



Undergraduate and Graduate  
2002-2003 Catalog



Lebanon Valley College



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# LEBANON VALLEY COLLEGE

**Founded:** 1866, as a private coeducational institution on the site of the Annville Academy. Became a four-year institution by 1883 as the lower grades were phased out.

**Curriculum:** a four-year program of study in the liberal arts with an academic year comprised of fall and spring semesters and an optional summer term.

**Degrees granted:** Bachelor of Arts, Bachelor of Music, Bachelor of Science, Associate of Arts, Associate of Science, Master of Business Administration, Master of Music Education, Master of Physical Therapy, Master of Science Education.

**Major fields of study:** accounting, actuarial science, American studies, biochemistry, biology, business, chemistry, computer science, digital communications, economics, elementary education, English, French, German, health care management, health science, historical communications, history, mathematics, medical technology, music, music business, music education, music technology, philosophy, physical therapy, physics, political science, psychobiology, psychology, religion, sociology, Spanish.

**Special programs:** military science (ROTC), secondary education certification; *in cooperation with Thomas Jefferson University:* biotechnology, cytotechnology, diagnostic imaging, occupational therapy, physical therapy; *in cooperation with The Pennsylvania State University, Case Western Reserve University, University of Pennsylvania, and Widener University:* engineering; *in cooperation with Duke University:* forestry, environmental sciences; *in cooperation with approved hospitals:* medical technology.

**Special options:** departmental honors, double majors, independent study, individualized majors, internships, tutorial study, study abroad, Philadelphia and Washington semester programs.

**Number of faculty:** 89; of the permanent faculty 82 percent have earned a Ph.D. or equivalent terminal degree.

**Student-faculty ratio:** 16:1, with an average class size of 20.

**Location:** Annville, founded in 1799, is a small town of approximately 5,000 people located in south central Pennsylvania. Driving times: Hershey, 10 minutes; Harrisburg, 1/2 hour; Baltimore, 2 hours; Philadelphia, 2 hours; New York, 3 hours; Washington, D.C., 3 hours.

**Size of campus:** 34 buildings. The library contains over 186,500 catalog items, and the College provides students with access to 200 personal computers. The sports center is nationally recognized for its water fitness program.

**Residence halls:** twenty-two residence halls housing 1,139 students in male, female, coed and apartment-style facilities.

**Student enrollment:** 1,478 full-time undergraduate students, with 399 part-time undergraduates and 197 graduate students.

**Student financial aid:** approximately 92 percent receive financial aid in the form of grants. Total financial aid in the form of LVC grant and academic scholarships for 2001-2002 was \$11,361,200. The average grant and scholarship totaled \$8,156.

## THE MISSION OF THE COLLEGE

Lebanon Valley is a small, private, liberal arts college. Its mission arises directly from its historical traditions and a relationship with the United Methodist Church.

The College's aim is to enable our students to become people of broad vision, capable of making informed decisions, and prepared for a life of service to others. To that end we seek to provide an education that helps students to acquire the knowledge, skills, attitudes and values necessary to live and work in a changing, diverse and fragile world.

Through both curricular and co-curricular activities we endeavor to acquaint our students with humanity's most significant ideas and accomplishments, to develop their abilities to think logically and communicate clearly, to give them practice in precise analysis and effective performance, and to enhance their sensitivity to and appreciation of differences among human beings.

Lebanon Valley College aspires to pursue this mission within a community in which caring and concern for others is a core value. We value strong and nurturing faculty interacting closely with students; encourage individual student development; and affirm the inter-relatedness of liberal learning and the ideal of vocation. We regard the cultivation of wisdom, that is the capacity of judging rightly in matters of life and conduct, and a life-long love of learning as the ultimate rewards of the educational experience.

*The motto of the College is, "You shall know the truth and the truth shall set you free"  
(John 8:32).*



# UNDERGRADUATE INFORMATION

## Admission for Full-time 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.

All candidates are encouraged to visit campus for a personal interview. Applicants for admission to certain academic programs (elementary education, music and physical therapy majors) are required to undergo additional steps. For further information contact:

#### **Admission Office**

Lebanon Valley College  
101 North College Avenue  
Annville, PA 17003-0501

*Phone:* (717) 867-6181 or 1-866-LVC-4ADM

*FAX:* (717) 867-6026

*Internet:* <http://www.lvc.edu>

*E-mail:* [admission@lvc.edu](mailto:admission@lvc.edu)

### *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 who withdraw, are dismissed or take a leave of absence from the College during the billing period in which he or she is enrolled will receive a refund in accordance with federal policy. A copy of the federal refund policy is available in the Business Office.

Part-time students should consult the refund schedule published by the Continuing Education Office. However, part-time students receiving federal financial assistance (Title IV) will receive a refund according to federal policy. A copy of the federal refund policy is on file in the Business Office.

### *Alternative Payment Plan*

Lebanon Valley College offers a payment plan for those families who, after exploring other options, prefer to spread payments over a 10-month period. An agent has been appointed to process deferred payment applications:

#### **Academic Management Services**

One AMS Place

P.O. Box 100

Swansea, MA 02777

*Phone:* 1-800-635-0120

### **Continuing Education**

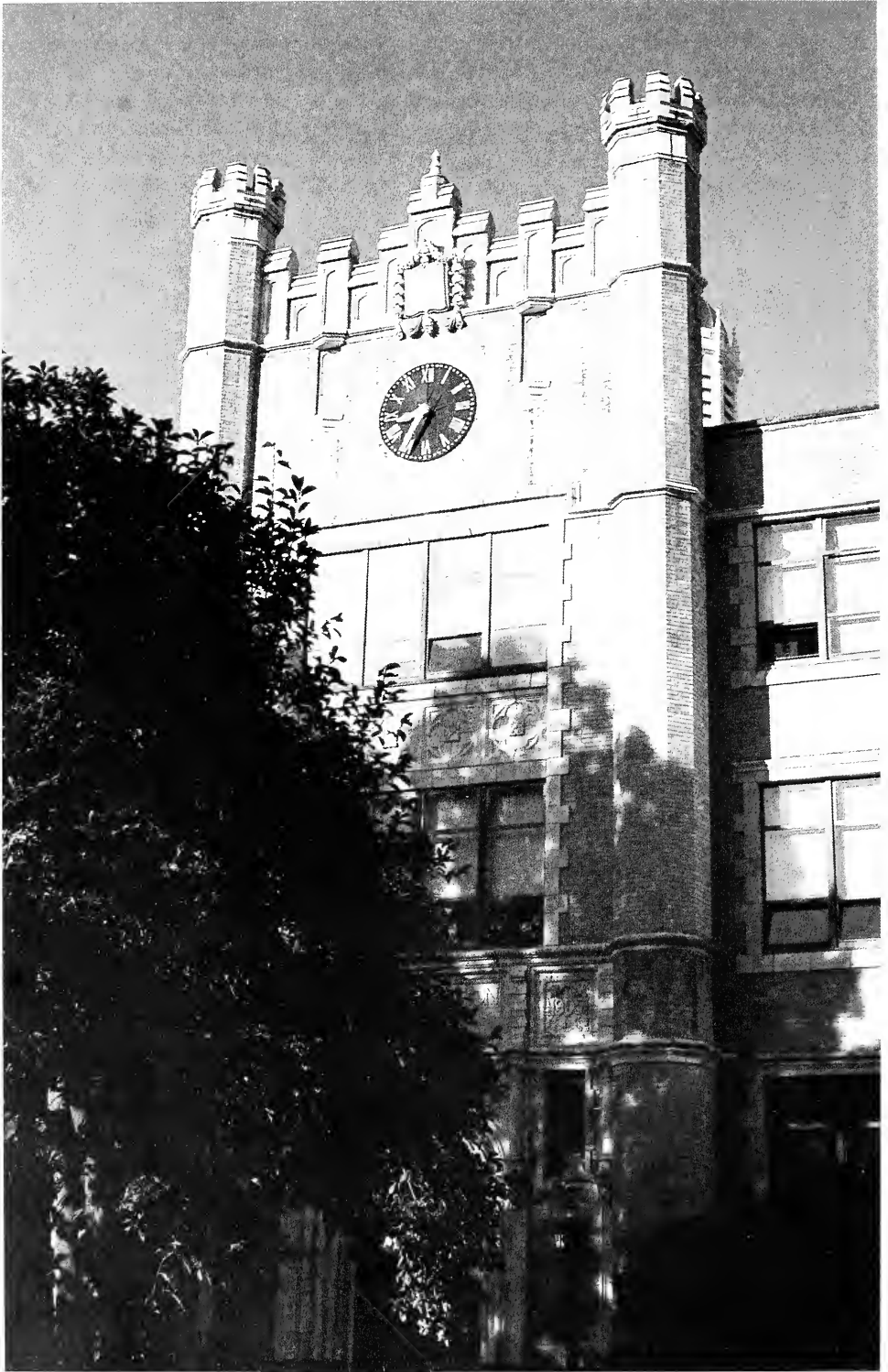
Students may enroll part-time for undergraduate study at Lebanon Valley College through Continuing Education. Students are considered part-time if they are enrolled for 0 - 11 credit hours per semester.

Continuing Education offers credit programs on four levels: certificate, associate, baccalaureate and professional certificates. 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. Professional certificate 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.

A second bachelor's degree may be awarded to adult students who already have received a bachelor of arts or sciences from Lebanon Valley or another accredited college or university. In such cases, students must only complete the major requirements for the second degree or a minimum of 30 credits, whichever is greater.

Courses taught through Continuing Education are offered during evening, weekend and summer sessions on the main campus in Annville, in Lancaster on the Franklin & Marshall College Campus, and in Camp Hill at our West Shore Center and Highmark Blue Shield. Continuing Education publishes course schedules for the fall, spring and summer sessions. To obtain copies of course schedules or get detailed information on all academic programs for adults call 717-867-6213 in Annville, 717-399-4419 in Lancaster, and 717-763-7073 in Camp Hill or write The Office of Graduate Studies and Continuing Education, Lebanon Valley College, Annville, PA 17003-1400.

A candidate for admission to any of Lebanon Valley College's Continuing Education certificate or degree programs must submit a completed application form with the required application fee. An official high school transcript is required if students have less than 24 semester hours of transferable college credits. Students planning to transfer to Lebanon Valley 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. Although candidates may begin taking classes before they have been accepted, they must speak with an adviser before registering for courses. To arrange an admission interview with an adviser call 717-867-6213 in Annville, 717-399-4419 in Lancaster, or 717-763-7073 in Camp Hill. 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 five baccalaureate degrees. Bachelor of Arts for students completing requirements in the following major programs: American studies, economics, English, French, German, historical communications, history, music, music business, 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, biochemistry, biology, business administration, chemistry, computer science, cooperative engineering, cooperative forestry, digital communications, elementary education, health care management, health science, international business, mathematics, music education, physics, psychobiology and certain individualized majors. Bachelor of Science in Chemistry, Bachelor of Science in Medical Technology, and Bachelor of Music: Emphasis in Music Recording Technology for students completing requirements for the appropriate major program.

### *Associate Degrees*

Through the Continuing Education Office part-time students may earn the Associate of Science degree in accounting, general studies or business administration, or the Associate of Arts degree in general studies.

## Privacy of Student Records

The Family Educational Rights and Privacy Act of 1974 is a federal law which provides students the right to review their academic records, the right to challenge the contents of their records, and the right to confidentiality of their records.

The Buckley Amendment allows the disclosure of basic directory data and, in the case of athletes, extends that information to relevant personal data and accomplishments. The College Relations Office uses permissible information from students' records to report on social and academic accomplishments.

Annually, Lebanon Valley College informs students of the Family Educational Rights and Privacy Act of 1974, as amended. This Act, with which the institution intends to comply fully, was designated to protect the privacy of education records, to establish the right of students to inspect and review their education records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. Students also

have the right to file complaints with the Family Educational Rights and Privacy Act Office (FERPA) concerning alleged failures by the institution to comply with the act.

Local policy explains in detail the procedures to be used by the institution for compliance with the provisions of the Act. Copies of the policy can be found in the following offices: Office of the Registrar, Office of Student Services and Office of the Dean of the Faculty. The policy is also printed in the Faculty Advising Handbook. The offices mentioned also maintain a Directory of Records which lists all education records maintained on students by this institution.

Questions concerning the Family Educational Rights and Privacy Act may be referred to the Registrar's Office.

### **Credit Hours**

A credit hour is the unit to measure academic progress. Each course has a credit designation approximately equal to the number of hours to be spent in class each week. A course requiring three hours of class attendance each week will carry three credit hours. Credit for laboratories is generally awarded at one-half the regular rate.

### **Graduation Requirements**

Candidates for a baccalaureate degree shall complete successfully 120 credit hours including the requirements for the general education program (see page 18), and the requirements for majors and minors as appropriate. Credit hours are accumulated in three separate categories: general education requirements, major requirements, and electives.

In addition, candidates shall complete successfully two units of physical education selected from a list of approved activities. Students shall not satisfy the physical education requirement by taking the same activity unit twice. Students shall have a maximum of one physical education unit waived for successful completion of any of the following: one season of a varsity sport, one semester of marching band, or one semester of military science. Continuing education students are exempt from the physical education requirement.

Candidates for an associate's degree must accumulate at least 60 credit hours including the course work appropriate to their major program. Fifteen of the last 18 credit hours toward the degree must be in residence.

Candidates for a degree must obtain a cumulative grade point average of 2.00 and a major grade point average of 2.00.

The general education program is that part of the curriculum that is shared by all students in all majors. The required courses reflect 54-56 credit hours.

The major programs each require at least 24 credit hours of course work.

Electives are those courses selected by the student that reflect neither major nor general education requirements.

Candidates for the bachelor's degrees must also take in residence 30 credit hours of the 36 taken immediately prior to graduation. Course work taken in all of the College's programs qualify as work done in residence.

### **Advising Program**

Each student has a faculty adviser whose role is to counsel about registration procedures, course selections, academic requirements and regulations. The student is required to obtain the adviser's counsel and approval before registration, withdrawal, election of pass/fail option, and/or change in credit/audit status.

## **Arrangement of Schedules**

Each student arranges a semester program of courses in consultation with, and by approval of, his or her faculty adviser. Students already in attendance do this during registration periods. New students accomplish this on orientation days.

## **Limit of Hours**

To be classified as full time, a student must take at least 12 credit hours in a semester. Seventeen credit hours is the maximum permitted without approval from the student's adviser and permission of the registrar. 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 a senior. Audited courses are counted in determining the course load, but music organizations are not. Students shall pay the prevailing tuition rate for each credit hour beyond 17 (not counting music organizations).

## **Class Standing**

Students are classified academically at the beginning of each year. Membership in the sophomore, junior or senior classes is granted to students who have earned a minimum of 28, 56 or 84 credit hours respectively.

## **Transfer Credit**

A student applying for advanced standing after having attended another accredited institution shall send an official transcript to the dean of admission. 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- (1.67) 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 course work at the previously attended institution. Course work 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. A total of 60 credits will be accepted for an associate degree and 57 credits for a diploma program. A maximum of 90 credit hours will be accepted toward a baccalaureate degree.

In most instances the applicant may be expected to complete the baccalaureate degree within two years. However, when the requirements of a particular major field or the nature of the previous study demand additional work beyond two years, the applicant will normally be notified at the time of admission.

## **Discontinuance of Courses**

The College reserves the right to withdraw or discontinue any course.

## **Registration and Preregistration**

Students are required to register for courses on designated days of each semester. Preference is given to upperclass students in the preregistration process to ensure registration in courses required for their major fields of study. 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.

On entering Lebanon Valley College students indicate that they are open or that they have a particular intended major. Students may make a formal declaration of major during the second semester of their freshmen year, and must make a formal declaration by the time they have completed 60 credit hours.

## **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 adviser. 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 adviser, a student may withdraw from a course during the first 10 weeks of the semester. However, first semester freshmen may withdraw from a course at any time through the last day of semester classes with permission of the adviser. 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 adviser. Audited courses are counted in considering the course load relative to the limit of hours which may result in an overload charge. 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 tenth 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 elected by students to be taken pass/fail may be used to meet the requirements of the general education program or other programs, the major(s), the minor(s) or secondary education certification. A student may select or cancel a pass/fail registration any time during the first 10 weeks of a semester. Passing with honors will be designated by the grade PH indicating that a grade of B+ or higher was earned. If a student does not pass the course, the student will receive an F on the transcript. See page 14 for grading systems.

## **Repetition of Courses**

A student may repeat as often as desired, for a higher grade, a previously taken course, subject to the following provisions: the course must have been taken in courses staffed by the College at the Annville campus or one of the satellite sites. Semester hours credit are given only once. The higher grade received each time taken is computed in the semester grade point average. Each semester grade report will show hours credit each time passed, but the total hours toward a degree will be equal only to the semester hours credit for the

course. For a course previously passed P/F, the grade received in the subsequent registration for regular grade is the “higher grade.” Each grade received remains on the permanent record and a notation is made thereon that the course has been repeated.

### **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 adviser and the registrar.

### **External Summer Courses**

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

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

### **In-Absentia**

The College treats students in domestic or foreign study programs as students-in-absentia. Any student who studies for a semester or academic year at another institution but with the intent of returning to the College is considered a matriculated student. A student desiring in-absentia status should complete the form in the registrar’s office and secure the approval of the adviser, the registrar and the dean of international programs. Students will receive information on registration and room sign-up after they notify the registrar of their address abroad or in the United States.

### **Leave of Absence**

For reasons of health or in other compelling circumstances students may request a voluntary leave from the College for one or two semesters. A student desiring such a leave should complete the form available from the registrar and secure the approval of the associate dean of the faculty. Students on leave are regarded as continuing students and retain their status for registration and room sign-up, if available. Students on leave will receive information on those procedures and will be asked to verify their return. The College reserves the right to require a leave of absence for medical reasons at any time it is deemed reasonably necessary to protect the student, other students, members of the College community, or the interests of the College itself. Before a student returns from a medical leave of absence, a clearance interview with one of the counseling psychologists, the dean of students or the vice president and dean of the faculty as well as additional documentation may be required.

## **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 director of continuing education. Readmission of a student requires written permission from the associate dean of the faculty.

## **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. No more than three credits from student teaching (SED 440, ELM 440 and MSC 441) may 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 more than three credits from internships may be counted toward a second degree.
9. No courses in the second degree program may be taken Pass/Fail.

## **Undergraduate Non-Traditional Credit**

Lebanon Valley College recognizes the ability of highly motivated 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 (challenge exams, advanced placement, CLEP, and credit for life experience). All non-traditional means of examination are graded satisfactory (S) or unsatisfactory (U). An unsatisfactory grade on any non-traditional examination will not be recorded on the permanent record.

## **Challenge Exam Policy**

Many LVC courses can be challenged for credit by examination. Full-time students should request challenge examinations through their academic advisers. Part-time students and those students enrolled through continuing education should make application for challenge exams through the continuing education office. 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. The grading criteria for challenge exams will be determined by each department. The exact nature of the examination will be determined by the faculty member and chairperson of the department involved and may include any means of evaluation normally

employed by the department. There is a fee for preparation and grading of each challenge exam, and it 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, writing intensive courses, and courses with laboratory components are normally not subject to credit by examination. Individual departments may have additional criteria regarding challenge exams. Consult the chairperson of the department in which the course is listed for specific information.

### **Advanced Placement Policy**

Advanced placement with credit in appropriate courses will 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 appropriate by the registrar and by the chairperson of the department.

### **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 for general and subject examinations. The English composition essay is required with a minimum score of 480 and at the 80th percentile for this CLEP examination.

A maximum of six credits shall be awarded for each examination; of these credits, only three 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. Normally, 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 advisers. Students enrolled in the continuing education program must petition through the continuing education office. 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
- (4) state the number of credit hours sought.

The appropriate department will consult with the academic adviser or the continuing education office 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 adviser, the appropriate department chairperson, and the associate 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 associate 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.

### **International Baccalaureate Program**

Credit for appropriate courses will be granted to entering students who achieve scores of 5, 6 or 7 on International Baccalaureate individual subject examinations. The official International Baccalaureate transcript must be presented by the student for evaluation by the registrar.

### **Grading Systems and Grade Point Averages**

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

A	4.00	C	2.00
A-	3.67	C-	1.67
B+	3.33	D+	1.33
B	3.00	D	1.00
B-	2.67	D-	.67
C+	2.33	F	.00

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 2.00, and a major grade point average of 2.00.

Continuing education degree candidates admitted before July 1, 1989 must meet graduation requirements by earning a cumulative grade point average of 1.75. All students and continuing education candidates admitted after July 1, 1989 must meet graduation requirements by earning a grade point average of 2.00. All students must have a 2.00 grade point average in their major, any second major, and any minor.

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 and W 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 tenth week of semester classes, except for first-semester freshmen who may withdraw through the last day of the semester. 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 or higher 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.

Continuing education students shall be named to the Continuing Education Dean's List by meeting the following terms:

- (1) must be matriculated in certificate, degree or teacher certification programs
- (2) must be enrolled for at least six credit hours
- (3) must achieve a minimum semester grade point average of 3.40.

### *Graduation Honors*

After completing a minimum of 60 calculated 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.

### *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. The minimal requirements for departmental honors are a cumulative GPA of at least 3.0, both at the time of application and the time of graduation; a written thesis; an oral presentation; and approval by a majority vote of the full-time members of the department. This project is undertaken on a subject of the student's own choosing under the supervision of a faculty adviser. Opportunity also exists to do creative work. A maximum of nine hours credit may be earned in departmental honors.

### *Phi Alpha Epsilon*

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

## Academic Dishonesty

Lebanon Valley College expects its students to uphold the principles of academic honesty. Academic dishonesty shall not be tolerated. A student should neither hinder nor unfairly assist the efforts of other students to complete their work. All work that a student uses in a course assignment must be the student's original work. Cheating and plagiarism are acts of academic dishonesty. Cheating is an act that deceives or defrauds. It includes, but is not limited to, looking at another's exam, using unauthorized materials during an exam, colluding on assignments without the permission or knowledge of the instructor, or furnishing false information for the purpose of receiving special consideration, such as postponement of an exam or paper deadline. Plagiarism is the act of submitting as one's own, the work (for instance, words, ideas, images, compositions) of another person or persons without attribution. Plagiarism can manifest itself in various ways: it can arise from sloppy note-taking; it can emerge as the incomplete or incompetent citation of resources; it can take the form of the wholesale submission of other people's work as one's own. The seriousness of an instance of plagiarism - its *moral* character as an act of academic dishonesty - normally depends upon the extent to which a student intends to deceive and mislead the reader as to the authorship of the work in question. The instructor will make this determination initially.

Once action has been taken on a matter of academic dishonesty by the professor, the student forfeits the right to withdraw from the course. The College's expectation and the consequences to meet those expectations are outlined below.

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 associate 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 associate dean shall so inform the faculty member(s) involved. Additionally, the associate dean of the 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 associate dean of the 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 associate dean of the faculty. The associate 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 vice president for academic affairs and dean of the faculty, who will serve as final arbiter.

### Academic Probation and Suspension

At the conclusion of each semester the Dean's Advisory Council meets to review the academic performance of all undergraduate students. The members of the council are the vice president for academic affairs and dean of the faculty, the vice president for enrollment and student services, the dean of student services, and the registrar.

To maintain themselves in good academic standing at the College, students must achieve minimum cumulative grade point averages appropriate to their progress toward their degree, and they must complete coursework at a regular and sustained pace. Minimum cumulative GPAs are as follows:

Semester Hours Completed	Required Cumulative GPA
1-27	1.60
28-55	1.70
56-83	1.80
84 or more	1.90

At the conclusion of each semester, the College examines students' academic records. Students who have not achieved the above minimum grade point averages will be given an **Academic Warning**, placed on **Probation** or **Academically Suspended** from the College.

**Academic Warning.** The first time students fall below the required cumulative GPA as listed above, they will be given Academic Warning. Academic Warning constitutes a formal notification that a student's academic performance is weak and that he/she needs to devote increased attention to academic work. Students receiving Academic Warning are cautioned that unless they achieve an acceptable cumulative grade point average, they will be placed on Probation and thereby lose the privilege of participating in extracurricular activities (including such activities as intercollegiate sports, student government, campus media, student clubs, and Greek and service organizations).

**Probation.** Students who fall a second time below the required cumulative GPA (whether in consecutive or non-consecutive semesters) will be placed on Probation. A student on Probation will not be permitted to take part in extracurricular activities.

**Final Probation.** Students who fall a third time below the required cumulative GPA (whether in consecutive or non-consecutive semesters) will be placed on Final Probation. A student on Final Probation will not be permitted to take part in extracurricular activities, and the student will be informed that unless the student restores himself/herself to good

academic standing and maintains that status, the student will be suspended from the College.

**Academic Suspension.** Students will be suspended academically from the College when (1) they fall a fourth time below the required cumulative GPA (whether in consecutive or nonconsecutive semesters); (2) they fail to achieve a cumulative GPA of at least 0.75 at the conclusion of any semester; (3) they have not earned by the conclusion of the second and subsequent semesters of full-time enrollment a total of at least 6 credit hours of coursework for each semester completed. Students suspended will not be permitted to return for at least the full subsequent semester (fall or spring). To request reinstatement, students must submit a written petition to the Associate Dean of the Faculty. A suspended student who returns to the College and who is suspended again for academic reasons will be regarded as permanently separated from the College.

Upon reinstatement to the college, a student will have two semesters to bring up his/her cumulative GPA to the minimum required for good academic standing at the College. Reinstated students may participate in extra-curricular activities. The student's grades will be monitored at mid-semester and again at the end of the semester to ensure academic progress. If a student's mid-term or final grades fall below a semester average of 2.0, the student will be removed from all extra-curricular activities immediately. The student will not be allowed to rejoin extra-curricular activities until the student has reached the minimum cumulative GPA required for good academic standing.

### **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.

Students eligible for veterans benefits who remain on academic probation for two consecutive semesters must be reported to the Department of Veterans Affairs. Veterans with questions about the College or their status with the College should contact the registrar.

### **Servicemember's Opportunity Colleges**

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

All candidates must complete the criteria for Admission to Teacher Certification as detailed under the Department of Education, page 60.

# UNDERGRADUATE ACADEMIC PROGRAMS

## General Education Program

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 has four components: communications, liberal studies, foreign studies and disciplinary perspectives. This program seeks to prepare graduates who are broadly competent, skilled in communication, capable of analysis and interpretation, tolerant, and able to continue to learn in a rapidly changing world.

The General Education Program aims to help students:

- strengthen their capacities for critical thinking and rational analysis;
- practice clear and effective communication;
- learn methods essential for study and research;
- develop breadth through fundamental studies in basic liberal arts disciplines;
- improve their ability to make informed aesthetic and moral assessments;
- understand and appreciate cultures and traditions different from their own;
- integrate different ways of learning and understanding.

The program consists of coursework in the following four areas:

**Communications.** 15 credit hours.

English Communications (2 courses)

Writing Requirement (3 courses)

Electronic Information Proficiency

This component recognizes the central role communication plays in learning and in life. Courses teach the principles of clear and effective communication and provide opportunities to practice and refine them throughout a student's college career.

*English Communications.* Courses teach the elements of English composition and the related skills of speaking, reading, listening, word processing and bibliographic access through database searching.

Requirement: ENG 111 or FYS 100; ENG 112.

First-year students must fulfill the communications component of the General Education program by enrolling in either First-Year Seminar (FYS 100) or English Communications I (ENG 111). The primary goal of each course is to help first-year students to become college-level writers. Students will be assigned the same amount of writing in both FYS 100 and ENG 111. An important difference between the two courses is that each FYS class is organized around a particular topic, and the students will write in response to various aspects of that topic, whereas ENG 111 is not organized around a particular topic, so its students can expect to write essays about a variety of different topics. Students in FYS should expect to do more reading than students in ENG 111.

*Writing Requirement.* In addition to English Communications, students must complete three courses designated Writing Process, preferably one each during the sophomore, junior and senior years. Along with course content, faculty will also teach writing in these courses and will make evaluation of writing quality an important factor in the course grade.

Requirement: Three courses from an approved list.

Approved: ART 203; BIO 307, 312, 322 424; BUS 285, 425, 480, 485; CHM 222, 321, 322; DSP 326, 340; ECN 321, 332, 410; EDU 311; ELM 361; ENG 213, 221, 222, 225, 226, 310, 315, 330, 341, 342, 350, 360; FRN 410, 420, 430, 440, 450; GMN 400-419, 460; HIS 205, 206, 207, 208, 217, 226, 250, 312, 315; MRT 371, 372; MSC 201, 334; PHL 215, 220, 300, 301-334, 336, 337, 349; PHY 328; PSC 211, 220, 312, 498, 499; PSY 120, 245, 443; REL 311, 312, 322, 337; SOC 322, 324, 331, 333, 382; SPA 310, 410, 420, 430, 440, 450, 460.

*Electronic Information Proficiency.* There is no specific computer course requirement. Courses in the General Education Program will build on the base established in English Communications to include other computer applications and modes of information access and retrieval as appropriate.

**Liberal Studies.** 27-29 credit hours.

Three courses in each group with at least one course from each area.

Group I	Group II	Group III
History	Natural Science	Literature and Fine Art
Social Science	Mathematics	Religion and Philosophy

Courses in this component introduce fundamental concepts, methods, and content in disciplines essential to a liberal education.

Requirement: Three courses from each group with at least one from each area.

Group I

*Area 1: History.* Courses acquaint students with historical methodology and with some of the principal developments in European and American history.

Approved: AMS 111; HIS 103, 104, 125, 126, 200, 212.

*Area 2: Social Science.* Courses establish and explore patterns of human culture and social organization including international aspects of the world by examining the relationships among individuals and the structures and processes of societies. They draw on the theories and methodological approaches used in the social sciences and prepare students to evaluate, integrate, and communicate information and issues related to human behavior.

Approved: ECN 100, 101; PSC 100, 111, 112, 130, 160; SOC 110, 120.

Group II

*Area 3: Natural Science.* Courses present findings, concepts, and theories of science, develop an understanding of scientific methods of inquiry, engage students directly in the practice of science, and prepare them to understand the relationship between science and technology.

Approved: BIO 101, 102, 103, 111/113, 112/114; CHM 100, 111/113, 112/114; ESS 110, 120; PHY 100, 101, 102, 103, 104, 111, 112; PSY 120; SCI 100.

*Area 4: Mathematics.* Courses introduce pivotal mathematical ideas, abstract mathematical constructs and mathematical applications. They make students aware of the powers and limitations of mathematics and emphasize the role of mathematics in our society.

Approved: MAS 100, 111, 112, 150, 161, 162, 170, 270.

### Group III

*Area 5: Literature and Fine Art.* Courses acquaint students with significant works of artistic expression and with their historical and cultural contexts. They help them analyze and appreciate works of art, music, and literature and seek both to extend their aesthetic experience and enhance the quality of their critical judgment.

Approved: ART 110, 201, 203, 205, 207; ENG 120, 221, 222, 225, 226, 227, 228, 229; GMN 330; MSC 100, 101, 200, 201, 242.

*Area 6: Religion and Philosophy.* Courses introduce major religious or philosophical perspectives, the critical study of value judgments, and the understanding that all judgments and value systems are grounded in particular world views. Students are encouraged to examine their own moral commitments as they develop an awareness of and tolerance for other value systems.

Approved: PHL 110, 130, 140, 160; REL 110, 120, 130, 160.

**Foreign Studies.** Nine credit hours.

Two courses in a foreign language.

One course from a list approved for this component.

This component responds to a contemporary world in which communication, travel and trade increasingly juxtapose cultures, values and ideas. Courses help students understand, interpret, and appreciate cultural, social, moral, economic and political systems different from their own.

*Foreign Language.* By learning another language students see the world from a perspective essentially apart from their native tongue and culture. These courses help students understand that all languages solve similar problems of expressing thought, but that each language provides special access to a particular human society.

Requirement: Two courses.

Options: 1. Continue a previously studied language (two or more years) at the intermediate level. FRN, GMN, SPA 201/202.

2. Begin a new language. FRN, GMN, SPA 101/102.

3. Repeat the elementary level (no language study for five full years), (FRN, GMN, SPA 101/102).

4. Complete one advanced course (requires permission from FLG department).

*Foreign Studies.* Courses introduce important aspects of societies in Asia, Africa, the Middle East and the Americas to foster an understanding of cultural, social, political, religious or economic systems outside the European tradition. Courses may compare European societies with other societies or address factors that influence culture as long as these other considerations do not obscure the primary goal of studying essentially different cultures.

Requirement: Choose one course from an approved list.

Approved: HIS 271, 273, 274, 275, 277, 279, 303; PHL 252, 254; PSC 211; REL 140, 253, 260, 265; SPA 460.

**Disciplinary Perspectives.** Three credit hours.

One course from a list approved for this component.

Certain problems are addressed best from the perspective of more than one discipline. This component offers students an opportunity to bring the insights from different disciplines to the analysis of a complex issue. Courses incorporate content and approaches from at least two disciplines, ask students to draw on their own disciplinary perspectives and challenge them to view issues from various points of view. Junior or senior standing is required. Requirement: one course from an approved list.

Approved: AMS 311; DSP 301, 310, 320, 322, 324, 326, 330, 340, 342, 350, 370, 390; PHL 335, 337, 342, 349; REL 332, 337, 342; SOC 326.

### *Interdisciplinary Courses (DSP):*

The faculty has approved the following multi disciplinary courses. All satisfy the General Education Program requirement for a disciplinary perspectives course. Junior or senior standing is required.

***DSP 301. Visual Art and Religious Experience.*** A comparative study of the visual arts as the embodiment of religious experience in the American Indian, Buddhist and Abrahamic traditions. 3 credits.

***DSP 310. AIDS.*** An examination of the origins and history of HIV/AIDS, including its economic, political, social, psychological and legal repercussions as well as the basics of virology, serology, epidemiology and diagnostic testing. 3 credits.

***DSP 320. The Native American Experience.*** A review of the development of Native American society, culture, politics and economy from prehistory to the present with special emphasis on the relationships between Native Americans and other immigrants to North America. 3 credits.

***DSP 322. The Twentieth-Century World.*** An exploration of those forces that profoundly changed the institutions and structures of society in the Twentieth Century including migrations within and across national borders, responses to environmental opportunities and threats, and uses and misuses of technology. Examines the rate, direction, and implication of societal and cultural change at national and global levels. 3 credits.

***DSP 324. The American Presidency: Power and Character.*** An exploration of the relationship between a president's character and leadership using several administrations as case studies. Provides exposure to the historiographic literature on historical biography, presidential memoirs, the use of primary sources and the interpretation of public opinion. 3 credits.

***DSP 326. American Business and Labor since 1900.*** An analysis of the role of business in America during the 20th century. Topics include managerial leadership, entrepreneurship, the development of the American economy and the relationships between business, government, trade unionism and society. Writing intensive. 3 credits.

***DSP 330. Diversity in the Workforce.*** An investigation of reasons why questions of diversity affect organizations including demographic changes, types of diversity and relevant federal legislation. Considers differences in race, sex, gender, religion, sexual orientation, ethnic background, age, physical ability/disability and geography. 3 credits.

**DSP 340. *Myths and Their Meaning.*** Looks at the significance Greek and Roman myths hold for us today from the perspectives of literature, psychology, religion, sociology and anthropology. 3 credits.

**DSP 342. *Plants and People.*** Dependence on certain plants has shaped historical events and cultures, and continues to influence human lives today. This course explores the extent of the impact of plant life on the history, culture, and daily life of human beings. Through lectures, student class presentations, hands-on exercises and field trips, and a one-day field trip to Longwood Gardens, the effect of plants in past and present human lives will be investigated. 3 credits.

**DSP 350. *Drugs and Behavior.*** This survey course is designed to familiarize students with the physiological, psychological, social and legal aspects of various drugs including alcohol, marijuana, caffeine, over-the-counter drugs, cocaine, heroin and the opiates, LSD hallucinogens, barbiturates, and amphetamines. 3 credits.

**DSP 370. *Paranormal Phenomena: A Critical Examination.*** By combining ideas from the social and natural sciences, as well as religion and philosophy, this course focuses on the importance of skepticism, scientific analysis, and valid logic when evaluating fringe-science topics such as ghosts, near-death experiences, psychics, astrology, UFOs and alien abductions, creationism, faith healing, alternative medicine, and other paranormal claims. 3 credits.

**DSP 390. *Special Topics.*** This number designates a special topics course in the disciplinary perspectives component of the General Education Program. Faculty may make use of this opportunity to design a course outside normal departmental offerings. The course selection booklet which appears before registration each semester will describe individual courses in this category. 3 credits.

A student may petition the vice president of academic affairs and dean of the faculty to substitute another course in the curriculum for an approved course in any component of the program

## Cooperative Programs

### *Allied Health Professions*

Lebanon Valley College has established a cooperative program with Thomas Jefferson University in Philadelphia, Pa., for students interested in the allied health professions. The College of Health Professions of Thomas Jefferson University offers baccalaureate programs in biotechnology, cytotechnology, 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 often 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 master's, for physical therapy) by Thomas Jefferson University.



## *Engineering*

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. Students do three years of work at Lebanon Valley College and then usually do two additional years of work in engineering. Students may study engineering at any accredited engineering school. To assist the student, Lebanon Valley College has cooperative (contractual) agreements with The Pennsylvania State University at both University Park and Harrisburg; Case Western Reserve University in Cleveland; University of Pennsylvania in Philadelphia; and Widener University in Chester, Pa. There are three tracks for 3+2 engineering. For most fields of engineering (e.g., civil, mechanical, electrical), the student completes the B.S. physics track. For chemical engineering, the student completes the B.S. chemistry track. For computer engineering, the student completes the B.S. computer science track. For more information, contact Professor Michael Day (Director 3+2 Engineering).

## *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 and environmental studies program with Duke University, School of the Environment, Durham, N.C. 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.

### *Program Requirements:*

Students interested in pursuing career preparation in forestry or 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 BIO 111, 112, 113, 114, 302; ECN 101,102; MAS 161 or 111; MAS 170, regardless of major, and shall meet the general requirements of the College.

## *Medical Technology (Clinical Laboratory Science)*

The student spends three years at Lebanon Valley College taking 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, the 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: Jersey Shore Medical Center, Reading Hospital and Lancaster General Hospital. However, the student is not limited to these affiliations and may seek acceptance at other approved hospitals.

### *Degree Requirements:*

*Degree:* Bachelor of Science in Medical Technology



*Major:* BIO 111, 112, 113, 114, 306, 322, eight additional credits in biology; Immunology, BIO 323, is required by most programs; CHM 111, 112, 113, 114, 213, 214, 215, 216; PHY 103, 104; MAS 170 (51 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.

## **Pre-Professional Programs**

### *Pre-Law Program*

Lawyers perform in a wide variety of services to American society. As a result, the legal profession has become increasingly specialized. In addition to traditional areas such as tax, administrative, corporate, criminal, and property law, lawyers now specialize in entertainment, environmental, family, and sports law. Many LVC graduates who have attended law school have gone on to careers in private practices, corporations, government, and politics.

Lebanon Valley students have done very well at a variety of law schools. In recent years, LVC grads have gone on to Penn State Dickinson, Temple, Villanova and Widener law schools. LVC students who have excelled academically have attended Harvard, Chicago, Columbia, Stanford, Washington and Lee, and William and Mary law schools.

The pre-law program is designed to provide important course preparation, practical experience, and advising for a pre-law student. In addition to the courses that are a part of the pre-law program, students are advised to take other courses relevant to the area of law they wish to pursue. The internship in law, taken in the junior or senior year, is an especially important part of preparation for law school.

The Law School Aptitude Test (LSAT) is required for acceptance at American Bar Association approved law schools. Students who are going to apply to law school should take the LSAT during their junior year. It is given four times during the year, and it may be taken at Lebanon Valley. For many, it will be beneficial to take an LSAT preparation course. Two are available within a short driving distance of LVC.

Students interested in law school should contact the pre-law advisor in their freshman year. Contact Dr. John Norton, Department of History and Political Science, 201A Humanities Building, extension 6326.

*Pre-law program courses:* PSC 111/112, American National Government; PSC 315/316, American Constitutional Law; PSC 415, Foundations of American Law; ECN 101/102, Principles of Micro and Macro Economics; BUS 371/372, Business Law; ACT 161/162, Financial and Managerial Accounting; and PSC 400, Internship.

### *Pre-Medical, Pre-Dentistry, Pre-Veterinary*

Lebanon Valley College offers pre-professional preparation 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 and molecular biology, biology, chemistry, medical internship, or psychobiology.

In addition to the basic natural sciences suited to advanced professional study, the student may participate in an internship program between the College and local physicians or veterinarians. Students not only receive credit for the work, but also gain valuable experience in the field.

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, University of Virginia, Cornell University, The University of Pennsylvania, The University of Pittsburgh, Jefferson Medical School, Lake Erie College of Osteopathic Medicine, The Pennsylvania State University Medical School at Hershey, Temple University School of Podiatric Medicine, The University of Maryland, The Philadelphia College of Osteopathic Medicine, The Pennsylvania College of Podiatric Medicine and the Pennsylvania College of Optometry.

## **Individualized Major**

The option of an individualized major is available to students who desire a field of concentration which is not substantially addressed by any one department. The faculty represents a diverse set of interests and perspectives that provides a considerable resource for those students who would like to develop a major around concerns that do not fall into traditional disciplinary areas. As a liberal arts institution, the College and its faculty are willing to help a student develop a program of study using interdisciplinary courses.

A student planning an individualized major should prepare an application which includes courses relevant to the topic and secure the written endorsement of at least two faculty advisers for the proposed major which shall consist of at least 24 credits above the 100 level.

The student should submit the application to the vice president and dean of the faculty for final approval. The student will work closely with the advisers. Any changes in the program must be submitted to the dean for approval.

*Degree:* Bachelor of Arts or Bachelor of Science degree (depending upon concentration) with an individualized major.

*Requirements:* Those courses specified within the approved individualized major plus those courses to meet the general requirements of the College.

### **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 opportunities to integrate their classroom learning with on-the-job experiences and to test practical applications of their liberal arts education in a variety of settings.

To be eligible for an internship sponsored by an academic department or program, a student generally will have junior or senior standing. Students must request and receive permission from departmental chairpersons or program directors to enroll in internships. The student must also enlist a faculty internship supervisor from the department sponsoring the internship and an on-site internship supervisor from the internship location. Application forms for internships are available in the office of the registrar. The application form shall be completed by the student and approved by the student's academic adviser, faculty internship supervisor, on-site internship supervisor and the department chairperson prior to registration.

For each semester hour of credit, the intern should invest at least 45 hours of time at the internship location. Academic departments and programs establish other specific criteria and procedures for internships. In addition to the practical on-site experience, internships have an academic component which may include readings, reports, journals, seminars and/or faculty conferences. A student may enroll for 1-12 credit hours of internship during any one semester. A student may use a maximum of 12 credit hours of internship to meet graduation requirements. All internships have a course number of 400.

### **Independent Study**

Independent study provides an opportunity to undertake a program of supervised reading, research, or creative work not incorporated in existing formal courses. The independent study should result in a formal document. Independent study shall not be used to approximate an existing course or to cover projects more properly described as internships. Junior or senior standing and a minimum GPA of 2.00 are required.

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 involves a contract between the student and the faculty member (contract instructor) who will oversee the study. Written application forms regarding the independent study are available in the office of the registrar. The forms must be completed by the student and approved by the student's faculty adviser, the contract instructor and the department chairperson.

Students may enroll in a maximum of three credit hours per independent study in any one semester. A maximum of six credit hours in independent study may be used toward the graduation requirements. All independent studies have a course number of 500.

### **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 adviser. 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, 490-498 and 590. 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 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.

### **Study Abroad**

Lebanon Valley College has established its own study abroad programs for students majoring in all subjects. All programs insure a cultural immersion experience for students, with several programs, open to language majors and non-language majors, also offering a language-enhancement opportunity. These programs are located in England, France, Germany, Greece, Italy, New Zealand, the Netherlands, Spain, and Sweden.

Lebanon Valley College also offers off-campus academic internship programs in Philadelphia and Washington, D.C. Students in any major field can gain work experience in a large U.S. city while earning academic credits for the semester. Further information on all off-campus programs may be obtained at the Study Abroad Office, HUM 206, Ext. 6076. See In-Absentia on page 11.

