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UNIVERSITY CALENDAR 2020 - 2021

FALL TERM 2020
THU AUG 20



A number of special educational opportunities are provided, including honors programs, independent study, internships, study at other institutions and abroad, student-designed majors and academic remediation.

approximately 300 full-time faculty members available to advise and counsel students on academic and career-related matters. There are also counseling, career planning and placement, and tutorial services, as well as services for nontraditional students. A

Students may be admitted to Millersville University to work toward an undergraduate degree or to take college-level courses for self-enrichment or career development. Students already holding a bachelor's degree may wish to pursue a second undergraduate

Lombardo Welcome Center at 800-MU-ADMIT or 717-871-4625, or visit the Millersville website at www.millersville.edu.

GENERAL ADMISSION POLICIES FOR ALL APPLICANTS TO UNDERGRADUATE DEGREE PROGRAMS

QUALIFYING FOR ADMISSION

To be considered for admission to Millersville University, one must be a graduate of an approved secondary school or hold a Gen-

have completed a college preparatory curriculum. Generally, the student's academic program should include four units of academic English; three units or more of academic mathematics, minimally including algebra I, algebra II and geometry; three units or more of

lab or technical science; and three or more units of academic social science coursework. Foreign language coursework at the sec-

Any home-schooled applicant wishing to be considered for admission to Millersville University should be a graduate of an approved home school association program. A GED issued by the Pennsylvania Department of Education is preferred if the student has not

SPECIAL ADMISSIONS PROGRAMS FOR DEGREE-SEEKING APPLICANTS

STUDENT ACCESS AND SUPPORT SERVICES

Millersville University provides diverse, dynamic, meaningful experiences to inspire learners to grow both intellectually and

Transfer students who hold an associate degree from a Pennsylvania community college receive full credit for all work success-

student teaching).

forfeit the transfer credit.

Transfer credits are not used in computing Millersville GPAs.

Military personnel and veteran applicants who do not meet standard transfer admissions criteria can be admitted on full-time probationary status.

admission (not through the English Language Institute), students must score a minimum of "70" on the TOEFL IBT or "6.0" on the IELTS. If the applicant takes and submits SAT scores that meet the University's general admission standards, then the student does NOT also need to submit TOEFL/IELTS scores.

OTHER RESTRICTED PROGRAMS

space is available.

ACADEMIC AMNESTY

semester are eligible to petition for academic amnesty if their cumulative grade point average (CGPA) was below 2.0 at departure.

In order to be eligible to petition for academic amnesty, the former student must complete an application for readmission to undergraduate degree status. If academic amnesty is granted, the calculation of the CGPA is restarted with the new matriculation semester. Under academic amnesty, all previous coursework and grades remain on the permanent record but are not included in the calcula-

Students in good academic standing who are on leave from a degree program at another college may apply to Millersville as part-time transient students.

STUDENTS FROM FRANKLIN & MARSHALL COLLEGE AND LANCASTER THEOLOGICAL SEMINARY

Millersville University has reciprocal agreements with these two institutions. Franklin & Marshall College may, upon appropriate

Similarly authorized full-time graduate students from Lancaster Theological Seminary may enroll in undergraduate and graduate-level courses at Millersville without a tuition charge by Millersville.

Millersville students may also take advantage of these agreements and enroll for courses at these institutions. See the section for more information.

HIGH SCHOOL STUDENTS (DUAL ENROLLMENT)

Qualified high school juniors and seniors may take credit-bearing courses at Millersville while pursuing their high

sults. They must also complete a special high school student application form. This form, along with approved dual-enrollment courses, can be found on the admissions website. Participation in the program does not guarantee later admission as a degree-seeking student. Homeschooled students pursuing a Pennsylvania Homeschoolers Association

transcripts and standardized test results.

VETERANS

Section 1775 (a)(1). DANTES and USAFI courses are considered for transfer credit in accordance with the recommendations of the Commission of Accreditation for Service Experiences of the American Council on Education.

ADVANCED STANDING

ADVANCED PLACEMENT EXAMINATIONS (AP)

Credit is granted to students earning scores of 3 or higher on AP examinations. The number of credits awarded depends on the taking an AP examination. Students must be admitted to undergraduate, degree-seeking status and be currently enrolled to be edu/apcores for more information regarding score reports.

COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP)

CLEP is a program of the College Board that includes both general and subject examinations. Six credits are awarded for scores of 50 or above on each of the CLEP general examinations: College Composition (with or without essay); Humanities; College Mathematics; Natural Sciences; and Social Sciences and History.

Three to six credits are awarded to students who earn a score of 50 or above on the CLEP subject examinations.

CHALLENGING COURSES BY EXAMINATION

Students who feel they have already mastered the material in a Millersville course may “challenge the course by examination,” taking a test on the course content instead of enrolling for the course itself. Students may challenge most courses in which they have not received a grade, and which have not been waived because of demonstrated competency or advanced placement. Because of content and structure, some courses may not be challenged by examination.

nience of the instructor. The grade earned is entered on the student’s record and calculated into the GPA whether or not a passing grade is earned. Standard tuition and fees are charged.

In some instances, department chairpersons may approve the use of a CLEP subject examination to challenge a course by examination. See the preceding section on CLEP for more information.

INTERNATIONAL BACCALAUREATE (IB) PROGRAM

Millersville University recognizes the value of the rigorous IB Program and gives it serious consideration when evaluating the on examinations in higher-level (HL) IB courses. Such credit is generally awarded on a course-by-course basis. The University does not give credit for standard-level (SL) examinations.

ments, or electives in the same manner as Advanced Placement (AP). Students will not receive duplicate credit for IB examinations, AP examinations, CLEP examinations or any other college courses taken before or after enrolling at Millersville University. In the event of overlapping course content, credit will be given for only one course.

EXPENSES AND FINANCIAL AID

As a state-owned university, Millersville University provides educational opportunities that surpass those available at many more costly institutions.

The table below and other information in this section present the most recent approved costs for the academic year (September to May) for students living in University residence halls. Tuition and fees are subject to change at any time.

		Nonresidents of Pennsylvania
Tuition*	\$9,570	\$19,290
General Fee*	\$2,202	\$2,202
Technology Fee*	\$478	\$728
	\$14,106	\$14,106
Estimated Books & Supplies***	\$1,000	\$1,000
Estimated Personal Expenses***	\$1,750	\$1,750
Estimated Travel Costs***	\$800	\$800

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PAYMENT OF TUITION AND FEES

forwarded four to six weeks before the beginning of each semester. Full payment is due two to three weeks prior to the beginning of the semester, by the due date on the e-bill.

drop any class they do not plan to attend. Failure to drop the class before the semester begins may result in charges and/or grades being posted to your records. Do not rely on the "drop for nonpayment" policy to remove classes.

Payment Plan

and parents meet education costs for the fall and spring semesters.

The payment plan enables participants to make regularly scheduled monthly payments. The payment plan allows for all or a portion

Millersville University to enroll.

TUITION

Tuition charges are set in July by the Board of Governors of Pennsylvania's State System of Higher Education.

Tuition for Residents of Pennsylvania. In-state undergraduates pay \$319 per credit hour. All undergraduates pay \$319 per credit hour during winter and summer sessions.

Tuition for Nonresidents of Pennsylvania. Full-time undergraduates pay \$9,645* per semester for 12 to 18 credit hours plus \$805* per credit hour over 18. Part-time undergraduates enrolled for fewer than 12 credit hours pay \$805* per credit hour. All undergraduates pay \$805* per credit hour during winter and summer sessions.

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Tuition for International Students. International students are charged nonresident tuition and fees, and a \$100 international student fee.

Residency Status.

as summarized below:

1. Continuous residence in Pennsylvania for 12 months prior to registration.
2. U.S. citizenship, formal declaration of intent to become a citizen or admission to the United States on an immigrant visa. A nonimmigrant visa (tourist or student visa) is not proof of intent of residency.

3. Pennsylvania residency by parent(s) or guardian(s) of students who are minors. The age of majority in Pennsylvania for establish-
through clear and convincing evidence.
4. A United States government employee or a member of the armed forces who was residing in Pennsylvania immediately prior to

2019-2020 Room rates per semester:

East, South and West Villages	Semester Price
Single Suite	\$4935
Double Suite	\$4390
Full Suite (South only)	\$4953
Marauder Suite	\$4919
Reighard Hall - All Suites	\$3894
Shenks Hall	
A Suite	\$4466
B Suite - Double	\$4108
B Suite - Single	\$4466
C Suite	\$3894

MEAL PLAN FEES - GORDINIER HALL RESIDENT DINING AND ALL DINING RETAIL LOCATIONS ON CAMPUS

Residential Students - The 2020-2021 housing and meal rate is \$7,053 per semester with a Dining Declining Balance level of \$2,100.

enrolled in the \$2,100 Declining Balance level. Students with greater than 30 credit hours, including transfer and upperclassmen resi-

Commuter Students (non-Millersville University Resident Students) – All commuter students may sign up for any of the Declining Balance levels for the fall and spring semesters. Commuter students who are Declining Balance members during the fall semester are not automatically signed up for a spring semester Declining Balance level. Commuter students may choose from any of the Declining Balance levels to add to their remaining balance from the fall semester or become a member beginning with the Spring Semester.

Students are responsible for managing the Declining Balance dollars throughout the course of each semester. Declining Balance

are approximately 15 academic weeks each semester, which should be used to determine the potential number of meals and the

Declining Balance Level for each of the Summer Sessions will be \$600.

Balance plan who present their Millersville University ID will be charged \$8.25 for breakfast, \$10.75 for lunch/brunch and \$13.25 for

All students who leave the University, regardless of reason, receive a prorated refund of meal plan fees, provided they complete the

Refunds. A prorated refund schedule for housing and meal plan fees for students who withdraw from the University is as follows:

Before student move-in day	100%
First week	90%
Second week	80%
Third week	70%
Fourth week	60%
Fifth week	50%

Marauder Gold. Money deposited into your Marauder Gold account may be used to make purchases at on-campus locations, University services and local participating vendors that display the Marauder Gold logo, including the University Store. You can open a Marauder Gold plan with a minimum deposit of \$50 and additions of \$25. Please note Marauder Gold and the amount being sent on your statement.

