 1946; L.R.A.M., Royal Academy of Music, 1962; A.R.C.M., Royal College of Music, 1962; L.T.C.L., Trinity College of Music (London), 1965; Fellow, 1966; D.M.A., University of Oregon, 1977.

- CAROLYN R. HANES, 1977-; Professor of Sociology and Social Work and Leadership Studies, Chairperson of the Department of Sociology and Social Work. B.A., Central Michigan University, 1969; M.A., University of New Hampshire, 1973; Ph.D., 1976.
- BRYAN V. HEARSEY, 1971-; Professor of Mathematical Sciences. B.A., Western Washington State College, 1964; M.A., Washington State University, 1966; Ph.D., 1968.
- ROBERT H. HEARSON, 1986-; Assistant Professor of Music. B. Music, University of Iowa, 1964; M.A., 1965; Ed.D., University of Illinois, 1983.
- JOHN H. HEFFNER, 1972-; Professor of Philosophy. Chairperson of the Department of Religion and Philosophy. B.S., Lebanon Valley College, 1968; B.A., 1987; A.M., Boston University, 1971; Ph.D., 1976.
- JEANNE C. HEY, 1989-; Assistant Professor of Economics. B.A., Bucknell University, 1954; M.B.A., Lehigh University, 1982.
- BARRY L. HURST, 1982-; Assistant Professor of Physics; Chairperson of the Department of Physics. B.S., Juniata College, 1972; Ph.D., University of Delaware, 1982.
- DIANE M. IGLESIAS, 1976-; Professor of Spanish; Chairperson of the Department of Foreign Languages. B.A., Queens College, 1971; M.A., 1974; Ph.D., City University of New York, 1979.
- RICHARD A. ISKOWITZ, 1969-; Associate Professor of Art; Chairperson of the Department of Art. B.F.A., Kent State University, 1965; M.F.A., 1967.
- RICHARD A. JOYCE, 1966-; Associate Professor of History. A.B., Yale University, 1952; M.A., San Francisco State College, 1963.
- JOHN P. KEARNEY, 1971-; Professor of English. Chairperson of the Department of English. B.A., St. Benedict's College, 1962; M.A., University of Michigan, 1963; Ph.D., University of Wisconsin, 1968.
- MICHAEL R. KOHLER, 1988-; Instructor in Music. B.S., Lebanon Valley College, 1980; M.M. Bowling Green State University, 1982.
- EDWARD H. KREBS, 1976-80; 1989-; Assistant Professor of Economics. B.S., The Pennsylvania State University, 1965; M.S., University of Massachusetts, 1967; Ph.D. Michigan State University, 1970.
- DAVID I. LASKY, 1974-; Professor of Psychology; Chairperson of the Department of Psychology. A.B., Temple University, 1956; M.A., 1958; Ph.D., 1961.
- ROBERT W. LEONARD, 1988-; Assistant Professor of Management. B.A., Ohio University, 1977; M.A., St. Francis School of Industrial Relations, 1978, M.B.A., The Ohio State University, 1986.

- DANIEL B. MCKINLEY, 1988-; Assistant Professor of Leadership Studies, Director, Leadership Studies Program. B.S., United States Coast Guard Academy, 1968; M.A.L.S. Wesleyan University, 1973; M.A., University of Maryland, 1982.
- FREDERICK H. MAIDMENT, 1988; Associate Professor of Management. B.S., College of Business & Public Administration, 1970; M.B.A., Bernard M. Baruch College, City University of New York, 1972; Ed.D., University of South Carolina, 1983.
- LEON E. MARKOWICZ, 1971-; Professor of Leadership Studies. A.B., Duquesne University, 1964; M.A., University of Pennsylvania, 1968; Ph.D., 1972.
- JOERG W.P. MAYER, 1970-; Professor of Mathematical Sciences. Dipl. Math., University of Giessen, 1953; Ph.D., 1954.
- OWEN A. MOE, JR., 1973-; Professor of Chemistry. B.A., St. Olaf's College, 1966; Ph.D., Purdue University, 1971.
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