# UNDERGRADUATE DEPARTMENTS AND PROGRAMS

## AMERICAN STUDIES PROGRAM

By examining American culture in its historical context from an interdisciplinary point of view, American Studies heightens critical awareness and appreciation of what is distinctive about American civilization.

An undergraduate degree in American Studies can lead to a career in teaching, publishing, law, journalism, government, consulting and research, historic preservation, museums, archiving, tourism, or a number of other professions.

### *Degree requirements:*

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

*Major Core:* AMS 111, 211, 223, 229, 311, 450 (18 credits)

In addition to the core, each major must select courses from among the following:

*Social Sciences:* one required course to be elected from among anthropology (SOC 120), history (HIS 125, 126, or 200 level or above), sociology (200 level or above), political science (PSC 111, 112, or 200 level or above), or DSP 320. The course must be related to American culture. 3 credits.

*Humanities and Fine Arts:* two required courses, one of them at the 200 level or above, to be elected from among English, art, music, religion (or REL 120), or philosophy (or PHL 140). The courses must be from different disciplines, and must be related to American culture. 6 credits.

Each major must also select a concentration; two courses to be elected in consultation with the academic adviser. These courses could include AMS 400 (internship) and/or AMS 500 (independent study), or they could be upper division courses in another discipline. 6 credits.

*Minor:* AMS 111, 211, 223, 229, 311, 450 (18 credits)

### *Courses in American Studies (AMS):*

**101. Introduction to American Cultures.** An interdisciplinary, cultural study of fundamental American institutions, social patterns, cultural myths and cultural icons in historical perspective. Field trips to national and regional sites included. 3 credits.

**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.

**223. American Thought and Culture.** A study of American intellectual history focusing on cultural criticism as represented in such schools of thought as Puritanism, Enlightenment, Rationalism, Transcendentalism, Utopianism, the Southern Agrarians, The Progressives, the New York Intellectuals, Marxism, feminism and the New Journalism. 3 credits.

**229. Culture and Conflict in Modern America.** An examination of the social, political, economic and cultural upheaval of the 1960s and 1970s in the historical context. 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.

**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.

**450. Schwinn's, Barbies, and Bicycles.** An integrative study by each student of a single item of American material culture, seen from a variety of disciplinary perspectives. 3 credits.

### Faculty

**Gary Grieve-Carlson**, professor of English, director of American Studies Program. *Ph.D., Boston University.*

He teaches courses in American literature, American Studies, Greek myth, and grammar. He has been a Fulbright Junior Lecturer in Germany and has published on American cultural criticism and twentieth-century poetry.



## DEPARTMENT OF ART

The fine arts play a crucial role in a liberal arts education. In the Art Department at Lebanon Valley College, students are challenged to explore the creative process and recognize its vital connection to other disciplines. The department offers studio courses in painting, drawing, design, printmaking, pastel, and ceramics. Art history courses introduce students to art of different cultures from prehistory to the present day. Frequent offerings of special topics courses augment the catalogue listings below. All art students at LVC develop skills in visual description, critical analysis, and problem solving in an environment in which tradition is understood, valued, and challenged. At the Suzanne H. Arnold Art Gallery on the LVC campus, students can study major works of art, engage in research preparatory to an exhibition, and learn about aspects of gallery management. Guest lecturers, visiting artists, and field trips to regional and national museums augment the program. The department encourages internships at regional art institutions and, when possible, study abroad. Students can pursue a minor in art history and studio art or an independent major, in which art is combined with another discipline of choice.

### Art Program

#### *Degree Requirements:*

No major in art is offered.

*Minor:* ART 110, 112, 121, 203, 270, and one elective in art or art history (18 credits).

#### *Courses in Art and Art History (ART):*

**110. Concepts in the Visual Arts.** The course investigates how and why art is made, with a focus on different themes in different cultures at different times. Topics include painting media, such as egg tempera, oil, and fresco; techniques in sculpture, including modeling, carving, and casting; photography; printmaking; and building methods and materials. Issues of aesthetics and the changing role of the artist in society are also explored. 3 credits.

**112. Art History I.** An introduction to art history through the study of paintings, sculpture, architecture, and the material culture of prehistoric Europe, the Ancient Near East, Egypt, Greece, Rome, and the Middle Ages. Particular attention is paid to stylistic development and cultural context. The course seeks to promote good critical description and visual analysis. 3 credits.

**121. Drawing I.** Fundamental concepts of drawing and pictorial development. Using traditional methods in a variety of media, this course explores drawing as a way of seeing and recording visual information from the world around us. 3 credits.

**122. Drawing II.** Intermediate concepts of drawing and pictorial development. Using traditional and experimental methods in a variety of media, this course continues the exploration of drawing as a way of seeing, with an increased emphasis on the development of individual subject matter. Prerequisite: ART 121 or permission. 3 credits.





**203. *Art History II.*** From Giotto to Giacometti, Fragonard to Frank Lloyd Wright, an examination of the visual and material culture of Europe, North America, and other regions from the fourteenth century to the present day. Special attention is paid to aesthetics, economics, gender, and nationalism. Writing process. 3 credits.

**205. *American Art History.*** An introduction to American art from 1650 to the present day. The course offers a critical grounding in selected themes, with an emphasis on cultural history and stylistic change. Includes painting, architecture, film, photography, and sculpture. Writing process. 3 credits.

**207. *German Art from the Middle Ages to the Present.*** The development of art from the Gothic paintings of Stefan Lochner (Cologne School) to the watercolors and performances of Joseph Beuys. The emphasis is on German art and artists, placed within an international framework. Participants study major art movements, including Romantik, Brücke, Blauer Reiter, Dada, Fluxus, and Neue Wilde, with visits to galleries, museums, and workshops. Offered in the Cologne program. 3 credits.

**210. *Digital Graphic Design.*** An introductory studio/lecture course designed to increase visual literacy and vocabulary, develop design skills, and present the creative possibilities of the computer as an art-making and editing tool. 3 credits. {Cross-listed as Digital Communications 210.}

**230. *Painting Studio: Acrylic.*** Since its introduction in the mid-twentieth century, acrylic has had an impact on the history of painting because of its fast-drying, plastic-like qualities. Incorporating both traditional techniques and contemporary approaches, this course explores the physical properties of acrylic painting as a vehicle for pictorial development and conceptual expression. Prerequisite: ART 121. 3 credits.

**240. *Painting Studio: Oil.*** First used in the fifteenth century, oil is the primary medium in the history of painting. Incorporating both traditional techniques and contemporary approaches, this course explores the physical properties of oil painting as a vehicle for pictorial development and conceptual expression. Prerequisite: ART 121. 3 credits.

**250. *Painting Studio: Watercolor.*** Unique in its aqueous properties, watercolor has played an important role in the history of painting since the eighteenth century. Incorporating both traditional techniques and contemporary approaches, this course explores the physical properties of watercolor painting as a vehicle for pictorial development and conceptual expression. Prerequisite: ART 121. 3 credits.

**260. *Drawing III: Life Drawing.*** Fundamental concepts in figure drawing and anatomical study. Using traditional methods in a variety of media, this course explores the human form as a central component of drawing and individual expression. 3 credits.

**270. *Ceramics I.*** An exploration of techniques in clay, including pinch, coil, slab construction, and throwing on the wheel. Projects use a range of low-temperature surface treatments from glaze and underglaze painting to outdoor sawdust firings. Students are introduced to the work of master potters through slide lectures and research into ceramic history. 3 credits.

**290. *Introduction to Art Therapy.*** A practical introduction to art therapy. This course explores the history of the art therapy profession and the development of creative expression in young people up to the age of fourteen. Emphasis is placed on the use of different art media, approaches, and techniques.

**301. *Visual Art and Religious Experience.*** An exploration of the way in which the visual arts have come to embody religious experience in Native American, Buddhist, and Abrahamic traditions. A series of comparative studies introduce students to socioreligious content in art and diverse impulses to worship. Disciplinary perspective. 3 credits.

## Faculty

**Barbara Anderman**, assistant professor of art. Chairperson.

*Ph.D., Rutgers University.*

Anderman teaches Art History I and II, Northern European art and architecture (seventeenth to nineteenth century) and the history of Paris. Her research has focused on French genre painting and art theory in the late Baroque era.

**Melanie DeMartyn**, adjunct instructor in art.

*M.A., Indiana University of Pennsylvania.*

DeMartyn is a board-certified art therapist and licensed professional counselor. She has nineteen years experience conducting family, group, and individual psychotherapy. Her areas of expertise include psychiatric problems, childhood sexual abuse, drug and alcohol abuse, and women's and children's issues. She teaches Introduction to Art Therapy.

**James Gallagher**, adjunct instructor in art.

*M.Ed., Temple University .*

Recognized for his painting and ceramics, Gallagher exhibits throughout Pennsylvania. He teaches ceramics.

**Amy Ludwig Heinly**, adjunct instructor in art.

*M.F.A., Marywood College.*

Heinly's paintings and drawings have been exhibited throughout the northeast and mid-Atlantic regions. She teaches drawing, painting, and Concepts in the Visual Arts.

**G. Daniel Massad**, artist-in-residence.

*M.F.A., University of Kansas.*

Massad is a nationally recognized painter, whose pastels on paper are included in such distinguished collections as The Metropolitan Museum of Art and the Philadelphia Museum of Art.

**Michael Pittari**, assistant professor of art.

*M.F.A., University of Tennessee.*

Pittari's research and teaching have focused on two-dimensional media in relation to historical and contemporary art practice. A recognized artist and critic, he teaches courses in drawing, painting, and printmaking, in addition to Concepts in the Visual Arts.

**Marie Riegle**, adjunct assistant professor of art.

*M.F.A., The Pennsylvania State University.*

Riegle teaches drawing, Concepts in the Visual Arts, and Visual Art and Religious Experience. A writer as well as a practicing artist, she has received an award for her fiction for children.

**Scott Schweigert**, director of the Suzanne H. Arnold Art Gallery and assistant professor of art.

*M.A., The George Washington University.*

Schweigert is a specialist in Renaissance and Southern Baroque art, whose research interests include issues of art patronage in Baroque Rome and architecture of the fifteenth to eighteenth century. He has completed Ph.D. coursework at The Pennsylvania State University.

# DEPARTMENT OF BIOLOGY

## Biology Program

The Biology Department attempts to share with all LVC students the role of living organisms within the universe. We encourage the students to understand how these organisms interact with each other and their environments and are the result of the complex interplay of ordinary chemicals, arranged according to the fundamental laws of physics, and assembled in mathematically predictable ways.

The goal of the Biology Department is to produce graduates who are well-versed in the principles and techniques of biology, have the intellectual training to investigate novel concepts, have the ability to learn independently, interpret and articulate clearly their findings, possess the highest scholarly standards of the discipline and maintain honest academic conduct.

The Biology Department curriculum (1) employs the underlying principles of biology and requires a background in the supporting disciplines, (2) requires the application of the scientific method in the laboratory or field, (3) integrates informational retrieval, the synthesis of ideas into a coherent whole, and the communication of research findings, and (4) prepares students for advanced study in medical, dental and veterinary professional schools, graduate schools, and employment in technical fields.

### *Degree Requirements:*

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

*Major:* BIO 111, 112, 113, 114, 201, 499; one course each in the general areas of physiology, cellular and subcellular biology, botany, morphology and population biology (33 credits). CHM 111, 112, 113, 114, 213, 214, 215, 216 (16 credits); PHY 103, 104 or 111, 112; MAS 161 or 111 (60-62 total credits).

*Minor:* BIO 101, 102, or BIO 111, 112, 113, 114; plus four additional courses in biology (24 total credits).

*Secondary Teacher Certification:* Students seeking secondary certification in biology must take BIO 312, 360 and 21 credits in education courses including EDU 110 and SED 430, 431 and 440.

### *Courses in Biology (BIO):*

BIO 111, 112, 113, and 114 are prerequisite for all upper-level courses in biology unless otherwise noted.

**101. Human Biology.** 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 Heredity.** This course is intended for the non-science major. Although the major emphasis of this course is on the inheritance of traits in humans, topics ranging from basic cell reproduction through gamete production and early stages are also covered. Classical genetics, in both humans and other organisms, including both chromosomal and gene genetics, as well as population genetics, molecular genetics and application of genetics

to biotechnology and genetic engineering are discussed. The laboratory is intended to give the student “hands-on” experience in making observations, performing experiments and working with scientific equipment. Topics to be covered in the laboratory include studying prepared slides, performing genetic crosses, activating genes in bacteria, isolating DNA and learning about DNA fingerprinting. 4 credits.

**103. Environmental Science.** Designed for non-science majors, the course serves as an introduction to ecological principles and their applications to understanding the causes and current status of environmental problems. Options for dealing with these problems are evaluated. Possible topics for discussion are overpopulation, food and water resources, ozone depletion, global warming, deforestation, acid rain, biodiversity, erosion, loss of wetlands, energy sources, pollution, eutrophication and waste disposal. Laboratory exercises are designed to illustrate ecological concepts presented in lecture. 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. Must be taken concurrently with Biology 113. 3 credits.

**112. General Biology II.** This course, also rigorous and designed for science majors, covers concepts in physiology, botany, embryology, and ecology. Must be taken concurrently with Biology 114. 3 credits.

**113. General Biology I Laboratory.** Laboratory exercises include enzyme kinetics, carbohydrate analysis, isolation and identification of plant pigments, microscopy, and histological techniques. Must be taken concurrently with Biology 111. 1 credit.

**114. General Biology II Laboratory.** Laboratory exercises include shark anatomy, invertebrate dissection, animal development, plant development in angiosperms. Stomate response to environmental changes, animal taxonomy, and an ecological field study. Must be taken concurrently with Biology 112. 1 credit.

**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.

**212. Animal Behavior.** A study of the basic concepts of invertebrate and vertebrate behavior with emphasis on the development, genetics, physiology and evolution of behavior. Laboratory exercises include ethogram construction, avian foraging, aggressive display analysis and estrous cycle regulation. Prerequisite: BIO 112 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.



**222. Human Physiology.** The design of this course is intended to impart an understanding of the basic concepts of human physiology with emphasis on neuromuscular, cardiovascular, and endocrine physiology. Laboratory exercises will place emphasis on effective experimental designs and data analysis in the study of physiological mechanisms. Lab exercises will cover such topics as muscle contraction measurements, spirometry, and EKG analysis. 4 credits. Does not fulfill a biology major requirement.

**302. Plant Diversity.** The development and diversity of fungi, algae and land plants and the relationships between them. Field and laboratory work familiarizes the student with the structure and reproduction of algae and plants and with the identification and pollination of flowering plants in the local flora. Prerequisite: BIO 112 or permission. 4 credits.

**304. Developmental Biology.** An organismal and molecular approach to the study of animal development using typical invertebrate and vertebrate organisms. The laboratory includes the study of slides as well as experiments on fertilization, regeneration and metamorphosis. 4 credits.

**305. Cell and Tissue Biology.** A study of cell ultrastructure and the microscopic anatomy of vertebrate tissues, including the structure and function of membranes and organelles, cell motility and excitability, and vertebrate tissue similarities and specialization in relation to function. Laboratory includes the preparation and staining of sections using selected histochemical and histological procedures as well as a variety of microscopic 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. Writing process. 4 credits.

**312. Ecology I.** An examination of the basic concepts of ecology with extensive laboratory work and field experiences in freshwater, marine and terrestrial ecosystems. Prerequisites: BIO 112 or permission. Writing process. 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: BIO 101 or 112 and one semester of chemistry or permission. Writing process. 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 autoimmunity, histocompatibility, immunogenetics and acquired immune deficiencies. Prerequisites: BIO 111,112 and CHM 111,113 or equivalent or permission. 4 credits.

**324. Invertebrate Physiology.** A study of many of the invertebrate phyla, concentrating on the physiological mechanisms controlling movement, metabolism, information and control, and reproduction. Writing process. 4 credits.

**360. The Teaching of Biology in Secondary Schools.** A course designed for students seeking certification to teach biology in secondary education. Responsibilities include assisting in the preparation of materials and equipment for lab; supervision of lab work; and preparation, administration, and evaluation of quizzes and lab tests. Prerequisite: permission of the instructor. 1 credit.

**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: BIO 305 or permission of instructor. 4 credits.

**409. Ecology II.** 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.

**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.

## Biochemistry and Molecular Biology Program

The Biology Department offers a biochemistry and molecular biology program in conjunction with the Chemistry Department, described on page 52. The major in biochemistry and molecular biology 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 Requirements:*

*Degree:* Bachelor of Science with a major in biochemistry and molecular biology.

*Major:* BIO 111,112, 113, 114, 201; CHM 111, 112, 113, 114, 213, 214, 215, 216; BCMB 401, 421, 422, 430, 499; MAS 161; PHY 103, 104 or 111, 112 (51 credits); nine credits from BIO 305, 306, 307, 322, 323, 404 and CHM 305, 306, 307, 308, 311.

### *Courses in Biochemistry and Molecular Biology (BCMB):*

**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 BIO 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: CHM 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: CHM 214, 216. 1 credit.

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

## Psychobiology Program

The major in psychobiology is offered jointly by the Departments of Biology and Psychology, described on pages 34 and 126. This interdisciplinary major emphasizes the physiological substrates and consequences of behavior. Consisting of a combination 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 Requirements:*

*Degree:* Bachelor of Science with a major in psychobiology.



*Major:* BIO 111, 112, 113, 114, 212, 322 (16 credits); PSY 111, 120, 130, 378 plus one course from the following: DSP 350; PSY 250, 265 (16 credits); BIO 499 or PBI 499; CHM 111, 112, 113, 114 (8 credits); MAS 161; plus 8 additional credits in the sciences in consultation with adviser. Recommended CHM 213, 214, 215, 216, PHY 103, 104 or 111, 112. 52 total credits.

*Courses in Psychobiology (PBI):*

**378. Physiological Psychology.** A study of the biological mechanisms underlying behavior processes. The course focuses on the physiology of reflexes, sensation and perception, learning and memory, sleep, ingestive behaviors and motivation and emotion. Prerequisite: PSY 111, 112, 120, 130 or permission; completion of a biology course is recommended. 3 credits. {Cross-listed as Psychology 378.}

**499. Psychobiology Seminar.** Readings, discussions and reports on selected topics in psychobiology. Prerequisite: permission. This course may be repeated. 1 credit.

## Faculty

**Dale J. Erskine**, professor of biology.

*Ph.D., University of Oklahoma.*

He teaches animal physiology, introduction to immunology, human biology, AIDS and participates in general biology. His students are introduced 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 Daniel Fox Youth Scholars Institute.

**Stacy A. Goodman**, associate professor of biology.

*Ph.D., The Pennsylvania State University.*

She teaches general biology, animal behavior, coordinates the general biology laboratories and supervises the senior seminar. Her research interests include the functioning of carbonic anhydrase isozymes and the role of PDH kinase in sepsis.

**Luke G. Huggins**, assistant professor of biology.

*Ph.D., State University of New York at Stony Brook.*

He teaches developmental biology and general biology. His research interests focus on induction and specification of mesoderm in invertebrate model systems.

**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 adviser 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 20 years, including the discovery of the mechanism of Venus flytrap closure. He has over six years of experience automating laboratory instruments with microcomputers. He is regularly a faculty member at Cornell University during the summer session.

**Paul L. Wolf**, professor of biology.

*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 salt-marshes of Eastern United States. He also holds the position of adjunct professor of marine biology in the Graduate College of Marine Studies, University of Delaware.

**Allan F. Wolfe**, professor of biology. Chairperson.

*Ph.D., University of Vermont.*

He teaches cell and tissue biology, invertebrate physiology, electron microscopy, and general biology, 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. He is also chairman of the Health Professions Committee.

**Anna F. Tilberg**, adjunct instructor in biology.

*B.A., University of Pennsylvania.*

She is on the staff of the Milton Hershey Medical Center and teaches human biology.

# DEPARTMENT OF BUSINESS AND ECONOMICS

The Department of Business and Economics offers programs leading to the bachelor of science degree in accounting, business administration, and health care management, and the bachelor of arts degree in economics. A major in music business is also offered by the music department. All programs are enhanced by the liberal arts core required of all Lebanon Valley College students. This interdisciplinary knowledge base is essential for assuming leadership positions in the changing environment.

Accounting and business administration students complete a common body of knowledge in close conformity with the national standards for the study of business as recommended by The Association to Advance Collegiate Schools of Business (AACSB International). This comprehensive background in business fundamentals helps graduates become prepared for business careers and graduate school.

Economics students pursue the science of the choices forced upon us by a world of resources that have competing uses. The major in economics includes preparation in accounting, mathematics, political science, and economics. Economists have a wide variety of employment opportunities.

Students have the opportunity to enhance their understanding of global concepts by studying at the University of Maastricht in the Netherlands. This English speaking program designed for junior-level majors allows students to take courses in European business and economics in the medieval city of Maastricht. Students can travel throughout Europe with emphasis on Belgium, France, and Germany.

Other students with French or Spanish backgrounds are encouraged to study at the Lebanon Valley programs in France or Spain.

## Accounting Program

The program in accounting offers the bachelor of science degree in accounting. Majors receive an excellent foundation for seeking professional certification as a C.P.A. or C.M.A. The accounting curriculum prepares the student for careers in public accounting, governmental, industry or finance.

The curriculum includes an array of introductory, intermediate and advanced accounting topics integrated with courses in business and other supporting fields.

The 21 credit hours for the minor in accounting supply the minimum accounting background to sit for the C.P.A. exam.

### *Degree Requirements:*

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

*Major:* Business core which includes ACT 161, 162; ECN 101, 102; MAS 150, 170; BUS 160, 185, 285; 340 or 350; 361, 371, 383, 485; ACT 251, 252, 353; two electives in accounting; BUS 322 (57 credits).

*Minor:* ACT 161, 162, 251, 252, 353, six credit hours of accounting electives (21 credits).

### *Courses in Accounting (ACT):*

**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. 3 credits.

**162. Managerial Accounting.** Cost-volume-profit relationships, cost analysis, business segment contribution, profit planning and budgeting as a basis for managerial decision making. Prerequisite: ACT 161 with a minimum grade of "C-" or better. 3 credits.

**251. Intermediate Accounting I.** Study of the theory and development of generally accepted accounting principles as they relate to financial reporting; the application of these principles to the preparation of financial statements; special emphasis on revenue recognition as well as valuation, classification and disclosure of current assets. 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 stockholder's equity. Prerequisite: ACT 251 with a minimum grade of "C-" or better. 3 credits.

**253. Intermediate Accounting III.** Analysis of more specialized financial accounting topics including pension plans, post-retirement benefits, leases, income taxes, accounting charges, cash flow statement, financial statement analysis and changing prices. Computer component. Strongly recommended for accounting majors. Prerequisite: ACT 252. 3 credits.

**351. Advanced Accounting.** Study of theory and standards with application to income presentation, interim reporting and per-share disclosures. Emphasis on business combinations and consolidated financial presentations. Prerequisite: ACT 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: ACT 162. 3 credits.

**353. Cost Accounting.** Analysis and use of techniques for cost management and control; the accumulation and recording of the costs including job-order, process and standard cost systems, the joint and by-product costing; contemporary topics such as activity based costing and just-in-time manufacturing. Prerequisite: ACT 162. 3 credits.

**451. Individual Income Tax.** Analysis of the federal income tax laws as applied to individuals; case problems, preparation of returns. Prerequisite: ACT 162. 3 credits.

**452. Corporate Income Tax.** Analysis of the federal income tax laws as applied to corporations, partnerships and fiduciaries; case preparation of returns. Prerequisite: ACT 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: ACT 252. 3 credits.

## **Business Administration Program**

This popular program offers the bachelor of science degree in business administration. This major is designed to prepare the student for a variety of entry-level and middle-management positions in industry, government and service organizations.

The business curriculum conforms closely to the national common body of knowledge recommended by The Association to Advance Collegiate Schools of Business (AACSB International) and provides a solid background in the fundamentals of business. Majors complete a general business curriculum that prepares them for a variety of positions.

Students desiring more in-depth study in a specific area of business may select a focus area comprised of optional courses. Such focus areas include Human Resource/Labor Relations, International Relations, Marketing & Public Relations, and Organizational Psychology.

*Degree Requirements:*

*Degree:* Bachelor of Science with a major in business.

*Major:* ENC 101, 102; ACT 161, 162; MAS 150, 170; BUS 160, 185, 285, 340, 350, 361, 371, 376, 383, 460, 485 ( 51 credits).

*Minor:* ECN 101; ACT 161; BUS 185, 340, 350, 371; one 300/400 business elective (21 credits).

*Courses in Business (BUS):*

**160. Computer Applications.** An introduction to PC software applications and their use in business. Through hands-on classroom instruction students learn software applications that are commonly used in business including word processing, presentation, spreadsheet, database, and Internet applications. The class teaches basic principles of using business software to solve problems, enhance critical thinking skills, and facilitate creativity. 3 credits.

**185. Business Management.** An examination of the functional areas of business administration with an emphasis on management. The course focuses on understanding the composition of business organizations with respect to management, structure, leadership, and interpersonal relationships. Prerequisite: freshman or sophomore standing only or permission. 3 credits.

**215. Health Care Finance.** An examination of the financial issues 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 principal elements of health care, including the physician, the hospital and the pharmaceutical industry, as well as the influence of government and the insurance industry. Prerequisites: ECN 101, 102. 3 credits.

**285. Organizational Communications.** The development of writing, speaking and listening skills for business management. Prerequisite: ENG 111 and 112. Writing process. 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.

**350. Organizational Behavior.** 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 BUS 185, or permission. 3 credits.

**354. Advertising & Consumer Behavior.** A study of the interrelationships between advertising and consumer behavior. Topics include the multimediation model of consumer behavior, the contributions of the social sciences to the understanding of consumer

behavior, the development and effective use of advertising strategies, and the creation of advertising campaigns. Class projects will be a major component of the course. Prerequisite: BUS 340. 3 credits.

**361. Principles of 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; and other financial topics. Prerequisite: ACT 162; ECN 101, 102. 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: BUS 361. 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. 3 credits.

**372. Business Law II.** Elementary principles of law relating to business. Includes agency, employment, commercial paper, security devices, insurance, partnerships, corporation, estates and bankruptcy. 3 credits.

**374. Personal Selling and Sales Management.** The study of personal selling as a communication process and the management of the personal selling force. Emphasis is placed upon the development, implementation and evaluation of the sales presentation; and upon the role of the sales manager in staffing, compensating, motivating, controlling and evaluating the sales force. Effective oral and written communication is stressed. Prerequisite: BUS 340. 3 credits.

**376. International Business Management.** Studies management techniques and procedures in international and multinational organizations. Prerequisite: BUS 185, 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: ACT 162, BUS 185. 3 credits.

**383. Management Science.** An introduction to the techniques and models used in management science. Topics include forecasting, inventory control models, linear programming, product scheduling, and simulation. Prerequisites: MAS 150 and MAS 170 with a minimum grade of C- or better, BUS 185, ACT 161, 162. 3 credits.

**400 Internship.** Field experience in a business, government, or organization. Prerequisite: GPA of 2.75, junior level standing, and permission of department chair. 1-15 credits.

**420. Human Resource Management.** This course examines the problems in effectively recruiting, selecting, training, developing, compensating and disciplining human resources. It includes discussions on both equal employment opportunity and labor-management relations. Prerequisite: BUS 185. 3 credits.

**460. Management Information Systems.** Examines data sources and the role of information in management planning, operations and control in various types of business environments. Treats information as a key organization resource parallel to people, money, materials and technology. Prerequisite: ACT 162, BUS 185 or permission. 3 credits.

**485. Strategic Management.** A capstone course to study administrative processes under conditions of uncertainty, integrating prior studies in management, accounting and economics. Uses case method and computer simulation. Prerequisites: BUS 185, 340, 361 and senior standing or permission. Writing process. Prerequisite: Last semester seniors only. 3 credits.

**487. Health Care Management.** A capstone course to study the administrative processes of America'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.

**500. Independent Study.** A course to allow the student to pursue a specific area of research not incorporated into the curriculum. Ordinarily for juniors and seniors only. Prerequisites: 2.75 GPA and permission of the department chair.

## **Economics Program**

Economists study how we work and play to satisfy our needs and desires. The traditional major in economics deals with decisions and choices made by individuals and firms and with the macroeconomic consequences of those choices. Economists have a wide variety of employment opportunities in government and the private sector. The major includes courses in accounting, mathematics, political science, and economics.

### *Degree Requirements:*

Degree: Bachelor of Arts with a major in economics.

*Major:* ACT 161; ECN 101, 102, 201, 202, 312, and four additional elective courses in economics; MAS 111, 150, or 161; 170, 270 or 372; PSC 112 (39 credits).

*Minor:* ECN 101, 102, 201, 202, 312; and one additional course in economics (18 credits).

### *Courses in Economics (ECN):*

**100. Public Issue Economics.** This course, for the non-major, covers public policy issues from the viewpoint of the economist. It looks at how individuals and also groups like corporations and governments make decisions about how resources are used. Issues

covered remain current but may include welfare, poverty, crime, the environment, race and gender in microeconomics and unemployment, the debt and deficit, inflation and growth at the macroeconomic level. 3 credits. (Students having completed ECN 101 and/or 102 may not receive credit for ECN 100.)

**101. Principles of Microeconomics.** The course examines how individuals and firms make choices within the institution of free-market capitalism. Individuals decide how much of their time to spend working and what to buy with the earnings of their labor. Firms decide how much to produce and in some cases what price to charge for their goods. Together these choices determine what is produced, how it is produced and for whom it is produced in our economic system. 3 credits.

**102. Principles of Macroeconomics.** This course extends the study of consumer and producer choices to discover how they affect the nation's economy. Macroeconomics deals with the economy as a whole as measured by the key variables of inflation, unemployment, and economic growth. Emphasis is on both Keynesian and classical theories and how they predict what monetary and fiscal policies can be used to affect these variables and reach national economic goals. Prerequisite: ECN 101. 3 credits.

**201. Intermediate Microeconomic Analysis.** This course covers the major theories of mainstream neoclassical economics. There is intensive study of the models of consumer and firm behavior that permit understanding of how the prices and quantities of goods and services are determined in a free market capitalistic system. The implications for social welfare, and equity and efficiency issues that are inherent in the free-market system are emphasized. Prerequisites: ECN 101 and 102. 3 credits.

**202. Intermediate Macroeconomic Analysis.** In this course, students develop a model of the macroeconomy which permits them to analyze the nature of the business cycle. The assumptions built into the model can be altered, rendering it capable of examining the macroeconomy from various theoretical viewpoints. In addition to unemployment, inflation and economic growth, the course covers real business cycles, the macroeconomic implications of free trade and emphasizes the microeconomic foundations of macroeconomics. Prerequisites: ECN 101 and 102. 3 credits.

**250. Public Choice Economics.** This course concerns itself with how individuals and groups make decisions in the context of the family, interest groups, bureaucracies and the government. It goes beyond individual choice and private markets to group interests and activities. It emphasizes the ethical and political nature of all economic choices. Prerequisites: ECN 101 and 102. 3 credits.

**312. Money and Banking.** The study of the nature and functions of money and credit, including the development and role of commercial and central banking, structures of the Federal Reserve System, and monetary and banking theory, policy and practice. The course considers the political nature of money and the tension between fiscal and monetary policy making. Prerequisites: ECN 101 and 102. 3 credits.



**315. Health Economics.** This course uses the concepts of micro and macro economic theory to examine how health care is produced, delivered and financed. The tension between efficiency and equity that pervades the free market system will be a focal point. Topics such as the pricing of medical care, insurance and moral hazard, ethical problems of quality versus quantity control, and the political nature of policy decisions are examined. Prerequisites: ECN 101 and 102. 3 credits.

**316. Ecological Economics.** Ecological economics stresses the co-evolution of human preferences, understanding, technology and cultural organization. This approach differs from that of conventional economics and conventional ecology in the importance it attaches to environment-economy interactions. The role that our economic system plays in decisions affecting the sustainability of our ecosystems is emphasized. Prerequisites: ECN 101 and 102. 3 credits.

**321. Public Finance.** This course extends the study of public economics to its application in the principles of taxation and public expenditures. Topics include the structure of the Federal Budget, the national debt and fiscal deficits, but also state and local financing and the division of responsibilities between the federal and local governments. Prerequisites: ECN 101 and 102. Writing process. 3 credits.

**332. International Economics.** This course introduces the theory and practice of international economic relations. It includes, not only the history and purpose of trade and the traditional theory of the gains from trade, but also the more modern theory of trade with imperfect competition. The history and nature of the institutional structures of trade (World Trade Organization) and international finance (International Monetary Fund) are covered. Prerequisites: ECN 101 and 102. Writing process. 3 credits.

**410. Senior Seminar.** This course begins with an introduction to econometrics; each student will complete a research project that includes data analysis using a statistical computer program and retrieving data from the Internet. Students will also read and critique articles from refereed economic journals and from the popular press. Prerequisites: ECN 101, 102, 201, 202 and either 250 or permission of the instructor. Writing process. 3 credits.

## **Health Care Management Program**

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 Requirements:*

*Degree:* Bachelor of Science with a major in health care management.

*Major:* Health Care Management/Business core: ACT 161, 162; BUS 185, 215, 285, 340, 350, 371, 420, 487; ECN 101, 102; ENG 111; MAS 170; PHL 160; SOC 324; 12-15 credits in sociology, psychology, or other disciplines approved by the associate dean for graduate studies and continuing education (at least six credits in courses at the 200 level or higher). (60-63 total).

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, Clinical Perfusionist, Surgical Technician.

*Courses in Hotel Management (HTM):*

**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. 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: HTM 111 or 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: HTM 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: HTM 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: HTM 112. 3 credits.

**322. Food and Beverage Management II.** Analysis of the food and beverage functions with emphasis on production and services. Prerequisite: HTM 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: HTM 112, MGT 340 and permission. 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.

## Faculty

**Gayle L. Bolinger**, assistant professor of accounting.

*M.S., Purdue University.*

Bolinger is a Certified Public Accountant and Certified Valuation Analyst who serves as a consultant to many area organizations. She teaches accounting and management courses.

**Donald C. Boone**, associate professor of business administration.

*M.B.A., Michigan State University.*

Boone has 18 years of hotel industry experience and has taught several years in hotel management programs. He serves as coordinator of internships and study abroad and teaches courses in hotel management, financial and managerial accounting, and business management. Boone has received the designation of Certified Hotel Administrator from the Educational Institute of the AH&MA and he is a non-practicing C.P.A.

**Sharon F. Clark**, professor of business administration.

*J.D., University of Richmond.*

Clark has experience in private law practice and several years as a supervisory tax attorney with the Internal Revenue Service. She serves as a management consultant to various state-wide organizations. Clark teaches courses in business law, human resource management and diversity in the work force. She is a faculty member for the M.B.A. program.

**Paul A. Heise**, professor of economics.

*Ph.D., New School for Social Research.*

His chief areas of interest are public policy, international economics and the economics of the European Community. He has served with the United States International Trade Commission, the U.S. Department of State, and the Executive Office of the President with overseas assignment in Geneva, Switzerland. He has published in the United States and abroad on labor and multinational corporations and on the philosophy of Adam Smith.

**Jeanne C. Hey**, professor of economics.

*Ph.D., Lehigh University.*

She specializes in economic theory and environmental and health economics. Her chief interests are in the application of economic principles to the study of social issues. Her professional focus is on the economic analyses of state and local public policy issues.

**Joel A. Kline**, assistant professor of business administration and acting director of the digital communications program.

*M.J., Temple University.*

Kline co-owns a marketing and technology firm. He teaches business management and digital communications courses.

**Robert W. Leonard**, professor of business administration. Chairperson.  
*M.B.A., Ohio State University.*

Leonard has been a management consultant for 17 years, working with over 300 organizations. He has received numerous state and federal grants for his work with nonprofit organizations. He serves as director of the College's Supervisory Management Institute. He teaches courses in organizational behavior, and strategic management and is a faculty member for the M.B.A. program. He has completed Ph.D. coursework at The Ohio State University.

**Leon E. Markowicz**, professor of business administration.  
*Ph.D., University of Pennsylvania.*

Markowicz is a communications consultant and a writer for *The Daily News* of Lebanon. His research includes investigating the relationships among communications, the effectiveness of an organization and leadership. He teaches courses in communications.

**R. Anthony Maynard**, assistant professor of economics.  
*Ph. D., University of Tennessee.*

His interests include international economics, developmental, environmental and natural resource economics, international finance, and international trade. Maynard has published in the *Journal of Economic Issues* where he also serves as a referee. He teaches courses in economics.

**Barney T. Raffield III**, professor of business administration.  
*Ph.D., Union Graduate School.*

Dr. Raffield has been named a Fulbright Scholar to Ukraine at the State Academy of Management in Donetsk. He is also a faculty member for the M.B.A. program, consults with area businesses, and serves as the coordinator of advising for the department.

**Gail Sanderson**, associate professor of accounting.  
*M.B.A., Boston University.*

A C.P.A., Sanderson has professional experience in accounting, income tax, computer systems analysis and design. She teaches courses in financial and managerial accounting.

**Edward J. Sullivan**, associate professor of business administration.  
*Ph.D., The Pennsylvania State University.*

Sullivan has published articles in business and economic journals and specializes in monetary, macro and financial economics. He teaches courses in principles of finance, management science, money and banking, and economics.

**Nancy L. Eastwood**, adjunct instructor in business administration.  
*M.B.A., University of Pittsburgh.*

Eastwood has experience as a financial consultant for small businesses and a credit analyst in the banking industry. She teaches principles of finance and is a M.B.A. faculty member.

**Catherine M. Fitzgibbons**, adjunct instructor in business administration.

*J.D., Northwestern University School of Law.*

Fitzgibbons is a partner in the law firm of Fitzgibbons & Fitzgibbons whose practice specializes in estate planning, small business and real estate. She teaches business law and is a M.B.A. faculty member.

**Douglas C. Gautsch**, adjunct instructor in business administration.

*M.B.A., Lebanon Valley College.*

Gautsch works in logistical/transportation business development. He teaches courses in business and management.

**Jeff Tsai**, adjunct professor of business administration.

*Ph.D., Florida State University.*

Tsai works for the Pennsylvania Bureau of Information Systems and teaches courses in management information systems, operations management and economics.

**Gene G. Veno**, adjunct instructor in business administration.

*M.P.A., Marywood College.*

Veno has extensive experience in both public and private sector health care administration. He teaches courses in business and marketing.

**Barbara S. Vlajsavljevic**, adjunct professor of accounting and associate dean of faculty.

*J.D., Widener University.*

Vlajsavljevic has worked in the public sector as a C.P.A. for nine years. She teaches courses in auditing, governmental and non-profit accounting, and managerial accounting.

**Michael C. Zeigler**, adjunct instructor in business administration.

*M.Ed., The Pennsylvania State University.*

Zeigler works for the college in the computer services department as director of client services. He teaches courses in management information systems and computer applications.

# DEPARTMENT OF CHEMISTRY

## Chemistry Program

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.

The Department of Chemistry is located on the upper two floors of the Garber Science Center. Major scientific equipment available to students includes a superconducting 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, a Raman spectrophotometer, a gas chromatograph-mass spectrometer and an atomic absorption spectrophotometer. Computing facilities available to students in the department include 12 computers in the Molecular Modeling Laboratory.

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, majoring in chemistry.

The major in biochemistry is offered jointly with the Biology Department. For the major program and course descriptions in biochemistry, see page 38.

The chemistry department participates in the “3+2” Engineering program and directs the chemical engineering track. For details see Cooperative Programs page 22.

### *Degree Requirements:*

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

*Majors:* (B.S. in Chemistry) CHM 111, 112, 113, 114, 213, 214, 215, 216, 222, 305, 306, 307, 308, 311, 312, 321, 322, 411; BCMB 421; three credits from CHM 414-498 or 590 or BCMB 422; four credits of CHM 510; MAS 161, 162; PHY 111, 112 (63-64 credits).

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

*Minor:* CHM 111, 112, 113, 114; 12 credits from CHM 213, 214, 222, 305, 306, 311, 312, 411 or BCMB 421, 422; three credits from CHM 215, 216, 307, 308, 321, 322 or BCMB 430.

*Secondary Teacher Certification:* Students seeking secondary certification in chemistry must take BIO 111, 112; BCMB 421; CHM 360 and 21 credits education courses including EDU 110 and SED 430, 431 and 440.

*Courses in Chemistry (CHM):*

**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. Students who have received credit for CHM 111 may not take CHM 100.

**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 CHM 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. Prerequisite: one year of high school chemistry or permission. 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, NMR and atomic absorption spectrometers. Prerequisite or corequisite: CHM 111 for CHM 113 and CHM 112 for CHM 114. 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. Prerequisite: CHM 112. 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. Prerequisite or corequisite: CHM 114 and CHM 213 for CHM 215 and CHM 214 for CHM 216. 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 and the structures of solids. Prerequisite: CHM 112. Writing process. 3 credits.

**305. Analytical Chemistry.** Gravimetric, volumetric, and electro-chemical methods of chemical analysis covered. Includes statistical methods of data treatment and rigorous considerations of complex chemical equilibria. Prerequisites: CHM 112 and MAS 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: CHM 112 and MAS 161. 3 credits.

**307. Quantitative Analysis Laboratory.** Techniques of gravimetric, volumetric, and electro-chemical analysis are applied to the analysis of unknowns. Prerequisite or corequisite: CHM 305. 1 credit.

**308. Instrumental Analysis Laboratory.** Chemical instrumentation is utilized in analytical method development and analysis. Prerequisite or corequisite: CHM 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. Prerequisites: CHM 112, MAS 161, and PHY 104 or 112. 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. Prerequisite: CHM 311. 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. Prerequisite or corequisite: CHM 311 for CHM 321 and CHM 312 for CHM 322. Writing process. 1 credit per semester.

**360. The Teaching of Chemistry in Secondary Schools.** A course designed for students seeking certification to teach chemistry in secondary education. Topics include evaluation of laboratory experiments, demonstrations, textbooks and computer software. Prerequisites: CHM 112, 114. 3 credits.

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



**414. Advanced Organic Chemistry.** A study of advanced topics in the field of organic chemistry. The course covers mechanistic and synthetic chemistry with an emphasis on current and classical organic chemical literature. Prerequisites: CHM 213 and 214. 3 credits

**421. Chemometrics.** The application of multivariate statistics to experimental design and data analysis. Topics include experimental design, pattern recognition, calibration, optimization, signal processing and peak resolution. Some familiarity with computers and chemical instrumentation is recommended. Prerequisite: CHM 112. 3 credits

**510. Chemical Research.** Chemical research conducted under the supervision of a faculty member. This course introduces the students to the methods and analysis involved in research. A major written report and an oral presentation are required. Prerequisites or corequisites: CHM 305 and 311 and senior standing. 1 to 4 credits per semester.

**810. Computers in Chemistry.** A hands-on study of the application of Macintosh computers to problems in the high school chemistry curriculum. Topics include word-processing, graphics, spreadsheets, applications of computer interfacing, molecular modeling and the Internet. 3 credits.

*Course in Science (SCI):*

**100. Introduction to Science.** The study of scientific principles and experiments applicable to a person's everyday experiences. Student projects are selected from the areas of biology, chemistry, and physics. The course is open to all students and is appropriate for those intending to teach elementary school. Laboratory experience included. 4 credits.

## Faculty

**Marc A. Harris**, assistant professor of chemistry.

*Ph.D., University of Nevada, Reno.*

Research interests include the synthesis of macrocyclic azacrown and crown ether bipyridine analogues and their coordination complexes with Pt(II), Pd(II), and Rh(I). These complexes are investigated for their host-guest interactions with both small alkali metal cations and organic substrates.

**Kathleen Kolbet**, assistant professor of chemistry.

*Ph.D., University of Illinois.*

Research interests include statistical mechanics of condensed phase systems: equilibrium structure and thermodynamics of molecular and polymer liquids; and local and global structures of self-assembling systems.

**Owen A. Moe Jr.**, professor of chemistry.

*Ph.D., Purdue University; postdoctoral study, Cornell University.*

Biochemistry. Moe directs his research toward an understanding of enzyme active sites. He uses a technique called affinity labeling to covalently label amino acid residues at enzyme active sites. His research group carries out kinetic analyses of modified enzymes, identifies labeled amino acids by chromatographic and protein sequencing methods, and studies active site topography using computer-based molecular modeling.