Marauder Gold must be paid by check, money order or credit card. Financial aid may not be used.

OTHER FEES

Application Fee: Undergraduate Admissions. Students who apply and are admitted to the University through the admissions

Application Fee: Graduate Admissions. People who apply for admission through graduate and professional studies, regardless

of \$40 with the submission of each new application.

Late-Payment Fee. Students who do not resolve their account by the due date are charged \$100.

Late-Registration Fee. Students who register after the start of the semester/session are charged \$50, except when permission for late registration has been granted by the registrar.

Orientation Fee. -

Special Handling Fee. Anyone who gives the University a check or credit card that is not honored by the bank on which it is drawn is charged \$35.

Replacement Fee.

Damage Fee. Students are responsible for damages, breakages, and loss or delayed return of University property.

Degree Fee. Each candidate for a degree must pay \$30 to cover the cost of the diploma. The Commonwealth of Pennsylvania

Health Services Supplies Fee. The cost of any expensive supplies used to treat a patient at Health Services will be charged to the patient.

Library Overdue and Items Fees. Please contact the library for information at 717-871-7110, or visit the Millersville website, www.millersville.edu.

DEPOSITS

Advance Matriculation Deposit.

toward payment of tuition. It is transferable on a one-time basis to a revised admission date upon the approval of the director of admissions.

Advance Housing Deposit. Students admitted to University residence halls must pay a deposit of \$200 each year. It may be applied only toward payment of residence hall fees for spring. It is transferable on a one-time basis to a revised admission date upon the

OTHER EXPENSES

Most students incur additional expenses for books and supplies, personal needs, and traveling to and from home. These are not resources to meet the needs of their additional expenses.

The total annual expense for Pennsylvania residents living on campus in the residence halls is estimated at \$29,906, and \$39,876 for nonresidents for the 2019-2020 academic year.

The total annual expense for commuting students living at home with their parents/guardians is estimated at \$21,758, and \$31,728 for nonresidents for the 2019-2020 academic year.

The total annual expense for _____ who are renting temporary housing in the Millersville/Lancaster area is estimated at \$30,069, and \$40,039 for nonresidents for the 2019-2020 academic year. [L`k`Ye grfI`Ykkne`Jk`l` \]`klmλ\] fl`k`k` Yjā`_`Y\[āā\]k` Yf\`j\]fIYd\[gklk`o`ā` `Yl`q`Ykl`gf` \]gl` \]j`h\]jkgf`&](#)

Federal Financial Aid can only

More information regarding estimated expenses can be found on the Financial Aid section of Millersville's website under ; [Yq`māYā`_` =ā`zāāq2`_____](#)

Student Insurance. An accident and sickness insurance plan is available to Millersville University students through the University be directed to the insurance carrier, 800-633-7867.

FINANCIAL AID

Financial aid resources are available to [\]ā`zāā](#) students attending Millersville; these resources can include scholarships, state grants, federal grants, employment programs, federal loans and private education loans. To be considered for state and federal aid resources, students must complete the Free Application for Federal Student Aid (FAFSA) each year. The FAFSA is available beginning October 1. To be considered for all types of aid, the recommended deadline to complete the FAFSA is March 15. To be considered for a state grant, the FAFSA

More information regarding eligibility and how to complete the FAFSA can be found on the Financial Aid section of Millersville's website: _____.

UNIVERSITY SCHOLARSHIPS

need. Information on University scholarships can be found in the following section of this catalog and on the Financial Aid section of Millersville's website under [E`āā\]jkāāā`Mf`ā\]jkkāq`K\[`gd\]k`ānk` and` 9\`e`kkāāfk`K\[`gd\]k`ānk2`_____](#)
[grantsscholarship/scholarships.php](#).

FEDERAL GRANT PROGRAMS

Federal Pell Grants.

Pell Grant, complete the Free Application for Federal Student Aid (FAFSA), available online at [FAFSA.ed.gov](#), after October 1. The

LOAN PROGRAMS

Federal Direct Loans. This program enables students to borrow federal loans directly from the U.S. Department of Education. To be considered eligible, a student must complete the Free Application for Federal Student Aid (FAFSA) and be enrolled at least half-

loan with the Department of Education.

The maximum loan for a dependent undergraduate student ranges from \$5,500 to \$7,500 per year and is based on the student's grade level (credits earned). Federal Direct Loans can be subsidized or unsubsidized. Subsidized loans are awarded on the basis of

Unsubsidized loans are not awarded on the basis of need. The student will be charged interest from the time the loan is disbursed of absence or ceases to be enrolled at least half-time).

First-time students/borrowers must complete [=f|jYf\[\] ; gnfk\] df_](#) and a [E Ykl\]j` Hjge akkgjq` Fgl\]](#) (MPN) online at studentloans.gov. The student must have a FSA User ID and password to log into their account and complete these steps.

Federal Direct Parent PLUS Loans. Available to parents of dependent undergraduate students only. Additional information can be found on the Financial Aid section of Millersville's website: _____.

Federal Direct Graduate PLUS Loans. Available to degree-seeking graduate students only. Additional information can be found on the Financial Aid section of Millersville's website: _____.

Private/Alternative Loans. Applications are available through private lenders, and the loan is in the student's name (the borrower). website: _____.

Emergency Loans. Enrolled students may apply for emergency loans to assist with unexpected expenses that may arise. They are limited to \$350 and must be repaid within 30 days; these loans cannot be used to pay University charges. Applications and additional

ACADEMIC PROGRESS POLICY

of enrollment, whether or not aid was received for that period.

as well.

Satisfactory Academic Progress (SAP)

the department found in the brackets [] at the end of the scholarship criteria.

SCHOLARSHIPS - ACADEMIC

Dr. Joseph J. Abromaitis Family Industry and Technology Department Scholar-Athlete Scholarship. Awarded to a full-time male or female student majoring in industry and technology who participates in an intercollegiate sport in the year the scholarship is awarded. The recipient must be full-time, maintain a 3.0 GPA and be a sophomore, junior or senior for renewal. [Applied Engineering, Safety & Technology]

African-American/Latino Alumni Scholarship. Awarded to African-American and Latino students who are full-time undergraduates.

All-Greek Council/Stefanie Wojcik Scholarship.

American Association of University Women Scholarship. Awarded to a “nontraditional” female student from the Lancaster area

American Dream Scholarship. Awarded to a student(s) of academic promise who is committed to community involvement and

Beth Ann Barry Memorial Scholarship in Computer Science. Awarded to one rising junior with a GPA of 3.0 or greater within a range of 45 to 70 earned credit hours, has volunteer involvement with the campus and/or local community, is involved with computer science organizations or activities, and has demonstrated the greatest potential to succeed in a career related to computer science. The scholarship is renewable for one additional year, provided the student's GPA remains at 3.0 or greater. [Computer Science]

***Ann B. Barshinger Scholarship.** Awarded to a freshman student from York County with involvement in community/civic

The scholarship is renewable for up to three additional years, depending upon the recipient remaining in good academic standing, with a CGPA of 3.0 and with continuing involvement in community/civic activities. [Admissions]

***The Prof. Charles Richard Beam Memorial German Scholarship.** Awarded to a freshman, sophomore, junior or senior student with a major or minor in German. First preference is given to a student with a demonstrated interest in Pennsylvania German stud-

This scholarship is renewable. [Language and Culture Studies]

The Beideman Scholarship.

Ermaleen B. Etter Scholarship in Special Education. Awarded to senior student teachers enrolled in the College of Education and Human Services who have demonstrated professional excellence during their student-teaching experience with learning-disabled children. [Academic and Cultural Enrichment Committee]

***John Charles Falck Scholarship for Academic Excellence.** Awarded to an undergraduate student on the basis of academic a passing academic average. [Financial Aid]

***Dr. Dominick J. and Frances McAndrew Fanani Memorial Scholarship.** Awarded to an incoming freshman in humanities who has achieved a minimum cumulative high school academic performance of 3.3, and has a strong record of high moral character as demonstrated by community service and volunteer experience. [College of Arts, Humanities and Social Sciences]

***Faraday Physics Scholarship.** Awarded to two entering full-time freshmen pursuing a B.S., B.A. or B.S.Ed. in physics. The recipients shall be chosen based on merit as demonstrated by high school class rank or GPA performance, with emphasis on academic performance in the physics department. Financial need may be taken into consideration but shall not be the major criterion. The scholarships are renewable for two additional semesters, provided the students continue as physics majors with CGPAs of at least 3.0 and GPAs within the major and

***Margaret V. Farster and James R. Farster Scholarship.** Awarded to an incoming freshman student who is majoring in mathematics and continuance in the major. [Admissions]

Donald Ferguson '70 Scholarship. Awarded scholarship(s) through a gift in memory of Donald Ferguson '70 by his mother, Elizabeth Mary Ferguson. [Financial Aid]

Valborg Fletty Memorial Scholarship.
[Financial Aid]

***Kathy Focht '70 Elementary Education Scholarship.** Awarded to an incoming freshman or returning sophomore, junior or senior student from Lancaster County majoring in PreK–Grade 4 Early Childhood Education. First preference given to a student with a cu- & Exceptional Education]

Robert and Darlene Ford Merit Scholarship in Geography. Awarded to a geography major who has completed a minimum of 75 credits at Millersville University by the semester prior to awarding of the scholarship, and who maintains a GPA of 3.2 overall. [Geography]

***Robert N. and Darlene I. Ford Scholarship.** Awarded to a Penn Manor High School graduating senior in good academic standing who has applied to and been accepted by Millersville University. The spendable income is based on the student's years at Millersville: Freshman: 12%; Sophomore: 16%; Junior: 24%; Senior: 48%. [Admissions]

Robert N. and Darlene I. Ford Scholarship for Strings. Awarded to a student majoring in music, with an emphasis in string instruments. First preference is to a graduate of Penn Manor School District. [Music]