**Walter A. Patton**, assistant professor of chemistry.

*Ph.D., Lehigh University.*

Research interests include the elucidation of intracellular biochemical signal transduction pathways, determination of protein functional domains and active sites using proteins designed at the DNA level, and the development of novel methods and techniques for the detection and analysis of biochemical molecules.

**Carl T. Wigal**, associate professor of chemistry. Chairperson.

*Ph.D., Miami University, Ohio.*

Organic chemistry. Wigal's research is aimed at developing new strategies for synthesizing natural products. Of particular interest to Wigal are the synthetic and mechanistic aspects of addition reactions to 1, 4-quinones. He also is actively developing microscale experiments for organic chemistry.

**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. Neidig's pursuits include the development and publication of laboratory experiments for introductory chemistry.

**Cynthia R. Johnston**, lecturer in chemistry.

*B.S., Lebanon Valley College.*

Johnston is focusing her efforts on the development of science curricula for the elementary school classroom and on instructing those studying to teach in the elementary school.

**Philip J. Oles**, adjunct assistant professor of chemistry.

*Ph.D., University of Massachusetts.*

Analytical chemistry. Oles has extensive experience in chemical industry in the area of analyzing foods for various nutrients.



## CITIZEN EDUCATION PROGRAM

The College offers a program for students seeking certification to teach Citizenship Education in the secondary schools. The program includes three required components: the Citizenship Education core, the secondary education core, and a major in one of the following disciplines: history, political science, or economics. Graduation requirements for any of these majors are noted in this catalog under the appropriate department. There is no major in citizenship education. (**NOTE:** The Commonwealth of Pennsylvania is replacing part of the old Social Studies Certification Program with Citizenship Education Certification. This process is not yet complete, so the courses listed below are tentative until final approval from the Pennsylvania Department of Education.) Dr. James H. Broussard is the coordinator of the Citizenship Education Certification Program.

### *Program Requirements:*

*Citizenship Education core courses:* ECN 101, 102; HIS 103, 104, 125, 126, 202; PSC 111, 112, 130, 210, and either HIS 360 or PSC 360. (36 credits).

*Secondary Education core courses:* EDU 110, SED 280, 430, 431, 440. 22-24 credits. Students who enter LVC in the fall of 2002 must conform to new state guidelines that require another math and an English or American literature course in addition to the general education requirements. Students must apply to the certification program after completing at least 48 credits (including the math and English courses) with a 2.8 grade point average and must maintain that average in order to be certified. Due to the changeover from Social Studies to Citizenship Education, students entering the program will need to consult with the social studies coordinator.

*Major courses:* history, political science, or economics. (32-40 credits).

## DIGITAL COMMUNICATIONS PROGRAM

The new Digital Communications Program explores the fundamental elements of communication, business, design, and technology. The program fosters critical reasoning and learning so graduates have the ability to evolve as quickly as current technology.

The program is interdisciplinary and combines classes from the art, business, English, and computer science departments into one degree. After graduating with a B.S. in Digital Communications the student is prepared to enter a wide range of technology-related positions in marketing, public relations, information technology, journalism, graphic design, internet development, multimedia, and programming.

The creation of content, both written and visual, remains at the heart of this subject. Students will study art, writing, and marketing in the context of content creation for the New Media. Students will learn the theory behind the design of effective presentations, and will employ existing multimedia technologies to create them. The techniques with which content is created, processed, and delivered are found in the study of programming and computer science. Students in the program will choose a discipline related to the program and complete advanced coursework to form a cognate in that area. Students will investigate and carefully consider the social, ethical, psychological, aesthetic, commercial, educational, and legal ramifications of the information technology revolution.

The program, designed to be interdisciplinary and integrative, emphasizes critical thinking, creativity, and analysis, rather than specific applications and technologies. The general education program at the college, together with the courses in the students' cognate areas, will expose the students to the fundamental questions of how information is created, processed, understood, and communicated in those disciplines.

### *Degree Requirements:*

*Degree:* Bachelor of Science with a major in Digital Communications.

*Major Core:* DCOM 130, 230, 330, 410, 431; DCOM 210, 355; DCOM 265, 365; DCOM 275, 375; DCOM 285, 385.

In addition to the core, each major must select a cognate area from art, business, English, or computer science and take three additional courses from the cognate department. (48 credits.)

### *Courses in Digital Communications (DCOM):*

**130. Introduction to Digital Communications.** A broad survey of the curriculum making up the Digital Communications major. This includes the authoring of content (text, visual, aural); designing presentations for that content; understanding the processes, components; and distribution of information technology; introducing the legal and ethical environments, and comprehending the integrative nature of design, business, communication, and technology in society's culture. 3 credits.



**210. Digital Graphic Design.** An introductory studio/lecture course designed to increase visual literacy and vocabulary, develop design skills and present the creative possibilities of the computer as an art-making and editing tool. 3 credits. {Cross-listed as Art 210.}

**265. Business of Information.** An exploration of the important technologies related to doing business on the Internet. Topics will include e-commerce, advertising, customer support, and business-to-business applications. Emphasis on how businesses implement these technologies, resource requirements, cost-to-benefit analysis. 3 credits.

### **Faculty**

**Joel A. Kline**, assistant professor of business administration. Acting director of the digital communications program.

*M.J., Temple University.*

**Jeffrey J. Ritchie**, assistant professor of English.

*Ph.D., Arizona State University.*

## DEPARTMENT OF EDUCATION

The Department of Education prepares students for elementary, special education and secondary school teaching.

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

Certification in two or more areas of teacher preparation is possible; however, such certification requires meticulous attention to scheduling and may require additional semesters. Elementary education majors who, as freshmen, begin to pursue both elementary and special education certifications will be able to complete them within their four years of study, unless they add other elements to their studies, such as pursuing an additional minor, double majoring, going abroad, etc. Careful and early scheduling can avoid misconceptions about such issues.

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 live and work.

In accord with the regulations set forth in Chapter 354, General Standards for the Institutional Preparation of Professional Educators, the following criteria must be met by all candidates who seek teacher certification at Lebanon Valley College:

I. Admission to teacher certification is not automatic and synonymous with admission to the college or to the major.

II. All teacher candidates must be admitted to teacher certification by a formal and clearly delineated process that is distinct from admission to the college and/or to the major.

III. Admission to teacher certification is contingent upon the completion of these criteria:

- (1) completion of a minimum of 48 college credits;
- (2) an overall GPA, after having completed 48 or more college credits, of at least 2.8 (for candidates entering 2002-2003); of at least 3.0 for candidates entering 2003-2004);
- (3) completion of at least one English composition course;
- (4) completion of one English or American literature course;
- (5) completion of two college level mathematics courses;
- (6) passing scores on these PRAXIS Tests: PPST Reading; PPST: Writing; PPST: Mathematics.
- (7) completion of the Application for Admission to Teacher Certification form, available from the major adviser.

IV. Those students who do not meet the above criteria may continue to pursue teacher certification, even though they are not and cannot be considered candidates for teacher certification until all of the above requirements have been met.

V. Once all of the above requirements have been met, the student must see his or her adviser to complete the Application for Admission to Teacher Certification form,

VI. Students who are not formally admitted to teacher certification cannot student teach nor will they be able to be recommended for teacher certification upon graduation.

VII. Students who have been formally admitted to teacher certification, but who afterward fall below the required overall GPA of at least 2.8 or 3.0, as applicable, may continue in the program; however, they may not student teach unless and until they have achieved the required overall GPA of at least 2.8 or 3.0, as applicable.

VIII. Students must have the required overall GPA of at least 2.8 or 3.0, as applicable at the time of graduation in order to be eligible for recommendation by the college for teacher certification.

## **Title II**

In accordance with state and federal regulations, Lebanon Valley College, regularly reports the aggregate student data to the Pennsylvania Department of Education. The HEA-Title II 1999-2000 Academic Year Quartile Ranking (the last year of complete data), ranked the college's teacher preparation program in the 1st (highest) Quartile. Many factors such as number of students in the program, number of tests required for licensure, and the number of teacher certification candidates who actually take the licensure exams affect the college's overall ranking. The college's quartile ranking, along with its overall 95% pass rate for the PRAXIS licensure exams, point to the high quality of the college's teacher preparation program.

### **Education Program**

#### *Degree Requirements:*

There is no major or minor in education.

#### *Courses in Education (EDU):*

**110. Foundations of Education.** A study of the legal, social, historical and philosophical foundations of American education correlated with a survey of the principles and theories of influential educators. Includes required weekly field practicum (two hours per week minimum). Limited to teacher certification candidates or permission of instructor. 3 credits.

**310. An Introduction to Exceptionalities in Children and Youth.** An introduction to current research and practices concerning the range of exceptionalities in children. The course includes attention to policies, legislation, programs, methods and materials. Various resource personnel are invited to address pertinent issues. The course includes a required weekly field experience in local programs designed to meet the needs of exceptional children. Prerequisites: limited to teacher certification candidates or permission of the instructor. 3 credits.

**346. Educational Technology and Instructional Media.** An introduction to the educational technologies used in the classroom based on the Pennsylvania Science and Technology Standards. Among the topics covered are computer hardware, peripherals, and operating systems; multimedia production; software evaluation and use; web page evaluation and construction; and ethical and societal issues related to the use of technology. Prerequisites: freshman or sophomore education majors or other certification candidates with permission of the instructor. 3 credits.

### **Elementary Education (Teacher Certification) Program**

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 requires 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. The Education Department has established strong relationships with local public, parochial and private schools. 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. Student teacher candidates spend the semester immediately preceding the student teaching semester with their assigned cooperating teachers. 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, middle schools and in classes for exceptional children.

*Degree Requirements:*

*Degree:* Bachelor of Science with a major in elementary education.

*Major:* Elementary education majors must take: EDU 110, 310; ELM 220, 250, 270, 280, 332, 341, 342, 344, 361, 362, 401, 499; GPY 111; HIS 125; two college-level mathematics courses to fulfill the college's general education requirements, an English Composition course, and an American or British literature course; PSY 120, 180 (52-56 credits).

*Note:* Students who are pursuing teacher certification must also complete 12 credit hours of ELM 440 Student Teaching in addition to completing all requirements for the major in Elementary Education.

*Courses in Elementary Education (ELM):*

**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. Limited to teacher certification candidates or permission of instructor. 3 credits. {Cross-listed as Music 220.}

**250. Mathematics in the Elementary School.** A study of basic preschool to sixth grade mathematical concepts with major emphasis on the NCTM and Pennsylvania Mathematics Standards, the integration of media and technology, writing across the curriculum, student assessments and exceptional children. Attention is given to the development of hands-on teaching activities, simulations and experiences which can be utilized effectively with any classroom population. Limited to teacher certification candidates or permission of instructor. 3 credits.

**270. Children's Literature.** A study of the entire range of literature for children, from infants through grade 8 based on the Pennsylvania Reading and Language Arts Standard. All categories of children's literature are experienced and studied, including poetry, picture books, traditional literature, modern fantasy, realistic fiction, historical fiction, nonfiction (biography, informational books, etc.), multicultural and international literature. Attention is given to the essential values and crucial benefits of using children's literature in the classroom and in the home. Controversies involving children's literature are discussed openly, with care given to a balanced examination of all such issues. Limited to teacher certification candidates or permission of the instructor. 3 credits.





**280. Field Practicum in the Elementary School.** Supervised weekly field experiences (two hours per week minimum) 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 based on the Pennsylvania Science and Technology Standards. The course emphasizes the experiential nature of science in the elementary classroom with special attention to materials, media and technology, writing across the curriculum, authentic assessment, exceptional children, and methodologies appropriate for kindergarten through sixth grade students. The course integrates a multidisciplinary, whole language approach to teaching physical and environmental science. Limited to teacher certification candidates or permission of instructor. 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, based on the Pennsylvania Reading and Language Arts Standards. Effective reading programs, methods and materials are examined first hand. Prerequisite: ELM 270. Limited to teacher certification candidates or permission of instructor. 3 credits per semester.

**344. Health Education in the Schools.** Provides the background information and skills teachers need to implement comprehensive school health education. The course includes information on the six categories of risk behavior identified by the Center for Disease Control and Prevention, the Pennsylvania Science and Technology Standards. The course examines the objectives of Healthy People 2000, the eight components in comprehensive school health, the Safe Schools Act, the National Health Education Standards, comprehensive school health programs, the 10 content areas of health education, and instructional strategies and materials appropriate to the teaching of health in today's schools. Attention is given to the ethical, moral and religious issues often associated with this area of the school curriculum. Limited to teacher certification candidates or permission of instructor. 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, creative dramatics, handwriting, grammar and usage, spelling, reading, thinking, visualizing and visually representing based on the Pennsylvania Reading and Language Arts Standards. The course emphasizes media and technology, authentic assessment and exceptional children's language development. The course is designed to assist preservice teachers in helping children to communicate effectively and responsibly through a process writing, whole language, literature based, multi-disciplined approach to teaching. Writing process. Limited to teacher certification candidates or permission of instructor. Limited to teacher certification candidates or permission of instructor. 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, based on the 10 Social Studies Strands of NCSS. 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 are required. Limited to teacher certification candidates or permission of instructor. 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 and are based on the Pennsylvania Art Standards. 3 credits.

**440. Student Teaching.** Each student spends an entire semester in an area school under the supervision of a carefully selected cooperating teacher. Open to seniors or students who are seeking certification only. A major grade point average of at least 2.0 and a cumulative grade point average of 2.8 for those entering in 2002; 3.0 for those entering the college in 2003 are required. Prerequisites: EDU 110, 310; GPY 111; HIS 125; PSY 180; ELM 220, 250, 270, 280, 332, 341, 342, 344, 361, 362 and permission of the Education Department faculty. 12 credits.

**499. Senior Seminar.** Special topics related to current concerns in education are researched and presented by the students in the course. Issues related to teaching and to further professional growth are explored. Teams of students are required to do extensive

research in an approved topic and to make a computer-based, multimedia presentation of that research to the class. Limited to senior elementary education majors or permission of instructor. 3 credits.

## **Geography Program**

A course in geography is 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 course is recommended for all students who wish to broaden their understanding of the world.

*Course in Geography (GPY):*

**III. Physical Geography and Its Impact.** A survey of the physical aspects of the earth and its impact on life through the Six Themes of Geography developed by the National Geography Standards and the 10 Social Studies Strands of NCSS. 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 different modes of media and technology and a variety of hands-on activities, the impact that physical geography has on their everyday lives. A Whole Language, multidisciplinary approach to teaching geography is presented. Requirement for elementary education certification. Prerequisite: Elementary Education major or permission of instructor. 3 credits.

## **Secondary Teacher Certification Program**

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 Citizenship Education (with PDE approval 2002-2003).

Candidates are provided with opportunities to observe and to teach in junior high, middle school, 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.

*Degree Requirements:*

There is no major in education for those interested in secondary teaching. Students complete the requirements in their chosen major and the designated professional education courses.

*Degree:* Bachelor of Arts or Bachelor of Science in the chosen major. (Majors: biology, chemistry, English, French, German, Spanish, mathematics, physics and social studies.)

*Secondary Teacher Certification:* Students seeking secondary certification must complete the approved program in the chosen major and 21 credits in education courses, consisting

of EDU 110 and SED 430, 431 and 440. SED 280 or SED 430 must be taken in the fall or spring semester immediately preceding the student teaching semester. SED 280 should be taken at least twice prior to SED 440.

*Courses in Secondary Education (SED):*

**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 its implications for teaching and learning at the middle school and secondary levels. This course is normally taken in conjunction with student teaching. Prerequisites: EDU 110; SED 430; secondary teacher certification candidate; junior or senior status; approval of instructor. 3 credits.

**430. Practicum and Methods I.** A study of the basic principles and procedures for middle school and secondary school classroom management and instruction. Prerequisites: EDU 110; secondary teacher certification candidate; junior status; approval of the instructor; must be taken prior to SED 440. 3 credits.

**431. Practicum and Methods II.** A continuation of the basic principles and procedures for middle school and secondary school classroom management and instruction. Prerequisites: EDU 110; SED 280, 430; secondary teacher certification candidate; junior or senior status; approval of the instructor; must be taken prior to SED 440. 3 credits.

**440. Student Teaching.** Students spend the entire semester in an area school under the supervision of a cooperating teacher. A cumulative grade point average of at least 2.8 for those entering 2002; 3.0 for those entering in 2003; a grade point average of at least 2.00 in the major field. Prerequisites: EDU 110; SED 430, 431; open to seniors or students seeking certification only; fulfillment of all ACT 354 requirements as outlined by the Pennsylvania Department of Education; passing scores on the PPST Reading, Writing, and Mathematics PRAXIS exams; approval of the major subject area adviser and the Education Department faculty. 12 credits.

*Note:* No other courses should be taken during the student teaching semester except for SED 431, if it has not been taken in the semester immediately preceding the student teaching semester. SED 431 or SED 280 (one credit for four hours per week in an assigned classroom with a cooperating teacher) *should* be taken in the semester *immediately* preceding the student teaching semester.

# Special Education Certification Program

## Cognitive, Behavior, Physical/Health Disabilities (CBP/HD)

The special education program operates in conjunction with the elementary, music education or secondary education programs. Students complete a full sequence of course work in their majors in addition to their specialized course work in special education. Student teaching experiences are provided in two settings: one in a regular school setting and the second in a special education setting. Program graduates are certified to teach in regular elementary, music education, or secondary school programs and in special education programs for students with mental retardation, learning disabilities, behavior disorders, autism, orthopedic impairments, or multiple disabilities, grades K through 12.

Students pursuing special education certification must at the same time be seeking either elementary, music education or secondary teacher certification. Special education certification cannot be taken apart from one of these other areas.

Post-baccalaureate candidates who already have a currently valid teaching certificate may apply for admission to the special education program. Each candidate's credentials will be reviewed on an individual basis to ensure adequate preparation for admission to the special education program.

Each course in the program includes mandatory weekly field experiences in a special education setting over the course of the entire semester. One-half of the student teaching semester will be completed in a special education setting.

### *Degree Requirements:*

There is no major in special education. Students complete the requirements in their majors and in the chosen area of certification relative to that major and then the required courses in special education.

*Degree:* Bachelor of Arts or Bachelor of Science in the chosen major. (Majors: biology, chemistry, elementary, English, French, German, Spanish, mathematics, music education, physics and the social sciences.)

### *Courses in Special Education (EDU):*

**EDU 110. An Introduction to Exceptionalities in Children and Youth.** An introduction to current research and practices concerning the range of exceptionalities in children. The course includes attention to policies, legislation, programs, methods and materials. The course includes a required weekly field experience in local programs designed to meet the needs of exceptional children. Prerequisites: limited to teacher certification candidates with permission of the instructor. 3 credits.

**EDU 311, 312. Diagnostic and Prescriptive Teaching in Special Education and Included Settings-Phase I, II.** Addresses the diagnosis of and the necessary adaptations to the learning needs of exceptional students, preschool through grade twelve. The development and application of curricula, methodologies and classroom practices to respond to the strengths and needs of students will be developed and applied in real settings. All areas of the various kindergarten through grade twelve curricula, as well as life skills instruction, will be addressed. Includes a required weekly field experience in a special education setting. EDU 311 is Writing process. Prerequisites: EDU 110, 310. 3 credits per semester.

**313. *Managing Instructional and Behavioral Components in Special Education and Included Classrooms.*** The absolute necessity of knowing how, when, why and the what of dealing effectively with students who have special learning needs will be addressed in this course. Ways of observing, of recording and of responding to student behaviors will be developed. Intervention strategies will be studied and evaluated. Classroom management will be analyzed and reflectively applied. Includes a required weekly field experience in a special education setting. Prerequisites: EDU 110, 310, 311, 312. 3 credits.

**314. *Assessment, Evaluation, and Response Strategies for Students with Exceptionalities.*** Special education professionals need to use caution in the assessment process and in making educational decisions. There continues to be a need to understand the consequences of labeling and segregating individual students. This course will address the assessment process in light of current research and legislation concerning special education, with attention to recent state and federal legislation and revised mandates. This course also focuses on curriculum based assessments and performance based assessments used to evaluate the rate and quality of student learning and the effectiveness of teacher instruction on an ongoing basis. Includes a required weekly field experience in a special education setting. Prerequisites: EDU 110, 310, 311, 312, 313. 3 credits.

## Faculty

**Susan L. Atkinson**, professor of education. Chairperson.

*Ed.D., Temple University.*

She teaches method courses in mathematics, science, and language arts, plus courses in children's literature and physical geography. Supervises student teachers. Her research interests are in the area of matching student/teacher learning styles to increase academic achievement. Her interests include multidisciplinary curricula, classroom management and early childhood education. She is the adviser for the college's professional teaching organization, which includes secondary, elementary and music education majors.

**Cheryl L. George**, assistant professor of special education.

*Ph.D., University of North Texas.*

She serves as the director of special education and is responsible for the operation, coordination and continued development of the program. She teaches courses in special education and is the department liaison with special education administrators and teachers in the intermediate units and in the school districts of the surrounding areas. She oversees course required field experiences and supervises student teachers in special education settings. She serves as a resource in special education matters for faculty and students involved in teacher certification, especially within the education department.

**Donald E. Kline**, assistant professor of education.

*Ed.D., Lehigh University.*

He teaches courses in educational technology, secondary methodology and supervises student teachers. He serves as the director of instructional design and technology in the department to develop and promote the integration of the computer and other instructional media in all phases of teacher preparation.

**Dale E. Summers**, professor of education.

*Ed.D., Ball State University.*

He teaches courses in educational foundations, elementary social studies, and senior seminar. He serves as supervisor of student teachers and helps to monitor pre-student teaching field experiences. He maintains a particular interest in special education for the emotionally disturbed at both the elementary and secondary level.

**Linda L. Summers**, instructor in education.

*M.A., Ball State University.*

She serves as the director of elementary and secondary field experiences for the Education Department. She teaches courses in language arts, social studies and health. She supervises elementary and secondary student teachers. Areas of interest in education include early childhood education, thematic approaches to learning, the use of integrated curriculum and cooperative learning.

**M. Jane Yingling**, assistant professor of education.

*M.Ed., Shippensburg University.*

She serves as assistant to the director of special education. She teaches courses in both special education and elementary education, oversees required field experiences and supervises student teachers. Her areas of interest include working with children with mild to moderate learning disabilities, inclusion and brain-based learning and resiliency.

# DEPARTMENT OF ENGLISH

## English Program

The major in English introduces students to the humanistic study of language. While English majors may choose to concentrate in literature, communications, theater or secondary education, the basis for all concentrations is the study of literature. All majors learn the skills of clear, concise and correct expression as well as of effective collection, organization, and presentation of material. Such study prepares the student for graduate work in literature or communications, or for professional study in such fields as law or theology. Graduates of the Department of English are also prepared to work in journalism, teaching, editing, public relations, publishing, advertising, theater, and business.

Departmental Honors: English majors with a major GPA of 3.5 at the end of the junior year are eligible to apply for departmental honors. Details are available from the department chairperson.

The English Department offers minors in literature, communications and theater.

### *Degree Requirements:*

*Degree:* Bachelor of Arts with a major in English.

*Major:* Core requirements: ENG 120 ; three from 221-229 (at least two of the three must be from 221-226); 321; 341 or 342 (18 credits). Students must choose one of the concentrations below in addition to the core.

*Literature concentration:* Three additional survey courses (ENG 221-229); 370; three from among 330, 350, 390-literature (21 credits).

*Communications concentration:* ENG 099, 140; five additional communications courses, at least two of which must be at the 300 level (201 or 202, 210-218, 310-315, 390-communications); three credits of 400 (21 credits).

*Theater concentration:* ENG 201-204; three credits of 301; two additional drama-related courses from among the following: 330, 341 or 342, 350, 390, 391, 400 (21 credits).

*Secondary Education concentration:* One additional survey course from ENG 221-229 (the total of four surveys must include at least three from 221-226); two from among 201, 213, and 218; three from among 330, 350, 370, 390-literature or communications; and 360 (21 credits).

To be certified by the state, secondary education concentrators must also complete EDU 110; SED 280, 430, 431, and 440 (Minimum cumulative GPA, as required by PDE).

*Minor (Literature):* ENG 120; 221 or 222; two from 225, 226, 227, 228, 229; two additional 300-level literature courses (18 credits).

*Minor (Communications):* ENG 120, 140, 221 or 222; three additional communications courses (202-218, 310-315, 390-communications) (18 credits).



*Minor (Theater)*: ENG 120, 201, 202, or three credits of 301; 203 or 204; 341 or 342; six additional credits to be selected in consultation with the student's adviser (18 credits).

*Courses in English (ENG)*:

**ENG 99. Internship Portfolio.** A formal collection of the student's completed communications-oriented work, to be submitted to the department as part of the student's formal request to take ENG 400 (Internship). Offered every semester. 0 credits.

**ENG 111, 112. English Communications 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 written prose. ENG 112 also emphasizes speaking, reading and research skills. Prerequisite for 112: 111 or permission of chairperson. 3 credits.

**ENG 120. Introduction to Literature.** An introduction to literary genres and to the basic methodology, terminology and concepts of the study of literature. Usually offered every semester. 3 credits.

**ENG 140. Introduction to Mass Communications.** An introduction to career-oriented uses of language and to the skills used universally by reporters, editors, advertising copywriters, public relations personnel and technical writers. Usually offered every semester. 3 credits.

**ENG 201. Introduction to Acting.** The development of skills in speech and movement through the use of theater games and improvisations. Usually offered fall semester. 3 credits.

**ENG 202. Advanced Acting.** An exploration of the relationship between the actor and the text through script analysis and the performance of scenes and monologues. Usually offered spring semester. 3 credits.

**ENG 203. Stagecraft: Technical Skills.** Instruction in the mechanics of backstage theater operations, including lighting as well as set and property construction. Usually offered alternate fall semesters. 3 credits.

**ENG 204. Theater Production and Performance.** Instruction in all aspects of producing and performing a full-length play. Usually offered alternate fall semesters. 3 credits.

**ENG 210. Management Communications.** The development of writing, speaking and listening skills for business management. Prerequisite: ENG 111 and 112, or permission of the instructor. Usually offered alternate spring semesters. 3 credits.

**ENG 213. Journalism.** The development of the basic skills of journalistic writing such as interviewing, covering meetings, gathering and reporting news and writing features according to standard formats and styles. The course also covers legal and ethical aspects of journalism. Writing intensive. Prerequisite: ENG 111 and 112, or permission of the instructor. Usually offered fall semester. 3 credits.

**ENG 214. Creative Writing: Poetry.** A workshop in writing poetry. Usually offered alternate fall semesters. 3 credits.

- 215. Creative Writing: Fiction.** A workshop in writing short fiction. Usually offered alternate fall semesters. 3 credits.
- 216. Technical Applications in Writing.** The development of writing, speaking and illustrating skills to convey specialized, often technical information to a non-technical audience. Prerequisite: ENG 111 and 112 or permission of the instructor. Usually offered alternate spring semesters. 3 credits.
- 218. Oral Communication.** Introduction to informative, persuasive and other types of oral communication, with emphasis on the student's own performance as well as the judgment of others' performance. Usually offered alternate spring semesters. 3 credits.
- 221. Survey of American Literature I.** A survey of selected major American authors from the colonial period to about 1900. Writing process. Usually offered fall semester. 3 credits.
- 222. Survey of American Literature II.** A survey of selected major American authors from about 1900 to the present. Writing process. Usually offered spring semester. 3 credits.
- 225. Survey of English Literature I.** A survey of selected major English authors from the Middle Ages to about 1800. Writing process. Usually offered alternate spring semesters. 3 credits.
- 226. Survey of English Literature II.** A survey of selected major English authors from about 1800 to the present. Writing process. Usually offered alternate spring semesters. 3 credits.
- 227. World Literature I.** A survey of selected major writers from earliest literate history to about A.D.1000. This course includes literature from western Europe and non-western cultures. Usually offered fall semester. 3 credits.
- 228. World Literature II.** A survey of selected major writers from about A.D. 1000 to about 1800. This course includes literature from western Europe and non-western cultures. Usually offered spring semester. 3 credits.
- 229. World Literature III.** A survey of selected major writers from about 1800 to the present. The course includes literature from Europe and Russia, as well as non-western cultures. Usually offered fall semester. 3 credits.
- 291. Journal Writing.** Exploration of overseas experience by engaging students in a dialogue between themselves and the new society and culture. 1 credit.
- 301. Acting Lab.** A workshop that meets once a week to explore specific issues in acting; course content changes every semester. Usually offered every semester. 1 credit.
- 310. Advanced Journalism.** Enhancement of basic journalistic skills by reading and writing longer investigative and feature articles. Writing process. Prerequisite: ENG 213. Usually offered alternate spring semesters. 3 credits.
- 312. Writing for Radio and TV.** 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. Usually offered alternate fall semesters. 3 credits.



**313. Advertising Copy and Layout.** Principles and techniques of copywriting; selection and presentation of sales points; creative strategy in production of layouts. Usually offered alternate spring semesters. 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: ENG 213, or permission of the instructor. Usually offered alternate fall semesters. 3 credits.

**315. Editing.** Editing theory and exercises in copyreading, rewriting and headlining. Writing process. Prerequisite: ENG 213, or permission of the instructor. Usually offered alternate spring semesters. 3 credits.

**321. History and Grammar of the English Language.** An examination of the evolution of English phonology, morphology, syntax and vocabulary, including current conventions and usage. Usually offered fall semester. 3 credits.

**330. Literary Genres.** A study of one of the various forms of literature, such as the narrative poem, the lyric poem, the novel, the short story, drama, film, the essay, biography, and autobiography. The genre will vary from semester to semester. May be repeated for credit when it involves a genre the student has not previously studied. Writing process. Prerequisite: Eng 120 or a 200-level survey (221-229). Usually offered every semester. 3 credits.

**341. Shakespeare I.** A concentrated study of early Shakespearean drama, especially the comedies and the histories. Writing process. Prerequisite: ENG 120 or a 200-level survey (221-229). Usually offered alternate spring semesters. 3 credits.

**342. *Shakespeare II.*** A concentrated study of late Shakespearean drama, especially the tragedies and the romances. Writing process. Prerequisite: ENG 120 or a 200-level survey (221-229). Usually offered alternate spring semesters. 3 credits.

**350. *Major Authors.*** Intensive study of one or two major American or British authors. Recent subjects have included Faulkner, Joyce, Woolf, O'Connor, Morrison, Chaucer, Milton, Pound, and Williams. The authors will vary from semester to semester. May be repeated for credit. Writing process. Prerequisite: ENG 120 or a 200-level survey (221-229). Usually offered fall semester. 3 credits.

**360. *The Teaching of English in Secondary Schools.*** The teaching of writing and literature in the junior high and high school classroom, exploring literary, pedagogical, and composition theory as they apply to actual teaching practice. Writing process. Prerequisites: ENG 120 and EDU 110. Usually offered alternate spring semesters. 3 credits.

**370. *Literary Theory and Its Applications.*** Consideration of fundamental questions such as the definition of literature, the value of literature, and the validity of the literary canon. Provides an introduction to a variety of critical approaches to literary interpretation, on both a theoretical and practical level. Prerequisite: ENG 120. Usually offered alternate spring semesters. 3 credits.

**400. *Internship.*** Practical and professional work experience, on or off campus, related to the student's career interests, involving both on-site and faculty supervision. Generally limited to juniors and seniors. All internships are graded pass/fail. Prerequisites: ENG 099; permission of the chairperson; application form from Registrar's office must be completed prior to registration. 1-12 credit hours.

## Faculty

**Philip A. Billings**, professor of English.

*Ph.D., Michigan State University.*

He teaches courses in world and American literature as well as poetry and fiction writing. His publications include poems and articles in various magazines and two books of poems.

**Marie G. Bongiovanni**, associate professor of English. Chairperson.

*M.L.A., University of Pennsylvania.*

She teaches courses in travel writing, environmental literature, and communications. Experienced in journalism, public relations, and freelance writing, she has published one book and numerous articles and essays in national magazines.

**Phylis C. Dryden**, associate professor of English.

*D.A., State University of New York at Albany.*

She teaches courses in communications and American literature. She has published numerous poems, stories, and journalistic articles, and she has won two NEH Summer Seminar grants for the study of British literature. A current book-length project will explore town-gown issues in selected "college towns."

**Gary Grieve-Carlson**, professor of English. Director of American Studies Program.

*Ph.D., Boston University.*

He teaches courses in American literature, American studies, Greek myth<sup>3</sup>, and grammar. He has been a Fulbright Junior Lecturer in Germany and has published on American cultural criticism and twentieth-century poetry.

**John P. Kearney**, professor of English.

*Ph.D., University of Wisconsin.*

He teaches courses in Shakespeare, English literature, and technical writing as well as an interdisciplinary course in revolutions. He is a Victorian literature scholar who is working on Charles Dickens and George Eliot.

**Walter E. Labonte**, lecturer in English.

*M.A., Northeastern University.*

He teaches introductory writing and literature courses, as well as “The Teaching of English in Secondary Schools.” He is assistant director of the College Writing Center.

**Mary K. Pettice**, associate professor of English.

*Ph.D., University of Houston.*

She teaches courses in journalism, creative writing, and English and American literature. She also advises the student newspaper. Experienced in the newspaper and publishing worlds, she has also published poetry and short stories.

**Kevin B. Pry**, assistant professor of English.

*Ph.D., The Pennsylvania State University.*

Dramaturge for local theater companies, he teaches courses in acting, world literature, dramatic literature, and theater production. He also advises Wig and Buckle, the student drama club.

**Jeffrey J. Ritchie**, assistant professor of English.

*Ph.D., Arizona State University.*

He teaches courses in technical writing, digital communications, and British literature. He has published on British literature and currently serves on the executive committee of the MLA Scottish literature discussion group.

**Henry L. Wilson**, assistant professor of English.

*Ph.D., University of Tennessee.*

He teaches American literature, management communications, and technical writing, and he is director of the College Writing Center. He has published on contemporary issues in rhetoric and composition.

## 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, particularly Lebanon Valley College programs in Cologne, Germany; Montpellier, France; and Salamanca, Spain.

The Department of Foreign Languages offers majors in French, German and Spanish, secondary teacher certification in foreign language, as well as minors in the three languages. The department also offers the major in International Business jointly with the Management Department.

### Foreign Languages Program

#### *Degree Requirements:*

Majors are offered in French, German and Spanish.

*Elementary or Secondary Teacher Certification:* In addition to majoring in a language, students seeking elementary or secondary certification in a foreign language must take FLG 360 and 21 credits in education courses including EDU 110 and SED 430, 431 and ELM or SED 440.

#### *Courses in Foreign Language (FLG):*

**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.

**350. Linguistics.** A study of the field of linguistics. Investigates language as a system of signs and as a culturally conditioned behavior. 3 credits.

**360. The Teaching of Foreign Language in Schools.** A comprehensive study of modern teaching methods, with emphasis on practicing basic classroom skills for elementary through secondary school level instruction. Prerequisite: FRN 202, GMN 202, or SPA 202. 3 credits.

### French Program

#### *Degree Requirements:*

*Degree:* Bachelor of Arts with a major in French.

*Major:* 24 credits in French above the intermediate level at least six of which must be in 400 level courses, FLG 350 (27 credits) For teaching certification, FLG 360 is required.

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

Our program in Montpellier, France, is designed for students with varying abilities in French. This program is located at the University of Montpellier in southern France near the Mediterranean Sea. Students are placed in courses at their level of language expertise. All courses will be in French.

*Courses in French (FRN):*

**101, 102. Elementary French I,II. Introductory courses in French.** Aimed at developing basic communicative proficiency in French. Also offers insights into French-speaking cultures. 3 credits.

**201, 202. Intermediate French I,II.** Review of material typically covered in a first-year French course. Aimed at building students' proficiency in all four language skills – listening, speaking, reading and writing – and at enhancing their knowledge of the cultures of French-speaking people. Prerequisite: FRN 102 or equivalent. 3 credits.

**300. Advanced Conversation.** Intensive practice in spoken French. Discussions on a wide range of topics related to French life and contemporary society. Prerequisite: FRN 202 or equivalent. 3 credits.

**310. Advanced Grammar & Composition.** Intensive practice in written French. Development of advanced writing skills through composition assignments based on contemporary French writing and issues. Prerequisite: FRN 202 or equivalent. 3 credits.

**320. Business French.** A study of the language of business and business practices of France and French-speaking countries. Prerequisite: FRN 202 or equivalent. 3 credits.

**340. The Sounds of French: Intensive Listening Comprehension Skills.** An intensive listening comprehension class in which students are exposed to, and tested in, many registers of spoken French: stories, lectures, movies, advertising, radio, television, conversation, announcements, instructions, etc. The objective is to provide students with a listening immersion in the Francophone world. Prerequisite: FRN 202 or equivalent. 3 credits.

**350. Issues in French Culture.** Discussion of an important issue in France from different points of view. Taught in French. Prerequisite: FRN 202 or equivalent. 3 credits.

**410. French Literature of the Middle Ages and Renaissance.** A study of medieval French literature to 1600. Works from the medieval epic and courtly romance through Renaissance philosophical essays. Development of advanced communicative skills through literature will be promoted. Prerequisite: FRN 300 or 310 or permission. Writing process. 3 credits.

**420. French Literature of the 17th Century.** A study of the spirit and principal authors of French Classicism with a special emphasis on the theater of Corneille, Racine and Molière. Prerequisite: FRN 300 or FRN 310 or permission. Writing process. 3 credits.

**430. French Literature of the 18th and 19th Centuries.** A study of the main ideological currents of the 18th and 19th centuries: the faith in reason, the emergence of pre-romanticism, romanticism and realism. Emphasis on the works of Voltaire, Montesquieu, Diderot, Rousseau, l'Abbé Prévost, Marivaux, Hugo, Flaubert, Balzac, Zola and Baudelaire. Prerequisite: FRN 300 or FRN 310 or permission. Writing process. 3 credits.

**440. French Literature of the 20th Century.** A study of contemporary society as reflected in the literary evolution from Proust to the *Nouveau Roman* and *le théâtre de l'Absurde*. Such writers as Giraudoux, Anouilh, Malraux, Sartre, Camus, Ionesco and Becket will be studied. Prerequisite: FRN 300 or FRN 310 or permission. Writing process. 3 credits.

**450. Modern Theatre and Poetry of France.** A study of theater and poetry of the 19th and 20th centuries. Prerequisite: FRN 300 or FRN 310 or permission. Writing process. 3 credits.

## German Program

### *Degree Requirements:*

*Degree:* Bachelor of Arts with a major in German.

*Major:* 24 credits in German above the intermediate level at least six of which must be in 400 level courses, FLG 350. (27 credits). For teaching certification, FLG 360 is required.

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

Our program in Cologne, Germany, allows students to complete a full year of intermediate German in one semester. Students also enroll in a German reading course or courses in German civilization taught in English.

### *Courses in German (GMN):*

**101, 102. Elementary German I, II.** Introductory courses in German. Aimed at developing basic communicative proficiency in German. Also offers insights into German-speaking cultures. 3 credits.

**201, 202. Intermediate German I, II.** Review of material typically covered in a first-year German course. Aimed at building students' proficiency in all four language skills—listening, speaking, reading and writing—and at enhancing their knowledge of the cultures of German-speaking people. Prerequisite: GMN 102 or equivalent. 3 credits.

**203, 204; 303, 304; 403, 404. Language & Culture I, II.** An immersion course on three levels offered in Cologne, Germany. German in context with a grammar review, practical exercises and discussion of cultural issues. Placement determined in Cologne. Prerequisite: GMN 102 or equivalent. 3 credits.

**300. Advanced Conversation.** Intensive practice in spoken German. Discussions on a wide range of topics related to German life and contemporary society. Prerequisite: GMN 202 or equivalent. 3 credits.



**301. Advanced Grammar & Composition.** Intensive practice in written German. Development of advanced writing skills through composition assignments based on contemporary German writing and issues. Prerequisite: GMN 202 or equivalent. 3 credits.

**310. Germany Past and Present.** Studies the major epochs of German cultural history and describes the chief characteristics of present-day German society. Prerequisite: GMN 202 or equivalent. 3 credits.

**320. Business German.** A study of the language of business and business practices of Germany and German-speaking countries. Prerequisite: GMN 202 or equivalent. 3 credits.

**330. German Short Fiction.** A reading course in the Cologne program for the intermediate student. Study of short texts to develop more advanced skills and introduce the techniques of literary analysis. Prerequisite: GMN 202 or equivalent. 3 credits.

**350. Issues in German Culture.** Study of a major issue from various points of view. Readings in German and English; discussion and writing in German and English. Prerequisite: GMN 202 or equivalent. 3 credits.

**370. Techniques of Translation & Interpretation.** Emphasizes the skills needed for accurate and idiomatic translation of German texts into English. Discussion of more complex grammatical structures. Prerequisite: GMN 202 or equivalent. 3 credits.

**400-419. Readings in German.** Works of fiction and nonfiction selected to explore a particular topic or theme. Prerequisite: GMN 202 or equivalent. Writing process. 3 credits.

**460. Lyric Poetry.** A study of German song from minnesang to contemporary rock. Involves both texts and music as appropriate. Prerequisite: GMN 202 or equivalent. Writing process. 3 credits.

## Spanish Program

**Degree Requirements:**

**Degree:** Bachelor of Arts with a major in Spanish.

**Major:** 24 credits in Spanish above the intermediate level at least six of which must be in 300 level courses, FLG 350 (27 credits). For teaching certification, FLG 360 is required.

**Minor:** 18 credits in Spanish above the elementary level. Courses in advanced conversation and composition as well as in culture are strongly recommended.

Our program in Spain is located in the university city of Salamanca. Students take courses in Spanish language, history, civilization, economics, music and art at the Colegio de Espana.

**Courses in Spanish (SPA):**

**101, 102. Elementary Spanish I, II.** Introductory courses in Spanish. Aimed at developing basic communicative proficiency in Spanish. Also offers insights into Spanish-speaking cultures. 3 credits.

**201, 202. Intermediate Spanish I, II.** Review of material typically covered in a first-year Spanish course. Aimed at building students' proficiency in all four language skills—listening, speaking, reading and writing—and at enhancing their knowledge of the cultures of Spanish-speaking people. Prerequisite: SPA 102 or equivalent. 3 credits.

**211, 212. Spanish for Physical Therapy and Rehabilitation I, II.** Introductions to the technical vocabulary of physical therapy needed to communicate with Spanish-speaking patients. One hour of conversation and mock patient-therapist sessions per week. Prerequisite: SPA 202 or equivalent. 1 credit each.

**300. Advanced Conversation.** Intensive practice in spoken Spanish. Discussions on a wide range of topics related to Spanish life and contemporary society. Prerequisite: SPA 202. 3 credits.

**310. Advanced Grammar & Composition.** Discussion of more complex grammatical structures. Intensive practice in written Spanish. Development of advanced writing skills through composition assignments based on contemporary Spanish writing and issues. Prerequisite: SPA 202. Writing process. 3 credits.

**320. Business Spanish.** An introduction to the language of business and business practices. Prerequisite: SPA 202 or equivalent. 3 credits.

**340. The Sounds of Spanish: Intensive Listening Comprehension.** An intensive listening comprehension class in which students are exposed to, and tested in, many registers of spoken Spanish: stories, lectures, movies, advertising, radio, television, conversation, announcements, instructions, etc. The objective is to provide students with a listening immersion in the Hispanic world. Prerequisite: SPA 202. 3 credits.

**350. Spanish Culture and Civilization.** An overview of Spanish culture, history and geography, with special focus on current issues. Taught in Spanish. Prerequisite: SPA 202 or equivalent. 3 credits.

**360. Latin American Cultures and Civilizations.** An overview of Latin American cultures, history, and geography, with special focus on current issues. Taught in Spanish. Prerequisite: SPA 202 or equivalent. Foreign studies. 3 credits.

**370. Techniques of Translation & Interpretation.** Studies methods of translation and interpretation. Oral and written texts will be used to work both from Spanish to English and English to Spanish. Prerequisite: SPA 202. 3 credits.

**410. Spanish Literature of the Middle Ages and Renaissance.** A study of the outstanding works of the period. Prerequisite: SPA 202 or equivalent. Writing process. 3 credits.

**420. Spanish Literature of the Golden Age.** A study of the major works of the period. Prerequisite: SPA 202 or equivalent. Writing process. 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: SPA 202 or equivalent. Writing process. 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: 202 or equivalent. Writing process. 3 credits.