Forty et Eight (Voiture 42) Scholarship for Nursing Education. Awarded to one or more students enrolled in the nursing program student should also demonstrate intent to be active in the practice of nursing upon completion of the program. The award will be on the recommendation of the nursing faculty. [Nursing]

Dr. Abram Foster Scholarship for Excellence in History. Awarded to a student who is a rising junior or senior in history with a minimum

Gregory and Shannon Freedland Education Scholarship. Awarded to a student from the College of Education and Human Services with a 3.5 GPA or higher. First preference will be given to a graduate of the Lampeter-Strasburg School District. If this is not possible, second preference will be given to a graduate of any existing Lancaster County public high school. Preference will also be given to a

***Dr. and Mrs. Stephen Gring Scholarship.** Awarded to an incoming freshman student majoring in secondary education who has a minimum 3.5 high school academic average and a record of community service. The scholarship is renewable for no more than three years, and the student must maintain a minimum grade point average of 3.0. Financial need may be taken into consideration in awarding the scholarship. [Admissions]

***Nancy Zakrewski Grof Memorial Scholarship.**

***Gene Haas Scholarship.** Awarded to one or more incoming freshmen or returning undergraduate student(s) in machinist-based used for tuition, books, student's personal NIMS account, and cost of NIMS credentials and small personal tools the students are

John and Audrey Hallgren Scholarship. Awarded to a student majoring in music. [Music]

James E. Harf '61, Ph.D., Study Abroad Scholarship.

demically standing studying abroad in a semester- or year-long program or one of shorter-term duration sponsored by or coordinated to maximize the number of participants in study abroad in a given year through the distribution of the spendable income. First prefer-

Hower Earth Sciences Scholarship. Awarded to a junior or senior Millersville University student with a major in the Department of Earth Sciences and who is in good academic standing. First preference to a student with a minimum cumulative GPA of 3.25.

Hughes Foundation, Incorporated Scholarship.

***James Hughes Memorial Scholarship.**

[Admissions]

***R. Clinton and Dorothy Hughes and Kathryn Hughes Seaber Vocal Music Scholarship.** Awarded to a freshman vocal music major. May be renewed for three additional years, provided the student remains a voice music major in good academic standing and is progressing toward graduation. [Music]

Russell C. Hughes English Scholarship. Awarded to a student in good academic standing who is a member of the Phi Kappa Phi Honor Society.

***Andrew and Clara Kissh Academic Scholarship.** Awarded to an incoming freshman student, based upon the student's notable high school academic performance. The scholarship is renewable, provided the student remains in good academic standing. [Admissions]

Esther S. Knaub Scholarship.

***Richard G. Kokat/Andrei Georgescu Memorial Scholarship.** Awarded to an incoming freshman majoring in computer science, remains in good academic standing and is approved by the faculty of his/her chosen major/discipline. [Admissions]

James E. Koken Science Scholarship. Awarded to a student enrolled in a science curriculum or in science education who has completed 55 credits at Millersville University by the end of the semester prior to the semester in which the scholarship is awarded. Preference is given to a chemistry major. [College of Science and Technology]

Michael Kovach Scholarship.

who has successfully completed at least three foreign language courses at the 200 level and above, and/or plans to study abroad. [Language and Culture Studies]

H. H. and Fay Kramer Scholarship. Awarded to a rising junior who is either a math major (preferred) or secondary social studies

***David B., Ph.D., and Kathryn Millar Kraybill Scholarship.** Awarded to an entering freshman from the Lampeter-Strasburg School

E. Kathryn Millar Kraybill '15 Scholarship.

Enrichment Committee]

Charlotte A. and Charles J. Lafferty History Scholarship. Awarded to a student(s) majoring in history, interested in applied history, with a minimum high school average of 3.0 and is active in school or community service. The scholarship is renewable for up

may also be taken into consideration. [History]

***Landis Family International Scholarship.**

in his/her home country and/or provides documentation of successful completion of mandated national exams. The recipient will

Dr. Secunderabad N. Leela Scholarship in Social Sciences. Awarded to a junior majoring in the social sciences. The recipient

provided the student continues to meet the criteria. [College of Arts, Humanities and Social Sciences]

***Richard S. Levandusky '58 Technology Scholarship.** Awarded to a freshman entering any of the AEST programs, to be distributed evenly over two semesters. [Applied Engineering, Safety & Technology]

***Harry A. '65 and Carolyn J. Lohss Physics Scholarship.** Awarded to two full-time students pursuing a B.A., B.S. or B.S.Ed. in physics. If either recipient is a freshman, that individual must be in the top 20 percent of her or his high school class or have a GPA of at least 3.0 on a 4.0 scale and show evidence of strong science and mathematics skills demonstrated by class work and standardized tests. If awarded to other than a freshman, the recipient must have a CGPA of 3.0 or greater on a 4.0 scale. Financial need may be considered in selecting the recipient, but it is not to be the primary factor. With the annual approval of the physics department chairperson or designee, the scholarship may be renewed yearly for a maximum six additional semesters beyond the freshman year, provided the student continues to maintain a departmental and overall GPA of 3.0 or greater. [Physics]

Jacqueline Long French Scholarship. Awarded to an upperclassman who has demonstrated interest in the study of the French lan-

who is majoring in French; second preference to a student who is a French minor. If a student who meets the above criteria cannot be found, the award will be made to a student with a minimum 2.5 GPA who has successfully completed at least three French courses at the 200 level and above, and/or plans to study abroad in France or in a French-speaking country. [Language and Culture Studies]

Gertrude Bettle Stoll and Esther Stoll Barlow Lowry Memorial Scholarship. Awarded to a junior early childhood education major on the basis of an empathic concern for the personal, emotional and educational needs of young children, a GPA of at least 3.0 and

Marburg Study Abroad Scholarship.

V. J. Marcelis Memorial Scholarship in Education. Awarded to a rising senior in good academic standing who intends to teach at

Violet F. Markey Academic Scholarship. Awarded as an academic scholarship as determined by the University president or designee. [Financial Aid]

The Martin Endowed Scholar.

be renewed for eight semesters. [Financial Aid]

McCullough Family College of Arts, Humanities and Social Sciences Scholarship. Awarded to a junior or senior student pursuing standing. [College of Arts, Humanities and Social Sciences]

McCollough Family College of Education and Human Services Scholarship. Awarded to a junior or senior student pursuing a

[College of Education and Human Services]

McCollough Family College of Graduate Studies and Adult Learning Scholarship. Awarded to a full-time graduate student with

Kenneth G. and Elisa G. Munro Education Scholarship. Awarded to a student pursuing a Bachelor of Science in Education (B.S.E.)

***Philip C. and Karen Ashkar Murley '63 Freshman Scholarship.** Awarded to an entering, full-time freshman from Pennsylvania

***Joseph Oberly Jr. Memorial Family Music Award.** Awarded to an incoming freshman or sophomore student in good academic standing in the music department. First preference should be given to a student with focused training on the accordion, keyboard, piano and/or guitar. [Music]

The John and Renee Genbauf e O'Leary Scholarship in Science Education. Awarded to a student majoring in the early child-

***Fred E. Oppenheimer Scholarship.** Awarded to a freshman foreign language major based on academic excellence, dedication to

***James C. Parks Scholarship in Botanical Research.** Awarded to an incoming freshman with an interest in botany. The recipient of this scholarship is expected to develop a botanical research project, in collaboration with a faculty member, that will lead to the presentation of research results in the Dr. James C. Parks Memorial Lecture in the recipient's senior year. [Biology]

Dorothy J. Patterson English Scholarship. Awarded to a rising junior majoring in the English teacher preparation program and working toward a Bachelor of Science in English education with a minimum GPA of 3.0 in both the major and overall. The scholarship

Mark W. Phillips Education Award. Awarded to a senior with a minimum GPA of 3.3 and a major in the College of Education and Human Services or College of Arts, Humanities and Social Sciences, with an emphasis on art. [Financial Aid]

Patricia E. Pillar Scholarship. Awarded to a sophomore majoring in business administration with a minimum GPA of 2.5 and demonstrated involvement in campus extracurricular activities and/or community service. [College of Arts, Humanities and Social Sciences]

Audrey Pomponi Memorial Scholarship.

need. Student must have enrolled as part of the PACE program (if in existence at the time of entry). If the PACE program is discon-

additional years. To renew, the recipient's CQPA must, at the time of selection, have improved by at least .15 points over the prior year until or unless the CQPA reaches 3.25, when renewal will be automatic. [Financial Aid]

Predmore-Cornogg Scholarship. Awarded to a rising junior or senior majoring in geography who demonstrates a strong com-

year. [Geography]

***Sydney Radinovsky Scholarship.** Awarded to an entering freshman biology major with an interest in biological research. The scholarship recipient will develop a research project in collaboration with a faculty member that will lead to the presentation of research

Jane Rohrer Scholarship.

Sharp Team Scholarship.