**SPA 150. *Latin-American Literature of the 20th Century.*** A study of the important writers of the century, with emphasis on recent developments. Prerequisite: SPA 202 or equivalent. Writing process. 3 credits.

**SPA 160. *The Age of Discovery.*** An examination of the Aztec, Mayan and Incan civilizations before 1492 and the philosophy of the Spanish explorers from 1492 on. Prerequisite: SPA 202. Foreign studies. Writing process. 3 credits.

### **Faculty**

**Jean-Marc Braem**, assistant professor of French.  
*Ph.D., Princeton University.*

Braem teaches courses on all levels of Francophone language, culture, and civilization. He has written on censorship in French literature and the instructional use of films in French.

**Marta Guevara-Geer**, assistant professor of Spanish.  
*M.A., University of Wisconsin-Madison.*

She teaches basic language classes as well as literature and culture of the Hispanic world. Her research interests include Cervantes, the Golden Age comedia and Spanish American Colonial texts. She is interested in comparative literature and film

**Diane M. Iglesias**, professor of Spanish.  
*Ph.D., City University of New York.*

Iglesias teaches courses in Spanish language, and in Spanish and Latin American culture, civilization and literature. She has presented research papers in medieval balladry and the Spanish Golden Age theater at scholarly conferences. She is currently researching the plays of Vélez de Guevara and Quiñones de Benavente.

**James W. Scott**, professor of German. Acting chairperson.

*Ph.D., Princeton University.*

Scott teaches German and courses in the culture, civilization and literature of German-speaking countries. His most recent scholarly presentations have ranged from Kafka's short fiction to cabaret in the GDR and communicative testing. At present he is preparing a new translation of Iwein, an Arthurian epic by Hartmann von Aue. He chairs a state selection committee for the Congress-Bundestag Youth Exchange Program.

**Rosa Tezanos-Pinto**, assistant professor of Spanish.

*Ph.D., University of Miami.*

Tezanos-Pinto teaches courses in Spanish language, Hispanic culture and literature. She researches the poetic and narrative works of the Twentieth century Caribbean and Hispanic American female writers. She has published essays on critical theory and literary language and has presented papers at conferences in the United States, Europe, Asia and Latin America.

**Angel T. Tuninetti**, associate professor of Spanish.

*Ph.D., Washington University.*

Tuninetti teaches Spanish language classes and Latin American culture, history, and literature. His special interests are South American travel literature of the colonial and nineteenth century periods, and Pre-Columbian civilizations.

**Theresa Bowley**, adjunct instructor in French.

*M.A., Middlebury College.*

Bowley teaches French language at the elementary and intermediate level.

**Ming Gao**, adjunct instructor of Linguistics.

*Ph.D., Lehigh University.*

Gao's work is in psychology and applied linguistics.

**Rita M. Gargotta**, adjunct instructor in Spanish.

*M.A., West Chester University.*

Gargotta teaches courses in Spanish language, culture and contemporary society.

**Barbara Nissman-Cohen**, adjunct instructor in French.

*M.A., Montclair State College.*

Nissman-Cohen teaches French language at the elementary level.

**Doris J. Russ**, adjunct instructor in German.

*M.A., University of Maryland.*

Russ teaches the German language and courses relating to the culture of German speaking countries.

## DEPARTMENT OF HISTORY AND POLITICAL SCIENCE

As disciplines, history and political science are closely related. Many students choose a double major or a major/minor combination. Others combine a history or political science major with a major or minor in fields such as economics, foreign languages, philosophy or religion, English, or business. Students in these majors also may choose to work towards certification in Citizenship Education (formerly social studies).

### History Program

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 can lead to a career in teaching at the college or high school level, law, government, politics, the ministry, museums and libraries, journalism or editing, historical societies and archives, historical communications or a number of other professions.

#### *Degree Requirements:*

*Degree:* Bachelor of Arts with a major in history.

*Major:* History 103, 104, 125, 126, 250, 251; six upper division courses (above the 100 level), including one each in American, European, and Latin American or non-western history, and three electives; and 499. Two of the six upper division courses must be at the 300 level (39 credits).

*Secondary Education Concentration:* Students shall successfully complete the history major plus HIS 360, The Teaching of History and Social Studies in Secondary Schools. Students shall also complete the Citizenship Education core, a second math course, an English or American literature course, and 21 credits of secondary education courses including EDU 110, SED 280, 430, 431, and 440. Students apply to the certification program after completing at least 48 credits (including the math and English courses) with a 2.8 grade point average, and must maintain that average in order to be certified.

*Minor:* HIS 103, 104, 125, 126, 250 or 251; two electives, at least one of which must be at the 300 level (21 credits).

### Historical Communications Program

The History Department offers a historical communications program in conjunction with the English Department, described on page 70. The major in historical communications is an interdisciplinary program that provides the opportunity for interested students to engage in a comprehensive study of both history and communications and their interconnectedness. The program is designed to prepare students for professional research, writing and editing positions in such fields as radio, television, motion pictures, cable, popular history magazines, theatrical history and oral history. Lebanon Valley College is one of the very few colleges to offer such a major.

*Degree Requirements:*

*Degree:* Bachelor of Arts with a major in historical communications.

*Major:* HIS 103, 104, 125, 126, 202, 250, 251, 400; three upper division courses (above the 100 level), one each in American, European, and Latin American or non-western history; one course from 271, 273, 275, 277, 279, or 303; ENG 140, 213, 216, 310; and one from ENG 204, 312, 315 (48 credits)

*Courses in History (HIS):*

**103. *The Ancient World: The Dawn of Civilization to the Fall of the Han and Roman Empires.*** A study of the development of civilizations from the development of human civilizations to the end of the first era of empire building in India, China, and the Mediterranean. Topics include the river valley civilizations of Mesopotamia, Egypt, India, and China; the formation of great philosophies and religious traditions in Asia and Greece; and the first empires in the Mediterranean world, India, and China. 3 credits.

**104. *The Second Age of Empires: World History From the Fall of Rome to the Mongol Invasions.*** A study of the second phase of empire building in world history, spanning the period from the fall of Rome in 476 to the end of the Middle Ages in Europe and the end Mongol domination in Asia and Russia by 1450. Topics will include the Byzantine Empire; the gradual recovery of Europe after the fall of Rome; the renewal of China under the T'ang and the Song Dynasties; the Islamic dynasties in the Middle East, Africa, India, and China; the pre-Columbian empires of Latin America; and the Mongol invasions. 3 credits.

**125. *United States History to 1865.*** The major events and developments in America from Columbus to the Civil War, with emphasis on the creation of a distinctive American society from the interaction of different cultures, ethnic groups, and ideas. Major themes include the transformation of European cultural ideas in colonial America and the impact of republican ideology, democratization, and the spread of the market economy between the Revolution and the Civil War. 3 credits.

**126. *United States History to 1865.*** This course investigates American history from 1865 until the present. Students learn about important themes in recent history such as law and order, native land rights, protest movements, foreign policy and its critics, and the rise of corporate power and its economic and political consequences. The course also introduces students to the method of historical inquiry, analysis, and writing. 3 credits.

**200. *Europe Encounters the World: Colonization from Columbus to Mao.*** A study of European expansion from the fifteenth century to the process of decolonization in the twentieth. The course will examine trading post empires; colonization of the New World; the slave trade; the relationship among the industrial revolutions, nationalism in Europe, and nineteenth-century imperialism; independence movements; and neocolonialism. Prerequisites: sophomore standing or permission of instructor. 3 credits.

**02. Historical and Cultural Geography.** A study of the various geographic regions of the world and how the natural environment has influenced historical and cultural development. Prerequisites: sophomore standing or permission of instructor. 3 credits.

**05. Early Modern Europe.** The Renaissance, Reformation, Scientific Revolution, and the development of national political states. Writing process. 3 credits.

**06. Revolution & Nationalism, 1789-1914.** A study of the effects of the French Revolution and the industrial revolution in Europe. Particular attention is paid to the rise of class antagonisms and national rivalries. Writing process. 3 credits.

**07. Europe in the 20th Century.** Developments in Europe from 1900 to the present, with special focus on the role of Germany, the Nazi Era and post-World War II conditions. Writing process. 3 credits.

**08. Great Britain from 1688 to the Present.** Selected themes in British history from 1688 to the present. The course will begin with the Glorious Revolution of 1688 so as to establish the background for an ongoing discussion of Great Britain's parliamentary tradition. Great Britain's industrial revolution, the rise of a working class, and the politics of labor will constitute another set of related themes. The course will also explore Victorianism and cultural developments in the nineteenth century. Other major topics will include British imperialism, the impact of two world wars, and the relationships among the component parts of the United Kingdom (Ireland, Scotland, Wales, and England). Writing process. 3 credits.

**10. The History of Modern France, 1750 to the Present.** A study of French history from 1750 to the 1980s. The course provides an overview of the political, social, economic, and cultural history of France from the late eighteenth to the late twentieth century. The course will address a variety of themes from the standpoint of France's place in European history as a whole but also in terms of the uniqueness of the French experience. Some of the themes covered by the course will include: France's revolutionary tradition; the development of a democratic society; the French pattern of gradual industrialization; the persistence of the French peasantry; the socialist movement and syndicalism; the evolution of the radical right; imperialism; French communism; intellectual movements in literature, philosophy and the arts; France and Europe in the post-war period; women in French society; and the role of minorities in France. The course will also examine the ways in which these themes relate to issues confronting contemporary France. 3 credits.

**12. History of Modern Germany.** An introduction to the historical, political, social and intellectual background of modern Germany. Discussion topics include the Congress of Vienna, the 1848 revolution, the first unification in 1871, the Weimar Republic, National Socialism and the division of Germany after World War II. Special attention will be paid to the unification process since 1989 and Germany's role in international politics. Offered in the Cologne program. 3 credits.

**15. The History of London.** This course will explore London history from Roman times to the 20th century with emphasis on London's traditions and accomplishments in terms of social, cultural, religious, political and technological change. 3 credits.

**217. *Women in Modern Europe, 1750 to the Present.*** An exploration of the position of women in Modern Europe from 1750 to the present. The course focuses around the tensions between women's difference and demands for equal treatment as this theme has played out through history. The course will begin with a discussion of gender in history and then proceed to examination of women in pre-industrial Europe, the French Revolution, the industrial revolution, nineteenth-century reform movements, feminism and the suffrage movement. Twentieth century themes include the "new" woman, women in communist Russia and under the fascist regimes, the impact of two world wars on women's roles, the welfare state, and finally, contemporary feminism. Writing process. 3 credits.

**226. *Age of Jefferson & Jackson.*** How the old republican ideal of a virtuous agrarian society struggled to confront the new age of economic modernization, social diversity and sectional tension. Writing process. 3 credits.

**240. *American Military History.*** An analysis of American military institutions from Old World tradition to the post-Persian Gulf era with emphasis on the U.S. Army. 3 credits.

**242. *The African-American Experience.*** This course is a survey of African-American history from the origins of slavery until the present. The course develops several inter-related themes such as slavery, protest movement and civil rights, economic history, and blacks in Pennsylvania. 3 credits.

**245. *Women in America.*** This course addresses the role and status of women in American society from the colonial period to the present. It emphasizes the ways that women's paid and unpaid labor has shaped their status and role in the family, society, and the economy. 3 credits.

**250. *The Historian's Craft.*** An introduction to the basics of historical research and writing. The most important goal of the course is to help students produce a clearly written research paper, with footnotes and a bibliography. A primary source paper and other writing assignments will prepare the students for the achievement of this goal. Class discussion will revolve around analysis of various types of primary sources, secondary sources, journal articles, issues of interpretation, and research methods. The course will also include several research trips to libraries, archives, historical societies, or local history collections. Prerequisites: at least one of the following: History 103, 104, 125, or 126; or permission of the instructor. Writing process. 3 credits.

**251. *History and Historians.*** The first half of this course covers the lives and ideas of the great historians from ancient times to the modern world; the second half of the course covers recent interpretations of American history. 3 credits.

**271. *Modern China and Japan.*** An analysis of political, economic and cultural institutions of China and Japan with special emphasis on the western impact on these institutions after 1500. Prerequisites: Sophomore standing or permission of the instructor. Foreign studies. 3 credits.



**273. *Modern Africa.*** This course surveys African history from the origins of humanity until the present. Students learn more about the modern period, particularly the effects of the slave trade, colonialism, and neocolonialism on Africa. Special emphasis is given to the genocides in the Congo Free State at the end of the nineteenth century and in Rwanda at the close of the twentieth. Prerequisites: Sophomore standing or permission of the instructor. Foreign studies. 3 credits.

**274. *Colonial Latin America.*** This course will cover Latin America from its prehistory to the end of independence movements in the 1820s. Topics will include early civilizations such as the Maya, Aztec, and Incas; the confrontation between the Amerindians and the European colonizers; the development of Latin American societies under Portuguese and Spanish rule; slavery; the colonial economy; and finally, independence movements. Prerequisites: Sophomore standing or permission of the instructor. Foreign studies. 3 credits.

**275. *Modern Latin America.*** Latin American civilization from the emergence of independent states, relationships with the United States and the modern regional distinctions. Prerequisites: Sophomore standing or permission of instructor. Foreign studies. 3 credits.

**277. *The Modern Middle East.*** Middle Eastern civilization from the rise of Islam to the present, with emphasis on the Arabian peninsula, the Fertile Crescent, Iran, Turkey and Egypt, particularly after 1914. The origins and development of the modern state of Israel are also analyzed. Prerequisites: Sophomore standing or permission of the instructor. Foreign studies. 3 credits.

**279. *Modern South Asia.*** Indian sub-continent civilizations from the 16th century to the present with emphasis on the impact of the Mughal empire, the impact of western colonial control, the crisis of the 19th and 20th centuries, the evolution of nationalism resulting in independence and partition and with major reference to the contemporary nations and cultures of India, Pakistan, Bangladesh and Sri Lanka. Prerequisites: Sophomore standing or permission of the instructor. Foreign studies. 3 credits.

**303. *History of South Africa.*** A seminar on the history of South Africa from the 1600s until the end of apartheid in the early 1990s. Topics include early colonization, conflicts between European settlers and natives and between the English and the Afrikaaner republics, the development of capitalism, the dynamics of black South Africans under apartheid, and the bloody struggle for and against national liberation in the early 1990s. Prerequisites: junior or senior standing or permission of the instructor. History 273 is recommended. Foreign studies. 3 credits.

**312. *The American Revolution.*** An in-depth study of why Americans declared their independence and how they won the Revolution and worked to build a republic in a hostile world of monarchies. Particular attention is paid to major issues on which historians of the period disagree. Writing process. 3 credits.

**315. *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. Writing process. 3 credits.

**360. *The Teaching of Citizenship Education in Secondary Schools.*** A course for those preparing to teach history, political science, economics, and geography at the secondary level. Topics include issues and trends in secondary education, history of historical pedagogy, professional development and course enrichment resources, teaching techniques, the uses of technology, and student motivational techniques. 3 credits. Required for all history majors seeking Citizenship certification. Does not count towards the major. {Cross-listed as Political Science 360.}

**400. *Internship.*** Field experience in a historical setting. Ordinarily intended for juniors and seniors. Prerequisite: GPA of 2.50 in major and permission of department chair. Minimum of three credits. 3-12 credits.

**499. *Senior Seminar in History.*** This course will focus on a theme in history such as World War I, the industrial revolution, or the Enlightenment. These topics will be approached from a variety of perspectives (economic, political, or social for example) and from the viewpoint of many national histories. Class meetings will include discussion of course readings, research methods, and the historiography related to the theme of the course. Students will write a research paper on some aspect of the course topic utilizing a variety of primary and secondary sources and present their research to the class. Prerequisites: Senior history majors or permission of the instructor. 3 credits.

## Political Science Program

Political scientists study government institutions and the political systems related to them. Students who major in political science take courses to give them a thorough understanding of the American political system, the political systems of other nations, and international politics. Twenty-four of the 39 credits in this major are taken in core requirements, and the remainder consist of elective credits chosen by students in accordance with their interests.

A degree in political science opens the door to a wide variety of careers. Political science majors have entered such professions as lawyers, high school and junior-high school teachers, college professors, journalists, law enforcement officers, business people, consultants, lobbyists, and government officials.

The political science major is an integral component of the pre-law, criminal justice, and Citizenship certification programs, as each program carries a heavy emphasis on political science courses.

### *Degree Requirements:*

*Degree:* Bachelor of Arts with a major in political science.

*Major:* ECN 101, 102; PSC 111, 112, 130, 210, 220, 498/499 and five additional elective courses in political science (39 credits).

*Minor:* PSC 111, 112, 130, 210, 220 and one elective course in political science (18 credits).

*Courses in Political Science (PSC):*

**100. Introduction to Political Science.** This course is designed as a broadly-based introduction to the discipline of political science. It will acquaint students with the concepts, structures, trends, and belief systems that form the basis of political activity throughout the world. Those taking the course will leave with an enhanced understanding of - if not appreciation for - the multiple ideologies, institutions, issues, and actors that shape and drive politics. 3 credits.

**111. American National Government I.** In this course we discuss the ideas that shaped the original American political system and the ways these ideas have developed. In addition, we examine important civil rights questions relating to freedom of speech, the press, and religion. The course also explores contemporary debates over equal rights (affirmative action) and privacy rights (abortion and sexual orientation). Finally, we look at the operations of interest groups and political parties and the processes by which candidates get elected to office. 3 credits.

**112. American National Government II.** In this course, we discuss the functions of the Presidency, the Congress and the federal courts. With this material learned, we examine various domestic, defense and foreign policy-making questions including debates over balancing the budget, welfare reform, defense strategies and U.S. relations with other nations. The course also includes an examination of state and local government. 3 credits.

**130. International Relations.** This course is designed to introduce students to the study of international relations. The course hinges on a series of questions: Who are the principal actors in the international system? What are the theoretical ways of discerning why these actors do what they do? How has the international system evolved into its present form? What are the central issues confronting the international system? Topics addressed include weapons of mass destruction, ecology, terrorism, political economy, development, and dependency. 3 credits.

**142. Statistics and Data Analysis.** This laboratory course explores the basic quantitative and qualitative statistics and data-based analytical methods used by scientists to interpret and understand behavior. Topics include the logic of the scientific method applied to data analysis, descriptive statistics, the foundations and utility of inferential statistics, and the statistical methodologies of simple and advanced hypothesis testing. Students will also design, analyze, and present the results of their own original data-collections project. 4 credits. {Cross-listed as Psychology 130.}

**160. The Political System of Germany.** This course introduces students to the political system of Germany, with emphasis on actual daily political events and the current political climate in Germany. Both foreign and domestic issues will be discussed, including topics such as the European Union, disarmament, unification, the environment and Neo-Nazism. Class time is divided between lecture and discussion of readings. Offered in the Cologne Program. 3 credits.

**210. Comparative Politics.** This course is a comparative study of the leading political systems of the world outside of the United States. The political status and evolution of these nations are examined and contrasted. Among the countries surveyed are Great Britain, France, Germany, Russia, Japan, China, Mexico, and Israel/Middle East. 3 credits.

**211. The Developing Nations.** 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 is emphasized. Country studies will include Nigeria, Mexico and the Philippines. Writing process. Foreign studies. 3 credits.

**220. Political Philosophy.** Students in this course study the development of western political thought from Classical Greece to modern times. This study is organized around some of the central questions of political thought (who should rule? why obey?) and encourages students to develop their own thinking on these questions. Writing process. 3 credits. {Cross-listed as Philosophy 220.}

**250. Public Policy Analysis.** This course describes the public policy process and analyzes various areas of substantive domestic policy at the national level. Topics covered include budgeting and taxation, education, health, welfare, and the environment. Prerequisites: PSC 111 and 112 or permission of the instructor. 3 credits.

**260. The Presidency and Congress.** This course will examine the Presidency and Congress as institutions and as policy-making agents of the federal government. It will focus on the necessary and frequently confrontational interaction between these two political branches of government with special emphasis on separation of powers doctrine and constitutional law. Prerequisites: PSC 111 and 112 or permission of the instructor. 3 credits.

**312. American Foreign Policy.** This course offers a two-part examination of American foreign policy. The first part will be an extensive survey of U.S. foreign policy from its inception as a nation through today. A critical theme will be the U.S. tradition of unilateralism, not isolationism. The second part will examine the policy-making process itself, focusing on the multiple actors and cross-cutting interests that comprise U.S. foreign policy decision-making. Writing process. 3 credits.

**315. American Constitutional Law I.** This course uses key cases to study important doctrines established by the Supreme Court with respect to the structure and functions of the constitutional system (judicial, legislative and executive power and federalism), There is a particular emphasis on various forms of textual interpretation used by individual justices to apply the Constitution in deciding cases and writing opinions. PSC 111 and 112 strongly recommended. 3 credits.

**316. American Constitutional Law II.** This course uses key cases to study important doctrines established by the Supreme Court with respect to civil rights, equality, property, and political rights, There is a particular emphasis on various forms of textual interpretation used by individual justices to apply the Constitution in deciding cases and writing opinions. PSC 111 and 112 strongly recommended. 3 credits.

**330. Electoral Politics.** The dynamics of the electoral process, with emphasis on presidential and congressional elections and the role of parties, public opinion and interest groups. 3 credits.

**330. State and Local Government.** Governmental institutions, characteristics of state and local political systems and the major inter-governmental problems in state and local relations with the federal government. 3 credits.

**360. The Teaching of Citizenship Education in Secondary Schools.** A course for those preparing to teach history, political science, economics, and geography at the secondary level. Topics include issues and trends in secondary education, history of historical pedagogy, professional development and course enrichment resources, teaching techniques, the uses of technology and student motivational techniques. 3 credits. Required for all political science majors seeking Citizenship certification. Does not count towards the major. {Cross-listed as History 360.}

**400. Internship.** Field experience in a Political Science environment. Prerequisite: GPA of 2.50 in major and permission of department chair. 3-12 credits.

**415. Foundations of American Law.** An historical survey of American legal development from colonial times to the present. The course is a supplement to Constitutional Law. Strongly recommended for pre-law students. Prerequisite: PSC 112. 3 credits.

**425. Executive Power.** This course will provide a comprehensive examination of the world's oldest and most controversial governing institution - the executive. The course structure will primarily comprise three component themes of inquiry: comparative democratic executive systems; philosophical definitions and prerogatives of executive power; and various electoral models of executive selection. 3 credits.

**498. Seminar in Politics.** This seminar allows junior and senior political science majors to pursue a research interest within a broad topic area prescribed for each semester the seminar is given. Students will present their work at an undergraduate research conference hosted by a regional university. Prerequisites: major in political science and junior or senior standing. Writing process. 3 credits.

**499. Seminar in World Politics.** This seminar allows junior and senior political science majors to pursue a research interest within the context of international politics. In addition to a substantive research paper on an international subject, students will track contemporary issues of the international community through weekly presentations and discussions. Among the likely topics are terrorism; weapons of mass destruction; globalization; ecopolitics; women's rights; and political economy, among others. Students will present their papers at an undergraduate research conference hosted by a regional university. Prerequisites: PSC 130 or permission of the instructor. Writing process. 3 credits.

## Criminal Justice Program

For students interested in the field of criminal justice (including police work, counseling juvenile offenders, court assistants, probation work and other areas), the courses listed below constitute the criminal justice program. The chairs of the Sociology and the History and Political Science Departments function as advisers for this program. Interested students should consult with one of these advisers.

### *Degree Requirements:*

There is no major or minor in criminal justice, but the program can be most easily combined with a major in political science or sociology. However, the program is not confined to majors in these areas.

The courses required are as follows: PSC 112,315,316,415; SOC 110,331,333; one of the following: SOC 271, SOC 272, SOC 278; six credits of PSC, PSY, or SOC. No courses may be taken pass/fail. (30 credits)

## Faculty

**James H. Broussard**, professor of history.

*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 formerly served as executive director of the Society for Historians of the Early American Republic.

**Griffin C. Hathaway**, assistant professor of political science.

*Ph.D., University of Maryland.*

He teaches courses in international relations, comparative government, U.S. foreign policy, and the American presidency. His research concentrations are comparative executive systems, separation-of-powers doctrine, and executive power. He provides political commentary on international and domestic policy issues for television, radio, and newspapers.

**John Hinshaw**, assistant professor of history.

*Ph.D., Carnegie Mellon University.*

He teaches courses on modern American history, black history, urban history, African history, world history, labor history, and specialized courses in race and ethnicity. He has written and edited books on the industrial revolution in world history, the steel industry and steel workers in Western Pennsylvania, and the labor movement in the United States.

**Tia E. Malkin-Fontecchio**, assistant professor of history.

*Ph.D., Brown University.*

She teaches courses on colonial and modern Latin America, and world history. Her teaching interests also include Brazil, Mexico, Chile, and Cuba. Her research focuses on education in twentieth-century Brazil.

**Rebecca K. McCoy**, associate professor of history. Chairperson.

*Ph.D., University of North Carolina at Chapel Hill.*

She teaches world civilization and specialized courses in European history. Her research focuses on the social, religious and political history of France from the seventeenth to the nineteenth century. Other teaching and research interests include the history of European women, the cultural and intellectual history of modern Europe, and the development of nationalism and national identity.

**John D. Norton**, professor of political science.

*Ph.D., American University.*

He teaches courses in American government, constitutional law, political philosophy and American politics. He contributes columns to local newspapers and appears as an analyst on radio and T.V. He is the pre-law adviser for the College. His professional and research interests are in the areas of American Constitutionalism, history of political thought and political journalism.

**P. Terry Baker**, adjunct instructor of history.

*M.Ed. Shippensburg University.*

He teaches American history and the teaching of history and social studies in the secondary schools. He also evaluates student teaching.

**Jean-Paul Benowitz**, adjunct instructor in history.

*M.A., Millersville University.*

He teaches American history. His research and teaching interest is on U.S. political history for the period since 1928, with particular focus on the Roosevelt-Truman and Kennedy-Johnson administrations. Related fields of interest include social, cultural, and diplomatic history for the period since 1945. He is completing a Ph.D. at Temple University.

**Diane E. Wenger**, adjunct assistant professor of American history and American studies.

*Ph.D., University of Delaware.*

She teaches American history and American studies. Her research interests include American material culture and American business history with an emphasis on the economic/ social history of the federal period.

# 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. The increasing national need for quantitatively prepared individuals makes our program even more attractive today. Actuaries, computer programmers, mathematics and computer science teachers, college professors, 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 are excellent preparation for numerous and varied areas of work and study.

The Department was cited in the Mathematical Association of America's 1995 publication, *Models that Work*, for its exceptional program and for its service to students. It offers majors in Actuarial Science, Computer Science and Mathematics; secondary teaching certification in Mathematics; and minors in Mathematics and Computer Science.

Departmental graduates have earned doctorates in economics, physics, statistics, and computer science as well as mathematics. Other graduates have completed law school. Many graduates have earned the designation of Fellow of the Society of Actuaries or the Casualty Actuarial Society.

Mathematical Sciences Department majors are active in student government, athletics, musical organizations and other activities. The Department is always well represented in the list of students named to *Who's Who in American Colleges and Universities*. There are two active student clubs, the Math Club and the Student ACM Chapter.

The Mathematical Science Department also directs the Computer Engineering track in the 3+2 Engineering Program. For details see Cooperative Programs on page 22.

## Mathematics Program

The Mathematics major is the cornerstone of the program in the Department of Mathematical Sciences. Each faculty member in the department has a doctorate in some area of mathematics. Operations Research analyst, computer support consultant, computer analyst and secondary school teacher are job descriptions of some recent graduates. Other graduates have chosen to use mathematics as preparation for graduate school in areas such as economics, management, operations research and statistics.

### *Degree Requirements:*

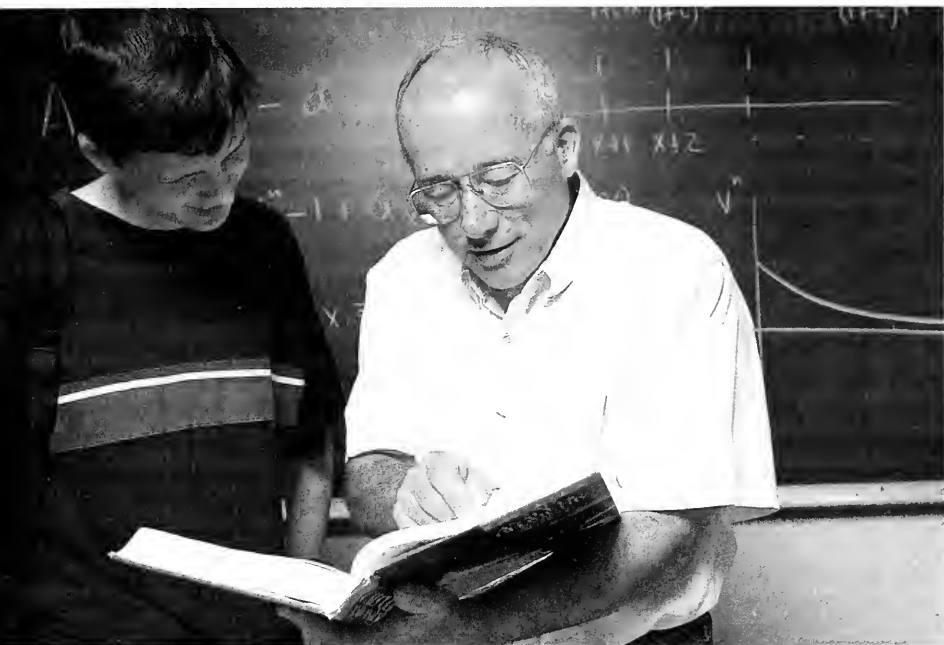
*Degree:* Bachelor of Science with a major in mathematics.

*Major:* MAS 111, 112, 113, 114, 202, 222, 251, 261, plus five (5) MAS courses numbered 200 or above; at least four of MAS 311, 322, 325, 335, 371, 372, 390; and at least one of MAS 311 or 322. A 400 level ASC course may substitute for 335 and ASC 385 may substitute for MAS 266 or MAS 270 (37 credits).

Mathematics majors are advised to take at least one computer science course or have equivalent experience.

*Minor:* MAS 161, 162, 222 and 251 or 202; three courses from CSC 144 or MAS courses numbered 200 or higher (21 credits).





Students may attempt any combination of double majors or major/minor within the Department of Mathematical Sciences. But, no course, except where required by number in both programs, may be used in more than one program.

*Secondary Teacher Certification:* Students seeking secondary certification in mathematics must complete: a mathematics major including MAS 270, 322, 325, and 360; CSC 144; EDU 110; and SED 430, 431, 440.

*Courses in Mathematics (MAS):*

**100. Concepts of Mathematics.** A study of a variety of topics in mathematics. Many introduce 20th century mathematics and most do not appear in the secondary school curriculum. 4 credits.

**102. Pre-Calculus.** A review of precalculus mathematics including algebra and trigonometry. 4 credits. A student may not receive credit for this course after completing MAS 111, 161, or the equivalent.

**111, 112. Analysis I, II.** A calculus sequence for department majors and other students desiring a rigorous introduction to elementary calculus. Prerequisite: placement testing or MAS 102; MAS 111 is a prerequisite for MAS 112. Corequisites: MAS 113, 114. 4 credits per semester. A student may not receive credit for both MAS 111 and MAS 161. A student may not receive credit for both MAS 112 and MAS 162.

- 113, 114. Introduction to Mathematical Thinking I, II.** An introduction to college mathematics for potential mathematical science majors. Prerequisite: placement testing or MAS 102. Corequisite: MAS 111,112. 1 credit per semester.
- 150. Finite Mathematics.** Introduction to mathematical techniques used in quantitative analysis in business and economics. Topics include sets, linear relations, matrices, linear programming, probability and interest. 3 credits.
- 161, 162. Calculus I, II.** A calculus sequence covering functions, limits, differentiation, integration and applications. Prerequisite: placement testing or MAS 102. MAS 161 is a prerequisite for MAS 162. 3 credits per semester. A student may not receive credit for both MAS 111 and MAS 161. A student may not receive credit for both MAS 112 and MAS 162.
- 170. Elementary Statistics.** An introduction to elementary descriptive and inferential statistics with emphasis on conceptual understanding. 3 credits. A student may not receive credit for MAS 170 after completing MAS 372. A student may not receive credit for both MAS 170 and MAS 270.
- 202. Foundations of Mathematics.** Introduction to logic, set theory, and proof techniques. Prerequisites: MAS 112 or MAS 162 and MAS 251. 3 credits.
- 222. Linear Algebra.** An introduction to linear algebra including systems of equations, vectors spaces and linear transformations. Prerequisite: MAS 112 or MAS 261. 3 credits.
- 251. Discrete Mathematics.** Introduction to mathematical ideas used in computing and information sciences: logic, sets and sequences, matrices, combinatorics, induction, relations and finite graphs. Prerequisites: MAS 112 or MAS 162. 3 credits.
- 261. Calculus III.** Multivariate calculus including partial differentiation, multiple integration, vector fields and vector functions. Prerequisites: MAS 112 or MAS 162. 3 credits.
- 266. Differential Equations.** An introduction to ordinary differential equations. Prerequisites: MAS 162 or 112. 3 credits.
- 270. Intermediate Statistics.** A more advanced version of MAS 170 intended for students with some calculus background. Similar to MAS 170 with more extensive content. 3 credits. A student may not receive credit for both MAS 170 and MAS 270.
- 311. Real Analysis.** Convergent and divergent series, limits, continuity, differentiability and integrability; Fourier series. Prerequisites: MAS 202, 222, 251. 3 credits.
- 322. Abstract Algebra.** Introduction to algebraic structures including groups, rings and fields. Prerequisites: MAS 202, 222, 251. 3 credits.
- 325. Geometry.** Axiomatic development of absolute, Euclidean and non-Euclidean geometries. Prerequisites: MAS 202, 222, 251. 3 credits.

**35. Operations Research.** Introduction to some operations research techniques including linear programming, queuing theory, project scheduling, simulation and decision analysis. Prerequisites: MAS 222, 251 or MAS 202. 3 credits.

**60. Teaching of Mathematics in Secondary Schools.** A course for secondary education mathematics majors introducing issues and trends in mathematics education, history of mathematical pedagogy, enrichment and professional development resources, teaching techniques and use of technology. Prerequisites: MAS 202, 222; junior standing; EDU 110. 3 credits.

**63. Numerical Computation.** A survey with topics from: finite arithmetic, root finding algorithms, numerical integration and differentiation, interpolation, systems of equations, splines, numerical solution of differential equations, simulation and optimization. Prerequisites: MAS 222, 251. 3 credits.

**71. Mathematical Probability.** A mathematical introduction to probability, discrete and continuous random variables, and sampling. Prerequisites: MAS 112 and either a B- grade in MAS 112 or junior standing. 3 credits.

**72. Mathematical Statistics.** An introduction to the mathematical foundations of statistics including sampling distributions, estimation, hypothesis testing, linear models and multivariate distributions. Prerequisites: MAS 371. 3 credits.

## Actuarial Science Program

Actuaries are business professionals who use expertise in mathematics, economics, finance and management to define, analyze, and solve financial and social problems. Actuaries are employed by insurance companies, consulting firms, pension/benefit consulting firms, large corporations, and federal and state government agencies. Actuarial credentials, which are earned after obtaining a bachelors degree, result from completing the rigorous education and examination program administered by either the Casualty Actuarial Society or the Society of Actuaries.

The Actuarial Science program at Lebanon Valley College was established in the 1960's and is coordinated by Professor Hearsey who is an Associate of the Society of Actuaries. With over 120 graduates working in the profession, including nearly 40 fellows and 30 associates, Lebanon Valley is recognized as having one of the leading undergraduate actuarial education programs in the East and the only full undergraduate program at a small liberal arts college.

The LVC actuarial curriculum is designed to help actuarial students prepare for the curricula of the professional actuarial societies initiated in the year 2000. The LVC program introduces students to material on the first four examinations in the Society of Actuaries and Casualty Actuarial Society examination programs.

The rigorous standards of the program, including the required passing of at least one actuarial examination, has resulted in a nearly 100% placement record of LVC actuarial science graduates in professional actuarial positions.

*Degree Requirements:*

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

*Major:* ASC 281, 385, 481, and one of 471, 472, 482; CSC 125 or 144; MAS 111, 112, 113, 114, 222, 261, 371, 372; ECN 101, 102, 201; ACT 151. (49 Credits) The Course 1/Part 1 or Course 2/Part 2 examination of the Society of Actuaries/Casualty Actuarial Society must be passed before senior standing is reached.

Students may attempt any combination of double majors or major/minor within the Department of Mathematical Sciences. But, no course, except where required by number in both programs, may be used in more than one program.

*Courses in Actuarial Science (ASC):*

**281. Introduction to Actuarial Science.** An introduction to risk management in property/casualty and life insurance with emphasis on probability concepts. Prerequisite: MAS 112. 3 credits.

**385. Mathematics of Finance.** Measurement of interest, time value of money, annuities, amortization and sinking funds, bonds, depreciation, capitalized cost and finance applications including net present value, yield rates, and stock and option pricing. Prerequisite: MAS 112. 3 credits.

**471. Regression and Time Series Analysis.** An introduction to regression and time series models with emphasis on economic applications. Prerequisite: MAS 372. 3 credits.

**472. Loss Distributions and Credibility Theory.** An introduction to loss distributions and credibility theory with emphasis on actuarial applications. Prerequisite: MAS 372. 3 credits.

**481. Actuarial Mathematics I.** Survival distributions, life insurance, life annuities, benefit premiums and reserves, multiple life and decrement models. Prerequisite: ASC 385. Corequisite: MAS 371. 3 credits.

**482. Actuarial Mathematics II.** Individual and collective risk models, compound distributions, including applications such as stop-loss reinsurance. Prerequisites: ASC 385, 481. 3 credits.

## **Computer Science Program**

Computer Science is the study of the automation of problem solving. Topics in this discipline range from the theoretical study of the nature of problems that can be solved by machine, to the design of machines to solve problems (computers), to techniques for implementing the solutions (computer programming).

At LVC, while our curriculum explores all of these topics, we have a clear emphasis on computer programming. The core of the program is a four-course sequence that explores the theory and practice of programming. This core, combined with a substantial mathematics

requirement, prepares motivated students for the advanced work that follows.

At the upper level, we present recent topics in the discipline via our Advanced Topics courses. The flexibility of this arrangement allows us to adapt quickly to this rapidly changing field, as well as to student and faculty interests. Independent study and internship courses allow further exploration of what is current in our discipline.

This well-designed and challenging curriculum has produced graduates with a nearly 100% placement rate in computer-related fields and graduate studies.

### *Degree Requirements:*

*Degree:* Bachelor of Science with a major in computer science.

*Major:* CSC 143, 144, 249, 282, 321, 344, two of 481 and 482 and 448, 400 or 500; ENG 100 or 216; MAS 111, 112, 113, 114, 222, 251, 270 (49 credits).

*Minor:* CSC 143, 144, 249, 282, and one CSC course numbered 300 or higher; MAS 111 or 161, 270 (21 credits).

Students may attempt any combination of double majors or major/minor within the Department of Mathematical Sciences. But, no course, except where required by number in both programs, may be used in more than one program.

### *Courses in Computer Science (CSC):*

**25. *Introduction to Computers as Tools.*** An introduction to the use of modern computing technology in the storage, organization, and retrieval of information. The course focuses on the use of the Internet, database concepts, social impact and ethical considerations. 3 credits.

**43. *Introduction to Computer Science.*** A broad introduction to the field of computer science. Topics covered include history, algorithms and problem solving, logic, hardware design, and programming. Intended for first-year computer science majors and others intending to take programming courses. Offered every fall semester. 3 credits.

**44. *Introduction to Programming with Java.*** Introduction to programming in Java. A student may not receive credit toward graduation for CSC 144 after completing CSC 249 or the equivalent. Offered every spring. 3 credits.

**49. *Advanced Programming with C++.*** Features of the C++ language. Classes, objects, pointers, libraries and projects with multiple modules. Prerequisite: CSC 144 or permission. 3 credits.

**82. *Data Structures.*** Lists, stacks, queues, trees, tables, networks. Prerequisite: CSC 249 or permission. 3 credits.

**21. *Survey of Computer Languages.*** Classification of languages and development environments, and experience with examples such as visual tools, ADA, Prolog, SmallTalk, LISP and SQL. Prerequisite: CSC 282. 3 credits.

**344. Computer Architecture with Assembly Language.** A study of the organization of computers. Topics include instruction sets, registers, memory, devices and interrupts. Prerequisite: CSC 249. 3 credits.

**448. Database Management.** Database structure and implementation. Prerequisite: CSC 282. 3 credits.

**481, 482. Advanced Topics in Computer Science I, II.** Topics to be selected from current areas of interest and concern in computer science. Possible topics include graphics, compiler construction, operating systems, networks and artificial intelligence. Prerequisite: CSC 282; MAS 251. Either course can be taken more than once for credit as long as the topics are different. 3 credits per semester.

## Faculty

**Christopher J. Brazfield**, assistant professor of mathematical sciences.

*Ph.D., University of Oregon.*

Brazfield teaches mathematics and computer science. He oversees the department website. His research interests are in the area of noncommutative algebra. He advises computer science and other department majors.

**J. Patrick Brewer**, assistant professor of mathematical sciences.

*Ph.D., University of Oregon.*

Brewer teaches mathematics. His graduate degree was earned in the area of algebra, and he is broadening his areas of expertise to include statistics and actuarial science. He is adviser for the Math Club. Professor Brewer advises mathematics and actuarial science majors.

**Michael D. Fry**, professor of mathematical sciences. Chairperson.

*Ph.D., University of Illinois.*

An avid practitioner of computer science and an accomplished mathematician. Trained as an algebraist, he has become a computer scientist as well with special interests in graphics, fractals, and applications of group theory. Professor Fry advises computer science majors.

**Bryan V. Hearsey**, professor of mathematical sciences. Coordinator, Actuarial Science Program.

*Ph.D., Washington State University.*

Hearsey is an Associate of the Society of Actuaries (ASA) and an active member of the academic actuarial community. He serves as the Society of Actuaries liaison representative to the Mathematical Association of America and is a member of the Joint CAS/SoA Academic Relations Committee. Although his original mathematics interest was topology, his primary interests are now with actuarial mathematics and finance. He advises actuarial science majors.

**David W. Lyons**, assistant professor of mathematical sciences.

*Ph.D., University of North Carolina at Chapel Hill.*

Lyons has broad mathematical interests in the areas of geometry, topology, algebra, and computer visualization. He teaches mathematics courses and advises mathematics majors. He also serves as master instructor and faculty advisor to the campus Tae Kwon Do Club.

**Mark A. Townsend**, professor of mathematical sciences.

*Ed.D., Oklahoma State University.*

Townsend is a winner of the Lindback Award for Distinguished Teaching. Trained as a numerical analyst, he has developed a wide range of other interests including introductory computer science. He advises mathematics majors interested in secondary education.

**Kenneth F. Yarnall**, associate professor of mathematical sciences. Coordinator, Computer Science Program.

*Ph.D., University of South Carolina.*

Yarnall has interests ranging from pure mathematics to computer science to history and philosophy of science. Trained as an analyst, he teaches both mathematics and computer science. He advises computer science majors. He is the advisor for the ACM student chamber, and he advises computer science majors.

**Timothy M. Dewald**, adjunct assistant professor of mathematical sciences.

*M.Div., Andover Newton Theological School.*

Dewald is interested in the history of mathematics and enjoys teaching all students especially those with math anxiety. He teaches elementary statistics. He has won the Knisely Teaching Award.

## MILITARY SCIENCE PROGRAM

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

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 will receive a commission as a second lieutenant in the United States Army, The U.S. Army Reserve or The Army National Guard, upon graduation. Then they will 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 Military Science Department, 717-245-1221 or 888-356-3942, for further information.

Program participants may take part in various enrichment activities during the academic year: rappelling, rifle qualification, leadership exercises, land navigation, orientation trips and formal social functions. Program participants may also apply for special training courses during the summer: airborne, air assault schools and cadet troop leader training.

*Scholarships:* Army ROTC offers four, three and two year scholarships, awarded strictly on merit, to the most outstanding students who apply. The scholarship is valued at \$17,000 a year. In addition to paying all or part of your tuition, the scholarship offers a stipend of \$250-400 a month plus \$600 a year for books. All scholarship recipients remain eligible for financial aid.

*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.