***Richard W. Stewart Scholarship.**

the student must have a 2.5 cumulative QPA and maintain full-time enrollment. Only one dependent per family shall ever be eligible to be the recipient of the scholarship. [Admissions]

Clyde S. and Pauline F. Stine Scholarship. Awarded annually to a resident assistant who is a member of the junior class and who

Drs. George F. and Helen A. '64 Stine Sociology Scholarship. Awarded to an outstanding sociology major who is a rising junior with a CGPA of at least 3.0 and an overall CGPA of 2.5. [Sociology/Anthropology]

***Drs. Helen A. '64 and George F. Stine Freshman Scholarship.** Awarded annually to an admitted freshman with a high school CGPA of at least 2.5 who attended at least two years of, and is a graduate of, Solanco School District, Lancaster County, Pa. Preference

***Dr. Helen Asbury Stine Freshman Scholarship.** Awarded annually to an admitted freshman with a high school cumulative grade resided within the Solanco School District for no fewer than three years. [Admissions]

The Christina Pavlick Strong '91 Scholarship for Success. Awarded to a student with a minimum 2.0 GPA. First preference will be to a student currently or formerly in the foster care system. Second preference would go to a student from the College of Sci-

***Susquehanna Bancshares, Inc., Scholarship.** Awarded to a full-time freshman who is an employee or dependent of an employee of entrance test scores and a letter from a senior bank administrator identifying the individual as an employee or employee dependent. entering freshman business or economics major. The award is not renewable. [Admissions]

***Susquehanna Engineering & Manufacturing Society—Gravell Scholarship.** Awarded to a freshman enrolled in an industry and technology program, in either the associate or bachelor's degree program, with a strong commitment to the major. [Admissions]

Susquehanna Litho Club Scholarship. Awarded to a full-time junior or senior industrial technology, graphic communication or

Thomas G. "T. J." Versprille Memorial Scholarship. Awarded as tuition to a student in good academic standing with a CGPA of

in political science. The scholarship may be renewed if the student continues to meet the criteria. [Director of Intercollegiate Athletics]

Helen Spahr Walker '43 Education Scholarship. Awarded to an early childhood or middle-level education major in good academic

ship may be renewed up to three years, provided the student remains within the major in good academic standing. [Early, Middle & Exceptional Education]

Joseph E. Walker American History Scholarship. Awarded to a worthy junior who intends to teach American history on an elemen-

Benchmark Construction Athletics Scholarship. Awarded to an active member(s) of one or more of the University's intercollegiate athletic teams in good academic standing. This award may be renewed at the athletic director's discretion, provided the recipient(s) remains a member of at least one team and in good academic standing.

Conor Gilbert '15 Golf Scholarship. Awarded as tuition to a returning member of the men's golf team. First preference is for the individual to have a GPA of 3.0 or greater. Additional considerations include a scoring average of 78 and 70 percent of tournaments played. Second preference is for the individual to have a GPA of 2.75 or greater.

Catherine "Kitty" Glass Housing Scholarship. Awarded to one or more students in good standing who are members of the the year in which scholarship funds are to be awarded. Scholarship may be renewed at the discretion of the head coach of the women's basketball team but is not automatically renewable.

Eugene Grof –Arthur Hulme Football Scholarship. Awarded to a student participating in intercollegiate football.

George D. Hauber Housing Scholarship. Awarded to one or more female student-athletes in good standing who live in a housing

Scholarship may be renewed at the discretion of the athletic director but is not automatically renewable.

***Willard O. and Dr. Catherine Gibson Havemeier Scholarship for Football.**

Justin Flannery Hilton '07 Memorial Baseball Scholarship. Awarded as tuition to a member of the baseball team who plays the position of pitcher, is in good academic standing with a GPA of at least 2.3, and demonstrates strong team spirit and leadership on

Floyd "Shorty" Hitchcock Memorial Wrestling Scholarship.

need. The recipient must actively participate in the wrestling program the year the award is received.

Robert L. Jones '61 Soccer Award.

athlete, who is in good academic standing with a CGPA of 2.75 or greater, and who demonstrates leadership, teamwork and service to the University or broader community.

***Dr. Frank Kafka Basketball Scholarship.** Awarded to an athlete who has potential for outstanding achievement in men's intercol-

***J. Henry Keneagy Scholarship in Athletics.** Awarded to an entering full-time freshman who intends to participate in intercollegiate

Stephen and Veronica Kepchar Jr. Housing Scholarship. Awarded to one or more students in good standing who are Millersville University

***Men's Basketball Memorial Scholarship.**

basketball team members now deceased. Awarded to athletes who have potential for outstanding achievement in men's intercol-

Men's Rugby Alumni Award. Awarded to a young man of strong character who plays rugby according to the spirit of the game.

***Men's Soccer Scholarship.** Awarded to an incoming freshman or returning student-athlete on the men's soccer team in good academic standing.

***Scott Micklewright Mid Penn Bank Golf Scholarship.** Awarded to an outstanding incoming freshman or current member of the Millersville University men's or women's golf team in good academic standing.

Millersville University Alumni Association Athletic Scholarship. Awarded to one male and one female athlete who participate in NCAA-recognized sports at Millersville University. Students must be full-time, maintain an overall GPA of 3.0 and have passed 24 credits but no more than 60 credits.

***Morgan Scholarship Fund for Women's Athletics.** Awarded to two or more incoming freshmen or current members of a women's intercollegiate athletic team in good academic standing.

Lois T. Morgan '54 Field Hockey Scholarship.

coach, provided recipients attain PSAC Scholar Athlete status (currently a 3.25 GPA) and demonstrate a continued, active and

Lois T. Morgan '54 Student-Athlete Endowed Scholarship. Awarded as tuition to one or more student-athletes. There is no sport

above-average talent in their sports. The scholarship may be renewed at the discretion of the athletic director and respective coaches, provided recipients attain PSAC Scholar-Athlete status (currently a 3.25 GPA) and demonstrate a continued, active and above-average contribution to their sports.

Linda Murphy Baseball Scholarship. Awarded to one or more baseball players. First preference is given to a pitcher. Student/s selected must be on the team during the semester in which the funds are received and in good academic standing. Financial aid is

Muscovitch Family Baseball Scholarship. Awarded to a sophomore, junior or senior member of the baseball team in good academic standing. First preference will be given to a pitcher.

The B. Todd Myers Memorial Golf Scholarship. Awarded to students who participate on the Millersville University men's and women's golf teams.

6R2YH2BAPjCHpZpV2V2P[2F2]P)...A)PUR)PEVHLGipPYP5APY05P)5*XR5UR5ZLpY0E2LVYPPY0X(06KUNHJWDEPPE]06

Kathryn G. Hughes Seaber and Samuel J. Seaber Jr. Men's Baseball Scholarship. Awarded to one or more active members of the men's baseball team who are incoming freshmen. The student's high school CGPA must have been a minimum of 2.75 out of

Kathryn G. Hughes Seaber and Samuel J. Seaber Jr. Women's Softball Scholarship. Awarded to one or more active members of the women's softball team in good academic standing with a GPA of 2.75 or greater. The scholarship is renewable, provided the student(s) continues to meet the criteria.

Robert L. Slabinski Scholarship. Awarded to a student(s) participating in intercollegiate women's basketball who has a minimum academic average of 2.5 and has 60 or more academic credit hours. The recipient(s) will be selected by the head women's basketball coach, with the intention to provide additional assistance for the student(s) to continue her education.

Women's Athletic Scholarships. Awarded to two junior female athletes.

***Women's Soccer Alumni Scholarship.** Awarded to an incoming freshman women's soccer player(s) or a current member(s) of the women's soccer team in good academic standing.

UNIVERSITY AWARDS

of the student's achievements. For more information on any of these awards, contact the department found in the brackets [] at the end of the award criteria.

AFSCME Local 2421 Award. Awarded to students who are full-share members of AFSCME Local 2421 or dependents of full-share members of AFSCME Local 2421 and who are currently attending Millersville University. Award funds will be used to cover costs

ents must be in good academic standing. Students must be enrolled in a degree-seeking program and have completed a minimum

year. [Financial Aid]

American Chemical Society, Millersville University Student Affiliate Award.

senior of high academic standing who has contributed outstanding service to the chemistry department and the chapter. [Chemistry]

American Chemical Society, Southeastern Pennsylvania Section Award. The Merck Index is awarded to the outstanding

are awarded. [Chemistry]

American Chemical Society, Undergraduate Award in Analytical Chemistry. A subscription to *Journal of Analytical Chemistry* and honor-

in Caputo Hall. [Chemistry]

American Chemical Society, Undergraduate Award in Inorganic Chemistry. Awarded to the student who demonstrates academic excellence (minimum of 3.5 QPA) and outstanding performance in CHEM 452: Advanced Inorganic Chemistry, and who plans a future career in chemistry. [Chemistry]

American Chemical Society Undergraduate Award in Organic Chemistry. Awarded to the top graduating senior student majoring in chemistry or biochemistry who has demonstrated excellence in organic chemistry based on a combination of research experience, coursework and a desire to pursue a career in chemistry. The student must be enrolled at Millersville University for the current academic year. [Chemistry]

American Institute of Chemists Award.

the outstanding graduating chemistry major, based on character, academic standing and potential to become a successful chemist. [Chemistry]

American Society of Safety Engineers, Lehigh Valley Chapter Award. Awarded to a rising junior or senior majoring in occupa-

& Technology]

American Society of Safety Engineers/Raymond C. Mullin Award. Presented by the Central Pennsylvania Chapter (ASA) and outstanding engineer

Chemical Rubber Company Chemistry Achievement Award.

[Chemistry]

Class of 1866 Award. Awarded to two seniors for excellence in mathematics. [Mathematics]

Class of 1895 Frank Albert Award. Awarded to a graduating senior on the basis of scholarship and all-around service to the University. [Honors and Awards Committee]

Class of 1898 Award. Awarded to the second-ranking member of the junior class, payable after graduation. [Honors and Awards Committee]

Class of 1910 Award. Awarded to a student for excellence in English at the end of the student's senior year. [English]

Class of 1911 H. Justin Roddy Memorial Award. Awarded to a graduating senior who, in student teaching, shows the greatest promise of becoming a successful teacher of the sciences. [College of Science and Technology]

Class of 1922 Esther E. Lenhardt Award.