*National Advanced Leadership Camp:* The practicum consists of a five-week summer training program at Fort Lewis, Washington. NALC 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 NALC is required prior to commissioning and is normally attended between the junior and senior years. Participants receive room, board, travel expenses, medical care and pay.

### *Degree Requirements:*

*Requirements:* MIL 101, 102, 201, 202, 301, 302, 401, 402; HIS 240.

### *Courses in Military Science (MIL):*

**101, 102. Introduction to Military Science.** Emphasizes developing self-confidence and bearing. Instruction and weekly practical training in the basic skills of map reading, rappelling, weapons, communications, first aid, tactical movements, customs, courtesies, public speaking and leadership. Meets one hour per week. 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. 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 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. Prerequisite: Open only to Advanced Course cadets. 1 credit each semester.

## Faculty

**Mark N. Mazarella**, professor of military science.

*M.Ed., The Pennsylvania State University. Lieutenant Colonel, United States Army.*

Mazarella is the Commander of the Blue Mountain ROTC Battalion (which encompasses Lebanon Valley College, Dickinson College, Penn State Harrisburg and Millersville University) and he is the primary instructor for MSIV courses at Lebanon Valley College, Dickinson College and Penn State Harrisburg.

**Robin L. Duane**, senior military instructor.

*Master Sergeant, United States Army.*

Duane is the primary instructor for MSIII courses at Lebanon Valley College. He is a Special Forces Engineer Sergeant.

**Barry K. Farquhar**, instructor of military science.

*B.S., Troy State University. Major, United States Army.*

Farquhar is the primary instructor for MSI-MSII courses at Lebanon Valley College and Dickinson College. He is also the Operation Officer for the Blue Mountain ROTC Battalion.

## DEPARTMENT OF MUSIC

Students in the Department of Music may major in one of four areas: music, music business, music education or music recording technology. Each student in the B.A. (MUS or MBS), B.M. (MRT), or B.S. (MED) programs, is required to take a core of courses in music theory and music history. Each student also completes additional course work particular to his/her area of interest.

### Music Program

Music majors (except music business students) will exhibit proficiency at the piano and in voice, each to be determined by jury. Precise requirements for these proficiencies and the recital attendance requirement are found in the Department of Music Student Handbook. To prepare for proficiency juries, students can take MSC 510 and/or 520. Music majors will be in at least one major performing ensemble (identified as either Marching Band, Symphonic Band, College Choir, Concert Choir or Symphony Orchestra) each fall and spring semester. All students may earn up to 12 credits for ensemble participation. They will enroll in private study on their principal instrument/voice during each fall and spring semester.

Students registered for private instruction in the 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.

#### *Degree Requirements:*

The Bachelor of Arts in music (B.A.) is designed for those students preparing for a career in music with a strong liberal arts background. All B.A. candidates will take an hour lesson per week in their principal performance medium. Students in the jazz studies concentration will take 530 private applied and 530 jazz studies each semester to fulfill this requirement. The theory/composition concentration students will take 530 private applied and 530 individual composition each semester to fulfill this requirement. Concentrations identified in the Department of Music Student Handbook include: piano, organ, voice, instrumental, sacred music, jazz studies and theory/composition.

*Degree:* Bachelor of Arts in music. (MUS)

*Majors:* Core courses in three of the music degree programs are: MSC 099, 115, 116, 117, 118, 215, 217, 241, 242, 246 and 328. MSC 530 for B.S. and B.M. candidates, and MSC 540 for B.A. candidates. In addition, music majors will be in either MSC 601, 602, 603 or 604 each semester, exceptions noted previously.

*Music (B.A.):* Core courses plus: Piano concentration: MSC 216, 306, 316, 406 and 600; Voice concentration: MSC 216, 233, 326 and 327; Organ concentration: MSC 216, 316, 351, and 352; Instrumental concentration: MSC 216, 345, 403, 405 and 416; Sacred Music concentration: MSC 216, 347, 351 or 334, and 422; Jazz Studies concentration: MSC 201, 218, 416 and 500: Senior Project; Theory/Composition concentration: MSC 216, 315, 329, 416 and 500: Senior Composition Project.

*Minor:* MSC 099 (two semesters), 101, and three music literature courses from among the following: 100, 200, 201, 241 or 242. Minors also take MSC 530 for four semesters and must participate in a music ensemble for four semesters.

### *Student Recital*

Student recitals are of inestimable value to all music students in acquainting them with a wide range of the best music literature, and in developing musical taste and discrimination. Performing in a recital provides the experience of appearing before an audience and helps to develop self reliance and confident stage demeanor. Students at all levels of performance ability appear on regularly scheduled student recitals depending on their performance readiness and in consultation with the private teacher.

### *Courses in Music (MSC):*

**099. Recital Attendance.** Designed for music majors and minors and graded on a satisfactory/unsatisfactory basis. Music core course. 0 credits.

**100. Introduction to Music.** For the non-music major, a survey of Western music designed to increase the individual's musical perception. 3 credits.

**101. Fundamentals of Music.** For music minors and non-music majors, an introduction to the rudiments of music: notation, key signatures, theory, aural theory and so forth. 3 credits.

**110. Class Piano for Beginners.** 1 credit.

**111. Class Guitar for Beginners.** Student provides his or her own instrument. 1 credit.

**115. Music Theory I.** A study of the rudiments of music and their notation. Harmonization of melodies and basses with fundamental triads. Analysis. Music core course. 2 credits.

**116. Music Theory II.** A study of diatonic tonal harmony, including all triads and seventh chords, nonharmonic material and elementary modulation. Music core course. Prerequisite: MSC 115 or permission of the instructor. 2 credits.

**117. Aural Theory I.** The singing and aural recognition of intervals, scales, triads and simple harmonic progressions. Music core course. 2 credits.

**118. Aural Theory II.** A continuation of MSC 117, emphasizing clef reading, modality, modulation and more complicated rhythmic devices and harmonic patterns. Music core course. Prerequisite: MSC 117 or permission of the instructor. 2 credits.

**136. Survey of Music Education.** A first-year field experience with a classroom component. 1 credit.

**200. Topics in Music.** Designed primarily for the non-music major, the course will focus on genre and period studies. 3 credits.

- 201. American Music History.** A historical survey of American music emphasizing stylistic developments and illustrative musical examples from colonial times to the present. Includes American musical theater, jazz, folk and popular styles. Writing process. 3 credits.
- 215. Music Theory III.** A study of chromatic tonal harmony, including secondary dominants, augmented sixth chords, tertian extensions, altered chords and advanced modulation. Music core course. Prerequisite: MSC 116 or permission of the instructor. 2 credits.
- 216. Music Theory IV.** A study of 20th century compositional techniques, including modal and whole-tone materials, quartal harmony, polychords, atonality, serialism and various rhythmic and metric procedures. Prerequisite: MSC 215 or permission of the instructor. 2 credits.
- 217. Aural Theory III.** A continuation of MSC 118, emphasizing chromatic materials and more complex modulations, chord types, rhythms and meters. Music core course. Prerequisite: MSC 118 or permission of the instructor. 2 credits.
- 218. Jazz Theory.** A study of jazz theory, including notation, extended chords, improvisation and practice. Prerequisites: MSC 115, 116, and 215. 2 credits.
- 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. {Cross-listed as Elementary Education 220.}
- 223. Brass Methods.** A study of the brass family. Emphasis on pedagogical techniques. Mixed brass ensemble experience. 2 credits.
- 227. Percussion Methods.** A study of the percussion family. 1 credit.
- 233. Diction.** An introduction to the pronunciation of singer's English, German, French, Italian and Latin, utilizing the International Phonetic Alphabet. Required of voice concentration majors, the course is open to other students with permission of the instructor. 2 credits.
- 241. History and Literature of Music I.** A survey course in the history of Western music (in the context of world musics of various cultures), with emphasis on stylistic developments and illustrative musical examples, from early music through the Baroque era. Music core course. 3 credits.
- 242. History and Literature of Music II.** A survey course in the history of Western music (in the context of world musics of various cultures), with emphasis on stylistic developments and illustrative musical examples, from the classical period to the present. Music core course. 3 credits.
- 246. Principles of Conducting.** Principles of conducting and baton technique. Students conduct ensembles derived from class personnel. Music core course. 2 credits.



**380. Field Practicum in Music Education.** Optional supervised field experiences in appropriate settings. Required pass/fail. Prerequisites: EDU 110 and permission. 1-3 credit(s).

**306. Piano Literature.** A survey of the development of the piano and its literature with emphasis on piano methods books and related materials. 2 credits.

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

**316. 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.

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

**327. Vocal Pedagogy.** This course prepares the advanced voice student to teach private lessons at the secondary school level. Students 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 will be studied. 2 credits.

**328. 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. Music core course. 2 credits.

- 329. *Form and Analysis II.*** A study through analysis and listening of fugal forms, suite, complex sonata forms and techniques for analysis of certain contemporary styles of music. 2 credits
- 330. *Woodwind Methods.*** A study of the woodwind family. 2 credits.
- 331. *String Methods.*** A study of the string family. 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. *Choral Literature and Methods.*** A study of literature, materials and approaches appropriate for choral and general music classes in grades 6-12. Writing process. 3 credits.
- 335. *Instrumental Literature and Methods.*** A study of literature, materials, philosophy and methods applicable to the teaching of instrumental ensembles (including marching band) from elementary through high school levels. 3 credits.
- 336. *Music Education Field Practicum.*** Students are placed in schools one hour per week where they are involved in a teaching/learning environment. 1 credit.
- 345. *Advanced Instrumental Conducting.*** Emphasis on practical work with instrumental groups. Rehearsal techniques are applied through individual experience. Prerequisite: MSC 246 or permission of the instructor. 2 credits.
- 347. *Advanced Choral Conducting.*** Emphasis is on advanced technique with and without baton, score preparation, interpretation and pedagogy relating to choral organizations. Prerequisite: MSC 246 or permission of the instructor. 2 credits.
- 351. *Organ Literature.*** A historical survey of representative organ literature from earliest times to the present day. 2 credits.
- 352. *Organ Pedagogy.*** Designed with a practical focus, this course surveys various methods of organ teaching. Laboratory teaching and selection of appropriate technical materials for all levels are included. 2 credits.
- 401. *Instrument Repair.*** A laboratory course in diagnosing and making minor repair of band and orchestral instruments. 2 credits.
- 403. *Instrumental Pedagogy.*** A survey of teaching materials that relate to the student's performance area. Students may be expected to apply teaching procedures in a laboratory situation. 2 credits.
- 405. *Instrumental Literature.*** A survey of literature (solo and chamber) that relate to the student's performance area. 2 credits.

**06. 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.

**16. 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.

**22. Church Music Methods and Administration.** A course that acquaints students with the church music program. Includes the development of a choir program, methods and techniques of rehearsal, budget preparation, and committee and pastoral relationships. 3 credits.

**41. Student Teaching: Instrumental.** 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 at least 2.80 during the first six semesters (effective for students entering the program in the fall of 2002).
- 2) successful completion of piano and voice proficiency juries.
- 3) completion of music core courses and MSC 136, 216, 223, 227, 316, 330, 331, 333, 334, 335, 336, including field experiences, 345 or 347 and EDU 110.
- 4) approval of the music faculty. Students are responsible for transportation; the College cannot ensure that student teaching placement can be in a local geographic area. 8 or 4 credits.

**42. Student Teaching: Vocal.** Same as MSC 441. 8 or 4 credits.

**10. Class Piano Instruction.** Designed for music majors with minimal piano skills. Preparation for department piano proficiency requirements. 1 credit.

**20. Class Voice Instruction.** Designed for music majors with minimal vocal skills. Preparation for department voice proficiency requirements. 1 credit.

**30. Individual Instruction** (Voice, Piano, Orchestral and Band Instruments). 1 credit.

**40. Individual Instruction** (Voice, Piano, Orchestral and Band Instruments). 2 credits.

**00. Accompanying.** Under the guidance of a piano instructor the piano concentration student prepares accompaniments for recital performance. One credit per semester is given for one solo recital or two half recitals. A maximum of two credits, usually distributed over the last three years, may be earned. 1-2 credit(s).

## *Music Ensembles*

**601. Marching Band.** The principal band experience during the fall semester open to all students by audition. Performs for home football games. Practical lab experience for music education majors. One semester satisfies one unit of physical activity of the general education requirements. Satisfies large ensemble requirement. 1 credit.

**602. Symphonic Band.** The principal band experience during the spring semester, open to all students by audition. The Symphonic Band performs original literature and arrangements of standard repertoire. Satisfies large ensemble requirement. 1 credit.

**603. Symphony Orchestra.** Various 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. Open to all students by audition. Satisfies large ensemble requirement. 1 credit.

### **604. Concert Choir.**

Sec. 1. Open to all students by audition, the Concert Choir performs all types of choral literature. In addition to local concerts, the Choir tours annually. Satisfies large ensemble requirement. 1 credit.

### **604. College Choir.**

Sec. 2. Open to all students by audition, the College Choir performs all types of choral literature. Satisfies large ensemble requirement. 1 credit.

**605. Chamber Choir.** Open to all students by audition, the Chamber Choir performs chamber vocal literature from madrigals to vocal jazz. 1/2 credit.

### **610. Woodwind Ensembles.**

Sec. 1. Clarinet Choir. 1/2 credit.

Sec. 3. Woodwind Quintet. 1/2 credit.

Sec. 2. Flute Ensemble. 1/2 credit.

Sec. 4. Saxophone Ensemble. 1/2 credit.

### **615. Brass Ensembles.**

Sec. 1. Brass Quintet. 1/2 credit.

Sec. 3. Low Brass Ensemble. 1/2 credit.

Sec. 2. Tuba Ensemble. 1/2 credit.

Sec. 4. Trumpet Ensemble. 1/2 credit

**616. Percussion Ensemble.** 1/2 credit.

**620. String Ensemble.** 1/2 credit.

### **625. Jazz Ensembles.**

Sec. 1. Jazz Band. 1/2 credit.

Sec. 2. Small Jazz Ensemble. 1/2 credit.

### **630. Chamber Ensembles.**

Sec. 1. Guitar Ensemble. 1/2 credit.

**635. Handbell Choir.** 1/2 credit.



## Music Business Program

The Bachelor of Arts: emphasis in music business (B.A.) is a liberal-arts based music business curriculum which builds on the strengths of current programs in business and music.

### *Degree Requirements:*

*Degree:* Bachelor of Arts: emphasis in music business (MBS)

*Music Business (B.A.):* MSC 099 (4 semesters); 115, 116, 117, 241 or 242, 510 (1 semester), 530 (4 semesters), a music ensemble (4 semesters); MRT 177, 371, 372; MBS 370, 400, 401; ACT 161, 162; BUS 185, 285, 340, 371; and ECN 101.

### *Courses in Music Business (MBS):*

**70. Principles of Music Business.** Explores issues related to trends in and the scope of music business: music merchandising, music publishing (including copyrights, licensing, contracts, distribution, and so forth); unions, promotion and other management issues. Prerequisites: MRT 371 and 372 (taken in the sophomore year); BUS 340 and/or permission of the instructor. 3 credits.

**70. Internship.** Prerequisites: Completion of all program requirements and permission of the instructor. 3-12 credits.

**70. Music Business Seminar.** A senior, capstone experience. The focus will be on discussion, particularly of important issues raised by the internship experience. 1 credit.

## Music Education Program

The Bachelor of Science in music education (B.S.), approved by the Pennsylvania Department of Education and accredited by the National Association of Schools of Music, is designed for the preparation of public school music teachers, kindergarten through grade 12, instrumental and vocal. Piano and voice proficiencies for the music education major prepare the candidate to meet the standards of the Pennsylvania Department of Education and are administered by competency jury. 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. During the student teaching semester, the candidate is not required to register for recital attendance, private lessons or an ensemble.

### *Degree Requirements:*

*Degree:* Bachelor of Science in music education. (MED)

*Music Education (B.S.):* Core courses plus: MSC 136, 216, 223, 227, 316, 330, 331, 333, 334, 335, 336, 345 or 347, 416, 441, 442; EDU 110; PSY 120 (recommended), 180; and a 2.80 cumulative grade point average. Music education majors are permitted to register for only one half-hour lesson in their principal performance medium during the student teaching semester if they are preparing a recital. This is accomplished by petition.

## Music Recording Technology Program

The Bachelor of Music: emphasis in music recording technology (B.M.) is designed to prepare students for today's rapidly developing interactive media and music recording industries.

### *Degree Requirements:*

*Degree:* Bachelor of Music: emphasis in music recording technology. (MRT)

*Music Recording Technology (B.M.):* Core courses plus: MRT 177, 219, 277, 278, 370, 371, 372, 373, 374, 400 or 500, 473, 474; PHY 101, 102, 203, 212, 350; and MAS 102 (or MAS 161).

### *Courses in Music Recording Technology (MRT):*

**177. Survey of Music Recording Technology.** An introductory course in the field. 1 credit.

**219. Ear Training for Recording Engineers.** Critical listening skills are developed through class demonstration and ear-training exercises. Specific skills include hearing and discriminating frequencies, levels, processing, phase, etc. while listening musically to various production styles. Prerequisite: MRT 277. 1 credit.

**277. Recording Arts I.** Fundamentals of the recording arts including basic audio signal and acoustics theory, recording consoles, microphone design and technique, and signal processing. Students work in on-campus studios to complete lab assignments and projects. Prerequisite: PHY 102 or permission. 3 credits.

**278. Recording Arts II.** Multitrack studio production techniques are developed through class discussion, demonstration, and project assignments. Theory and application of MIDI technology and its integration into music production is emphasized. Students use the studios for assignments and individual projects. Prerequisite: MRT 277. 3 credits.

**370. Tonmeister Recording.** Students use the art of recording live ensembles, focusing on tonmeister recording techniques and philosophy. Prerequisite: MRT 278. 1 credit.

**371. Music Industry I.** Topics discussed include: how the music business operates, song-writing and music publishing, copyright law, music licensing, record companies and recording contracts. Writing intensive. 3 credits. Prerequisite: permission of the instructor.

**372. Music Industry II.** Topics discussed include: music merchandising, retail, entrepreneurship, promotion, advertising and distribution; music for telecommunications and new media. Prerequisite: MRT 371 or permission of the instructor. Writing process. 3 credits.

**373. Electronic Music.** An in-depth look at the history, use and development of electronic music. Emphasis in MIDI, sequencing, transcription, sound design, synthesis techniques, sampling and studio production integration. Prerequisite: MRT 278 or permission of instructor. 3 credits.

**374. Digital Audio Technology.** An in-depth examination of the principles and applications of digital audio in today's recording and interactive media industries. Topics discussed include: digital audio fundamentals, recording and reproduction systems theory, computer-based recording and editing, and audio for CD-ROM; and other new media applications. Prerequisite: MRT 278 or permission of instructor. 3 credits

**400. Internship.** Practical on-the-job experience provides students insight, exposure, and experience in an area of interest within the music/interactive media industry. Prerequisites:

MRT 382 and permission of the program director. 3 credits. The internship can be taken either in the last semester, in the summer between junior and senior years, or full-time in the last semester for 12 credits. A full-time internship, if all other coursework is completed, allows students to relocate for the term.

**MRT 373. *New Media Technology.*** The world of interactive media is explored. Students are exposed to a variety of multimedia technologies such as digital video, digital imaging, animation, 3-D modeling and authoring systems. Industry-standard software packages such as Director, Premiere, Photoshop, Hypercard, etc. are used for demonstrations and projects. Prerequisite: MRT 374 or permission of instructor. 3 credits.

**MRT 374. *Music Production Seminar.*** Advanced issues of music production are discussed and practiced. These include musicality, client relations, engineering, budgets, etc. An individual emphasis is provided to help the student focus on these technical, artistic, organizational and personal aspects. The course centers around completion of a major project. Prerequisite: MRT 374 or permission of instructor. 2 credits.

## Faculty

**Johannes M. Dietrich**, associate professor of music.

*D.M.A., University of Cincinnati College-Conservatory of Music.*

Dietrich teaches violin, viola and the music history sequence. He directs the Lebanon Valley College Symphony Orchestra, coaches chamber ensembles and performs solo recitals.

**Scott H. Eggert**, professor of music.

*D.M.A., University of Kansas.*

Eggert teaches music theory, aural theory, counterpoint and composition. He is active as a composer and has premiered major works on and off campus.

**Robert H. Hearson**, professor of music.

*Ed.D., University of Illinois.*

A low brass specialist, Hearson directs the bands, 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.

**Barry R. Hill**, associate professor of music.

*M.M., New York University.*

Hill is the director of the music recording technology program. A member of the National Academy of Recording Arts and Sciences, he has a significant background of experience including record production, interactive media, MIDI/electronic music, live reinforcement and studio/system design. He teaches music technology courses, supervises development of the on-campus studios and administers the internship program.

**Jeffery F. Kleinsorge**, assistant professor of music.

*Ph.D., Michigan State University.*

With degrees in composition and piano performance, Kleinsorge teaches music theory, aural theory, class piano and private lessons.

**Mary L. Lemons**, associate professor of music.

*Ed.D., University of Illinois at Urbana-Champaign.*

Coordinator of music education, she teaches music education methods courses, arranges and supervises music student teaching, and he advises the campus MENC student chapter.

**Mark L. Mecham**, professor of music. Chairperson.

*D.M.A., University of Illinois at Urbana-Champaign.*

His doctorate is in choral music, and he has experience in choral conducting, music education, and voice. Conductor of the LVC Concert Choir and Chamber Choir, Mecham also serves as adjudicator, clinician and consultant.

**Shelly Moorman-Stahlman**, associate professor of music.

*D.M.A., University of Iowa.*

Moorman-Stahlman teaches private organ and piano lessons, organ literature, organ pedagogy, and sacred music courses, and coordinates class piano instruction. She directs the handbell choir, performs frequently in solo organ recitals and advises the Sigma Alpha Iota chapter.

**Philip G. Morgan**, associate professor of music.

*M.S., Pittsburg State University (Kansas).*

Morgan teaches applied voice with specialization in vocal technique, vocal pedagogy and vocal literature. He performs frequently in solo recitals, oratorios and chamber recitals in the United States and Europe. He serves as vocal coach for Hershey Park's summer shows.

**Renee Lapp Norris**, assistant professor of music.

*Ph.D., University of Maryland.*

A musicologist by training, Norris teaches the music history sequence, American music history, topics courses, and form and analysis.

**Jeff Snyder**, assistant professor of music.

*M.S., Kutztown University.*

Snyder is assistant director of the music recording technology program. He has designed curricula and presented seminars in audio recording and MIDI for several artists, public schools, colleges, universities and technical schools. He has produced, engineered and been a session player on 20th century and commercial jingles, songs and recordings.

**Thomas M. Strohman**, associate professor of music.

*M.M., Towson State University.*

He is responsible for woodwind studies, jazz studies and directs the jazz ensembles. A founding member of the jazz ensemble "Third Stream," he has recorded for Columbia Artists.

**Dennis W. Sweigart**, professor of music.

*D.M.A., University of Iowa.*

Sweigart teaches applied piano and courses in keyboard harmony, form and analysis and piano pedagogy. He regularly performs as a soloist and as an accompanist.

**Susan Szydowski**, director of special music programs.

*B.A., Colby College.*

She has pursued graduate studies at Temple University.

**Joseph G. Bashore**, adjunct assistant professor of music.

*M.F.A., University of Iowa.*

An accomplished recitalist and accompanist, Bashore teaches class and applied piano.

**Severly K. Butts**, adjunct assistant professor of music.

*M.A., Michigan State University.*

A well-known soloist, orchestral musician, and teacher in the region, Butts teaches applied clarinet, clarinet literature, and pedagogy courses.

**Phyllis J. Drackley**, adjunct assistant professor of music.

*M.A., Marywood University.*

A well-known soprano soloist and teacher in the region, Drackley teaches class and applied voice.

**James A. Erdman II**, adjunct instructor in music.

Retired solo trombonist, "The Presidents 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 performs on the trombone and appears nationally as a soloist and clinician.

**Timothy M. Erdman**, adjunct instructor in music.

*B.S., Temple University.*

Formerly trumpet soloist, "The President's Own" United States Marine Band, Washington, D.C.; Erdman has been principal trumpet with the Harrisburg and Reading symphonies. Instructor of applied trumpet, he is a member of "Basic'ly Brass," a professional brass quintet.

**Paul Fierro**, adjunct assistant professor of music.

*M.M., Ohio University.*

A well-known pianist in the region, he teaches applied piano, class piano, introduction to music, and fundamentals of music.

**Suzanne D. Fox**, adjunct assistant professor of music.

*M.M., University of Miami.*

A well-known music educator and performer in the region, Fox teaches French horn.

**Emily Y. Frantz**, adjunct assistant professor of music.

*M.M.T., Temple University.*

Frantz is an oboist and full-time music therapist at Bethany Children's Home.

**Nevelyn J. Knisley**, adjunct associate professor of music.

*M.F.A., Ohio University.*

Knisley performs extensively as a piano soloist, accompanist and chamber music performer.

**Robin Lilarose**, adjunct instructor of music.

*B.S., Elizabethtown College.*

Lilarose is a professional flutist from the Reading area. She is a member of the FYVE Woodwind Quintet, Reading Pops Orchestra and so forth.

**James E. Miller**, adjunct instructor in music.

A member of the jazz ensemble "Third Stream," his teaching specialty is string bass and electric bass. He has played with several regional symphonies in the area.

**Joseph D. Mixon**, adjunct assistant professor of music.

*M.M., Combs College of Music.*

He is a professional guitarist in the tri-state area and teaches private lessons, class guitar, guitar ensemble and jazz theory.

**Robert A. Nowak**, adjunct assistant professor of music.

*M.M., University of Miami.*

He teaches percussion and directs the Percussion Ensemble.

**Laurie Haines Reese**, adjunct assistant professor of music.

*M.M., University of Southern California.*

An active recitalist, chamber music performer and member of the York Symphony Orchestra, she teaches private cello lessons.

**Andrew Roberts**, adjunct instructor of music.

*B.M., Berklee College of Music.*

He teaches applied piano and jazz studies; and is a composer, arranger, music director and keyboardist in the region.

**Victoria Rose**, adjunct assistant professor of music.

*M.M., Towson State University.*

Teaching class voice, private lessons and the College Choir, she is an active recitalist and oratorio soloist in Central Pennsylvania, Philadelphia and Baltimore.

**David Still**, adjunct instructor in music.

*B.S., The Pennsylvania State University*

He is an environmental acoustics engineer specializing in structural acoustics, roadway projects, etc. Still has a long track record as recording engineer, studio and facility designer, and producer, including Grammy-winning projects for Muddy Waters. He often teaches the musical acoustics and audio electronics classes for the music recording technology program.

**Julia P. Wagner**, adjunct assistant professor of music.

*M.A., Ithaca College.*

A professional bassoonist, Wagner plays with several regional symphonies.

**Michael Wojdylak**, adjunct assistant professor of music.

*D.D.S., University of Maryland.*

Wojdylak directs the college choir and teaches private voice lessons.

**Shelly Yakus**, adjunct instructor of music.

A 1999 inductee into the Rock and Roll Hall of Fame as a recording engineer for numerous hit albums (Alice Cooper, Blue Oyster Cult, Joe Cocker, Judy Collins, Chick Corea, John Lennon, Madonna, Stevie Nicks, Tom Petty, U2, and so forth), he team teaches the music production course in the music recording technology program.

# PHYSICAL EDUCATION PROGRAM

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

*Courses in Physical Education (PED):*

**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.

**113. Bowling.** Instruction in the techniques, etiquette, history and method of scoring. About eight weeks will be spent in league play.

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

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

**135. Racquetball.** Instruction in the tactics, techniques and different forms of competition used in racquetball.

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

**160. Swimming.** Beginning, intermediate and advanced instruction.

**162. Water Exercise.** Includes water-walking, water running and other aerobic water exercises for swimmers and non-swimmers. Utilizes water as resistance to improve strength and cardiovascular endurance.

**168. Life Guarding.** The primary purpose of the American Red Cross Lifeguarding program is to provide lifeguard candidates and lifeguards with the skills and knowledge necessary to keep the patrons of aquatic facilities safe in and around the water. After successfully completing the requirements of the course, students will be certified in:

Lifeguarding (3 year certification)

First Aid (3 year certification)

CPR for the Professional Rescuer (1 year certification)

**169. Water Safety Instructor.** This course is designed to provide students with the skills, knowledge and experience needed to become certified to teach the following Red Cross Swimming and Water Safety courses:

Infant and Preschool Aquatics Program (IPAP)

Levels 1 through 7 Learn to Swim Progression

Basic Water Safety

Emergency Water Safety

Water Safety Instructor Aide



**180. Team Sports.** Softball, volleyball and basketball, four to five weeks of each, emphasizing team concepts.

**185. Aerobic Kickboxing.** An aerobic class designed to teach the basics for safe and biomechanically correct kickboxing.

**190. Varsity Sports.** Participation in an intercollegiate varsity sport or cheerleading.

Students shall complete successfully two units of physical education selected from a list of approved activities. Students shall not satisfy the physical education requirement by taking the same activity unit twice. Students shall have a maximum of one physical education unit waived for successful completion of any of the following: one season of a varsity sport, one semester of marching band or one semester of military science (Army ROTC Cadets only). Students must sign up for the varsity sport course during the semester of their sport or activity.

## Faculty

**Allan G. MacCormack**, program director.

*M.S., Ithaca College.*

He is the coach of the ice hockey team and the director of the physical education program.

**O. Kent Reed**, associate professor of physical education.

*M.A. in Ed., Eastern Kentucky University.*

He instructs the fitness classes and utilizes body fat percentages, pulse rate and recovery, strength testing devices and workout charts. He also instructs bowling, racquetball and skiing and team activities such as softball and volleyball. Responsibilities in the athletic program are track and field (indoor and outdoor) and cross country.



# DEPARTMENT OF PHYSICAL THERAPY

## Health Science Program

This curriculum only shall be completed by students enrolled in the Physical Therapy Program. A minimum 3.0 GPA in all coursework is required. Students must also maintain a minimum GPA of 2.50 in the required science courses (biology, physics, and chemistry). Students may have no individual grade lower than a C in any prerequisite courses (courses may be repeated to meet this requirement).

Required pre-professional course work includes completion of the general education program and major requirements including nine credit hours in a cognate discipline of student interest.

### *Degree requirements:*

*Degree:* Bachelor of Science with a major in health science.

*Major:* BIO 111, 112, 113, 114, 221, 222 or 322; CHM 111,112,113,114; PHY 103,104; MAS 170 or 270, or PSY 130; PSY 112; PHT 200, 201, 401, 403, 410, 411, 412, 414, 423, 425, 426; SOC 110 or 120 (67 total credits).

No minor is offered in health science.

### *Courses in Health Science (PHT):*

**200. Health Care Professions and Systems.** Provides a comprehensive overview of a representative primary health care professional discipline and introduces students to health care organizations and systems. 3 credits.

**201. Health Care Terminology.** Examines terminology used by health care providers in clinical health care delivery. Explores medical word structure; terminology applicable to all body systems and medical abbreviations. 1 credit.

**202 Comparative Health Care Professions and Systems.** Students participating in the Study Abroad Program will complete a review of the US Healthcare system and the rehabilitation team, followed by a similar review of the Host country's Healthcare system and members and roles of the rehabilitation team. Students will also complete observation hours in several different clinical settings. 3 credits

**401. Foundational Sciences I (Anatomy).** Explores human neuromusculoskeletal, cardiovascular, and integumentary systems using cadaveric dissection. In-depth study of digestive, pulmonary, endocrine, genitourinary, and reproductive human systems. 5 credits.

**402. Professional Issues I.** Introduces professional-phase students to key professional ethical and practice issues. 2 credits.

**403. Sociocultural Aspects of Rehabilitation.** Examines culture: social construct, values, mores, customs, and folkways; the concept of disability; and cultural differences in approaches to health and rehabilitation. 2 credits.

**410. Foundational Science II (Exercise Physiology).** Examines skeletal muscle structure and function and cardiovascular, respiratory, and neuromusculoskeletal physiology related to physical activity and exercise in general and special patient/client populations. Includes the basics of therapeutic exercise. 4 credits.

**411. Foundational Science III (Movement Science).** Examines tissue and joint structure and function, and the mechanical principles involved in human motion. 3 credits.

**412. Foundational Science IV (Neuroscience).** Provides the student with a thorough understanding of the structure and function of the nervous system. 4 credits.

**413. Patient Care Management I.** Examines basic physical therapy practices, procedures, techniques, and wound management for the development of clinical practice skills. 4 credits.

**414. Critical Inquiry I.** Provides a critical appreciation of basic science, clinical, and grounded theory research to the evolution of physical therapy as an evidence based clinical health professional discipline. 3 credits.

**420. Cardiopulmonary Physical Therapy and Case Studies.** Examines the physical therapy management of individuals with cardiac and respiratory dysfunction. 4 credits.

**421. Orthopedic Physical Therapy.** Studies physical therapy patient/client examination, evaluation, diagnosis, prognosis, interventions, and outcomes related to musculoskeletal injury or disease. 4 credits.

**422. Orthopedic Case Studies.** Provides students an opportunity to apply didactic principles through case studies addressing specific orthopedic physical therapy patient/client presentations. 2 credits.

**423. Foundational Science V (Pathology and Medical Lectures).** Examines basic human pathology and medical principles, including but not limited to, inflammation, infection, systemic conditions, pain management, genetics, and clinical laboratory tests. 2 credits.

**424. Patient Care Management II.** Continues exploration of theory and practice of basic clinical physical therapy patient/client management psychomotor skills. 4 credits.

**425. Foundational Science VI (Pharmacology).** Examines pharmacological principles as related to physical therapy patient populations and practice specialties and concerns. 2 credits.

**426. Documentation Issues Seminar.** Addresses intermediate and advanced patient care documentation issues that affect clinical physical therapists. 1 credit.

**430. Orthotics and Prosthetics.** Provides a detailed examination of the physical therapy management of individuals requiring splinting or bracing, as well as, individuals with amputations requiring prosthetic devices. 2 credits.

**431. Clinical Practice I.** A six-week supervised clinical learning experience to provide students the opportunity to develop clinical competence in the physical therapy management of individuals. 3 credits.

**432. Clinical Practice II.** A six-week supervised clinical learning experience where students apply the knowledge and skills acquired in the academic portion of the curriculum to direct patient care. 3 credits.

## Faculty

**Claudia C. Gazsi**, assistant professor of physical therapy. Academic coordinator of clinical education.

*M.H.A., The Pennsylvania State University.*

She teaches patient care I & II and physical therapy administration and management. Her interests include fall reduction and balance and vestibular disorders.

**Roger M. Nelson**, professor of physical therapy. Chairperson.

*Ph.D., University of Iowa.*

His teaching interests include: Electrodiagnosis; patient outcomes and patient management modeling. His research interests include outcome modeling using activity based methodology and patient satisfaction.

**Stacey A. Ruch**, assistant professor of physical therapy.

*Ph.D., The Pennsylvania State University.*

She teaches human anatomy, neuroscience, exercise physiology, and pathology. Her research interests include the role of the lateral hypothalamus in taste-guided behaviors such as sodium appetite, conditioned taste aversion, and drug-induced avoidance.

**Ted Yanchuleff**, adjunct professor of physical therapy.

*M.P.A., The Pennsylvania State University.*

He teaches the pre-professional courses PHT 200 and 201, and Physical Therapy Administration and Management. His interests include wound care, aquatic therapy, orthopedics and sports medicine, and healthcare administration.

# DEPARTMENT OF PHYSICS

## Physics Program

Physics, the most fundamental science of the physical world, combines the excitement of experimental discovery and the beauty of mathematics. The program in physics at Lebanon Valley College is designed to develop an understanding of the fundamental laws dealing with motion, force, energy, heat, light, electricity and magnetism, atomic and nuclear structure, and the properties of matter.

Students major in physics as a preparation for professional careers in industry as physicists and engineers, and education as high school and college teachers. Other possibilities include technical writing, sales and marketing. Physics students can continue their professional training by going to graduate school in physics and engineering, or to other professional schools offering degrees in such fields as health physics and business.

The facilities of the Physics Department are located on the third and fourth floor of the Garber Science Center. In addition to the introductory physics laboratory, the department maintains an atomic force microscopy laboratory, optics laboratory, atomic physics laboratory, electronics laboratory and nuclear physics laboratory. Students majoring in physics also have the opportunity to use equipment (e.g., electron microscope and nuclear magnetic resonance spectrometer) maintained by other science departments.

Students majoring in physics take advantage of close contact with faculty, work as paid laboratory assistants, pursue independent study or research/internships, and participate in the local chapter of the Society of Physics Students. Summer research opportunities, supported by college funds or external grants, are available for physics students.

Students majoring in physics also have a unique opportunity for study abroad. A student can spend a semester as a physics student at Anglia Polytechnic University in England. This opportunity combines a continuing education in physics with the richness of an international experience.

The Physics Department also directs the 3+2 Engineering program. For details see Cooperative Programs, page 23.

### *Degree Requirements:*

*Degree:* Bachelor of Science with a major in physics.

*Major:* PHY 111, 112, (or 101, 102 or 103, 104 with permission), 211, 311, 312, 321, 322, 327, 328 and four additional semester hours above 211; MAS 161, 162, 261 and 266 or MAS 111, 112, 261 and 266. (43-47 credits)

*Minor:* PHY 111, 112 (or 101, 102 or 103, 104), 211, plus six credits in physics above 211; MAS 111 or 161. (21-23 credits)

*Secondary Teacher Certification:* Along with the major requirements, students seeking secondary certification in physics must take additional courses in education and the sciences. Contact the department for the courses required.

### *Courses in Physics (PHY):*

**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.

**101, 102. Fundamentals of 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. Emphasis and applications appropriate for music recording technology majors. 4 credits per semester.

**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.

**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: MAS 111 or 161. 4 credits per semester.

**120. Principles of Astronomy.** An introduction to the forces that shape the solar system and the universe as well as the tools used to observe them. It presents a comprehensive review of the modern scientific view of the physical universe. Topics include the history of astronomy, astronomical technology, and the structure and evolution of astrophysical systems including the solar system, Sun, other stars, and galaxies. Laboratory work required. 4 credits. {Cross-listed as Earth and Space Science 120.}

**203. Musical Acoustics.** The study of wave motion, analysis and synthesis of waves and signals, physical characteristics of musical sounds, musical instruments, the acoustical properties of rooms and studio design principles. Prerequisite: PHY 102, 104 or 112 or permission. 3 credits.

**211. Atomic and Nuclear Physics.** An introduction to modern physics, including special relativity, the foundation of atomic physics, quantum theory of radiation, the atomic nucleus, radioactivity and nuclear reactions, with laboratory work in each area. Prerequisite: PHY 102, 104 or 112, MAS 111 or 161 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 102, 104 or 112, or permission 4 credits.

**261. Introduction to Computational Physics.** An introduction to the approximate numerical solution of physical problems with computers. The course focuses on problems from mechanics, electromagnetics, and quantum mechanics that are not analytically solvable. Topics include realistic projectile motion, planetary motion, and electromagnetic fields produced by charge and current distributions. Prerequisites: PHY 102, 104, or 112 and MAS 111 or 161. 3 credits.

**302. Optics.** A study of the physics of light, with emphasis on the mathematics of wave motion and the interference, diffraction and polarization of electromagnetic waves. The course also includes geometric optics with applications to thick lens, lens systems and fiber optics. Prerequisites: PHY 112 and MAS 112. 3 credits.

**304. Thermodynamics.** A study of the physics of heat, with emphasis on the first and second laws of thermodynamics. Applications of thermodynamics to physics and engineering are included. Elements of kinetic theory and statistical physics are developed. Prerequisites: PHY 112 and MAS 112. 3 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 MAS 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 MAS 266. 3 credits per semester.

**327, 328. Experimental Physics I, II.** Experimental work selected from the areas of mechanics, AC and DC electrical measurements, optics, atomic physics, and nuclear physics, with emphasis on experimental design, measuring techniques and analysis of data. Prerequisite: PHY 211. PHY 328 is writing process. 1 and 2 credits per semester.

**350. Audio Electronics.** A study of electronics as used in the audio and telecommunications industries. Various principles of signals including frequency, bandwidth, modulation and transmission are discussed. Studio maintenance and repair techniques are emphasized. Laboratory work included. Prerequisite: PHY 212. 3 credits.

**360. 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.

**421, 422. Quantum Mechanics 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 MAS 266, or permission. 3 credits per semester.

**428. Advanced Instrumentation.** Theory of operation of the atomic force microscope, the scanning electron microscope and nuclear magnetic resonance spectrometer. Through laboratory exercises and experimental work, students will learn the proper use and application of these instruments. Prerequisites: PHY 327 or permission (advanced students in the sciences or technical fields are encouraged to consider this course). 1 to 3 credits.

## Faculty

**Michael A. Day**, professor of physics.

*Ph.D., University of Nebraska.*

He has two doctorates: one in physics, one in philosophy. His publications are in theoretical physics (specializing in anharmonic solids), the philosophy of science and the teaching of physics. Day also worked for Shell Oil as a geophysicist. He recently spent one year teaching in China. In 1999, he received the Vickroy Award for distinguished teaching.

**Thomas G. Hollingsworth**, adjunct instructor in physics.

*M.S., Gonzaga University.*

He is a retired USAF Command Pilot with extensive experience in aviation. He manages a variety of the departmental outreach programs and is a member of the Hershey School Board. His interests include secondary education, introductory college physics and atomic force microscopy.

**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. Recently, Hurst was awarded an NSF grant in atomic force microscopy.

**Scott N. Walck**, assistant professor of physics.

*Ph.D., Lehigh University; postdoctoral research, University of Rochester and Naval Research Laboratory.*

He enjoys mathematical physics and quantum mechanics. Walck studies quantum information theory, particularly the theory of quantum entanglement, and collaborates with students in this research. The aesthetic appeal in mathematical descriptions of physical reality drives his interest in physics.

## Earth and Space Science Program

Two courses in earth and space science are offered to acquaint students with the physical aspects of the world in which they live and to introduce them to earth and space science as a discipline. These courses are recommended for all students who wish to broaden their understanding of the world.

*Courses in Earth and Science (ESS):*

**10. Principles of Geology.** An introduction to the dynamic Earth and the interrelations of both the internal and external processes which shape it. This course offers an overview of the history and evolution of Earth in the context of plate tectonics. It explores the nature of volcanoes, earthquakes, mountain building processes, weathering, erosion, and the various origins and compositions of Earth materials. Opportunities for hands-on inquiry are provided for the student in both the laboratory and in the field. 4 credits.

**120. Principles of Astronomy.** An introduction to the forces that shape the solar system and the universe as well as the tools used to observe them. It presents a comprehensive review of the modern scientific view of the physical universe. Topics include the history of astronomy, astronomical technology, and the structure and evolution of astrophysical systems including the solar system, Sun, other stars and galaxies. Laboratory work required. 4 credits. {Cross-listed as Physics 120.}

## DEPARTMENT OF PSYCHOLOGY

The Psychology Department at Lebanon Valley College seeks to foster the development of a thoughtful, flexible, and scientific approach toward human behavior, guided by critical analyses of empirical research. Our curriculum is a student-oriented, liberal arts program that prepares students, following graduation, for applied entry positions in the work force, or for graduate studies in a range of areas such as psychology, neuroscience, social work, medicine, business, education, and law. The program allows our students to arrive at a thorough understanding of processes underlying behavior, with a broader goal of applying this knowledge to one's own life and society in general. This goal is consistent with the mission of the College, which is to enable "students to become people of broad vision, capable of making informed decisions and prepared for a life of service to others."

The Department offers students the benefits of a strong classroom-based traditional background in a variety of behavioral sub-disciplines, along with providing opportunities to become involved in the field of psychology in an applied manner. Many psychology majors gain practical knowledge through (a) participation in independent and collaborative research projects under the guidance and supervision of individual faculty members, as well as (b) our extensive internship program, which allows students to receive college credit for work experience relevant to their particular interests within the field of psychology. Overall, the Department of Psychology at Lebanon Valley College offers the 'best of both worlds': experiences and facilities usually associated only with larger universities, along with individualized instruction and advisement characteristic of small liberal arts institutions.