[English]

Class of 1928 Isaac F. Seiverling Award

Roy and Mary Garden Gamber–Helen L. Koontz Award in Education. Awarded to two students (junior or senior status) who have demonstrated a commitment to a career in teaching. One award must be directed to a candidate committed to early childhood or middle-level education. [Elementary, Middle & Exceptional Education]

Geography Faculty Award.

faculty to a geography major who graduates with honors. [Geography]

D. Joan Godfrey Nursing Award. Awarded to one to three senior nursing majors on the basis of participation in the nursing program, club and other campus activities; involvement in the nursing profession and academic standing. [Nursing]

John K. Harley and Grace W. Evans Award. Awarded to a student who has maintained the highest standing in scholarship and deportment during both his/her junior and senior years, and who is of high moral character and exemplary habits. [Honors and Awards Committee]

James Hamilton and Lucretia Boyd Hartzell Piano Award. Awarded to a junior or senior piano student who possesses extraordinary talent, has shown considerable progress and has contributed to the musical enrichment of the University community. [Music]

Jef rey Hawthorne Memorial Award. Awarded to a rising sophomore majoring in elementary education with a minimum GPA of 2.5

to meet the criteria. [Early, Middle & Exceptional Education]

Isaac and Terry Hay Sculpture Award. Awarded to an undergraduate student for excellence in sculpture, to be determined by the faculty member coordinating the Millersville Student Art Show in consultation with the juror of the student art show. [Art & Design]

Frank R. Heavner Memorial Award. Awarded to the English major who has the highest average in at least nine credits of linguistics courses. [English]

Earle M. Hite Award. Awarded to a member of a student publication of Millersville University who has shown enthusiasm and dedication in the production of _____ or _____ and meets the following criteria: has worked for the publication for at least four semesters; is versatile and willing to help with any task; and has made notable contributions to the betterment of the publication and the University. This award may be given to an editor, writer, reporter, photographer, business manager, member of the circulation or advertising department, or other member who contributes to the production of the publication. [Snapper]

The Reverend Lewis Merwin Hobbs Medallion/Dr. Dominick '53 and Mrs. Helen DiNunzio Award. Awarded to graduating seniors achieving summa cum laude (4.0 academic average overall). [Honors and Awards Committee]

Elsie Hostetter Award. Presented by the early childhood faculty to the outstanding senior early childhood education major. [Early, Middle & Exceptional Education]

Ralph J. Hyson Memorial Award. Awarded to the senior French major judged outstanding in French studies. [Language and Culture Studies]

Instrument Society of America Central Keystone Section Outstanding Student Award. Awarded to a junior or senior industry and technology student who possesses a GPA of at least 3.0 and is committed to specializing in and demonstrating outstanding performance in transportation/energy/power. [Applied Engineering, Safety & Technology]

Ireland 500 Award. Awarded to a student who is participating in a global education experience in Ireland (including Northern Ireland), including study abroad (any-length program), student teaching or internship abroad. First preference will be given to a student with

Henry J. Kaufman Award in Metal Technology. Awarded to a senior industry and technology major who has attained distinguished achievement in metals technology. [Applied Engineering, Safety & Technology]

Richard C. Keller Award in American History. Awarded to a senior history major who has shown strong interest and capability in American history. [History]

Martin and Anna Zimmerman Kondor Award. Awarded to a senior in early childhood or middle-level education with a 3.35 GPA, excellence in student-teaching experience, outstanding personal and professional characteristics, and dedication to teaching. [Early, Middle & Exceptional Education]

Louis and Margarete Koppel Awards in European History and German Literature. The awards are given to two graduating

Susan P. Luek Award for Graduate Study in Psychology. Awarded to up to four graduating psychology majors who have a CGPA of 3.5 or higher and show considerable promise for graduate study in psychology or related areas. [Psychology]

Susan P. Luek University Honors College Award. Awarded to up to four graduating seniors in the University Honors College who have a CGPA of 3.5 or higher and show considerable promise for graduate study or post-baccalaureate professional school. [University Honors College]

Patricia N. May '66 Memorial Award. Awarded to an early childhood education major with a cumulative GPA of at least 3.0 who

[Early, Middle & Exceptional Education]

John Mentzer Award in Special Education.

and has demonstrated potential for becoming an outstanding teacher. [Special Education]

Helen R. Metzler Undergraduate and Graduate Reading Award. Awarded to an early childhood or middle-level education major

University. [Early, Middle & Exceptional Education]

Music Faculty Award. Awarded to the outstanding music education graduate. [Music]

C. Maxwell and Edna H. Myers History Award. Awarded to a history major who has earned a minimum of 85 credits; based on academic accomplishment and service to the department and the University. [History]

Carol J. Myers Music Educators Award. Awarded to a music education major in good academic standing entering his/her senior year, prior to the semester in which the student will be student teaching. Preference given to students concentrating in vocal studies. [Music]

Dr. Gary W. and Jacqueline Reighard Award for Outstanding Leadership. Awarded to a student for outstanding leadership who has completed at least 60 credits and who possesses at least a 2.75 GPA. Selection is based upon past contributions to Millersville

Robertson Library Garden Botany Internship. Awarded to a rising sophomore, junior or senior with a CGPA of 2.5 or greater, with in horticulture, horticultural taxonomy, landscape design or other related disciplines in botany, and will be the student deemed most capable of completing a successful project in a timely manner. The internship is not renewable. [Biology]

Henry J. Rutherford Memorial Award. Awarded to a junior or senior who has been constructively involved in environmental action and environmental enrichment activities. [Priority Club Advisor]

***Michael Scott Sawicki Memorial Award.** Awarded to an incoming or present student at Millersville who engages in community [Financial Aid]

Irene P. Seadle German Section Award. Awarded to a senior German major who has done excellent work in German studies and

Social Work Faculty Award. Awarded to a senior social work major for academic excellence. [Social Work]

Social Work Organization Award. Awarded to a senior social work major for academic excellence and contributions to the Social Work Organization. [Social Work]

Society for the Advancement of Management Award. Presented by the Millersville student chapter of S.A.M. to a junior or senior who has maintained at least a 3.0 GPA and exhibited outstanding management potential through participation in cocurricular activities in business administration. [Management and Marketing]

Charles D. Spotts Naturalist-Humanist Award. Awarded to a student who has contributed most to the naturalist-humanist ethic. [Entomology Club Advisor]

Mary R. Slokum Sproul Prize. Awarded to a student for excellence in public speaking. [Communication & Theatre]

Starbrad Excellence in Science Award.

istry, and who is participating in an internship for which he or she is receiving no pay. [Experiential Learning & Career Management]

J. Richard Steinmetz Technology Teaching Award. Awarded to a technology education senior who, in the judgment of the industry and technology faculty, has high potential to become a successful teacher, as evidenced by outstanding performance in student teaching and excellence in professional technical areas. [Applied Engineering, Safety & Technology]

Mark Stine Scholastic Attainment Award. Awarded to a junior and a senior who have pursued higher education primarily on a part-time basis and who have had special family responsibilities, or who have overcome cultural challenges. Students admitted on nondegree status are eligible. [Honors and Awards Committee]

Anna Tunis Summy Print Award. Awarded for outstanding achievement by a student who has produced the best print in the art department's printmaking classes, as judged by a jury of art department faculty. [Art & Design]

Anna Tunis Summy Watercolor Award. Awarded to a student demonstrating special talents and contributions related to visual arts

Wentzel-Wright Memorial Award. Awarded to a student at the end of the junior year, payable upon enrollment for the second activities, scholarship, good character, integrity, honesty and professionalism. [Honors and Awards Committee]

Wickersham-Burrowes Fund for Excellence in the Arts.

provide nontuition assistance for examples that may include, but again are not limited to, travel expenses for national or international

Ruth Fox Wilkinson Award. Awarded to a graduating senior who has attained the highest average in early childhood or middle-level education courses. [Early, Middle & Exceptional Education]

WIXQ Service Award.

Edna Rochow Workman Memorial Award. Awarded to a junior or senior art major who has produced the best painting in oil or related media during the academic year. [Art & Design]

Xenophile-Theodore H. Rupp Foreign Language Award. Awarded to a senior for excellence in foreign languages. [Language and Culture Studies]



CRITICAL THINKING ACROSS THE LIBERAL ARTS

- a. Courses in the arts and humanities challenge students to examine, analyze and critically evaluate artifacts of the human intellect and imagination to illuminate the complexity of the human experience. Through exposure to multiple voices, insights, engagement expands knowledge, deepens empathy and encourages collaboration between diverse individuals and communities.
-

In Science and Mathematics, two of the three courses must come from biology, chemistry, earth sciences and/or physics, including one which has a laboratory (L) component.

No more than two courses within each Liberal Arts area may be from a single department. Additionally, at least three courses taken

THE MAJOR PROGRAM



To be eligible for the program, students must have a cumulative GPA of at least 3.0 and the endorsement of the department.

research, which culminates in the production of a thesis or project. One to four credits may be earned for each of the departmental departmental committee.

Final theses or projects are examined by and orally defended before the departmental committee. Grades of B- or higher must be earned on them. They are then presented to the Honors and Awards Committee for review. Titles of completed works are published

HONORS COURSES

Honors courses are open to students in the University Honors College, students with a cumulative GPA of at least 3.35 and other student's record.

ON-CAMPUS ACADEMIC OPPORTUNITIES

WINTER SESSION

Winter session allows students to complete additional courses between the fall and spring semesters. Courses are open to stu-

(717) 872-3099, or check the University website.

INDEPENDENT STUDY

Independent study allows students to pursue, with faculty supervision and guidance, an academic area of interest not available through an established course. To apply, students must complete a special studies assignment form, available in department chairperson and school dean before the start of the term.

INDIVIDUALIZED INSTRUCTION

pursue a course through individualized instruction is granted only under special circumstances. To apply, students must complete the proposed topic and faculty supervisor from the department chairperson and school dean before the start of the term.

COURSE SCHEDULING PREFERENCE FOR VETERAN STUDENTS

with preference in course scheduling. Noncompliance may be reported to the Pennsylvania Department of Education by submitting the Higher Education Student Complaint form found at www.education.state.pa.us. In accordance with Act 46 of 2014, Millersville

served in the United States Armed Forces, including a reserve component and National Guard, and was discharged or released from service under conditions other than dishonorable; 2. admitted to Millersville University for the current academic year; 3. reside

given course scheduling priority privileges are permitted to enroll in courses two days prior to the regular scheduling timetable as

TAKING GRADUATE COURSES AS AN UNDERGRADUATE

conditions apply to each of these credit alternatives.

Undergraduates may enroll in 500-level graduate courses for undergraduate credit with permission of the instructor and advisor. The

An undergraduate with a 3.0 GPA or higher may enroll in 500- and 600-level graduate courses for graduate credit. The student must

the dean of graduate studies. The undergraduate will also need to be admitted as a nondegree graduate student.

A maximum of nine graduate credits may be earned by an undergraduate. These credits may not count toward the completion of the student's baccalaureate degree.

of Higher Education and to enable students to take advantage of courses available across the System, without loss of institutional residency, eligibility for honors or athletics, or credits toward graduation at the home institution.

The student must be matriculated at the home university with a minimum of 12 college-level credits and be in good academic standing.

The student who presents evidence of good standing at the home university will be allowed to register for courses at other PASSHE universities. The visiting student priority level for registration will be determined by each university.

All credits and grades accrued at other PASSHE universities shall be accepted in full by the home university and thereafter treated as home university credits, residency and grades.

It is the responsibility of the student to work with the student's advisor at the home institution regarding applicability of credits

institution.

The student shall register at, and pay tuition and fees to, the State System University visited. A student wishing to divide a course load between two institutions during the same term shall register and pay appropriate tuition and fees at both universities.

STUDY AT OTHER INSTITUTIONS

Millersville students may take courses at other colleges and universities for transfer back to Millersville. Many students, for example, take summer courses at a college near their home. Students must obtain approval in advance from their advisor, the department

STUDENT TEACHING, EARLY FIELD EXPERIENCES AND CERTIFICATION

internships and student teaching in international and Native American settings, are coordinated through the Department of Field Services.

EARLY FIELD EXPERIENCES

and students must successfully complete these experiences to be admitted to student teaching. Admission to Advanced Professional

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an Act 114 FBI clearance, an Act 34 Criminal clearance and an Act 151 Child Abuse clearance that indicate "No record exists" for

English
French
German
Mathematics
Middle Level
Music
Physics
PreK-4
Social Studies
Spanish
Technology Education

CHINCOTEAGUE BAY FIELD STATION OF THE MARINE SCIENCE CONSORTIUM



Ermaleen B. Etter Faculty Research Award. Awarded to an education faculty member to conduct research contributing to professional and personal enhancement of professors instructing students with learning disabilities.

Mary Ross Ezzo. Funds to be used toward a literary lectureship.

Paul G. Fisher Endowment for a Symphonic Guest Artist. Funds are directed to the honoraria and expenses to bring distinguished symphonic band conductors or soloists to the University to perform primarily with the Millersville Symphonic Band.

Peter H. Freedman Jazz Concert Endowment. To fund an annual jazz concert.

Helen A. Ganser Endowment Fund. Used to purchase library materials.

Glenna M. Hazeltine Endowment. Used in support of a University conference, to be known as the Glenna M. Hazeltine Women in Mathematics and Science Conference.

William Randolph Hearst Foundation Endowment Fund. Funds support scholarships for the Lancaster Partnership Program.

Elsie Breckbill Hollinger Endowment for Library Acquisition.

Doris Keller Hosler Professorship for the Coordinator for Information Access Services. The professorship is to support an responsibility of this professional librarian shall be to encourage, develop and educate students in the use of the library facilities at Millersville University.

Instructional Equipment Endowment. Income from the endowment will support purchases and maintenance of instructional

Eleanor Isaacson Lifetime Achievement in the Arts Award. The income from the endowment will be used to support the Isaacson artist-in-residence. Program expenses may include but are not limited to artist's fees, class materials, workshops, public presentations and associated events.

Ray W. Kaufman Endowment Fund. Funds honoraria and expenses to bring distinguished orchestral performers to the campus to perform with the Millersville Community Orchestra.

Esther Killefer Endowment in Earth Sciences.

Meteorological Endowment.

Mowery Family Baseball Scholarship Endowment. Awarded to support the Millersville University baseball program including but

Karen A. Murley Student Undergraduate Research Fellowship Program in Chemistry.

Richard Cecil Todd and Claudia Pennock Todd Presidential Endowment Fund. shall be unrestricted in nature.

Richard Cecil Todd and Claudia Pennock Todd Social and Cultural Growth Endowment Fund. Used to promote social and cultural programs at the University and to develop in students a thoughtful and well-informed attitude towards problems of current

United Campus Ministry Endowment. Funds will support program/activity needs for United Campus Ministry (UCM).

Kay E. Vandergrift and Jane A. Hannigan Innovator-in-Residence Program Endowment. The income from the endowment will for up to three days to interact with the Millersville University community, including class presentations, workshops, public presentations and associated special events. Costs may include but are not limited to speaker honorariums, travel expenses and associated presentation materials.

Walter B. '42 and Betty Waetjen Global Opportunities Fund. Funds to support program needs associated with either education-hosting visiting faculty and students from abroad; program support for said students and faculty; and costs associated with establishing, promoting or monitoring student programs with international academic partner institutions.

Robert S. and Sue A. Walker Center for Civic Responsibility and Leadership Endowment. The income from the endowment projects and activities.

Michael Warfel '84 Fund for International Student Experiences. Awarded to support program needs associated with either in-research experiences abroad and hosting visiting faculty and students from abroad. Decisions regarding the expenditure of the an-

The Ware Center Endowment. Funds to be used directly for annual operational support restricted to building maintenance and to program support for music and performing arts at the Ware Center at 42 N. Prince St., Lancaster, Pa., in perpetuity.

Donald E. Weiman Instructional Equipment Endowment. chemistry department.

Harold R. Weirich Memorial Lecture in Biology Endowment Fund. Funds support annual lecture in biology.

Women's Issues Endowment. Awarded annually to members of the University community for conducting or disseminating research or organizing programs that focus on issues of central concern to women.

Women's Studies Endowment. Awarded to support teaching, the conducting or dissemination of student or faculty research, or the organization of, or attendance at, programs focusing on issues of concern to the women's studies program.

David Zubatsky Endowment for International Studies. establish a collection for international studies.

Dr. David S. and Marie N. Zubatsky International Studies Scholarship and 20th-Century Art Library Materials Fund. Used for

David S. Zubatsky Endowment for Judaic Studies. -
lection for Judaic studies.

ACADEMIC POLICIES

SPECIAL INFORMATION RELATED TO SPRING AND SUMMER 2020 DUE TO COVID-19

Millersville University and other educational institutions across the United States and around the world. On March 13, 2020, Millersville students began spring break and did not return to campus for the remainder of the semester. All courses were converted to a remote-learning modality if they were not already designed to be delivered remotely. Scheduled in-person courses were suspended through March 22, 2020, to allow students and faculty time to make the transition to a fully remote learning environment.

In order to support students in this transition, several academic processes and policies were amended or suspended for the 2020 spring semester. The following apply only for the spring 2020 semester:

standard University grading scale (A through F). Courses that were graded using the pass/fail scale were exempt from the policies and restrictions that are otherwise applied (see pass/fail grading policy) and are not used in the computation of the student's

2020 semester.

All efforts were made to allow them to continue their studies through late entry into courses at Millersville University, individualized instruction or independent study with a Millersville faculty member, or online via their international institutions of education

spring 2020 academic standing:

Students with a Millersville University CGPA of 2.00 or greater are in satisfactory academic standing. Students with less than satisfactory academic standing at Millersville (below a CGPA of 2.0 at the end of spring 2020) are subject to academic warning or continued probation, as follows:

Review credits	Academic standing prior to spring 2020	Spring 2020 standing
0.5-32.0	Good Standing	Warning Letter
0.5-32.0	Probation	Warning Letter
32.5 or more	Good Standing	Warning Letter
32.5 or more	Probation	Continued Probation

GRADING POLICIES

student achievement.

GRADES AND GRADE POINT SYSTEM

The grade point average (GPA) is a comprehensive evaluation of a student's academic standing. The grades and terms used to describe achievement are reported at the end of each semester as:

Grade	Description	Grade Point Value
A	Excellent	4.0
A-		3.7
B+		3.3
B	Good	3.0
B-		2.7
C+		2.3
C	Acceptable	2.0
C-		1.7
D+		1.3
D	Poor	1.0
D-		0.7
F	Fail	0.0
I	Incomplete	*
P	Pass	*
S	Satisfactory	*
U	Unsatisfactory	*
W	Withdrew	*
M	Military Withdrawal	*
AU	Audit	*

for Grading

*Not considered in computing GPA.

University policy accepts D- as minimum earned credit. There are certain general education and department major competency course, the credits will count toward earned credits but might not count toward completion of general education and department

The $\frac{\text{total number of grade points earned in Millersville courses in a semester}}{\text{number of credits in that semester for which grades calculated in the GPA were earned}}$ is the number of grade points earned in Millersville courses in a semester, divided by the number of credits in that semester for which grades calculated in the GPA were earned. Grade points for are calculated by multiplying the grade point value by the number of credits for the course.

The $\frac{\text{total number of grade points earned in Millersville courses}}{\text{number of Millersville and transfer credits}}$ is the total number of grade points earned in Millersville courses divided by the number of Millersville and transfer credits are included in the CGPA.

The Millersville grade point average (GPA) is rounded to two decimal places.

GRADES AND POLICIES

Schedule Adjustment: Drop/Add. For fall and spring terms, students may drop or add courses online from the early-registration period until 11:59 p.m. EST, the eighth calendar day of the term, excluding holidays.

During the summer and winter sessions and for courses which have start and/or end dates outside of the regular semester length, the

dropped during the drop/add period will not be entered on the student's record.

Withdrew (W). The notation made on a student's record about a withdrawn course depends on when the student withdraws. Students who "drop" or withdraw by the end of the drop/add period have all references to that course deleted from their records. Students will be permitted to withdraw from a course and receive a grade of W up until the end of the 10th week of the semester. The W grade

from the University or taking a leave of absence. See [Drop/Add and Military Withdrawal](#) for more information. After the 10th week of the semester and through the last day of classes, students who withdraw will receive an earned, non-W grade, which will be determined by the instructor, consistent with University policy.

advisors) in time to meet the deadline.

See the sections on [Drop/Add](#) and [Military Withdrawal](#) for more information.

a W grade.

dent Forms Center.

Military Withdrawal (M). A grade of M may be assigned when a student or spouse must withdraw due to military obligation (called to active duty) and is unable to complete their courses. M grades are not applicable to students who withdraw from the University to complete basic military training. M grades are not used in the computation of cumulative grade point average.

Incomplete Policy.

control, such as personal illness, accident or death in the family. It is a privilege granted by the instructor because of circumstances,

An incomplete grade issued to a student on academic probation will not prevent or delay academic action for dismissal. A student's cumulative grade point average will be calculated based on all completed coursework.