### Psychology Program

The Psychology program requires all majors to complete a minimum of 42 credits of psychology coursework. All majors initially complete several "Foundation" courses, which include introductions to a vast array of subfields within Psychology, as well as laboratory-based exposure to the nature of research design and analysis. Students then complete courses within each of 5 critical psychological "Subdisciplines" (human development, psychopathology, biopsychology, cognition, and social processes), which include additional, advanced, lab-based research. Finally, all majors complete an integrative "Capstone Experience," which includes coursework surveying the history of psychology, as well as the completion of an individualized internship or research project.

#### *Degree Requirements:*

*Degree:* Bachelor of Science with a major in psychology.

*Major:* PSY 111, 112, 120, 130, 199, and 443; one course from 400, 410, or 420; 6 credits at the 200-level or higher. Students must also complete one 300-level 2-course lab sequence from one of the following 5 core areas, plus one 3-credit course from each of the remaining 4 core areas: biopsychology: 378/379, 280, 285; cognition: 363/364, 250, 260; human development: 324/325, 230, 235; social processes: 346/347, 240, 245, 247; psychopathology: 332/333, 265, 268.





*Minor:* PSY 111, 112, 120, and 130; 6 credits at the 200-level or higher; 3 credits at the 300-level.

*Courses in Psychology (PSY):*

**105. 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. This will be a pass/fail course for all students. 3 credits.

**111. General Psychology I.** This survey course examines the relationship between research and theory in the field of psychology. A brief review of the history of psychology allows students to understand the evolution of the discipline. The remainder of the course provides an overview of the basic research areas of psychology, including physiological psychology, sensation and perception, learning and memory, language and cognition, and human development. 3 credits.

**112. General Psychology II.** This survey course examines the relationship between research and theory in the field of psychology, with emphasis on the field of applied psychology. Individual and societal influences on physical and psychological health will be examined. Topics will include psychological testing, personality theory, intelligence, motivation and emotion, social behavior, and psychological disorders and treatment. 3 credits.

**120. Introduction to Experimental Psychology.** An introduction to psychology as a science, emphasizing laboratory research. Students complete literature reviews, design and

conduct a psychological experiment, perform data analysis and interpretation, and review scientific ethics. In addition, subdisciplines of psychology, and methodology specific to each, are explored. Writing process. 4 credits.

**130. Statistics & Data Analysis.** This laboratory course explores the basic quantitative and qualitative statistics and data-based analytical methods used by scientists to interpret and understand behavior. Topics include the logic of the scientific method applied to data analysis, descriptive statistics, the foundations and utility of inferential statistics, and the statistical methodologies of simple and advanced hypothesis testing. Students will also design, analyze, and present the results of their own original data-collection project. 4 credits. {Cross-listed as Political Science 142.}

**180. Child Development & Education.** A survey of major ideas in child development and educational psychology, with an emphasis on classroom applications. Topics include human development, intelligence, language, learning, memory, motivation, social and cultural contexts of development, and assessments. 3 credits.

**199. Sophomore Seminar.** This course is designed to assist psychology majors in developing skills that will help them be more successful in future academic and work settings. The subjects to be covered include current research in psychology and related fields, how to improve writing skills, how to prepare for a career in psychology, how to apply to a graduate program, how to study for the GRE, how to choose internship sites and similar topics. This will be a pass/fail course for all students. 1 credit.

**230. 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, identity and self-concept, sexual development, values, and transition to adulthood. Prerequisites: PSY 111, 112, 120, or 130. 3 credits.

**235. Psychology of Adult Development and Aging.** A study of research, literature, and theories concerned with psychological change in the adult, from early adulthood to death. Current research methods and findings are covered in the areas of physical, cognitive, personality, and social changes in the adult years. Prerequisites: PSY 111, 112, 120, or 130. 3 credits.

**240. Organizational Psychology.** Psychological principles applied to organizational behavior. Topics include individual factors (personality, attitudes, perceptions), group dynamics, personnel selection and training, communication, leadership, ergonomics and organizational change. Prerequisites: PSY 111, 112, 120, or 130. 3 credits.

**245. Personality.** A study of the major theories of personality, with emphasis on psychoanalysis, humanistic psychology, behaviorism, social learning, and trait theory. Prerequisites: PSY 111, 112, 120, or 130. Writing process. 3 credits.

**247. Psychological Perspectives on Gender.** This course is designed to address a broad spectrum of issues related to the psychology of gender. Of central importance is the examination of empirical findings related to gender differences and similarities in biological, behavioral, cognitive, social, and emotional domains. The course will also involve a critical examination of the meaning of gender in the field of psychology and in the broader society. Prerequisites: PSY 111, 112, 120, or 130. 3 credits.

**248. Health Psychology/Behavioral Medicine.** This course is designed as an introduction to health psychology/behavioral medicine. It will consider the role of psychology in the health field, including medical settings. It covers the relationship between psychological factors and physical disease from predisposition through maintenance. The study of behavioral medicine will include treatment of stress and stress-related disorders, preventive health behaviors and factors related to adherence of treatment programs. It also explores the psychological connections of pain and pain management, and how personal control is related to both health and the disease process. Prerequisites: PSY 111, 112, 120, or 130. 3 credits.

**250. Sensory and Perceptual Processes.** Surveys structures and functions of, and research strategies to examine, the various sensory systems with particular emphasis on the visual system. Physiological, psychological and philosophical aspects of perception are discussed. Prerequisites: PSY 111, 112, 120, or 130. 3 credits.

**260. Learning and Memory.** This course explores various processes involved in knowledge acquisition, storage, and retrieval. Specific topics include associative learning mechanisms, the impact of reinforcement and punishment on behavior, generalization and discrimination, memory encoding, long-term memory storage and retrieval, memory distortions, and the sources of individual differences in learning and memory. Prerequisites: PSY 111, 112, 120, or 130. 3 credits.

**265. 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 111, 112, 120, or 130. 3 credits.

**268. 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 111, 112, 120, or 130. 3 credits.

**280. Introduction to Neuropsychology.** This course serves as an introduction to the content areas and methodology of neuropsychology, the study of the relationships between brain function and behavior. Topics include basic communication in the nervous system, organization and function of sensory and motor systems, hemispheric specialization, localization of function, brain injury and plasticity, and issues associated with neuropsychological assessment. Prerequisites: PSY 111, 112, 120, or 130. 3 credits.

**285. Introduction to Psychopharmacology.** This course surveys the most commonly used substances to treat mental disorders, such as antianxiety, antidepressant, antipsychotic, mood-stabilizer, psychostimulant, and cognitive enhancer medications. The course also discusses the brain and its most common neurotransmitters, how transmitting neurons send and receive electrochemical information, the pharmacokinetics (metabolism and elimination) and pharmacodynamics (absorption, distribution, and effects) of each drug, as well as the action sites, side effects, and mechanisms of each drug. Prerequisites: PSY 111, 112, 120, or 130. 3 credits.

**290-298. Special Topics.** 1-6 credits.

**324. Psychology of Child Development.** This course provides a broad foundation for understanding child development through an integration of practical, theoretical, and research orientations. Attention is given to both cultural and biological determinants of social, cognitive, physical, and emotional development, focusing on individual differences as well as group similarities. Prerequisites: PSY 111, 112, 120 and 130, or permission of the instructor. 3 credits.

**325. Child Development Laboratory.** The course will provide students with experience planning (including IRB approval), observing, measuring, and analyzing child behavior using the methods employed by developmental researchers. This is intended to supplement the theory and research background they receive in PSY 324. Prerequisites: PSY 111, 112, 120, and 130; students must also have either completed or be currently enrolled in PSY 324. 1 credit.

**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. Prerequisites: PSY 111, 112, 120 and 130, or permission of the instructor. 3 credits.

**333. Psychological Testing and Assessment Laboratory.** Students will be given the opportunity to experience how psychological tests are designed and evaluated. Each student will conduct a literature review on their selected topics, and then design, construct, distribute, and evaluate the validity/reliability of a psychological test instrument consistent with a research theme that will change every year. Prerequisites: PSY 111, 112, 120, and 130; students must also have either completed or be currently enrolled in PSY 332. 1 credit.

**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 111, 112, 120 and 130, or permission of the instructor. 3 credits.

**347. Social Psychology Laboratory.** This course is intended to provide students with hands-on experience in the types of survey design, observational research, and lab-based

experimentation consistent with group behavior, interpersonal relationships, and the interaction between social issues and popular culture. The course culminates in the presentation of data from students' original research within social psychology. Prerequisites: PSY 111, 112, 120, and 130; students must also have either completed or be currently enrolled in PSY 346. 1 credit.

**363. Cognitive Science.** This course explores the human mind by integrating philosophical, psychological, and biological perspectives on the nature of thought processes. Specific topics discussed in this framework include attention, perception, consciousness, memory, language, reasoning, intelligence, and thought-related dysfunctions. Prerequisites: PSY 111, 112, 120 and 130, or permission of the instructor. 3 credits.

**364. Cognitive Science Laboratory.** This is an advanced, hands-on seminar in cognitive science, which will allow students to explore a preferred interest in human thinking via laboratory research. Students will review the literature on their chosen topic, design an experiment addressing this issue, and then collect and analyze the data from their experiment. The course culminates with an oral and written presentation of their research. Prerequisites: PSY 111, 112, 120, and 130; students must also have either completed or be currently enrolled in PSY 363. 1 credit.

**378. Physiological Psychology.** A study of the biological basis (substrates) of behavioral processes. The course focuses on the physiology of reflexes, sensation and perception, learning and memory, sleep, ingestive behaviors, emotion and psychopathology. Prerequisites: PSY 111, 112, 120 and 130, or permission of the instructor. 3 credits. {Cross-listed as Psychobiology 378.}

**379. Physiological Psychology Laboratory.** Students will be introduced to methods used in the study of the nervous system and its influence on behavior. Lab work will include collecting, analyzing, and reporting data from physiological studies, as well as sheep brain dissection and stereotaxic neurosurgery. In addition, students must complete an APA style proposal for an individual research project. Prerequisites: PSY 111, 112, 120, and 130; students must also have either completed or be currently enrolled in PSY 378. 1 credit.

**400. Internship.** This course focuses on practical and professional work experience related to the student's work or research interests or graduate school plans. Internships are limited to off-campus sites only. Students should not take more than six credits per semester. This will be a pass/fail course for all students. Prerequisites: PSY 111, 112, 120, 130, and at least 6 completed credits at the 200 level or higher; overall GPA of at least 2.5; completion of departmental form; approval of internship site by student's adviser prior to registration. 1-12 credits.

**410. Independent Laboratory Research.** This advanced seminar allows students to explore their own research-based interests in psychology via the completion of a laboratory experiment on a psychological topic of their choosing. Students will review the literature on their topic in an integrative manner, formulate a novel experiment that addresses some aspect(s) of their chosen discipline, collect and analyze data for their experiment.

and then present their findings in the form of a conference-style oral presentation and a complete APA-style research manuscript. Prerequisites: PSY 111, 112, 120, 130, at least 6 completed credits at the 200 level or higher, and a meeting with the course instructor prior to the start of the semester to begin discussing possible research topics. 3 credits.

**420. Independent Reading.** This is an advanced seminar in psychological science, where all students will research topics on the same specified theme, selected by the instructor (this theme will be different with each offering of the course). Students will produce an integrative literature review of their issue and develop some conclusions about their topic, then present their insights in both oral and written forms. Prerequisites: PSY 111, 112, 120, 130, at least 6 completed credits at the 200 level or higher, and a meeting with the course instructor prior to the start of the semester to begin discussing possible research topics. 2 credits.

**443. History and Theory.** A study of the history of psychology, including philosophical precursors to psychology, early and modern schools of thought within psychology, important trends, and famous psychologists. Prerequisites: PSY 111, 112, 120, 130, and at least 6 completed credits at the 200 level or higher. Writing process. 3 credits.

## Faculty

**Salvatore S. Cullari**, professor of psychology. Chairperson.

*Ph.D., Western Michigan University.*

His teaching interests are in clinical and abnormal psychology, personality, and creativity. His current research areas are in the study of schizophrenia and the study of eating disorders.

**Deanna L. Dodson**, associate professor of psychology.

*Ph.D., University of Memphis.*

Her teaching interests are in psychobiology and experimental psychology. Her current research areas include hemispheric specialization and handedness, and developmental patterns in lateralization.

**Barry X. Friedman**, assistant professor of psychology.

*Ph.D., University of Texas, Austin.*

His teaching interests include evolutionary psychology, psychology of human mating, psychology of gender, and experimental psychology. His research focuses on the evolved psychological mechanisms that underlie romantic relationships. He is also interested in the evolution and development of menopause, and the psychological changes that accompany it.

**Kerrie D. Laguna**, assistant professor of psychology.

*Ph.D., University of Nebraska-Lincoln.*

Her teaching interests include child and lifespan developmental psychology, and educational psychology. Her research interests include cognitive aging, technology and older adults, and worry and regret across the life span.

**Louis B. Laguna**, assistant professor of psychology.

*Ph.D., University of Nebraska-Lincoln.*

His teaching interests are in clinical, community, experimental, and forensic psychology, and psychopharmacology, and he also supervises internship students. His research interests involve anxiety disorders, cognitive behavioral therapy, and clinical applications of biofeedback.

**Louis Manza**, associate professor of psychology.

*Ph.D., City University of New York.*

His teaching interests include cognitive processes, research design and analysis, the history of psychology, and paranormal phenomena. His research interests focus on the development of pseudoscientific beliefs, as well as implicit learning and memory.

**Martha T. Brod**, adjunct assistant professor of psychology.

*Ph.D., Fordham University.*

Her interests include counseling psychology and developmental and educational psychology.

**David C. Evans**, adjunct instructor of psychology.

*M.Ed., Rutgers University.*

His teaching interests are career counseling and planning, and he is Director of Career Planning and Placement at LVC.

**Anne H. Hohenwarter**, adjunct instructor of psychology.

*M.S., Millersville University.*

Her teaching interests focus on learning disorders, and she is the Coordinator of the LVC Office of Disability Services.

**David E. Holden**, adjunct instructor of psychology.

*M.A., Kutztown University.*

His teaching interests include introductory psychology, career counseling, and organizational psychology. He is also interested in counseling psychology, bio-behavioral health, and performance enhancement. He is the Senior Program Developer at the Outreach Office of Program Development at Penn State University.

**Richard J. Tushup**, adjunct assistant professor of psychology.

*Ph.D., University of Delaware.*

His teaching interests are in experimental, neuropsychology, and abnormal psychology. He is a staff psychologist at a local Veterans Administration hospital.

## DEPARTMENT OF RELIGION AND PHILOSOPHY

A major in religion or philosophy may be combined with a major or minor in another subject. Many majors go on to advanced study in graduate or professional schools and seminaries. Our graduates have pursued a wide variety of careers in education, law, ministry and business.

### Religion Program

The study of religion is designed to give students insight into the meaning of the religious dimension of human experience. Course work in religion introduces students to the various historical and contemporary expressions of the Judeo-Christian heritage as well as to the diverse religious traditions of humankind.

#### *Degree Requirements:*

*Degree:* Bachelor of Arts with a major in religion.

*Major:* REL 110, 140, 201 or 202, 311, 312; one course from 252, 253, 254 or 260; and four additional courses in religion, of which at least one must be in 200-level courses and one in 300-level courses (30 credits).

*Minor:* REL 110, 140, 201 or 202; one course from 252, 253, 254 or 260; and two additional courses in religion, of which at least one must be in 300-level courses. (18 credits).

*Note:* To be credited for majors or minors in religion, cross-listed courses must be designated as religion courses at registration.

#### *Courses in Religion (REL):*

**110. Introduction to Religion.** An exploration of the many dimensions of religion as a central human experience: self and meaning, religious expression, religious knowledge, religion in its cultural context, and religion and the natural order. 3 credits.

**120. Religion in America.** A study of the origin and development of religious expression in America. 3 credits.

**130. Philosophy of Religion.** A study of the issues raised for philosophy by contemporary religious thought. The course examines such topics as faith and reason; faith and culture; and interpretations of revelation, symbolism and religious language. 3 credits. {Cross-listed as Philosophy 130.}

**140. Encountering World Religions.** This course examines the beliefs and practices of some of the world's major religious traditions and significant religious movements, focusing predominantly on non-Christian or non-European traditions. The course will be oriented topically (ritual, theology, etc.), geographically (India, the Middle East, etc.), or thematically (religion in the modern world, religious encounters in history, etc.) 3 credits.



- 160. Religion and Ethics.** A study of religion in its relation to moral values, both personal and social, with emphasis on Christian ethics. 3 credits.
- 201. Biblical Literature I.** A study of the Hebrew scriptures (known to Christians as the Old Testament) and related literature, including their historical and social context. 3 credits.
- 202. Biblical Literature II.** A study of the New Testament and related literature, including its historical and social context. 3 credits.
- 251. Judaism.** A survey of the development of Judaism and its contemporary teachings and practices. 3 credits.
- 252. Indian Religions and Philosophies.** An examination of the major religious/philosophical traditions of India, orthodox and heterodox, as expressed in both literature and practical effects in culture. Foreign studies. 3 credits. {Cross-listed as Philosophy 252.}
- 253. Buddhism.** A study of the development of Buddhism, including its teaching, practice and influence as one of the great missionary religions. Foreign studies. 3 credits.
- 254. Chinese Religious and Philosophical Traditions.** A study of the principal Chinese religious/philosophical traditions, including Confucianism, Taoism, Mohism and Chinese Buddhism. Key writings are examined together with their historical background. Foreign studies. 3 credits. {Cross-listed as Philosophy 254.}
- 260. The Sacred and Society.** A study of debates concerning the sacred origins of society in China, India and Western Europe. The course includes claims for divine sanctions for societal structures as well as opposing views. Foreign studies. 3 credits.
- 265. Myth and Metamorphoses.** A study of God in a variety of cultures, including India, Egypt and Greece at periods when writers were adapting mythic traditions and formulating less poetic, more literally minded views of the divine. The course also explores a variety of theoretical approaches to myth. Foreign studies. 3 credits.
- 311. History of Christianity I.** The story of Christianity from the apostolic age to the Renaissance. Writing process. 3 credits.
- 312. History of Christianity II.** The story of Christianity from the Protestant reformation to the ecumenical era. Writing process. 3 credits.
- 322. Sociology of Religion.** The structures and functions of religious organizations and phenomena with emphasis on the varieties of religious expression in America. Writing process. 3 credits. {Cross-listed as Sociology 322.}
- 332. Religion in Literature.** A study of religious and moral issues in contemporary fiction, poetry and non-fiction. Disciplinary perspective. 3 credits.

**335. Religion, Homosexuality and Society.** This course explores the history and contemporary implications of living with gay/lesbian identity, the battle for civil protections, and the debate over the social consequences of sexual orientation research. Disciplinary perspectives. 3 credits.

**337. Creation and Cosmos.** A study of religious and scientific theories of the origins of the cosmos from the Presocratics through contemporary cosmologists. The course examines developments of scientific theories of the cosmos in ancient Greece, the adaptation of those theories in the medieval church, the critique of ancient and medieval views in the early modern period, and the development of new theories in recent times. Writing process. Disciplinary perspective. 3 credits. {Cross-listed as Philosophy 337.}

**342. Religion, Ethics, and Technology.** An exploration of ethical and religious issues arising from modern science and technology, using process philosophy as a basis. Disciplinary perspective. 3 credits. {Cross-listed as Philosophy 342.}

**352. God.** Views of God as expressed in a variety of contexts from late antiquity to the early modern period, including Christian and Islamic views, as influenced by Platonism. Topics include proofs for the existence of God, arguments concerning God's nature, the limits of reason and the role of faith in discussing God. 3 credits. {Cross-listed as Philosophy 352.}

### Philosophy Program

The study of philosophy directly involves the student in the process of sharpening critical and analytical abilities. Philosophy courses examine some of the greatest perennial questions of values, knowledge, reality and their relation to human nature.

#### *Degree Requirements:*

*Degree:* Bachelor of Arts with a major in philosophy.

*Major:* PHL 120, 160, 300; either 301, 335 or 336; and six additional courses in philosophy (30 credits).

*Minor:* PHL 160, 300; either 301, 335 or 336; three additional courses in philosophy (18 credits).

*Note:* To be credited for majors or minors in philosophy, cross-listed courses must be designated as philosophy courses at registration.

#### *Courses in Philosophy (PHL):*

**110. Introduction to 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.

**130. *Philosophy of Religion.*** A study of the issues raised for philosophy by contemporary religious thought. The course examines such topics as faith and reason; faith and culture; and interpretations of revelation, symbolism and religious language. 3 credits. {Cross-listed as Religion 130.}

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

**160. *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.

**215. *Social Philosophy.*** An examination of some of the important philosophical issues, including the ethical and valuational, to be found in the social institutions of politics, law, government and religion. Writing process. 3 credits.

**220. *Political Philosophy.*** A survey of the different Western philosophies and theories of government, ancient and modern, but especially since the 16th century. Writing process. 3 credits. {Cross-listed as Political Science 220.}

**252. *Indian Religions and Philosophies.*** An examination of the major religious/philosophical traditions of India, orthodox and heterodox, as expressed in both literature and practical effects in culture. Foreign studies. 3 credits. {Cross-listed as Religion 252.}

**254. *Chinese Religious and Philosophical Traditions.*** A study of the principal Chinese religious/philosophical traditions, including Confucianism, Taoism, Mohism and Chinese Buddhism. Key writings are examined together with their historical background. Foreign studies. 3 credits. {Cross-listed as Religion 254.}

**260. *Business Ethics.*** 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. 3 credits.

**300. *History of Philosophy.*** The development of philosophical thought from the pre-Socratics through the 19th century, with emphasis on philosophy as a discipline of systematic inquiry. Writing process. 3 credits.

**301. *Major Authors.*** Intensive studies of individual great philosophers or principal schools. Prerequisite: PHL 300 or permission. Writing process. 3 credits.

**336. *Twentieth Century Philosophy.*** Examines representative American, British and Continental philosophers from 1900 to present. Writing process. 3 credits.

**337. *Creation and Cosmos.*** A study of religious and scientific theories of the origins of the cosmos from the Presocratics through contemporary cosmologists. The course examines

developments of scientific theories of the cosmos in ancient Greece, the adaptation of those theories in the medieval church, the critique of ancient and medieval views in the early modern period, and the development of new theories in recent times. Writing process. Disciplinary perspective. 3 credits. {Cross-listed as Religion 337.}

**342. Religion, Ethics, and Technology.** An exploration of ethical and religious issues arising from modern science and technology, using process philosophy as a basis. Disciplinary perspective. 3 credits. {Cross-listed as Religion 342.}

**349. The Holocaust: A Case Study in Social Ethics.** This course examines the moral responsibility of institutions in German society, 1939-1945, for acquiescing to and perpetrating the state-sanctioned killing of European Jews and others. Writing process. Disciplinary perspective. 3 credits.

**352. God.** Views of God as expressed in a variety of contexts from late antiquity to the early modern period, including Christian and Islamic views, as influenced by Platonism. Topics include proofs for the existence of God, arguments concerning God's nature, the limits of reason and the role of faith in discussing God. 3 credits. {Cross-listed as Religion 352.}

## Faculty

**Eric W. Bain-Selbo**, assistant professor of religion and philosophy. Chairperson.  
*Ph.D., University of Chicago.*

He specializes in social ethics. He has published or presented papers in the areas of religion and the family, educational theory, Holocaust studies, methods in the study of religion, and others. Interests include Asian philosophy/religion and cross-cultural dialogue.

**Donald E. Byrne Jr.**, professor of religion and American studies.  
*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 American studies, religion and ethics, religion and literature, peace studies and mysticism.

**John H. Heffner**, professor of philosophy.  
*Ph.D., Boston University.*

His teaching interests include philosophy of religion, metaphysics and history of philosophy. He has published research in philosophy of perception. His current research concentrates on Hegel and issues in science and religion.

**J. Noel Hubler**, associate professor of religion and philosophy.  
*Ph.D., The University of Pennsylvania.*

He specializes in philosophy of truth and knowledge, with an interest in both contemporary issues and historical perspectives. He has studied cosmology and theories of matter from antiquity to the modern period. He is also the translator of Ezekiel for the New English Translation of the Septuagint, Oxford University Press.

**Jeffrey W. Robbins**, assistant professor of religion and philosophy.

*Ph.D., Syracuse University.*

His area of specialization is in Continental Philosophy of Religion. He is also interested in the Problem of Evil and contemporary Ethical Theory. His teaching interests include Contemporary Religious Thought, World Religions, Biblical Literature, and Religion and Culture. He is the author of the forthcoming book, "Between Faith and Thought: an essay on the ontotheological condition" (2003).

**Ember S. Jandebour**, adjunct instructor in philosophy.

*J.D., Tulane University.*

She has graduate degrees in law and philosophy and teaches courses in business ethics.

**David W. Layman**, adjunct assistant professor of religion.

*Ph.D., Temple University.*

A specialist in the history of American religious thought, he teaches a variety of courses, including world religions, religion in America and history of Christianity.

**Thomas H. Sanagorski**, adjunct assistant professor of religion.

*M. Div., United Theological Seminary.*

He teaches introduction to religion, business ethics, and other continuing education courses and is pastor of Geysers United Methodist Church, Middletown.

**Robert H. Thompson**, adjunct instructor in philosophy.

*M.A., West Chester University.*

His teaching interests include ethics and history of philosophy. He is also studying for his doctorate at Temple University.

**Noëlle Vahanian**, adjunct instructor in philosophy.

*Ph.D., Syracuse University.*

Her area of specialization is at the crossroads of philosophical theology, continental philosophy, and political theory. Her teaching interests include the History of Philosophy, Ethics, and Philosophy and Literature. She is the author of the forthcoming book, "Theology, Language, and Desire: a Genealogy of the Will to Speak" (2003).

**Louis Zivic**, adjunct assistant professor of religion.

*M.A., Jewish Theological Seminary of America.*

Rabbi of Congregation Beth Israel, Lebanon, he is active in community affairs. He has published articles in various Jewish publications and has taught a variety of continuing education courses.

# DEPARTMENT OF SOCIOLOGY

## Sociology Program

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.

### *Degree Requirements:*

*Degree:* Bachelor of Arts with a major in sociology.

*Major:* SOC 110, 311, 321, 499; 21 additional credits in sociology excluding internships (33 credits).

*Minor:* SOC 110, 311, 321; three elective courses in sociology excluding internships (18 credits).

### *Courses in Sociology (SOC):*

**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, racism, sexism and poverty. 3 credits.

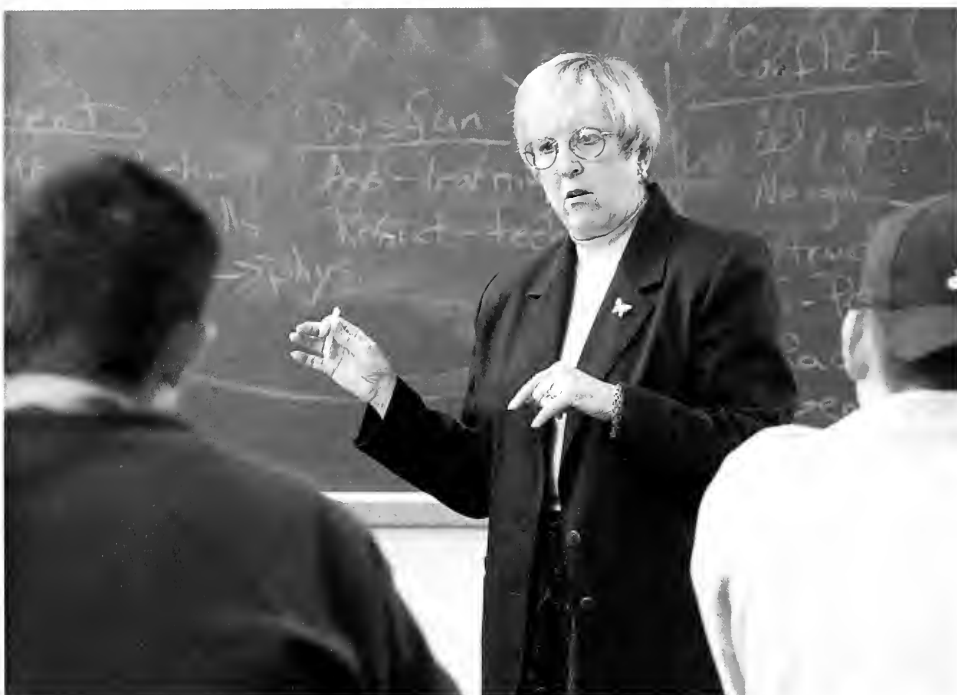
**120. Introduction to Anthropology.** Introduction to both physical and cultural anthropology including human evolution, human variation, and cross-cultural analysis and comparison. 3 credits.

**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: SOC 110. 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: SOC 110. 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: SOC 110. 3 credits.

**240. Diversity & Understanding.** The major objective of this course is to help students become aware of the degree to which behavior (including one's own) is culturally determined. As we continue to move toward a global society with increasingly frequent



intercultural contacts, we need more than simple factual knowledge about cultural differences; we need a framework for understanding inter-cultural communication and cross-cultural human relations. Through lecture, discussion, simulations, case-studies, role-plays and games, students will learn the inter-cultural communication framework and the skills necessary to make them feel comfortable and communicate effectively with people of any culture and in any situation involving a group of diverse backgrounds. Prerequisite: SOC 110. 3 credits.

**251. *Basic Interpersonal Relations Skill Processes.*** An introduction to the theory and skills of interpersonal relationships that are geared toward helping people resolve personal and social problems. The course features skill-building exercises as well as linkage of theory and skills. Open to students of any major who have an interest in interpersonal relationships or counseling. 3 credits.

**252. *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: SOC 110. 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: SOC 110. 3 credits.

**271. *Child Abuse.*** The study and analysis of child abuse in its various expressions with additional focus on physical and sexual abuse. Emphasis will be on models and theories of causation, dynamics, treatment and research. Prerequisite: SOC 110. 3 credits.

**272. *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: SOC 110. 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: SOC 110. 3 credits.

**280. *Sexuality and Society.*** Study of human sexuality from psychosocial and cultural perspectives. The course will include an examination of such topics as developmental sexuality, gender roles, sexual communication, sexual orientation, coercive sex, sexually transmitted diseases, HIV, and religious and ethical perspectives on sexuality. Prerequisite: SOC 110. 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: SOC 110, junior standing or permission. 3 credits.

**321. *Social Theory.*** An intensive examination of the major sociological theorists and movements. Prerequisite: 12 credits in sociology. Prerequisite: SOC 110. 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: SOC 110, junior standing or permission. Writing process. 3 credits. {Cross-listed as Religion 322.}

**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. Prerequisite: SOC 110, junior standing or permission. Writing process. 3 credits.

**326. *Women's Issues, Women's Voices.*** An examination of women's contributions to the world, their roles in social institutions, and issues arising from their uniqueness and social situations. Topics will include images of women and their writings; biology and health; issues of sexuality and gender identity; and women's roles in the family, religion, education, and in the worlds of work and politics. Prerequisite: SOC 110, junior standing or permission. Disciplinary perspective. 3 credits.

**331. *Criminology.*** An examination of the causes of crime. Special attention is given to violent crime, homicide and rape. In addition, crimes such as arson, robbery, burglary and white collar crime 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: SOC 110, junior standing or permission. Writing intensive. 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: SOC 110, junior standing or permission. Writing process. 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: SOC 110, junior standing or permission. 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: SOC 110, junior standing or permission. 3 credits.

**362. *Race, Minorities and Discrimination.*** An examination of the patterns of structured inequality in American society, including a variety of minority, racial and ethnic groups. Prerequisite: SOC 110, junior standing or permission. 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: 12 credits in sociology, junior standing or permission. Writing process. 3 credits.

**400. *Internship.*** Field experience in a Sociology environment. 1-12 credits.

**499. *Senior 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: SOC 110, 12 credits of sociology or permission. 3 credits.

## **Criminal Justice Program**

The chairs of the Sociology and the History and Political Science Departments function as advisers for the criminal justice program. See page 92 for information on this program.

### **Faculty**

**Sharon O. 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.

**Carolyn R. Hanes**, professor of sociology. Chairperson.

*Ph.D., University of New Hampshire.*

Her areas of interest include family and marriage, criminology, criminal justice, mass media and diversity. She is interested in the use of cooperative learning techniques.

**Sharon Hall Raffield**, associate professor of sociology.

*M.S.W., Washington University.*

Her areas of interest include social work practice with families, children and elders as well as policies which impact upon them.

**Daniel Simpkins**, lecturer in sociology.

*Ph.D., University of North Carolina at Chapel Hill.*

His teaching specialty is in the area of anthropology.

# GRADUATE ACADEMIC PROGRAMS

Lebanon Valley College offers four graduate programs. These programs are the Master of Business Administration (MBA), the Master of Physical Therapy (MPT), the Master of Science Education (MSE), and the Master of Music Education (MME).

The Master of Business Administration program is a multi-disciplinary program designed to prepare graduates for managerial responsibilities at various levels of business organizations. This program provides a strong theoretical foundation as well as operational expertise in the areas of finance, management, marketing, human resource management and operations management.

The Master of Physical Therapy degree program is a five and one-half year program of study for students who will receive a preliminary baccalaureate degree in health science after four years of course work.

The Master of Science Education degree program is designed primarily for elementary and middle school teachers, teaching in kindergarten through eighth grades, who want to enhance their understanding of science principles as well as their ability to teach these concepts to their students. This program focuses on the “hands-on” or experiential learning of science. Teachers with minimal experience in science and the methodology necessary to teach science to their students, as well as those with a strong background in one area of science and desire to complement it with comparable understanding of the other sciences, will benefit from this program.

The Master of Music Education degree program is designed to be completed over the course of three summers. Addressing the graduate education needs of K-12 music teachers (the program is accredited by the National Association of Schools of Music), the curriculum includes experiences in foundations and principles of music education, research methods, music technology, and the psychology of music learning plus several elective choices. The curriculum was approved early in 2001, and a pilot course was offered in July 2001. Further information on the program and approved courses can be found on page 154.

## Graduate Program Policies and Procedures

### *Academic Advising and Registration*

Graduate students should meet with their academic adviser prior to class registration. The adviser will develop a graduation plan with the student. All course registrations require the adviser’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 graduate programs have 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.

### *Transfer Credit*

A maximum of nine credits (a maximum of six core credits) may be transferred from another graduate program with the approval of the program director and the registrar. 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 outline, textbook used, and any reading materials so proper credit may be given.



### *Concurrent Courses*

A student enrolled for a graduate degree may not take courses concurrently at another educational institution without prior consent of the academic adviser and the registrar.

### *Grading*

Student work is graded **A, A-, B+, B, B-, C+, C** and **F**. Candidates must maintain a grade point average of 3.00 with a maximum of two C grades in the program.

In addition, the symbols **I** and **W** are used. *I* indicates work that is incomplete but otherwise satisfactory. It is awarded only for substantial reason and work must be completed in the first eight weeks of the following semester, including summer session, or **I** will be changed to **F**.

**W** indicates withdrawal from a course through the designated withdrawal date. Thereafter, the appropriate letter grade will be assigned for the course.

No graduate course may be taken pass/fail, except MSE 830 or MME 830, Research.

### *Review Procedure*

Every student's academic progress shall be reviewed at the end of each academic period by the academic adviser. Any student whose average falls below 3.00 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 and must achieve a 3.00 cumulative average within two semesters of being placed on probation. A student may repeat a maximum of two graduate courses with any given course being repeated only once. Students who fail to correct deficiencies may be dropped from the program. A student may appeal any decision of the Office of Graduate Studies and Continuing Education to the vice-president and dean of the faculty.

### *Course Withdrawal and Tuition Refund*

Any student who withdraws from courses for which he or she is registered must notify the adviser in writing. The effective date of withdrawal is the date on which the student notifies the office. Failure to give notice of withdrawal will result in a grade of F. Notifying the instructor does not constitute official withdrawal. A refund schedule based on official withdrawal date is published in the semester brochure

### *Time Restriction*

The maximum time for completion of a graduate 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 will not be tolerated. For the first academic dishonesty offense, failure in the course is mandatory, and the faculty member is required to inform the program director in writing. A letter of warning shall be sent to the student by the program director explaining the consequences and the right of appeal. For the second offense, failure in the course and expulsion from the graduate program and College are mandatory.

### *Address Changes*

Any change of address must be reported to the Office of Graduate Studies and Continuing Education 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 Direct Stafford Loan Program. Graduate students should contact the Financial Aid Office at 717-867-6181 to discuss financial aid eligibility.

### *Employee Tuition Reimbursement*

Students are encouraged to inquire about tuition reimbursement programs at their places of employment. Most employers of current students provide education subsidies of 50-100 percent of tuition. Some employers authorize the College to bill them directly. In this case, students must present billing authorization when they register.

### *Withdrawal from Program and College and Readmission*

To withdraw from Lebanon Valley College, a graduate student must complete an official withdrawal form obtained from the academic adviser. To apply for readmission, a graduate student must have the written approval of the associate dean for graduate studies and continuing education.

# MASTER OF BUSINESS ADMINISTRATION

The MBA Program at Lebanon Valley College is a unique program that combines liberal arts studies with career preparation in the field of business administration. The multi-disciplinary nature of the curriculum includes standard MBA level courses along with exposure to courses in Executive Communications, Executive Leadership and Corporate and Organizational Ethics.

## *MBA Admissions*

All candidates must have a bachelor's degree from an accredited college or university.

All candidates must submit a current resume and a completed application form with the required application fee. They must take a GMAT examination and have the official test results sent to the MBA Office. 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 MBA Office. An individual interview is required.

Graduate admissions are on a rolling basis; action usually will be taken within four weeks after all paperwork has been processed.

## *Graduation Requirements*

A candidate for the MBA must complete a minimum of 36 credits, of which 27 must be earned at Lebanon Valley College. There are nine required core courses (27 credits) and three electives of the student's choice (9 credits) for a total of 36 credits. A candidate must achieve at least a 3.00 cumulative average with a maximum of two C's within the 36 graduate credits to be certified for graduation.

## *Degree Requirements*

Every MBA candidate must complete 27 credits of core courses and 9 credits of electives. (MBA special topic courses can be used to meet MBA elective requirements.) All courses in the undergraduate common body of knowledge also must be completed successfully. Courses in the Lebanon Valley College MBA Program are taught on the Annville campus and at centers in Lancaster and Camp Hill.

*Degree:* Master of Business Administration.

*Undergraduate Core (Common body of knowledge):* ACT 161, 162; BUS 230, 322, 340, 361; ECN 101, 102; MAS 170 or: ECN 765; MGT 755, 780, 785 (can be combined with undergraduate core courses).

*Graduate Core:* ENG 825; LSP 835; MGT 805, 815, 820, 860, 895; PHL 830; PSY 810 (27 credits) and three of the following ACT 875; ECN 865; HIS 840; MGT 800, 850, 855, 870, 880; special topics (9 credits). Total of 36 credits.

***MGT 755. Management and Marketing Principles.*** A review of management principles and marketing principles. Topics include: organizational theory, administrative techniques,



marketing strategies, marketing research, buying behavior, selecting target markets, pricing, distributing and promoting products and services. 3 credits.

**ECN 765. *Economic Principles.*** A review of macroeconomic and microeconomic principles. Topics include: national income determination; price level; employment; economic growth; domestic and foreign monetary systems and policies; price, production and distribution theories; welfare economics; and public policy. 3 credits.

**MGT 785. *Quantitative Methods and Statistics.*** A review of quantitative methods and elementary statistics used in modern management science and economics. Topics include: linear programming and applications, forecasting, inventory models, PERT/CPM, waiting line models, computer simulation, probability distributions and decision theory. 3 credits.

**MGT 780. *Accounting and Financial Management.*** Designed for students who need to understand how accounting data is recorded and used for decision-making inside and outside of the firm, the relationship between the accounting and finance functions and financial management models used for corporate finance decisions. Topics include: recording financial data and preparing financial statements, financial statement analysis, budgeting, cost control, relevant costs, capital budgeting and risk analysis, capital markets, valuation theory and financial forecasting. 3 credits.

**MBA Courses:**

**ACT 875. *Managerial Decision Making.*** Provides students previously exposed to managerial accounting principles with the essential tools and strategies managers need to

develop data for making decisions related to pricing strategy; product expansion, discontinuance or redesign; performance measurement; resource allocation and management; merger and acquisition planning, and other types of managerial decisions. Stresses ways to avoid mistakes that result when internal decision-making is based on data developed for external financial reporting. Business topics covered include financial statement analysis, responsibility accounting, Economic Value Added (EVA), and Activity Based Costing (ABC). 3 credits.

**ECN 865. *Entrepreneurship.*** Entrepreneurship, intrapreneurship, small business, and acquisitions. Special attention to entrepreneurial behavior, sources of funding and actual case studies in the development of new enterprises. 3 credits.

**ENG 825. *Executive Communications.*** Organizational communication skills, emphasizing writing, speaking and listening techniques. Interpersonal communication. Explores and increases communication options on individual, group and organizational levels. 3 credits. (Must be one of the first 3 courses taken in the MBA program.)

**MGT 840. *American Business and Labor.*** An analysis of the history of American business and labor. The course is developed through a case study approach with a significant research component. 3 credits.

**LSP 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.

**MGT 800. *Quantitative Analysis.*** Surveys mathematical foundations of management science. Topics include linear programming, transportation and assignment problems, decision and network analysis, stochastic processes, queuing and simulation. Introduction appropriate computer software. 3 credits.

**MGT 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*. 3 credits.

**MGT 815. *Marketing Management.*** Seminar focusing on issues in the interplay between marketing and society including the ethics of selling, advertising, marketing research and the social responsibility of marketers. Prerequisite: ENG 825 strongly recommended. 3 credits.

**MGT 820. *Operations Management.*** Systems approaches to management of production and service organizations. Topics include design and control of operations, operations strategy, product and process planning, quality management, human resources, scheduling and control, and materials management. Emphasis is on mathematical foundations and quantitative techniques of management science/operations research (MS/OR), related



MS/OR tools and applications, the priority/capacity organizational concepts and the strategy underlying operations. Introduces appropriate computer software. 3 credits.

***MGT 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. Prerequisite: ENG 825, PSY 810 recommended. 3 credits.

***MGT 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 lecture. Prerequisite: ENG 825, PHL 830 recommended. 3 credits.

***MGT 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.

***MGT 870. Labor Management Relations.*** 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. Students will study negotiation, administration, wage/fringe issues and contents of labor agreements. Prerequisite: ENG 825. 3 credits.

***MGT 880. Investments and Portfolio Management.*** This course acquaints the student with the tools essential for sound money management. Considers 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. Prerequisite: MGT 805. 3 credits.

***MGT 895. Strategic Management.*** 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 widely used and outside research is required. Prerequisite: 24 hours of graduate credit. 3 credits.

***PHL 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 analysis. Includes: corporate and orga-

nizational social and political responsibility, ethics and business, ethics and organizational life, and governmental relations. Prerequisite: ENG 825 and LSP 835 or PSY 810. 3 credits.

**PSY 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.

### **MBA Administration and Resident Faculty**

**Cheryl L. Batdorf**, assistant director of the MBA program.

*M.B.A., Lebanon Valley College.*

Batdorf teaches human resource management.

**Gayle L. Bolinger**, assistant professor of accounting.

*M.S. in Management, Purdue University.*

Bolinger teaches accounting and managerial decision making.

**Marie G. Bongiovanni**, associate professor of English.

*M.B.A., Drexel University.*

Bongiovanni teaches executive communications.

**Sharon F. Clark**, professor of business administration.

*J.D., University of Richmond.*

Clark teaches human resource management and labor management relations.

**Robert W. Leonard**, associate professor of business administration.

*M.B.A., Ohio State University.*

Leonard teaches organizational behavior.

**Barney T. Raffield III**, professor of business administration.

*Ph. D., Union Graduate School.*

Raffield teaches courses in marketing and international business management.

# MASTER OF PHYSICAL THERAPY

The physical therapy program begins after successful completion of the pre-professional phase of study (three years, or approximately 90 semester credit hours) leading to a terminal degree in physical therapy. Students receive a baccalaureate degree in health science after four years of coursework.

The physical therapy program is currently undergoing revision. Further information regarding the program requirements can be obtained from the Program faculty or students assigned advisers.

*Undergraduate Core:* BIO 111, 112, 113, 114, 221, 222 or 322; CHM 111, 112, 113, 114; PHY 103, 104; MAS 170 or 270, or PSY 130; PSY 112; PHT 200, 201, 401, 402, 403, 410, 411, 412, 413, 414, 420, 421, 422, 423, 424, 425, 426, 431, 432; SOC 110 or 120.

## Program Administration and Resident Faculty

**Claudia C. Gazsi**, assistant professor of physical therapy. Academic coordinator of clinical education.

*M.H.A., The Pennsylvania State University.*

**Roger M. Nelson**, professor of physical therapy. Chairperson.

*Ph.D., The University of Iowa.*

**Stacey A. Ruch**, assistant professor of physical therapy.

*Ph.D., The Pennsylvania State University.*

**Ted Yanchuleff**, adjunct professor of physical therapy.

*M.P.A., The Pennsylvania State University.*

Lebanon Valley College is seeking accreditation by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association (APTA). The program will submit a *Declaration of Intent to Apply for Accreditation*, which is the formal application required in the pre-accreditation stage. Submission of this document does not assure that the program will be granted Candidate for Accreditation status nor does it assure that the program will be granted Initial Accreditation.

# MASTER OF MUSIC EDUCATION

The Master of Music Education (MME) is designed to meet the regional needs of area K-12 music educators. It is a summer only program in which a student can, with careful advising, complete the degree in three summers. It is offered in response to a significant regional need met by on and-off-campus expertise and a shared interest in improving the quality of music education in this part of the Commonwealth.

## *MME Admissions*

While prior teaching experience is not a requirement for entrance into this degree program, individuals considering pursuit of a masters degree in music education should plan on teaching one to three years prior to initial enrollment or before completing the degree. It is the conviction of this faculty that graduate study will be more meaningful to the individual if he or she has first gained experience in the field .

All candidates must have a bachelor's degree from an accredited college or university and submit an official transcript with the application. Any graduate courses to be considered for transfer (up to nine credits, a maximum of 6 credits in the core), also require an official transcript sent by the respective colleges or universities to the Office of Graduate Studies and Continuing Education. Priority for core courses will be given to students matriculated into the MME program.

All candidates must submit a current resume and a personal written statement (one page) indicating why they wish to pursue this degree with the application form and required application fee.

All candidates must hold and submit a copy of a current Teaching Certificate in Music with the application,

All candidates must submit three letters of recommendation with the application.

Graduate admissions are on a rolling basis; action will be taken promptly after all paper-work has been evaluated.

## *Degree Requirements*

Every MME candidate must complete 30 graduate credits, 21 of which must be earned at Lebanon Valley College. Of a possible 9 credits in transfer work, only 6 credits may be counted in the core of the MME program. There are four required core courses (12 credits) plus a weekly, non-credit based seminar required during each summer that the student is enrolled. The capstone experience includes either a project or a thesis (3 credits). The other 15 credits will be selected from among several elective opportunities. Courses in the Lebanon Valley College MME Program are taught on the Annville campus.

*Degree:* Master of Music in Music Education

*Core Courses:* MME 800, 801, 802, 803, 804 (12 credits), and 805 (project) or 806 (thesis).

## *MME Courses:*

**MME 800. Seminar.** A weekly meeting for all students to discuss various issues and topics. Participation is required each summer that the student is enrolled in the program. 0 credits.

**MME 801. Foundations of Music Education.** A consideration of philosophical and historical issues in music education and their implications for developing curricular and

instructional approaches to the field. A core course. 3 credits.

**MME 802. *Research Methods in Music Education.*** A study in the organization, presentation, interpretation, and documentation of research that makes use of encyclopedias, indices, databases, and other aids. 3 credits.

**MME 803. *Technology for Music Educators.*** An exploration of how technology can enhance the music learning process. This course examines what's involved in planning, configuring, and teaching various technology systems and applications so as to facilitate creative interaction with musical experiences. 3 credits.

**MME 804. *Psychology of Music Learning.*** An investigation and discussion of theories of learning as they relate to the teaching of music. This course includes the study of specific teaching strategies and the nature of musical response. 3 credits.

**MME 805. *Project.*** 3 credits, or

**MME 806. *Thesis.*** 3 credits.

**MME 830. *Private Applied.*** 1 credit. (Up to a maximum of 3 elective credits in the program.)

**MME 890.** Elective courses will be offered as special topic courses, then given permanent numbers as the program develops and matures. (E.g., Teaching Choral Music, Teaching General Music, Teaching Instrumental Music, Theory for Teaching, Graduate Music History Seminar, Music in Early Childhood, Music and the Exceptional Child, Statistics for the Music Researcher, Conducting, Arranging (Band scoring, Choral arranging, Jazz arranging), and so forth.

## **MME Administration and Resident Faculty**

**Robert H. Hearson**, professor of music, MME adviser.

*Ed.D., University of Illinois at Urbana-Champaign.*

**Barry R. Hill**, associate professor of music, director of the music recording technology program,

*M.M., New York University, additional graduate studies at The Pennsylvania State University.*

**Mary L. Lemons**, associate professor of music, MME adviser.

*Ed.D., University of Illinois at Urbana-Champaign.*

**Mark L. Mecham**, professor of music, MME adviser.

*D.M.A., University of Illinois at Urbana-Champaign.*

**Jeff Snyder**, assistant professor of music, director of music business, and assistant director of music recording technology.

*M.S., Kutztown University.*

# MASTER OF SCIENCE EDUCATION

Students enrolled in this program will concentrate on the principles and content of science as well as the appropriate teaching strategies to convey these ideas to their students. All of the courses are designed to maximize the opportunity for doing science instead of merely learning about science. The program will culminate with the satisfactory completion of a comprehensive examination and the production of a thesis in science education.

## *MSE Admissions*

To qualify for admission to the Master of Science Education Program the applicant must fulfill the following requirements:

- An applicant must hold a baccalaureate degree from an accredited institution.
- An applicant should have an undergraduate major in elementary education. Applicants holding a secondary science teaching degree and currently teaching in a middle school will be considered for entrance after meeting with the graduate committee of the department.
- An applicant must have achieved a 3.0 quality point average (QPA) on a four-point scale for the baccalaureate degree. An applicant with less than the 3.0 QPA may be admitted with provisional status pending satisfactory completion of six semester hours of graduate study with a 3.0 or above.
- A maximum of nine semester hours (maximum of six core credits) of acceptable graduate credits completed at other institutions may be transferred and applied toward the Master of Science Education degree with approval of the registrar. Transfer credits must meet a grade of B or above.
- An applicant must arrange to have official transcripts submitted for each undergraduate institution attended. If transfer credits are to be considered, transcripts from graduate courses must also be requested by the applicant.
- An applicant will be reviewed by no less than three members of the Science Education Masters Committee.

## *Degree Requirements*

A candidate for the MSE must complete a minimum of 30 credits, of which 21 must be earned at Lebanon Valley College. Only 6 credits may be transferred into the core. There are seven required core courses, (21 credits), any electives of the student's choice (6 credits), and a research thesis (3 credits) for a total of 30 credits. A candidate must achieve at least a 3.00 cumulative average to be certified for graduation.

*Degree:* Master of Science Education

*Graduate Core:* MSE 800, 801, 802, 803, 811, 812, 829, 830 (24 credits) and two of the following: MSE 805, 806, 807, 814, 815, 816, 820 (6 credits). Total of 30 credits.



*MSE Courses:*

***MSE 800. Science Education in the Elementary/Middle School Classroom.*** This course serves as an introduction to the content and methodology of science instruction as it relates to hands-on, minds-on science process skills in the elementary and middle school classrooms. Setting the tone for the entire program, it makes clear to participants the basic format which will be followed by subsequent courses. 3 credits.

***MSE 801. Principles of Life Science for Elementary/Middle School Teachers.*** This course addresses life science topics prevalent in virtually all science curricula as well as those set forth in the National Science Education Standards. Students will engage the use of scientific method to address topics typically taught in life science courses. 3 credits.

***MSE 802. Principles of Physical Science I for Elementary/Middle School Teachers.*** This course will utilize concepts in chemistry to make connections to common substances. Establishing chemistry as an integral part of everyday life as well as discoveries made through serendipity will make this topic relevant to all students. 3 credits.

***MSE 803. Principles of Physical Science II for Elementary/Middle School Teachers.*** Students will utilize hands-on experimental methods to gain confidence and experience with inquiry-based learning of physics. Topics will include motion, heat, light, electricity and magnetism. 3 credits.

***MSE 805. Principles of Earth and Space Science for Elementary/Middle School Teachers.*** The interaction and effects of geology, meteorology and space exploration will be explored in this course. 3 credits.

**MSE 806. Principles of Field Biology/Ecology for Elementary/Middle School Teachers.** Environmental studies illustrating the basic principles of field biology and ecology will be used to demonstrate the interdependence of living and nonliving systems. Current topics in ecology, as they relate to the preservation of our planet and its resources, will be addressed. This course will focus on the collection of data and/or organisms outside the classroom. Appropriate methods for elementary/middle school students will be utilized and practiced. 3 credits.

**MSE 807. Microscopy for Elementary/Middle School Teachers.** This course will introduce the use of a variety of microscopes, starting with the hand-held microscopes and continuing through compound and dissecting microscopes. It culminates with the use of the scanning electron microscope. Students also will master preparative techniques and slide making. 3 credits.

**MSE 811. Curriculum Development Using the National Standards.** Using the Standards in curriculum development, the classroom and other aspects of the public and private school systems will be the focus of this course. Alternative and authentic assessment, professional standards and current developments in science education will be taught with the elementary/middle school teacher and student in mind. 3 credits.

**MSE 812. Assessment in Science Teaching.** A variety of assessment techniques, especially applicable to hands-on or experiential learning, will be presented. The focus will be on developing and adapting authentic assessment for all learners of science. 3 credits.

**MSE 814. History of Science.** The historical perspective of science and scientists from ancient through modern history. Focus will include discoveries and scientists from both sexes and all ethnic backgrounds. Methods of integrating history and science in the elementary/middle school classroom will be addressed. 3 credits.

**MSE 815. Recent Advances in Science.** Modern concepts and recent advances in science will be studied through books, news magazines and newspapers. 3 credits.

**MSE 816. Science, Technology and Society.** The educational objective for quality science education is to produce a society which is literate in science, able to solve problems and can function as critical thinkers. This course utilizes biotechnology, among other areas of study, as a method of illustrating the need for and ultimate use of science and technology so they benefit society. Ethical issues involving science and technology will be discussed. 3 credits.

**MSE 820. Seminar.** This course will permit some flexibility to explore current topics in elementary/middle school education as they arise. A seminar course will permit special topics to be included in the course of study. In addition, certain transfer courses may be valid for degree accreditation but may not be a complete match in the courses listed. 3 credits.

**MSE 829. Research Methods.** This course is designed to develop the understanding of the methods employed in planning and developing research in science. You will gain experience



in generating ideas for research, critically evaluating literature, synthesizing and presenting results of research and writing in a clear and organized way. 3 credits.

**MSE 830. Research in Science Education.** A topic relevant to the teaching of science in the elementary/middle school classroom will be researched with the approval of the student's adviser. The topic of research should be well documented in professional journals and studies. 3 credits.

**MSE 850. Independent Study.** 1-6 credits.

## **MSE Administration and Resident Faculty**

**Michael A. Day**, professor of physics.

*Ph.D., University of Nebraska.*

Day teaches history of physics.

**Candice Falger**, coordinator of the MSE program.

*M.B.A., Lebanon Valley College.*

Falger teaches science education in the classroom and field biology.

**Kerrie D. Laguna**, assistant professor of psychology.

*Ph.D., University of Nebraska.*

Laguna teaches research methods.

**Louis B. Laguna**, assistant professor of psychology.

*Ph.D., University of Nebraska.*

Laguna teaches research methods and supervises research.

**Walter A. Patton**, assistant professor of chemistry.

*Ph.D., Lehigh University.*

Patton supervises research.

**Allan F. Wolfe**, professor of biology.

*Ph.D., University of Vermont.*

Wolfe teaches microscopy and supervises research.

# DIRECTORY

## BOARD OF TRUSTEES LEBANON VALLEY COLLEGE

### *Officers*

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### *Trustees*

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Edward H. Arnold, *B.A., L.H.D.*; *Chairman, C.E.O. and President, Arnold Logistics (2005).*

Ryan J. Arnold, *Student, Lebanon Valley College (2003).*

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Michael A. Day, *B.S., M.A., Ph.D., M.S., Ph.D.*; *Professor of Physics, Lebanon Valley College (2004).*

Wesley T. Dellinger, *CRS, GRI, CSP, '75, B.S.*; *Realtor, Brownstone Real Estate Company (2003).*

Ronald J. Drnevich, *B.S.*; *President, Gannett Fleming Inc. (2005).*

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Ross W. Fasick '55, *B.S., M.S., Ph.D.*; *Retired Senior Vice President, E.I. DuPont de Nemours & Co. (2004).*

Darwin G. Glick '58, *B.S.*; *Retired President, Glick, Stanilla and Siegel, C.P.A. (2005).*

A.L. Hanford III, *B.A.*; *President, Ladd Hanford Motors (2003).*

Wendie DiMatteo Holsinger, *B.A., M.Ed.; Chief Executive Officer, A.S.K. Foods, Inc. (2005).*

John F. Jurasits, Jr., *B.S.; Retired Vice President, Solution Technologies, Inc. (2003).*

F. Obai Kabia '73, *B.S., M.P.A.; Political Affairs Officer (2004).*

Malcolm L. Lazin '65, *B.S., J.D.; Executive Director of PrideFest America (2005).*

William Lehr, Jr., *B.B.A., J.D.; Community Volunteer, Retired Senior Vice President and Secretary, Hershey Foods Corp. (2005).*

Richard C. Miller, *B.S., M.S., D.P.E.; Dean, School of Health Sciences and Human Performance, Ithaca College (2004).*

James A. Mitchell, Jr. '58, *B.S., M.B.A.; Retired Corporate Insurance Manager, E.I. DuPont de Nemours & Co. (2004).*

G. David Pollick, *B.A., M.A., Ph.L., Ph.D.; President, Lebanon Valley College.*

Sherri T. Pursel, *Student, Lebanon Valley College (2004).*

George M. Reider Jr. '63, *Retired Insurance Executive and Former Insurance Commissioner, State of Connecticut, Retired teacher, University of Connecticut and Fordham University of Law (2004).*

Thomas C. Reinhart '58, *B.S., L.H.D.; Owner/President, T.C.R. Packaging, Inc. (2005).*

Richard T. Reynolds, *B.S.; President, Reynolds Construction Management, Inc. (2005).*

Bruce R. Rismiller '59, *B.A., M.Ed.; Retired Executive Vice President, Northwest Airlines (2004).*

Stephen H. Roberts '65, *B.S., President, Echo Data Services, Inc. (2004).*

James W. Scott, *B.A., Ph.D.; Professor of German, Lebanon Valley College (2003).*

Frank Sourbeer '72, *B.A., President & C.E.O., Wilsbach Distributors, Inc. (2003).*

John A. Synodinos, *B.S., M.S. Ed., L.H.D.; President Emeritus, Lebanon Valley College; Principal, The Franklin Consulting Group (2004).*

John Walter '53, *B.S., J.D.; Retired President Judge, Lebanon County Court of Common Pleas; Associate, Kreamer Funeral Home, Inc. (2004).*

Albertine P. Washington, B.A., P.D.; *Retired Elementary Educator, Lebanon School District (2004).*

J. Dennis Williams, B.A., M.Div., D.Min., D.D.; *Retired United Methodist clergyman; Senior Pastor, St. John's United Methodist Church (2003).*

Samuel A. Willman '67, B.S., M.Com.; *President, Delta Packaging, Inc. (2005).*

Harry B. Yost '62, Esq., B.S., LL.D., LL.M.; *Attorney, Senior Partner, Appel & Yost LLP (2003).*

#### *Emeriti*

Raymond H. Carr; *Realtor; Commercial and Industrial Developer.*

Eugene C. Fish, Esq., B.S., J.D., L.H.D.; *Chairman and President, Peerless Industries, Inc.; Chairman of the Board, Eastern Foundry Company; Managing Partner, Romeika, Fish and Scheckter.*

Eugene R. Geesey '56, B.S., *Retired Owner/President, CIB, Inc.*

Martin L. Gluntz '53; B.S., M.S., Ph.D.; *Retired Vice President, Technical Services, Hershey International Division, Hershey Foods Corporation.*

Thomas W. Guinivan '39, A.B., M.Div., M.S.T., D.D.; *Retired Pastor, United Methodist Church.*

Elaine G. Hackman '52, B.A.; *Retired Business Executive.*

Gerald D. Kauffman '44, A.B., M.Div., D.D., *Officer of the Courts, County of Cumberland; Pastor Emeritus, Grace United Methodist Church, Carlisle.*

Allan W. Mund, LL.D., D.B.A.; *Retired Chairman of the Board, Ellicott Machine Corporation.*

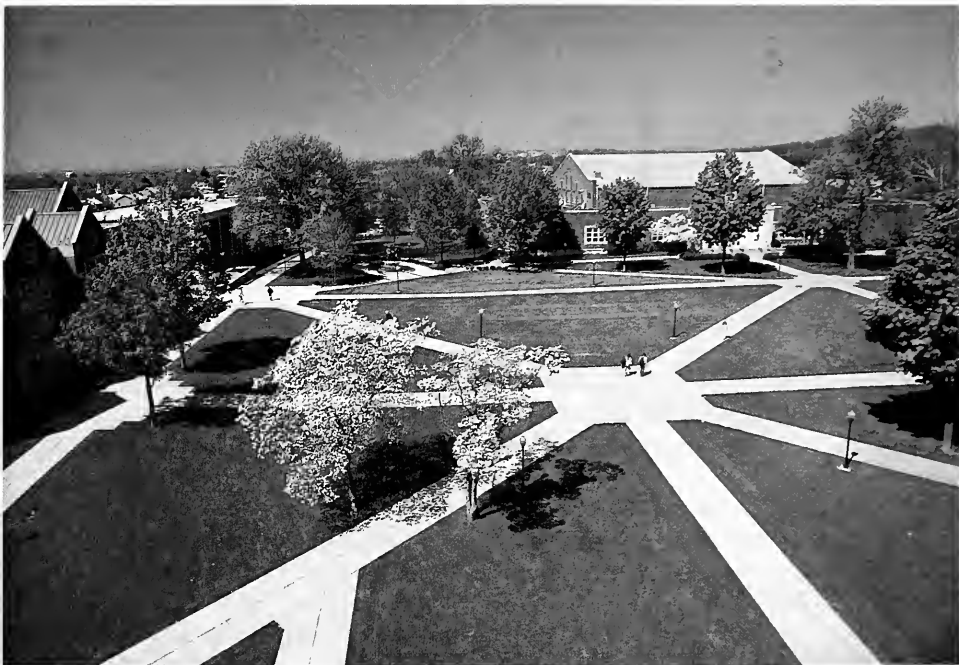
Harold S. Peiffer '42, A.B., S.T.M., D.D.; *Retired Pastor, United Methodist Church.*

Kenneth H. Plummer; *Retired President, E.D. Plummer Sons, Inc.*

F. Allen Rutherford Jr. '37, B.S., LL.D.; *Retired Ernst & Young C.P.A.*

Daniel L. Shearer '38, A.B., S.T.M., D.D.; *Retired Pastor, United Methodist Church.*

Morton Spector, L.H.D., *Chairman of the Board, Design House Kitchens and Appliances.*



Elizabeth K. Weisburger '44, *B.S., Ph.D., D.Sci.*; *Retired Chief of Carcinogen Metabolism and Toxicology Branch, National Cancer Institute.*

Harlan R. Wengert, *B.S., M.B.A., D.Sci.*; *Retired Chairman of the Board, Wengert's Dairy, Inc.*

E.D. Williams Jr., *L.H.D.*; *Private Investor.*

*Honorary*

Suzanne H. Arnold, *L.H.D.*, *Community Leader and Philanthropist.*

Bishop Neil L. Irons, *B.A., M.A., M.Div., Ph.D., D.D.*, *Resident Bishop of the Harrisburg Area of The United Methodist Church.*

Anne B. Sweigart, *B.S.*; *Chairman, President and Chief Executive Officer, D & E Communications, Inc.*

Bishop Peter D. Weaver, *B.A., M.Div., Th.D., D.D., L.H.D.*, *Resident Bishop of the Philadelphia Area of The United Methodist Church.*

## ADMINISTRATION

### *President*

G. David Pollick, 1996-. *Professor of Humanities, 1996-. B.A., University of San Diego, 1971; M.A., University of Ottawa, 1973; Ph.L., St. Paul's University, 1973; Ph.D., University of Ottawa, 1981.*

Karin L. Right-Nolan, 1994-; *Executive Assistant to the President, 2002-; B.A., Allegheny College, 1994.*

### *General College Officers*

Deborah R. Fullam, 1982-; *Vice President and Controller, 1995-. B.S., Lebanon Valley College, 1981; M.B.A., Philadelphia College of Textiles & Science, 1988.*

Robert E. Hamilton, 1986-; *Vice President for Administration, 1990-. A.B., Messiah College, 1962; M.Ed., Shippensburg University, 1966; D.Ed., The Pennsylvania State University, 1972.*

Stephen C. MacDonald, 1998-; *Vice President for Academic Affairs and Dean of the Faculty, Professor of Humanities, 1998-. B.A., Tufts University, 1969; Ph.D., University of Virginia, 1977.*

Anne M. Berry, 2000-; *Vice President for Advancement, 2000-. A.B., Franklin & Marshall College, 1977.*

Robert A. Riley, 1976-1978, 1988-; *Vice President of Information Technology Services, 1995-. B.S., Elizabethtown College, 1976.*

Gregory G. Stanson, 1966-; *Vice President for Enrollment and Student Services, 1991-. B.A., Lebanon Valley College, 1963; M.Ed., University of Toledo, 1966.*

## ADMINISTRATIVE OFFICERS

### *Academic*

Stephen C. MacDonald, *Vice President for Academic Affairs and Dean of the Faculty.*

Cheryl L. Batdorf, 1993-; *Assistant Director of the MBA Program, 1999-; B.S., Shippensburg University, 1983; M.B.A., Lebanon Valley College, 1992.*

Karen Diener Best, 1990-; *Registrar, 1990-. B.A., Dickinson College, 1989; M.P.A., The Pennsylvania State University, 1999.*

Michael A. Bodan, 2000-; *Assistant Director of Media Services, 2000-; B.M., Lebanon Valley College, 2000.*

Timothy M. Dewald, 1989-; *Coordinator of Academic Advising and Community Programming, 2001-. B.A., Dickinson College, 1970; M.Div., Andover Newton Theological School, 1975.*

Dale J. Erskine, 1983-; *Director, Youth Scholars Institute, 1985-*. B.A., *University of Maine at Portland, 1974*; M.A., *State University of New York at Buffalo, 1976*; Ph.D., *University of Oklahoma, 1981*.

Stanley A. Furmanak, 1990-; *Systems and Reference Librarian, 1994-*. B.A., *University of Scranton, 1978*; M.A., *The Catholic University of America, 1981*; M.L.S., *Southern Connecticut State University, 1984*.

Andrew S. Greene, 1990-; *Director of Media Services, 1992-*. B.S., *Kutztown University, 1990*.

Julia L. Harvey, 1998-; *Technical Services Librarian. A.A., Cottey College, 1977*; B.A., *Cedar Crest College, 1979*; M.S. (Library Science) *Drexel University, 1981*; M.A. (Educational Administration) *Rider University, 1990*.

Shirley Hockley, 1996-; *Director, Annville Continuing Education, 2001-*. B.A., *Lebanon Valley College, 1980*; M.A., *Bowling Green State University, 1994*.

Anne H. Hohenwarter, 1998-; *Coordinator of Disabilities Services, 1998-*; B.F.A., *Old Dominion University, 1980*; M.S., *Millersville University, 1999*.

Marcus Horne, 1992-; *Science Departments Stock Coordinator, Hazardous Waste Materials Officer. B.S., Lebanon Valley College, 1992*.

Patricia A. Kaley, 1987-; *Associate Registrar, 2000-*. B.A., *Lebanon Valley College, 1996*.

Donna L. Miller, 1986-; *Readers' Service Librarian, 1986-*. B.S., *Millersville University, 1984*; B.A., *Lebanon Valley College, 1993*; M.L.S., *Drexel University, 1986*.

P. Robert Paustian, 1991-; *Librarian, 1991-*. B.A., *University of Missouri, 1971*; M.A., *University of Kansas, 1975*; M.A., *University of Missouri, 1979*.

John J. Peck, 1999-; *Adjunct Catholic Chaplain, 1999-*. O.S.B., *Saint Vincent College and Seminary; Franciscan University*.

Edward D. Pitingolo, 2001-; *Director of West Shore Center, 2002-*. B.S., *The Pennsylvania State University, 1987*; M.B.A., *Kutztown University, 2001*.

Jill Russell, 2001-; *Study Abroad Advisor, 2001-*. B.S., *University of New Hampshire, 1993*; M.S., *University of Victoria, 1999*.

Scott A. Schweigert, 2002-; *Director of the Suzanne H. Arnold Art Gallery and Assistant Professor of Art. B.A., Dickinson College, 1992*; M.A., *The George Washington University, 1996*.

Susan Szydlowski, 1995-; *Director of Special Music Programs, 1995-*. B.A. *Colby College, 1996*.

Barbara S. Vlasisavljevic, 1987-; *Associate Professor of Accounting, 1988; Associate Dean of the Faculty, 1999-. B.A., Lehigh University, 1979; M.B.A., 1985; J.D., Widener University, 1996.*

D. Darrell Woomey, 1992-; *Chaplain, 1992-. B.A., Juniata College, 1964; M.Div., Pittsburgh Theological Seminary, 1969; Th.M., 1972; M.A., Duquesne University, 1986; Ph.D., 1996.*

### *Enrollment and Student Services*

Gregory G. Stanson, *Vice-President for Enrollment and Student Services.*

Richard L. Beard, 1994-; *Director of the Arnold Sports Center, 1997-. B.A., Lebanon Valley College, 1989; M.B.A., 1992.*

Jessica L. Bostdorf 2000-; *Admission Counselor, 2000-. B.A., Lebanon Valley College, 1999.*

Dorothy A. Brehm, 1993-; *Financial Aid Officer, 2001-. B.S., The Pennsylvania State University, 1976.*

William J. Brown, Jr., 1980-; *Dean of Admission and Financial Aid, 1993-. B.A., Lebanon Valley College, 1979; M.B.A., Philadelphia College of Textiles and Science, 1988.*

Vicki J. Cantrell, 1991-; *Assistant Director of Financial Aid, 2002-. B.A., Lebanon Valley College, 1999.*

Tchet D. Dorman, 2002-; *Director of Multi-Cultural Affairs, 2002-. B.A., Oberlin College, 1987; M.A., Temple University, 1993.*

David C. Evans, 1981-; *Director of Career Services, 1989-. B.A., Slippery Rock University, 1969; M.Ed., Rutgers University, 1970.*

Jennifer Dawson Evans, 1991-; *Director of Student Activities and the College Center, 1995-. B.S., Kansas State University, 1989; M.S., Shippensburg University, 1991.*

Chris M. Firestine, 2000-; *Admission Counselor, 2000-. B.S., Lebanon Valley College, 1999.*

Ronald K. Good, 1983-; *Senior Assistant Director of Admission, 2001-. B.S. in Ed., Millersville University, 1959; M.Ed., 1966.*

Julie A. Gordon-Dueck, 1997-; *Counseling Psychologist, 1997-; B.A., Fresno Pacific College, 1985; M.A., Ph.D., California School/Professional Psychology, Fresno, 1993.*

David W. Heeter, 1996-; *College Physician, 1996-. D.O., Philadelphia College of Osteopathic Medicine, 1991.*

Sharon Horst, 1999-; *Staff Nurse, R.N. Diploma, Lancaster General Hospital School of Nursing, 1970; B.S., Lebanon Valley College, 2001.*

John T. Hower, 1988-; *Counseling Psychologist, 1988-. B.A., Wheaton College, 1970; M.A., Rosemead School of Psychology, 1974; Ph.D., 1977.*



Linda Hower, 1993-; *Therapist*, 1993-. B.A., Wheaton College, 1971; M.S.W., Temple University, 1992.

Jason A. Kuntz, 2000-; *Assistant Director of Residential Life*, 2000-. B.A., Baldwin-Wallace College, 1996; M.Ed., University of South Carolina, 1998.

Jennifer S. Liedtka, 1994-1997; 2000-; *Director of Financial Aid*, 2002-. B.S., Lebanon Valley College, 1992; M.B.A., 2000.

Gary A. Luken, 1995-; *College Physician*, 1995-. M.D., University of Cincinnati, 1977.

Geraldine F. Nichols, 1999-; *Staff Nurse*, 1999-. R.N., Reading Area Community College, 1985.

Robert K. Nielsen, 1993-; *College Physician*, 1993-. M.D., Albany Medical College, 1975.

Mindy Parnes, 1995-; *College Physician*, 1995-. M.D., State University of New York, 1989.

Alan T. Paynter, 2001-; *Admission Counselor*, 2001-. B.S. Ed., Kutztown University, 1997.

Susan Sarisky, 1993-; *Director of Admission*, 2001-. B.A., Lebanon Valley College, 1992; M.Ed., Temple University, 1999.

Erin N. Schmid, 2001-; *Admission Counselor*, 2001-. B.A., Lebanon Valley College, 1998.

Tara L. Seeman, 2002-; *Area Coordinator/Program Assistant*, 2002-. B.S., University of Pittsburgh, 2000; M.A., Indiana University of Pennsylvania, 2002.

Angela Strickler, 1998-; *Therapist*, 1998-. B.S., Millersville University, 1989; M.S.W., Temple University, 1994.

Jonathan D. Wescott, 2000-; *Director of Residential Life*, 2000-. B.A., Lebanon Valley College, 1993; M.S., Shippensburg University, 1997.

Juliana Z. Wolfe, 1975-1978; 1979-; *Director of Health Center and Head Nurse*, 1979-. R.N., Diploma, St. Joseph's Hospital, 1963.

Rosemary Yuhas, 1973-; *Dean of Student Services*, 1991-. B.S., Lock Haven University, 1966; M.Ed., West Chester University, 1970.

### *Advancement*

Anne M. Berry, *Vice President for Advancement*.

Kristy A. Adams, 1999-; *Webmaster*, 1999-. B.S., Drexel University, 1995.

Shanna G. Adler, 1992-; *Development Associate*, 1998-. B.S., Bucknell University, 1992.

Kelly A. Alsedek, 1998-; *Associate Director of College Relations/Director of Publications*, 2002-. B.A., Gettysburg College, 1971.

Kristi L. Barbour, 2001-; *Director of Leadership Giving, 2001-. B.A., Grinnell College, 1996.*

Susan K. Borelli, 1990-; *Major Gifts Officer, 2000-. B.A., Albright College, 1989.*

Jasmine A. Bucher, 2001-; *Communications Assistant, 2001-. B.A., Lebanon Valley College, 1997.*

Lauren McCartney Cusick, 2002-; *Director of Media Relations, 2002-. B.A., University of Massachusetts at Amherst, 1971; M.A., Rutgers, The State University of New Jersey, 1974.*

Mattia S. Guinivan, 1999-; *Director of Prospect Research, 1999-. B.A., Millersville University, 1972.*

Thomas M. Hanrahan, 1997-; *Director of College Relations, 1999-. B.A., East Stroudsburg University, 1990; M.Ed., 1992.*

Carolyn A. Lauver, 1992-; *Director of Major Gifts, 2001-; B.Mus., College Misericordia, 1963.*

Ann Hess Myers, 1998-; *Director of Alumni Programs, 1998-. B.A., Kenyon College, 1979.*

Alexandra J. Ritter, 2001-; *Director of Advancement Special Events, 2001-. B.A., The Pennsylvania State University, 1999.*

Braden A. Snyder, 2002-; *Sports Information Director, 2002-. B.A., Lebanon Valley College, 2000.*

Deborah B. Wescott, 2000-; *Assistant Director of Alumni Programs, 2000-. B.A., Lebanon Valley College, 1995; M.A., The Pennsylvania State University, 1998.*

Jeffrey E. Zufelt, 2001-; *Director of Development, 2001-; B.S., Syracuse University, 1979.*

### *Financial Affairs*

Deborah R. Fullam, *Vice President and Controller.*

Benjamin S. Goodhart, 2001-; *Accounts Receivable Coordinator, 2001-. B.S., Lebanon Valley College, 1997.*

Ben D. Oreskovich, 1994-; *Associate Controller, 1999-. A.S., Danville Area Community College, 1990; B.S., The Pennsylvania State University, 1993.*

David I. Lasky, 1974-; *Director of Institutional Research, 1995-. A.B., Temple University, 1956; M.A., 1958; Ph.D., 1961.*

Dana K. Leshner, 1990-; *Payroll and Benefits Administrator, 1995-. B.A., Millersville University, 1977.*

### *Information Technology Services*

Robert A. Riley, *Vice President of Information Technology Services.*

Robert J. Dillane, 1985-; *Director of Information Management Services, 1986-. B.S., Lebanon Valley College, 1977.*

Angela D. Edris, 2000-; *Database Specialist, 2000-. B.S., Geneva College, 1992.*

Todd M. Gamble, 1998-; *PC Support Specialist, 1998-. B.S., Lebanon Valley College, 1998.*

Kent A. Harshman, 2002-; *Database Analyst/Programmer, 2002-. B.S., Loch Haven University, 1980.*

David W. Shapiro, 2000-; *Unix/Windows System Administrator, 2000-. B.A., Lebanon Valley College, 1999.*

Walter L. Smith, 1961-1969; 1971-; *Director of Special Services, 1982-. B.S., Lebanon Valley College, 1961; M.S. in Ed., Temple University, 1967.*

Michael C. Zeigler, 1990-; *Director of Client Services, 1990-. B.S., The Pennsylvania State University, 1979; M.Ed., 1995.*

### *Administrative Affairs*

Robert E. Hamilton, *Vice President for Administration.*

Robert E. Harnish, 1967-; *Manager of the College Store, 1967-. B.A., Randolph Macon College, 1966.*

Margaret A. Lahr, 1988-; *Director of Housekeeping, 1988-.*

George F. Lovell Jr., 1988-; *Superintendent of Facilities Services, 1988-.*

Harold G. Schwalm, 1994-; *Director of Building Maintenance, 1994-.*

Kathleen Tierney, 1983-2000; *Director of Athletics, 2001-. B.S., State University of New York at Brockport, 1979.*

Robert Wildasin, 2002-; *Assistant Manager of the College Store, 2002-. B.A., Lafayette College, 2002.*

Kevin R. Yeiser, 1982-; *Director of Grounds, 1982-.*

Allen R. Yingst, 1989-; *Director of Public Safety, 1990-.*

### *Athletics*

Richard L. Beard, 1994-; *Assistant Director of Athletics, 2001-. B.A., Lebanon Valley College, 1989; M.B.A., 1992.*

Michael R. Downey, 2002-; *Assistant Football Coach, 2002-. B.A., Lycoming College, 1996; M.B.A., Lebanon Valley College, 2001.*

- Lauren N. Frankford, 2002-; *Assistant Soccer Coordinator, Assistant Women's Basketball Coach, 2002-. B.A., Gettysburg College, 2000.*
- Mary M. Gardner, 1994-; *Aquatic Director, Head Swim Coach, 1997-. B.A., Gettysburg College, 1977; M.Ed., The Pennsylvania State University, 1996.*
- Jim Hoar, 1999-; *Head Baseball Coach, 1999-; Montana State University, 1974; University of Washington, Seattle, WA, 1969-1971.*
- Stacey L. Hollinger, 1998-; *Head Softball Coach, 1998-; Assistant Field Hockey Coach, 1998-; Coordinator of Summer Camps, 2002-. B.S., Millersville University, 1989.*
- Peg A. Kauffman, 1993-; *Head Women's Basketball Coach, 1993-; Assistant Athletic Director, 2001-; B.A., Millersville University, 1987; M.Ed, 1991.*
- Allan G. MacCormack, 1997-; *Head Ice Hockey Coach, 1997-; Director of Physical Education Program, 1998-. B.S., St. Lawrence University, 1974; M.S., Ithaca College, 1975.*
- Laurel Martin, 2001-; *Head Field Hockey Coach, 2001-. B.S., University of North Carolina at Chapel Hill, 1991.*
- Brad F. McAlester, 1994-; *Head Men's Basketball Coach, 1994-; B.A., Southampton College of Long Island University, 1975.*
- Cliff Myers, 1994-; *Head Tennis Coach, 1994-.*
- Wayne Perry, 1987-; *Head Women's Volleyball Coach, 1988-. B.S., Lebanon Valley College, 1978.*
- Mark J. Pulisic, 1993-; *Head Soccer Coach, 1993-98; Soccer Coordinator, Head Men's & Women's Coach, 1998-; B.S., George Mason University, 1991.*
- O. Kent Reed, 1971-; *Head Men's Track and Field Coach, Men's and Women's Cross-Country Coach, 1971-. B.S., Otterbein College, 1956; M.A., Eastern Kentucky University, 1970.*
- Michael J. Silecchia, 1998-; *Head Football Coach, 1998-. B.A., Mansfield University, 1978; M.S.E., 1984.*
- Brian Todd Smith, 1998-; *Assistant Football Coach, 1998-. B.A., Mansfield University, 1989.*
- Louis A. Sorrentino, *Golf Coach, 1989-; B.A., Lebanon Valley College, 1954; M.S., Bucknell University, 1961.*
- James E. Stark, 1986-; *Athletic Trainer, 1986-. B.S., Lock Haven University, 1983; M.Ed., Shippensburg University, 1986.*

## FACULTY

### Active

Barbara J. Anderman, 2001-; *Assistant Professor of Art. Chairperson of the Department of Art. M.A., University of St. Andrews, Scotland, 1971; M.A., Rutgers University, 1994; Ph.D., 2000.*

Sharon O. Arnold, 1986-; *Associate Professor of Sociology. B.A., University of Akron, 1964; M.A., 1967; M.S.W., Temple University, 1994.*

Susan L. Atkinson, 1987-; *Professor of Education. Chairperson of the Department of Education. B.S., Shippensburg University, 1972; M.Ed., (Elementary Education) 1973; M.Ed., (Special Education), 1979; D.Ed., Temple University, 1987.*

Eric Bain-Selbo, 1997-; *Assistant Professor of Religion and Philosophy. Chairperson of the Department of Religion and Philosophy. B.A., University of Tennessee, 1987; M.A., Miami University (Ohio), 1988; Ph.D., University of Chicago, 1997;*

Philip A. Billings, 1970-; *Professor of English. B.A., Heidelberg College, 1965; M.A., Michigan State University, 1967; Ph.D., 1974.*

Gayle L. Bolinger, 2000-; *Director, West Shore Center, 2000-2002; Assistant Professor of Accounting, 2002-; B.A., Purdue University, 1973; M.S., 1976.*

Marie G. Bongiovanni, 1990-; *Associate Professor of English. Chairperson of the Department of English. B.A., Temple University, 1977; M.B.A., Drexel University, 1982; M.L.A., University of Pennsylvania, 1996.*

Donald C. Boone, 1988-; *Associate Professor of Business Administration. B.A., Michigan State University, 1964; M.B.A., 1966.*

Jean-Marc Braem, 2002-; *Assistant Professor of French. Licencé, Université Libre de Bruxelles, 1980; M.A., Princeton University, 1985; Ph.D., 1989.*

Christopher Brazfield, 1999-; *Assistant Professor of Mathematical Sciences. B.A., Reed College, 1993; M.S., University of Oregon, 1995; Ph.D., 1999.*

J. Patrick Brewer, 1997-; *Assistant Professor of Mathematical Sciences. B.S., Northern Arizona University, 1991; M.S., University of Oregon, 1993; Ph.D., 1997.*

James H. Broussard, 1983-; *Professor of History. A.B., Harvard University, 1963; M.A., Duke University, 1965; Ph.D., 1968.*

Donald E. Byrne Jr., 1971-; *Professor of Religion and American Studies. Director of the American Studies Program. B.A., St. Paul Seminary, 1963; M.A., Marquette University, 1966; Ph.D., Duke University, 1972.*

Sharon F. Clark, 1986-; *Professor of Business Administration. B.A., University of Richmond, 1969; J.D., 1971.*

Salvatore S. Cullari, 1986-; *Professor of Psychology. Chairperson of the Department of Psychology. B.A., Kean College, 1974; M.A., Western Michigan University, 1976; Ph.D., 1981.*

Michael A. Day, 1987-; *Professor of Physics. 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).*

Johannes M. Dietrich, 1995-; *Associate Professor of Music. B.M., Montana State University, 1990; M.M., University of Cincinnati College-Conservatory of Music, 1992; D.M.A., 1996.*

Deanna L. Dodson, 1994-; *Associate Professor of Psychology. B.S., Tennessee Technological University, 1985; M.S., Memphis State University, 1988; Ph.D., 1992. (On leave, Spring 2003)*

Phylis C. Dryden, 1987-; *Associate Professor of English. B.A., Atlantic Union College, 1976; M.A., State University of New York at Albany, 1985; D.A., 1988.*

Scott H. Eggert, 1983-; *Professor of Music. B.F.A., University of Wisconsin (Milwaukee), 1971; M.A., University of Chicago, 1974; D.M.A., University of Kansas, 1982.*

Dale J. Erskine, 1983-; *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.*

Barry X. Friedman, 2002-; *Assistant Professor of Psychology. B.A., SUNY at Binghamton, 1997.*

Michael D. Fry, 1983-; *Professor of Mathematical Sciences. Chairperson of the Department of Mathematical Sciences. B.A., Immaculate Heart College, 1975; Ph.D., University of Illinois, 1980.*

Claudia C. Gazsi, 2001-; *Assistant Professor of Physical Therapy. Academic Coordinator of Clinical Education. B.S., West Virginia University, 1981; M.H.A., The Pennsylvania State University, 2000.*

Cheryl George, 1998-; *Assistant Professor of Education. B.S., Texas Christian University, 1984; M.Ed., University of North Texas, 1988; Ph.D., 1993.*

Stacy A. Goodman, 1996-; *Associate Professor of Biology. B.S., Westminster College, 1991; Ph.D., The Pennsylvania State University, 1996.*

Gary Grieve-Carlson, 1990-; *Professor of English. Director of General Education. B.A., Bates College, 1977; M.A., State University of New York at Binghamton, 1980; Ph.D., Boston University, 1988.*

Marta Guevara-Geer, 1999-; *Assistant Professor of Spanish. B.A., Ripon College, 1990; M.A., University of Wisconsin-Madison, 1993.*

Carolyn R. Hanes, 1977-; *Professor of Sociology. Chairperson of the Department of Sociology. B.A., Central Michigan University, 1969; M.A., University of New Hampshire, 1973; Ph.D., 1976.*

Marc A. Harris, 2000-; Assistant Professor of Chemistry. B.A., University of Arizona, 1994; Ph.D., University of Nevada at Reno, 1999.

Griffin C. Hathaway, 2001-; Assistant Professor of Political Science. B.A., University of North Carolina at Chapel Hill, 1987; M.A., The American University, 1990; M.A., University of Maryland College Park, 1995; Ph.D., 1998.

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-; 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. B.S., Lebanon Valley College, 1968; B.A., 1987; A.M., Boston University, 1971; Ph.D., 1976; M.A.R., Lancaster Theological Seminary, 2002.

Paul A. Heise, 1991-; Professor of Economics. B.S.F.S., Georgetown University, 1958; M.A., 1963; M.P.A., Harvard University, 1972; Ph.D., New School for Social Research, 1991.

Jeanne C. Hey, 1989-; Professor of Economics. B.A., Bucknell University, 1954; M.B.A., Lehigh University, 1982; Ph.D., 1990.

Barry R. Hill, 1993-; Associate Professor of Music. Director of the Music Recording Technology Program. B.S., Music with Recording Arts, University of North Carolina at Asheville, 1989; M.M., New York University, 1996.

John H. Hinshaw, 2000-; Assistant Professor of History, B.A., Macalester College, 1985; M.A., Carnegie Mellon University, 1988; Ph.D., 1995.

J. Noel Hubler, 1995-; Associate Professor of Religion and Philosophy. B.A., University of Pennsylvania, 1981; Ph.D., 1995.

Luke G. Higgins, 2001-; Assistant Professor of Biology. B.S., Albright College, 1988; M.S., University of Delaware, 1991; Ph.D., State University of New York at Stony Brook, 1999.