A faculty member may petition the school dean for a retroactive administrative withdrawal (W) from a course in which an incomplete grade cannot be resolved due to extraordinary circumstances (e.g., disability or death of the student or faculty). If the petition is approved, the dean will notify the registrar to record an administrative withdrawal for the course.

Pass/Fail Courses (P, F). In order to stimulate and/or satisfy intellectual curiosity, students are encouraged to engage in challenging study on an elective basis. The pass/fail option provides the opportunity for a student to enter a course that he/she might ordinarily avoid. Accordingly:

1. A student may enroll in no more than a total of two courses pass/fail.
2. The student needs to have passed 60 or more credits before electing a course pass/fail.
3. The student must have a minimum GPA of 2.80 or obtain permission of the instructor.
4. The pass/fail option is ordinarily restricted to courses numbered 300 or above. However, a 200-level course may be taken pass/fail with the prior approval of the instructor.

than general education purposes, they may take them pass/fail.

that are passed will not be included in the GPA computation on which academic honors and academic standing are based. Courses failed under the pass/fail option will be included when computing the GPA.

11. The minimum grade a student must earn in order to be awarded a "pass" grade is D-.

Credits	CGPA	Action
0.5-16.0	Below 2.00	Warning letter
16.5-32.0	1.75-1.99	Warning letter
16.5-32.0	Below 1.75	Probation

Students who have completed fewer than 80 credits may not register for more than 17 credits. Additional courses may be added at the beginning of the semester during the drop/add period.

Students may not register for more than 21 credits in one semester.

During the semester in which a student is enrolled in student teaching, one additional course may be taken, provided the course

plete a degree.

SUMMER AND WINTER SESSIONS

ACADEMIC APPEALS

Academic Determination

When a student disagrees with an academic determination by a faculty member, the student and the faculty member must meet,



CAMPUS LIFE

SERVICES FOR STUDENTS

DEPARTMENT OF ACADEMIC ADVISEMENT AND STUDENT DEVELOPMENT

Millersville University considers academic advisement to be an integral part of the undergraduate experience, from orientation to graduation. The advisement process is devoted to helping students achieve their academic goals, to ensure timely progression

academic and professional growth.

Every student has an assigned faculty advisor. Students in a declared major have a faculty member from their major department. Students in the Exploratory/Undeclared Program have faculty advisors, who are specially trained to support students as they explore

Advisors at Millersville are knowledgeable about University policies and procedures, helping students to understand and complete resources on campus, and helping students who need assistance to improve their academic standing. Students share responsibil-

While attending the ELI, students may earn up to 15 credits toward their academic major through concurrent enrollment during levels them to be successful throughout their academic career at Millersville University and beyond.

MILLERSVILLE UNIVERSITY HEALTH SERVICES

vides medical services necessary for maintaining the health and well-being of all registered students. There is no charge for a visit to Health Services and only minimal charges for some medications, testing and orthopedic supplies. Services include but are not

vaccines); TB testing; in-house lab testing; and other medical procedures such as EKGs, wound care and laceration repair. Our practitioners provide education and advice for health concerns and work closely with students' PCPs to monitor and manage some chronic health conditions. Students can obtain free over-the-counter medications and supplies for minor illnesses and injuries from the Self-Care Cart, located in the reception area.

at www.millersville.edu/healthservices. The deadline for submitting this information to Health Services is August 1 for fall matricula-

INTERNATIONAL STUDENT AND SCHOLAR SERVICES

maintaining their immigration status or any other related topic.

IPS serves as a liaison with foreign consulates and embassies, as well as several U.S. federal agencies, concerning international students at Millersville University.

MENTORSHIP

sustained relationship in which experienced persons provide guidance and feedback to less-experienced persons for the purpose of facilitating skill development or enhancing academic, professional or personal growth.

mentoring opportunities, guidance, support and recognition for Millersville mentoring relationships and programs.

targeted and high-impact mentorship for students and to develop new opportunities for students not currently served by ongoing mentoring programs.

more about the formal mentoring programs currently available on campus, as well as opportunities to participate in online mentoring programs.

PRE-PROFESSIONAL ADVISEMENT

Pre-professional advisement is available to students contemplating professional post-baccalaureate programs such as law or medicine. It is a secondary system that helps students prepare for admission to—and success in—these programs.

Health Professions Advisory Committee (HPAC). This multidisciplinary faculty panel advises students interested in attending schools of allopathic medicine (M.D.), osteopathic medicine (D.O.), podiatry, optometry, dentistry or veterinary medicine. Students in any major may meet with, seek advice from and be interviewed by this committee. Contact the Department of Biology, Caputo Hall, for details.

Pre-Law Advisement. Students interested in preparing for law school are assigned a special pre-law advisor in the department of

They also help students prepare for the law school admissions test (LSAT), identify appropriate law schools and complete the ap-

SERVICES FOR COMMUTERS

Commuting students are an integral part of the University community and are encouraged to take advantage of the many opportunities to get involved on campus. Millersville has over 170 student organizations that meet throughout weekdays and on weekends, which makes it easy for commuters to become engaged during a time that works best for them. A complete listing of student organizations can be found at

SERVICES FOR NONTRADITIONAL AND ADULT STUDENTS

While the majority of Millersville undergraduates are full-time residential students of traditional college age, an increasing number of students are working professionals, commuters, age 23 or older, attending part-time and/or parents of young children. Millersville is working to meet the needs of these students through a variety of services.

For information on admission to Millersville as a nontraditional or adult student, see the section on [Nontraditional and Adult Students](#).

SERVICES FOR STUDENTS WITH DISABILITIES

disabilities. Services are provided at no cost to the student. Students with disabilities are encouraged to submit eligibility documentation as soon as they receive admission to the University to allow time to arrange services. For more information on services for students, call 717-871-5554.

BUS SERVICE

apartment complexes, the Park City Mall and a bus route to downtown Lancaster. Schedules are available in the Student Memorial Center, at the Student Information Desk, located just inside the main entrance. The schedule plus additional information can be found at www.millersville.edu/shuttlebus.

TITLE IX COORDINATION

complaints, including intake, investigations, tracking and resolution) are managed through a collaborative process between the Of-

TUTORIAL SERVICES

the following areas: select departments in the CEHS, departments in the CAHSS and departments in the CST (math tutoring available only for students with disabilities; all other students should seek math tutoring directly through the Math Assistance Center).

UNIVERSITY DINING SERVICES

CENTER FOR HEALTH EDUCATION AND PROMOTION

ational mission of Millersville University through empowering students to make informed decisions and develop lifelong skills that enhance their personal well-being. The Center contributes to increasing the academic success, productivity and retention of students by providing current and relevant information about high-risk behaviors; raising awareness about personal decision making and the impact decisions have on an individual and their community; and engaging students in meaningful opportunities to create a healthy community in which all students can achieve their personal and academic goals.

The Center for Health Education and Promotion features trained peer educators who provide lifestyle education programs, aware-

and resources that support student success. Additionally, research and experience demonstrate that students who live on campus:

to learn from them. We attempt to create an environment that is inclusive for all our students on campus. Millersville University believes that an inclusive community is a core value, an essential part of the foundation for the community. Gender-inclusive housing furthers the University's nondiscrimination policy and provides a housing option that may appeal to students who identify as transgender, may be

The SMC has six furnished conference rooms and a multipurpose room that can handle various setups/weekly meetings, guest

SPECIAL EDUCATIONAL FACILITIES

LANGUAGE AND CULTURE STUDIES MEDIA CENTER

The Language and Culture Studies media center in McComsey Hall includes the instructional digital language lab with 30 student stations. The department also has a collection of visual, audio, games and print materials for the study and teaching of French, German and Spanish.

FRANCINE G. MCNAIRY LIBRARY AND LEARNING FORUM

The Francine G. McNairy Library and Learning Forum is a learner-centered hub for the University community, dedicated to educating, inspiring and connecting people with ideas, information and each other. Librarians and information professionals are available to assist students with research, information literacy and accessing information resources appropriate for their studies.

Students and members of the University community can access library resources by visiting the library or the library's website, www.library.millersville.edu. Library collections include electronic journals, databases, streaming video and eBooks, as well as physical

records focused on the University and local region. The library features state-of-the-art facilities for research and learning, including the Digital Learning Studio, where students can seek assistance with digital content creation, 3D printing and other current technologies. Flexible spaces for group and individual study and meetings are available for any member of the Millersville University community to use.

In addition, the Francine G. McNairy Library and Learning Forum is home to the Writing Center, an advising center, the Integrated

APPLIED ENGINEERING, SAFETY & TECHNOLOGY

student research laboratories, specialized support laboratories, 11 classrooms, four lecture halls, a student study lounge, a student Department of Computer Science has two computer teaching laboratories: the human-computer interaction laboratory and the chemistry, computer science, earth sciences, physics and nursing.

puter laboratory with 36 networked PCs, each loaded with an array of mathematical software, including the Mathematica computer algebra system and the Minitab and SAS statistical software packages. Wickersham also has student study areas, a conference room, dedicated space for mathematics tutoring and eight classrooms. It was completely renovated in 2006.

Facilities for the Department of Geography, housed in McComsey Hall, include the Environmental Geography Lab and the Geo-Graphics in a variety of environmental and physical geography courses. Additionally, the facility is utilized by faculty and students as they conduct independent research projects. The Geo-Graphics Lab is the teaching classroom for GIS-based courses. The Geo-Graphics Lab is also the common study and workspace for students in all geography courses and for scheduled group tutoring. The Geo-Graphics Lab houses approximately 20 PC work stations, a large-format plotter, and color and B&W printers. Instruction in all GIS-based courses utilizes the latest software, ArcGIS and ArcGIS Pro.

programs in applied engineering, engineering technologies, occupational safety and environmental health, technology and engineering education, and integrative STEM education.