Barry L. Hurst, 1982-; Associate 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. B.A., Queens College, 1971; M.A., 1974; Ph.D., City University of New York, 1979.

Cynthia R. Johnston, 1991-; Lecturer in Chemistry. B.S., Lebanon Valley College, 1987.

John P. Kearney, 1971-; *Professor of English*. B.A., *St. Benedict's College*, 1962; M.A., *University of Michigan*, 1963; Ph.D., *University of Wisconsin*, 1968.

Jeffery Kleinsorge, 1998-; *Assistant Professor of Music*. B.M., *Michigan State University*, 1984; M.M., *Manhattan School of Music*, 1986; Ph.D., *Michigan State University*, 1993.

Donald E. Kline, 1997-; *Assistant Professor of Education*. B.S., *Lebanon Valley College*, 1966; M.Ed., *Millersville University*, 1975; M.S.Ed., *Shippensburg University*, 1977; Ed.D., *Lehigh University*, 1990.

Joel A. Kline, 1999-; *Assistant Professor of Business Administration*. Acting Director of the *Digital Communications Program*. A.S., *Harrisburg Area Community College*, 1985; B.S., B.A., *Lebanon Valley College*, 1989; M.J., *Temple University*, 2002.

Kathleen Kolbet, 1999-; *Assistant Professor of Chemistry*. B.A. (Chemistry), B.S. (Mathematics), *Gonzaga University*, 1993; Ph.D., *University of Illinois*, 1999.

Walter Labonte, 1992-; *Lecturer in English*. B.S., *Northeastern University*, 1968; M.A., 1977; M.Ed., *Curry College*, 1984.

Kerrie D. Laguna, 1997-; *Assistant Professor of Psychology*. B.S., *The Pennsylvania State University*, 1990; B.Ed., 1991; M.A., *University of Nebraska*, 1996; Ph.D., 1997.

Louis B. Laguna, 1999-; *Assistant Professor of Psychology*. B.S., *The Pennsylvania State University*, 1990; M.S., *Millersville University of Pennsylvania*, 1992; M.A., *University of Nebraska*, 1995; Ph.D., 1998.

Mary L. Lemons, 1996-; *Associate Professor of Music*. B.S., *University of Illinois at Urbana-Champaign*; M.S., 1990; Ed.D., 1998.

Robert W. Leonard, 1988-; *Professor of Business Administration*. Chairperson of the *Department of Business and Economics*. B.A., *Ohio University*, 1977; M.A., *St. Francis School of Industrial Relations*, 1978; M.B.A., *Ohio State University*, 1986.

David W. Lyons, 2000-; *Assistant Professor of Mathematical Sciences*. B.S., *Davidson College*, 1981; Ph.D., *University of North Carolina at Chapel Hill*, 1996.

Tia Malkin-Fontecchio, 2002-; *Assistant Professor of History*. B.A., *University of California at Berkeley*, 1994; M.A., *Brown University*, 1996.

Louis Manza, 1995-; *Associate Professor of Psychology*. B.A., *State University of New York at Binghamton*, 1988; M.A., *Brooklyn College*, 1991; M. Phil., *City University of New York*, 1991; Ph.D., 1992.

Leon E. Markowicz, 1971-; *Professor of Business Administration*. A.B., *Duquesne University*, 1964; M.A., *University of Pennsylvania*, 1968; Ph.D., 1972; M.A., *Antioch University*, 1998.

G. Daniel Massad, 1985-; *Artist-in-Residence*. B.A., *Princeton University*, 1969; M.A., *University of Chicago*, 1977; M.F.A., *University of Kansas*, 1982.



Raymond A. Maynard, 2002-; *Assistant Professor of Economics. B.A., University of Sussex, 1987; M.A., University of Tennessee, 1992; Ph.D., 2000.*

Rebecca McCoy, 1998-; *Associate Professor of History. Chairperson of the Department of History and American Studies. A.B., Mount Holyoke College, 1975; M.A., University of North Carolina, 1980; Ph.D., 1992.*

Mark L. Mecham, 1990-; *Clark and Edna Carmean Distinguished Professor of Music. Chairperson of the Department of Music. B.M., University of Utah, 1976; M.M., 1978; D.M.A., University of Illinois at Urbana-Champaign, 1985.*

Owen A. Moe Jr., 1973-; *Vernon and Doris Bishop Distinguished Professor of Chemistry. B.A., St. Olaf's College, 1966; Ph.D., Purdue University, 1971.*

Shelly Moorman-Stahlman, 1997-; *Associate Professor of Music. B.Mus., University of Missouri-Kansas City, 1985; M.M., 1986; D.M.A., University of Iowa, 1990.*

Philip G. Morgan, 1969-; *Associate Professor of Music. B.M.E., Pittsburg State University (Kansas), 1962; M.S., 1965.*

Roger M. Nelson, 2002-; *Professor of Physical Therapy. Chairperson of the Department of Physical Therapy. Certificate in Physical Therapy, 1965; M.S., Boston University, 1971; Ph.D., The University of Iowa, 1981.*

Renee Lapp Norris, 2002-; *Assistant Professor of Music. B.A., West Chester University, 1991; M.M., University of Maryland, 1994; Ph.D., 2001.*

John D. Norton, 1971-; *Professor of Political Science. B.A., University of Illinois, 1965; M.A., Florida State University, 1967; Ph.D., American University, 1973.*

Walter A. Patton, 1999-; *Assistant Professor of Chemistry. B.S., Susquehanna University, 1988; Ph.D., Lehigh University, 1993.*

Mary K. Pettice, 1994-; *Associate Professor of English. B.A., Illinois Wesleyan University, 1982; M.S., University of Illinois, 1983; M.A. 1986; Ph.D., University of Houston, 1994.*

Michael Pittari, 2002-; *Assistant Professor of Art. B.F.A., University of Florida, 1989. M.F.A., University of Tennessee, 1995.*

Sidney Pollack, 1976-; *Professor of Biology. B.A., New York University, 1963; Ph.D., University of Pennsylvania, 1970.*

Kevin B. Pry, 1991-; *Assistant Professor of English. B.A., Lebanon Valley College, 1976; M.A., The Pennsylvania State University, 1980; Ph.D., 1984.*

Barney T. Raffield III. 1990-; *Professor of Business Administration. B.B.A., Southern Methodist University, 1968; M.B.A., 1971; Ph.D., Union Graduate School, 1982.*

- Sharon Hall Raffield, 1990-; *Associate Professor of Sociology. B.A., Wheaton College, 1963; M.S.W., Washington University, 1967.*
- O. Kent Reed, 1971-; *Associate Professor of Physical Education. B.S., Otterbein College, 1956; M.A., Eastern Kentucky University, 1970.*
- Jeffrey J. Ritchie, 2002-; *Assistant Professor of English and Digital Communications. B.S. and B.A., Indiana University, 1989; M.A., University of South Carolina, 1993; M.Ed., Arizona State University, 1998; Ph.D., 2000.*
- Jeffrey W. Robbins, 2002-; *Assistant Professor of Religion and Philosophy. B.A., Baylor University, 1994; M.Div., Texas Christian University, 1997; M.Phil., Syracuse University, 1999; Ph.D., 2001.*
- Stacey A. Ruch, 2001-; *Assistant Professor of Physical Therapy. B.S., Seton Hall University, 1989; M.S., 1993; Ph.D., The Pennsylvania State University, 2000.*
- Gail A. Sanderson, 1983-; *Associate Professor of Accounting. B.A., Hobart and William Smith Colleges, 1970; M.B.A., Boston University, 1977.*
- James W. Scott, 1976-; *Professor of German. Acting Chairperson of the Department of Foreign Languages. B.A., Juniata College, 1965; Ph.D., Princeton University, 1971.*
- Daniel Simpkins, 1998-; *Lecturer in Sociology. B.A., West Georgia College, 1976; M.A., University of North Carolina at Chapel Hill, 1984; Ph.D., 1992.*
- Jeff Snyder, 1997-; *Assistant Professor of Music and Assistant Director of Music Recording Technology. A.A., Pensacola Junior College, 1982; B.A., University of West Florida, 1984; M.S., Kutztown University, 1998.*
- Thomas M. Strohman, 1977-1983; 1987-; *Associate Professor of Music. B.S., Lebanon Valley College, 1975; M.M., Towson State University, 1998.*
- Edward J. Sullivan, 2001-; *Associate Professor of Business Administration and Economics. B.S., St. Peter's College, 1972; M.A., The Pennsylvania State University, 1975; Ph.D., 1985.*
- Dale E. Summers, 1990-; *Professor of Education. Director of Elementary and Secondary School Relations. B.S., Ball State University, 1971; M.A., 1973; Ed.D., 1978.*
- Linda L. Summers, 1991-; *Instructor of Education. B.S., Ball State University, 1972; M.A., 1977.*
- Dennis W. Sweigart, 1972-; *Professor of Music. B.S., Lebanon Valley College, 1963; M.M., University of Michigan, 1965; D.M.A., University of Iowa, 1977. (On leave, Fall 2002)*

Rosa Tezanos-Pinto, 1999-; *Assistant Professor of Spanish. B.A., University of Miami, 1979; M.A., 1994; Ph.D., 2002.*

Mark A. Townsend, 1983-; *Professor of Mathematical Sciences. B.S., Bethany Nazarene College, 1965; M.A., Oklahoma University, 1969; Ed.D., Oklahoma State University, 1983.*

Dennis J. Tulli, 2002; *Visiting Assistant Professor of Education. B.A., Lebanon Valley College, 1969; M.Ed., Shippensburg University, 1976; Ed.D., Temple University, 1991.*

Angel T. Tuninetti, 1996-; *Associate Professor of Spanish. Chairperson of the Department of Foreign Languages. L.L.M., Universidad Nacional de Córdoba, 1986; M.A., Washington University, 1991; Ph.D., 1999. (On leave, Fall 2002)*

Susan E. Verhoek, 1974-; *Professor of Biology. B.A., Ohio Wesleyan University, 1964; M.A., Indiana University, 1966; Ph.D., Cornell University, 1975.*

Scott N. Walck, 1999-; *Assistant Professor of Physics. B.S., Rensselaer Polytechnic Institute, 1988; M.S., Lehigh University, 1992; Ph.D., 1995.*

Carl T. Wigal, 1993-; *Professor of Chemistry. Chairperson of the Department of Chemistry. A.S., College of Mount Saint Joseph, 1984; B.S., University of Cincinnati, 1986; Ph.D., Miami University (Ohio), 1990.*

Stephen E. Williams, 1973-; *Professor of Biology. B.A., Central College, 1964; M.S., University of Tennessee, 1966; Ph.D., Washington University, St. Louis, 1971.*

Henry L. Wilson, 1999-; *Director of Writing Center, Assistant Professor of English. B.A., University of Tennessee, 1985; M.A., 1987; Ph.D., 1993.*

Paul L. Wolf, 1966-; *Professor of Biology. B.S., Elizabethtown College, 1960; M.S., University of Delaware, 1963; Ph.D., 1968.*

Allan F. Wolfe, 1968-; *Professor of Biology, Chairperson of the Department of Biology. B.A., Gettysburg College, 1963; M.A., Drake University, 1965; Ph.D., University of Vermont, 1968.*

Kenneth Yarnall, 1996-; *Associate Professor of Mathematical Sciences. B.S., South Carolina College, 1986; Ph.D., University of South Carolina, 1992. (On leave, Fall 2002)*

M. Jane Yingling, 2001-; *Assistant Professor of Education. B.S., Lock Haven University, 1972; M.A., Shippensburg University, 1996.*

#### *Emeriti*

Madelyn J. Albrecht, 1973-1990; *Associate Professor Emerita of Education. B.A., Northern Baptist College, 1952; M.A., Michigan State University, 1958; Ph.D., 1972.*

Howard L. Applegate, 1983-2000; *Professor Emeritus of History and American Studies. B.A., Drew University, 1957; M.A., Syracuse University, 1960; Ph.D., 1966.*

- Eloise P. Brown, 1961-1987; *Readers' Services Librarian Emerita*. B.S.L.S. Simmons College, 1946.
- Voorhis C. Cantrell, 1968-1992; *Professor Emeritus of Religion and Greek*. B.A., Oklahoma City University, 1952; B.D., Southern Methodist University, 1956; Ph.D., Boston University, 1967.
- D. Clark Carmean, 1933-1972; *Director Emeritus of Admissions*. A.B., Ohio Wesleyan University, 1926; M.A., Columbia University, 1932.
- Richard F. Charles, 1988-1997; *Vice President Emeritus for Advancement*. A.B., Franklin & Marshall College, 1953.
- Charles T. Cooper, 1965-1979; *Associate Professor Emeritus of Spanish*. B.S., U.S. Naval Academy, 1942; M.A., Middlebury College, 1965.
- Richard D. Cornelius, 1985-2001; *Professor Emeritus of Chemistry*. B.A., Carleton College, 1969; Ph.D., University of Iowa, 1974.
- George D. Curfman, 1961-1996; *Professor Emeritus of Music Education*. B.S., Lebanon Valley College, 1953; M.M., University of Michigan, 1957; Ed.D., The Pennsylvania State University, 1971.
- Donald B. Dahlberg, 1980-2001; *Professor Emeritus of Chemistry*. B.S., University of Washington, 1967; M.S., Cornell University, 1969; Ph.D., 1971.
- Robert S. Davidon, 1970-1984; *Professor Emeritus of Psychology*. A.B., University of Illinois, 1940; M.A., University of Pennsylvania, 1946; Ph.D., 1951.
- Alice S. Diehl, 1966-1997; *Technical Processes Librarian Emerita*. A.B., Smith College, 1956; B.S., Carnegie Institute of Technology, 1957; M.L.S., University of Pittsburgh, 1966.
- Carl Y. Ehrhart, 1947-1983; *Professor Emeritus of Philosophy and Dean of the College Emeritus*. A.B., Lebanon Valley College, 1940; M.Div., United Theological Seminary, 1943; Ph.D., Yale University, 1954.
- William H. Fairlamb, 1947-1990; *Professor Emeritus of Music*. Mus. B., cum laude, Philadelphia Conservatory, 1949.
- Arthur L. Ford, 1965-2001; *Professor Emeritus of English*. A.B., Lebanon Valley College, 1959; M.A., Bowling Green State University, 1960; Ph.D., 1964.
- Elizabeth M. Geffen, 1958-1983; *Professor Emerita of History*. B.S., University of Pennsylvania, 1934; M.A., 1936; Ph.D., 1958.
- Elizabeth M. Geffen, 1958-1983; *Professor Emerita of History*. B.S., University of Pennsylvania, 1934; M.A., 1936; Ph.D., 1958.

Pierce A. Getz, 1959-1990; *Professor Emeritus 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, 1980-2001; *Professor Emeritus of Education. B.A., St. Mary's Seminary and University, 1958; M.A., West Virginia University, 1970; Ed.D., 1974.*

Klement M. Hambourg, 1982-1995; *Professor Emeritus 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.*

June E. Herr, 1959-1980; *Associate Professor Emerita of Elementary Education. B.S., Lebanon Valley College, 1943, L.H.D., 1997; M.Ed., The Pennsylvania State University, 1954.*

Richard A. Joyce, 1966-1998; *Professor Emeritus of History. A.B., Yale University, 1952, M.A., San Francisco State College, 1963.*

Thomas A. Lanese, 1954-1978; *Associate Professor Emeritus of Strings, Conducting, and Theory. B. Mus., Baldwin-Wallace College, 1938; Fellowship, Julliard Graduate School; M.Mus., Manhattan School of Music, 1952.*

David I. Lasky, 1974-1995; *Professor Emeritus of Psychology. A.B., Temple University, 1956; M.A., 1958; Ph.D., 1961.*

Jean O. Love, 1954-1985; *Professor Emerita of Psychology. A.B., Erskine College, 1941; M.A., Winthrop College, 1949; Ph.D., University of North Carolina, 1953.*

George R. Marquette, 1951-1990; *Vice President Emeritus for Student Affairs. A.B., Lebanon Valley College, 1948; M.A., Columbia University, 1951; Ed.D., Temple University, 1967.*

Joerg W. P. Mayer, 1970-1997; *Professor Emeritus of Mathematical Sciences. Dipl. Math., University of Giessen, 1953; Ph.D., 1954.*

William J. McGill Jr., 1986-1998; *Senior Vice President and Dean of the Faculty Emeritus. A.B., Trinity College, 1957; M.A., Harvard University, 1958; Ph.D., 1961.*

Anna D. Faber McVay, 1954-1976; *Professor Emerita of English. A.B., Lebanon Valley College, 1948; M.A., University of Wisconsin, 1950; Ph.D., 1954.*

H. Anthony Neidig, 1948-1985; *Professor Emeritus of Chemistry. B.S., Lebanon Valley College, 1943; M.S., University of Delaware, 1946; Ph.D., 1948.*

Agnes B. O'Donnell, 1961-1987; *Professor Emerita of English. A.B., Immaculata College, 1948; M.Ed., Temple University, 1952; M.A., University of Pennsylvania, 1967; Ph.D., 1976.*

- J. Robert O'Donnell, 1961-1987; *Associate Professor Emeritus of Physics. B.S., The Pennsylvania State University, 1950; M.S., University of Delaware, 1953.*
- Gerald J. Petrofes, 1963-1988; *Associate Professor Emeritus of Physical Education. B.S., Kent State University, 1958; M.Ed., 1962.*
- Jacob L. Rhodes, 1957-1985; *Professor Emeritus of Physics. B.S., Lebanon Valley College, 1943; Ph.D., University of Pennsylvania, 1958.*
- Ralph S. Shay, 1948-1951; 1953-1984; *Professor Emeritus of History and Assistant Dean of the College Emeritus. A.B., Lebanon Valley College, 1942; A.M., University of Pennsylvania, 1947; Ph.D., 1962.*
- Robert W. Smith, 1951-1983; *Professor Emeritus of Music. B.S., Lebanon Valley College, 1939; M.A., Columbia University, 1950.*
- Joëlle L. Stopkie, 1989-2002-; *Professor Emerita of French. Licence, Sorbonne, 1960; M.A., New York University, 1963; Ph.D., Bryn Mawr College, 1979.*
- John A. Synodinos, 1988-1996; *President Emeritus. B.S., Loyola College, 1959; M.S.Ed., Temple University, 1977; L.H.D., Lebanon Valley College, 1996.*
- Warren K. A. Thompson, 1967-1997; *Professor Emeritus of Philosophy. A.B., Trinity University, 1957; M.A., University of Texas, Austin, 1963.*
- C. F. Joseph Tom, 1954-1989; *Professor Emeritus of Economics. B.A., Hastings College, 1944; M.A., University of Chicago, 1947; Ph.D., 1963.*
- Perry J. Troutman, 1960-1994; *Professor Emeritus of Religion. B.A., Houghton College, 1949; M.Div., United Theological Seminary, 1952; Ph.D., Boston University, 1964.*
- L. Elbert Wethington, 1963-1983; *Professor Emeritus of Religion. B.A., Wake Forest, 1944; B.D., Divinity School of Duke University, 1947; Ph.D., Duke University.*
- Glenn H. Woods, 1965-1990; *Associate Professor Emeritus of English. A.B., Lebanon Valley College, 1951; M.Ed., Temple University, 1962.*

#### *Adjunct*

- P. Terry Baker, 1997-; *Adjunct Instructor in History. B.S., Shippensburg University.*
- Joseph G. Bashore, 1994-1996, 2001-; *Adjunct Assistant Professor of Music. B.A., Lebanon Valley College, 1983; M.F.A., University of Iowa 1986.*
- Jean-Paul Benowitz, 1998-; *Adjunct Instructor in History. B.S., Eastern Mennonite University, 1991; M.A., Millersville University, 1993; additional graduate study at Temple University.*
- James F. Bohan, 1995-; *Adjunct Instructor in Mathematical Sciences. B.S., Loyola University, 1968; M.A., 1971.*

- Marthalee T. Brod, 1992-; *Adjunct Instructor in Psychology. B.A., Houghton College, 1967; M.Ed., Temple University, 1968; Ph.D., Fordham University, 1985.*
- Beverly Ann K. Butts, 2000-; *Adjunct Assistant Professor of Music. B.S., Lebanon Valley College, 1978; M.M., Michigan State University, 1980; additional graduate study at New York University.*
- James A. Diehm, 1997-; *Adjunct Instructor in Education. B.A., Albright College, 1961; M.A., Lehigh University, 1968; Administrative Certification, Temple University, 1972.*
- Joseph DiSanto, 1992-; *Adjunct Instructor in English. B.S., St. Joseph's University, 1967; Department of Defense Information Officers' School, 1969; M.A., Annenberg School of Communications, University of Pennsylvania, 1970.*
- James A. Erdman II, 1983-; *Adjunct Instructor in Music.*
- Timothy M. Erdman, 1988-; *Adjunct Instructor in Music. B.S., Temple University, 1970.*
- Paul Fierro, 2000-; *Adjunct Assistant Professor of Music. B.S., West Chester University, 1983; M.M., Ohio University, 1986.*
- Catherine M. Fitzgibbons, 1996-; *Adjunct Instructor in Business Administration. B.A., Williams College, 1986; J.D., Northwestern University School of Law, 1991.*
- Suzanne D. Fox, 1998-; *Adjunct Assistant Professor of Music. B.S., Lebanon Valley College, 1977; M.M., University of Miami, 1979.*
- Rita M. Gargotta, 1991-; *Adjunct Instructor in Spanish. B.S., West Chester State College, 1972; Diploma, University of Sevilla; M.A., West Chester State College, 1976.*
- Robert D. Gingrich, 1985-; *Adjunct Instructor in Social Work. M.S., Moravian College, 1968.*
- Rick Knepp, 1998-; *Adjunct Instructor in Science Education, B.S., Lock Haven University, 1979; M.Ed., Shippensburg University, 1986.*
- Nevelyn J. Knisely, 1963-; *Lecturer Professor of Music. B.M., Oberlin College, 1951; M.F.A., Ohio University, 1953.*
- David W. Layman, 1993-; *Adjunct Assistant Professor of Religion. A.B., University of Chicago, 1977; Ph.D., Temple University, 1994.*
- Mark N. Mazarella, 1998-; *Adjunct Professor of Military Science. B.A., Wilmington College, 1981; M.S., United States Army Command and General Staff College, 1994; M.Ed., The Pennsylvania State University, 2002. Lieutenant Colonel, United States Army.*
- James Miller, 1989-; *Adjunct Instructor in Music.*



Joseph D. Mixon, 1991-; *Adjunct Instructor in Music. B.A., Moravian College, 1981; M.M., Combs College of Music, 1990.*

Ellen Nicholas, 1996-; *Adjunct Instructor in Art Education. B.S., Kutztown University, 1968.*

Robert A. Nowak, 1988-; *Adjunct Assistant Professor of Music. B.S., Mansfield State College, 1973; M.M., University of Miami, 1975.*

Philip J. Oles, 1997-; *Adjunct Assistant Professor of Chemistry. B.A., University of Connecticut, 1968; Ph.D., University of Massachusetts, 1974.*

Glen Perry, 1998-; *Adjunct Instructor in Science Education. B.S., Shippensburg University, 1970; M.A., 1974.*

Laurie Haines Reese, 1996-; *Adjunct Assistant Professor of Music. B.M., University of Miami, 1983; M.M., University of Southern California, 1986.*

Jeff Remington, 1998-; *Adjunct Instructor in Science Education. B.A., Indiana University of Pennsylvania, 1986; M.Ed., The Pennsylvania State University, 1992.*

Andrew Roberts, 1998-; *Adjunct Instructor of Music. B.M., Berklee College of Music, 1989.*

Victoria Rose, 1993-; *Adjunct Assistant Professor of Music. B.M., Peabody Conservatory of the Johns Hopkins University, 1972; M.M., Towson State University, 1994.*



Thomas H. Sanagorski, 1997-; *Adjunct Assistant Professor of Religion. B.A., Elizabethtown College, 1971; M.Div., United Theological Seminary, 1974.*

Kirk W. Seibert, 1991-; *Adjunct Instructor in Business Administration. B.A., The Pennsylvania State University, 1969; M.S., Cornell University, 1973; D.S.W., University of Pennsylvania, 1982.*

Robert Siemers, 1995-; *Adjunct Assistant Professor of Music. B.M., Southern Illinois University, 1979; M.M., Eastman School of Music, 1981; D.M.A., Indiana University, 1997.*

Anna F. Tilberg, 1982-; *Adjunct Instructor in Biology. B.A., University of Pennsylvania, 1969.*

Barbara Tremitiere, 1994-; *Adjunct Assistant Professor of Sociology. B.A., Miami University of Ohio, 1961; M.S.W., University of Pittsburgh, 1963; Ph.D., Union Institute, 1992.*

Hui-Liang (Jeff) Tsai, 1988-; *Adjunct Professor of Business Administration. M.S. (Statistics), Florida State University, 1971; M.S.(Economics), 1974; Ph.D., 1976.*

Richard J. Tushup, 1989-; *Adjunct Assistant Professor of Psychology. A.B., St. Vincent Seminary; M.A., 1971; Ph.D., University of Delaware, 1977.*

Noëlle Vahanian, 2002-; *Adjunct Instructor in Philosophy. Baccalauréat, Lycée International des Pontonniers, 1988; B.A., Syracuse University; M.A., M.Phil., Ph.D., 1999.*

Michael Wojdylak, 2001-; *Adjunct Assistant Professor of Music. B.S., The Pennsylvania State University, 1977; M.AGR., 1983; D.D.S., University of Maryland, 1987; B.A., Lebanon Valley College, 1997.*

Louis Zivic, 1998-; *Adjunct Assistant Professor of Religion. B.A., Roosevelt University, 1969, M.A., Jewish Theological Seminary of America, 1975; Rabbi, 1976.*

### *Adjuncts in Medical Technology*

*Jersey Shore Medical Center:* Medical Advisor, Brian Erler, M.D., Ph.D.; Program Director, Perla L. Simmons, M.P.A., B.S.M.T. (ASCP) S.H., N.C.A. (CLS); Assistant Program Director/Education Coordinator, Mary Jane C. Schaefer, M.S., M.P.A.

*Lancaster General Hospital:* Medical Director, James T. Eastman, M.D.; Program Director, Nadine Gladfelter, M.S., M.T.(ASCP)

*Reading Hospital and Medical Center:* Program Director, School of Clinical Laboratory Science, Joanne S. Grant, M.S., M.T. (ASCP); Medical Director, School of Clinical Laboratory Science, William Natale, B.A., M.D., J.D.

## COLLEGE SUPPORT STAFF

Deborah L. Atkins .....	Annual Giving
Susan R. Aungst .....	Library
Phyllis C. Basehore.....	President of the College Office
Marilyn E. Boeshore.....	Alumni Office
Donna L. Brickley .....	Information Technology Services Office
Jo Lynn Brummer .....	Development Office
Joel M. Burkholder .....	Library
Wendy L. Carfagno.....	Registrar's Office
Crista Detweiler .....	Art Gallery
Monika Edwards .....	Graduate Studies and Continuing Education Office
Lois Filingeri .....	Financial Aid Office
Mary E. Fisher.....	Administration and Controller's Offices
Jennifer R. Fullenlove .....	Business and Economics
Beverly J. Gamble .....	Student Services Office
Cheryl A. George.....	Media Center
Susan M. Greenawalt .....	Graduate Studies and Continuing Education Office
Nancy J. Hartman .....	Business Office
Pamela S. Hillegas .....	Athletic Office
Constance W. Kershner.....	Business Office
Charlene R. Kreider .....	Advancement Office
Karen M. Kreider .....	Copy Center and Mail Services
Paula Gahres.....	Chaplain's Office
Scott C. Keyser.....	West Shore
Deborah L. Lerchen .....	English, Political Science, Sociology
Deborah L. Lutz .....	Development Office
Karen R. McLucas .....	Admission Office
Anita L. Miller .....	Associate Dean and Academic Services Office
Tami S. Morgan .....	Admission Office
Gwendolyn W. Pierce .....	Administration and Controller Offices
Ann K. Pitt .....	Student Services Office
Cindy L. Progin .....	College Relations Office
Christine M. Reeves .....	Development Office
Shirley C. Ritter.....	Copy Center and Mail Services
Carol Sabados .....	Biology and Psychology Departments
Ann Safstrom .....	Music Department
Audrey K. Sanders .....	Humanities Departments and General Education
Denise D. Sanders .....	Registrar's Office
Jacqueline F. Showers .....	Telephone Console Attendant
Barbara A. Smith.....	Vice President for Academic Affairs and Dean of the Faculty Office
Susan Snyder .....	Mathematical Sciences Department
Jay L. Sorrentino .....	Athletic Equipment Manager
Andrea Stone .....	College Center
Pamela J. Stoudt .....	Library
Bonnie C. Tenney .....	Facilities Services Office
LaRue A. Troutman .....	Major Gifts Office
Nathaniel C. Tulli .....	Information Technology Services Office
Nancy J. Waite .....	Education Department
Barbara E. West.....	Chemistry and Physics Departments
Mark C. Wolfe .....	Information Technology Services Office
Beverly Yingst .....	Arnold Sports Center
Susan B. Zearing .....	Admission Office

# THE THOMAS RHYS VICKROY DISTINGUISHED TEACHING AWARDS

The Vickroy Award recipient, who must be a full-time member of the college faculty, is selected by the president of the college after appropriate consultation with alumni, students, faculty and staff. The Vickroy Award replaces the Lindback Award which was presented through the 1993 academic year.

## 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. Byrne, 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
- 1990 Owen A. Moe Jr., Ph.D., Professor of Chemistry
- 1991 Scott H. Eggert, D.M.A., Associate Professor of Music
- 1992 Gary Grieve-Carlson, Ph.D., Assistant Professor of English
- 1993 Diane M. Iglesias, Ph.D., Professor of Spanish
- 1994 Sidney Pollack, Ph.D., Professor of Biology and Barbara S. Vlasisavljevic, M.B.A., Assistant Professor of Accounting
- 1995 David I. Lasky, Ph.D., Professor of Psychology
- 1996 James W. Scott, Ph.D., Professor of German
- 1997 Howard L. Applegate, Ph.D., Professor of History and American Studies
- 1998 Mark L. Mecham, D.M.A., Professor of Music
- 1999 Michael A. Day, Ph.D., Professor of Physics
- 2000 Jeanne C. Hey, Ph.D., Associate Professor of Economics
- 2001 Allan F. Wolfe, Ph.D., Professor of Biology
- 2002 Marie G. Bongiovanni, M.L.A., Associate Professor of English

## **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 Vickroy 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., Adjunct Instructor in French
- 1990 Michael J. Asken, Ph.D., Adjunct Associate Professor of Psychology
- 1991 Joanne Cole Rosen, B.A., Adjunct Assistant Professor of Chemistry
- 1992 Kevin B. Pry, Ph.D., Adjunct Assistant Professor of English
- 1993 Thomas M. Strohman, B.S., Adjunct Instructor in Music
- 1994 Timothy M. Dewald, M.Div., Adjunct Instructor in Mathematical Sciences
- 1995 Léonie Lang-Hambourg, M.A., Adjunct Assistant Professor of German
- 1996 Cynthia R. Johnston, B.S., Adjunct Instructor in Chemistry
- 1997 Richard J. Tushup, Ph.D., Adjunct Assistant Professor of Psychology
- 1998 Arlen J. Greiner, M.S., Adjunct Assistant Professor of Physics
- 1999 Leslie E. Bowen, M.F.A., Lecturer in Art
- 2000 Patricia M. Meley, M.A., Adjunct Instructor in American Studies
- 2001 Robert A. Nowak, M.M., Adjunct Assistant Professor of Music
- 2002 Gene G. Veno, M.P.A., Adjunct Instructor in Business Administration

## ACCREDITATION

Lebanon Valley College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools.

Lebanon Valley College is also accredited by the Pennsylvania Department of Education, the National Association of Schools of Music and the American Chemical Society.

Lebanon Valley College is on the approved list of the Regents of the State University of New York and of the American Association of University Women.

Lebanon Valley College is a member of the following: American Association of Colleges; National Association of Independent Colleges and Universities; Pennsylvania Foundation for Independent Colleges; College Entrance Examination Board; College Scholarship Service; Council of Independent Colleges; National Collegiate Athletic Association; Middle Atlantic States Collegiate Athletic Conference; Penn-Mar Athletic Conference; Central Pennsylvania Field Hockey Association; Eastern College Athletic Conference.

## NON-DISCRIMINATION POLICY

Lebanon Valley College does not discriminate on the basis of race, color, national and ethnic origin, sex, age, religion, sexual preference, or disability.

## STUDENT RETENTION

Lebanon Valley College participates in student financial assistance programs under Title IV of the Higher Education Act of 1965. According to the requirements of the Student Right-to-Know legislation the college is required to report annually the graduation rates within 150% of the normal time to complete a degree to students and prospective students.

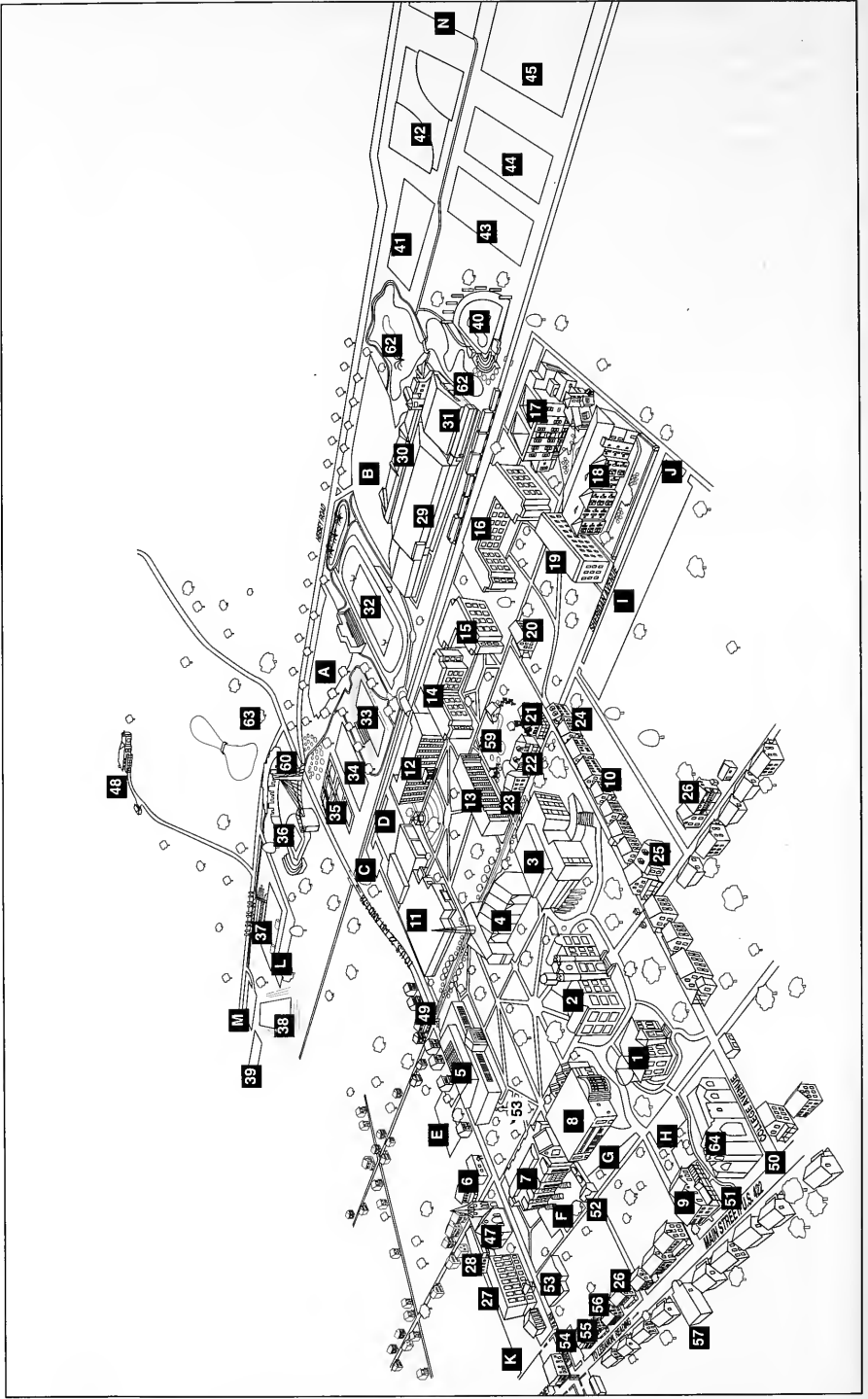
The cohort of 297 full-time, first-time degree-seeking undergraduates who entered Lebanon Valley College in the fall of 1995 consisted of 142 men and 155 women. At the end of four years 184 had completed a bachelor's degree. At the end of the fifth year another 31 had completed a bachelor's degree. By 2001, at the end of the sixth year 4 additional students had completed a bachelor's degree. The Student Right-to-Know Completion or Graduation Rate Calculation for the 1995 cohort is 74%. This information has been submitted to the U.S. Department of Education.

Detailed information on student retention and graduation rates is available in the Office of the Registrar.

Production of this catalog is under the direction of the Registrar's Office. Information included is correct as of the date of publication. Unexpected changes may occur during the course of the academic year; therefore, the listing of a course or program in this catalog does not constitute a guarantee or contract that the particular course or program will be offered during a given year.

\* All information is correct as of August 1, 2002.

# Campus Map



## ACADEMIC AND ADMINISTRATIVE BUILDINGS

- 1. Carnegie Building:** Admission and Financial Aid
- 2. Humanities Center and Administrative Offices:**  
Academic Departments: American Studies Program, English Department, Foreign Languages Department, History and Political Science Department, Religion and Philosophy Department, Sociology Department  
**Administrative Offices:** Business Office, Copy Center, Graduate Studies and Continuing Education, Mail Room, Media Services, President, Public Safety, Registrar, Study Abroad, Telephone Services, Vice President and Controller, Vice President and Dean of the Faculty, Vice President for Administration
- 3. Blair Music Center:** Music Department, Education Department, Lutz Recital Hall, Music Recording Technology Studios
- 4. Miller Chapel:** Chaplain's Office, Chapel, Classrooms
- 5. Lynch Memorial Hall:** Art Department and Gallery Offices, Business and Economics Department, Emmett C. Roop Management Department Wing, Information Technology Services, Lynch Gymnasium, William H. Lodge Mathematical Sciences Center; renovation scheduled for completion in 2003
- 6. Fencil Building:** Art Studios

## ATHLETIC AND RECREATION FACILITIES

- 29. Edward H. Arnold Sports Center:** Indoor Track, Physical Education, Intercollegiate Athletics, Pool, Recreational Facilities
  - 30. The Heilmann Center:** Athletic Training Facilities, Classrooms, Fitness Center, Physical Therapy Program, Wellness Pool
- 57.** Allen Theatre and MJ's Coffeehouse  
**58.** Carmean Plaza  
**59.** Peace Garden  
**60.** Faskick Bridge  
**61.** Pedestrian Bridge  
**62.** Wetlands/Environmental Study Area  
**63.** Williams Woods  
**64.** Annville United Methodist Church

## PARKING LOTS

### *Resident Students & ASC Members*

- A. Red Lot
  - B. Red Lot
  - N. Gold Lot
- Staff & Visitors*
- C. Silver Lot
  - D. Silver Lot
  - E. Silver Lot
  - F. Silver Lot
  - G. Silver Lot
  - H. Silver Lot

### *Commuter/Part-time Students and Visitors*

- I. Green Lot
  - J. Green Lot
  - C, D, overflow A + B
- Derickson Hall Residents*
- K. Blue Lot
  - E. Designated area

### *Unrestricted*

- L. Soccer/Baseball Lot
- M. Soccer Practice Lot

- 32. Henry and Gladys Arnold Field**
- 33-34. Field Hockey Complex**
- 35. Tennis Courts**
- 36. McGill Baseball Park**
- 37. Herbert Soccer Field**
- 38-39. Practice Soccer Fields**
- 40. Softball Park**
- 41. Robland Intramural Field**
- 42. Intramural Field**
- 43-44. Practice Football Fields**
- 45. Future Athletic Field**

## OTHER FACILITIES

- 47. Suzanne H. Arnold Gallery:** Suzanne H. Arnold Art Gallery, Zimmerman Recital Hall
- 48. Kreiderheim:** President's Residence, Conference Facility
- 49. Benjamin Cantor Entrance**
- 50. South Campus Entrance**
- 51. Bollinger Plaza**
- 52. Heating Plant**
- 53. Maintenance Shops**
- 54. Maintenance Offices**
- 55. Frank Afusinas House**
- 56. Middle Atlantic Conference Office**

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## PHONE NUMBERS

### College Offices\*

Academic Offices	6208
Academic Support	6988
Admissions	6181
Business Office	6300
Career Planning and Placement	6235
College Center	6161
College Store	6313
Computer Lab (general)	6067
Computer Science Lab	6067
Continuing Education	6213
Dean of Student Services	6233
Financial Aid	6181
Registrar	6215
Safety and Security	6111
Vice President/Dean of Faculty	6208

### Academic Offices\*

American Studies	6356
Art	6015
Biology	6175
Business Administration	6101
Chemistry	6140
Economics	6330
Education	6305
English	6240
Foreign Language	6250
History	6355
Mathematical Sciences	6080
Music	6275
Philosophy	6130
Physical Education	6364
Physics	6150
Political Sciences	6330
Psychology	6195
Religion	6130
Sociology	6155

\* Area code 717, prefix 867.

# 2002-2003 ACADEMIC CALENDAR

## FIRST SEMESTER

August	24	Saturday, 9:00 a.m.	Residence halls open for new students
	24	Saturday, 2:00 p.m.	Opening Convocation
	25	Sunday, Noon	Residence halls open for students
	26	Monday, 8:00 a.m.-5:00 p.m.	Advising Day
	27	Tuesday, 1:00-4:00 p.m.	Add/Drop Day
	28	Wednesday, 8:00 a.m.	Day classes begin
	28	Wednesday, 6:30 p.m.	Evening classes begin
October	4-6	Family/Homecoming Weekend	<i>Moravian College</i>
	11	Friday, 5:00 p.m.	Fall break begins
	15	Tuesday, 6:30 p.m.	Classes resume
	16	Wednesday, Noon	Mid-term grades due
	18	Friday, 5:00 p.m.	Incomplete grades due
November	1	Friday, 5:00 p.m.	Last day to change registration or withdraw from a course
	27	Wednesday, Noon	Thanksgiving vacation begins
December	2	Monday, 8:00 a.m.	Classes resume
	6	Friday, 5:00 p.m.	Last day for first-semester freshmen to withdraw from a course
	6	Friday, 5:00 p.m.	Day classes end
	7	Saturday	Reading Day
	8	Sunday	Reading Day
	9-14	Monday-Saturday	Final examinations
	14	Saturday, 5:00 p.m.	Semester ends
	18	Wednesday, Noon	Final grades due

## SECOND SEMESTER

January	12	Sunday, Noon	Residence halls open for students
	13	Monday, 8:00 a.m.	Add/Drop period begins
	13	Monday, 8:00 a.m.	Classes begin (all day classes)
	13	Monday, 6:30 p.m.	Evening classes begin
	20	Monday	Martin Luther King Holiday
	21	Tuesday, 5:00 p.m.	Add/Drop period ends
February	18	Tuesday, 11:00 a.m.	Founders Day
March	5	Wednesday, Noon	Mid-term grades due
	7	Friday, 5:00 p.m.	Spring vacation begins
	17	Monday, 8:00 a.m.	Classes resume
	21	Friday, 5:00 p.m.	Incomplete grades due
April	4	Friday, 5:00 p.m.	Last day to change registration or withdraw from a course
	17	Thursday, 5:00 p.m.	Easter vacation begins
	21	Monday, 6:30 p.m.	Classes resume
	30	Wednesday, 5:00 p.m.	Last day for first-semester freshmen to withdraw from a course
	30	Wednesday, 5:00 p.m.	Day classes end/Reading Afternoon
May	1	Thursday	Reading Day
	4	Sunday	Reading Day
	2-8	Friday-Thursday	Final examinations
	8	Thursday, 9:30 p.m.	Semester ends
	9	Friday, Noon	Senior grades due
	10	Saturday, 9:00 a.m.	Baccalaureate Service
	10	Saturday, 11:00 a.m.	134th Commencement
16	Friday, Noon	All final grades due	

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