The lower level of Osburn Hall includes an electronics lab; an energy, power & transportation lab; and an automation and robotics lab.

multipurpose room. The upper level of Osburn hall is dedicated to graphic communications and packaging, drafting and design, and occupational safety and environmental health (OSEH). It includes an advanced CADD lab with a rapid prototyping area, an additional CADD lab, a desktop publishing laboratory, a graphics lab a CNC packaging lab, and a series of laboratories associated with the OSEH

Millersville University has an extensive inventory of modern instrumentation that students use in classroom work and for independent study and research. Included are four large environmental chambers, autoclaves, optical microscopes, an atomic force microscope, an optical polarizing microscope, a scanning electron microscope, several types of spectrophotometers (FT infrared, visible-ultraviolet, 400 MHz counter, phase contrast microscopes, optical bench components, a vibration-isolating table for holography and optical interferometry, ² incubators for tissue culture, ultralow freezers, an ultracentrifuge, several gas chromatographs, an electrochemical oxygen analyzer, an auto-analyzer, a high-vacuum system,

limnological research pond, the Keever ecological study area, several microcomputer-based laboratories, photographic darkrooms, and

(BL) and atmospheric chemistry research and education. The BL component of this facility, referred to as the Millersville University

that is used for operational forecasting and in support of the observational studies and throughputs over 100 Gb per day of satellite, radar, model, upper air, and surface data and data .cnent of thir, 01800170014005 (, 66005C>-78.F>-5 0003003>-27.7 004D MPUM03-2WPSSLYRHJL61MOD6 061-0AE

full access to facilities, including two monitor boats, the

- 4) Don't look in the direction of other students' papers during examinations.
- 5) Use a recognized handbook for instruction on citing source materials in papers. Consult with individual instructors or academic departments when in doubt.
- 6) Make use of tutorial services, or other services that may be available, to assist in preparing papers and completing other course assignments properly.

UNDERGRADUATE PROGRAMS

BACCALAUREATE DEGREES

BACCALAUREATE DEGREE

OPTIONS	DEPARTMENT
Allied Health Technology B.S. Clinical Laboratory Science Nuclear Medicine Technology Pre-Athletic Training Sports Medicine	Biology
Anthropology B.A. Archeology	Criminology, Sociology and Anthropology
Applied Engineering & Technology Management B.S. Advanced Manufacturing Technology Computer-Aided Drafting/Design Technology Construction Management General Technology Graphic Communication Technology	Applied Engineering, Safety & Technology

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Chemistry B.S.	Chemistry
Biochemistry	
Engineering Instrumentation Automation	
Environmental Chemistry	
Nanotechnology	
Polymer Chemistry	
Pre-Pharmacy	
*Chemistry B.S.Ed. (7-12)	Chemistry
Chemistry with Inclusive Education (7-12)	

": \Yf_]k Ig T`] []j l p [Y l a f k Y f \ T`] []j l p [Y l a f h j g _ j Y e k Y j] Y f l a d h Y l \ Y l T`] \ a j [l a f g Y l] H] f f k q d h Y f a <] h Y j l e] f l i g ^ = \ n f Y l a f &

Interactive and Graphic Design B.Des.	Art & Design
International Studies B.A.	Multidisciplinary
Language and Culture Studies B.A. Culture Studies (French, German or Spanish) Language Studies (French, German or Spanish)	Language and Culture Studies
Manufacturing Engineering Technology B.S.	Applied Engineering, Safety & Technology
Mathematics B.A. Actuarial Science Statistics	Mathematics
Mathematics B.S. Actuarial Science Applied Mathematics Statistics	Mathematics
*Mathematics B.S.Ed. (7-12) Actuarial Science Mathematics with Inclusive Education (7-12) Statistics	Mathematics
Meteorology B.S.	Earth Sciences
Middle-Level Education (Grades 4-8) B.S.Ed. Language Arts (Grades 4-8) Mathematics (Grades 4-8) Science (Grades 4-8) Social Studies (Grades 4-8)	Early, Middle & Exceptional Education
Multidisciplinary Studies B.A. Applied Disability Studies Atlantic World Studies Digital Journalism Education Educational Studies Humanities Environmental Hazards & Emergency Management Science & Mathematics Science Writing Social Sciences Sport Business Sports Journalism	Multidisciplinary

Music B.A./Span/ActualTextFEFF0009>>> BDC -3.333 -1.25 Tdih_a5333 0-1.25 Td.J-_____or (dp_____Tj/Spa/ActualText

Music B.A./Span/Act* 3.33_____3 -1.25 TdK()TjEMC 3.333 0 Td(Applied Mathematics)Tj3.055 Tw /Span/ActualT3.3>>> BDC -3.333 -1.25 Td()TjEMC

Ocean Sciences and Coastal Studies B.S.
Physical Oceanography

Earth Sciences

Philosophy B.A.

Philosophy

Physics B.S.

Physics

*Physics B.S.Ed. (7-12)
Physics with Inclusive Education (7-12)

Physics

Psychology B.A.

Psychology

*Social Studies B.S.Ed. (7-12)
Economics
Economics with Inclusive Education (7-12)
Geography
Geography with Inclusive Education (7-12)
Government
Government with Inclusive Education (7-12)
History
History with Inclusive Education (7-12)

Multidisciplinary

Social Work B.A.

Social Work

Sociology B.A.
Criminology

Criminology, Sociology and Anthropology

Speech Communication B.S.
Communication Studies
Media & Broadcasting

Communication & Theatre

Theatre

*Technology and Engineering Education B.S.Ed. (K-12)
Engineering Design Concentration
Technology and Engineering (K-12) with Inclusive Education (7-12)

Applied Engineering, Safety & Technology

ASSOCIATE DEGREE

ASSOCIATE DEGREE OPTIONS

DEPARTMENT

Applied Engineering & Technology A.T.
Advanced Manufacturing Technology
Computer-Aided Drafting/Design Technology
Construction Technology
Control Systems Technology
Graphic Communication Technology
Nanofabrication Manufacturing Technology
Occupational Safety & Hygiene Technology

Applied Engineering, Safety & Technology

MINORS AND OPTIONS

MINOR OPTIONS

DEPARTMENT

African-American Studies

Multidisciplinary

Anthropology
Archaeology
Cultural Anthropology
General Anthropology

Criminology, Sociology and Anthropology

Art History Fine Art Metals Photography Studio Art	
Applied Engineering & Technology Advanced Manufacturing Technology Computer-Aided Drafting/Design Technology Construction Technology Control Systems Technology General Applied Engineering & Technology Graphic Communication Technology Occupational Safety	Applied Engineering, Safety & Technology
Integrative STEM Education Methods	Applied Engineering, Safety & Technology
Athletic Coaching	Wellness & Sport Sciences
Biochemistry	Chemistry
Biology	Biology
Business Administration Accounting Finance General Business Management Marketing	Accounting and Finance/Management and Marketing
Chemistry	Chemistry
Computer Science	Computer Science
Criminology	Criminology, Sociology and Anthropology
Culture Studies	Languages & Culture Studies
Earth Sciences	Earth Sciences
Economics General Economics Technical Economics	Economics
Environmental Industrial and Environmental Health Land Use Quantitative Methods in Environmental Science	Multidisciplinary
Environmental Chemistry	Chemistry
Environmental Hazards and Emergency Management	Multidisciplinary
English American Literature British Literature Creative Writing and Publishing ESL/Linguistics Film Studies General English Journalism Science Writing Writing Studies	English
Entrepreneurship	Multidisciplinary

Geography Environmental Geography General Geography Geospatial Applications Global Geography	Geography
Geology	Earth Sciences
Gerontology	Social Work
Heliophysics and Space Weather	Earth Sciences & Physics
History	History
International Studies	Multidisciplinary
Language Studies	Language and Culture Studies
Latina(o) Studies	Multidisciplinary
Mathematics	Mathematics
Meteorology	Earth Sciences
Military Science	History
Molecular Biology/Biotechnology	Biology
Music	Music
Musical Theatre	Communication & Theatre
Occupational Safety and Environmental Health	Applied Engineering, Safety & Technology
Oceanography	Earth Sciences
Philosophy	Philosophy
Physics	Physics
Psychology	Psychology
Social Justice	Social Work
Sociology	Sociology/Anthropology
Statistics	Mathematics
Theatre	Communication & Theatre
Women and Gender Studies	Multidisciplinary

SUB-BACCALAUREATE CERTIFICATE PROGRAM

SUB-BACCALAUREATE CERTIFICATE OPTIONS	DEPARTMENT
Marketing	Management and Marketing

GRADUATE PROGRAMS

UNDERGRADUATE PROGRAMS OF STUDY

In the following course listings, G1, G2 and G3 refer to general education courses approved to satisfy the Critical Thinking Across

G1 Course counts in Humanities and Fine Arts block

G2 Course counts in Science and Mathematics block

G3 Course counts in Social Sciences block

follows:

D A cultural diversity and community course

L A lab course

P A perspectives course

AW An advanced writing course

For more information on these components of the general education program, refer to the section in the catalog entitled *General Education Program* &

FREQUENCY OF COURSE OFFERINGS:

- When a course is always offered in fall, spring and summer, no notation is shown.
- When a course is listed as "Offered . . .," it is offered only in the semesters noted.
- When a course is listed as "Offered periodically," it is offered on an irregular or as-needed basis.
- When a course is listed as "Offered infrequently," the course has not been offered for two years and will not be offered for two more years.
- When a course is listed as "Offered annually," the course is taught in either spring or fall.

ACCOUNTING

See Business Administration

ACTUARIAL SCIENCE

See Mathematics

ADVANCED MANUFACTURING TECHNOLOGY

See Applied Engineering, Safety & Technology

AFRICAN-AMERICAN STUDIES

Associate Professor Adyanga, interim coordinator

African-American Studies is an 18-credit interdisciplinary minor focusing on the history and socio-culture of African Americans. The

minor emphasize African-American perspectives, as well as the development of critical thinking and written and oral communication skills. The minor will present opportunities to examine, compare and contrast African-American perspectives with those of other

and knowledge of African-American culture will complement many majors, especially elementary and secondary education, business, communication and theatre, English, history, sociology, art, music, and industry and technology. It appears to be both essential and

African-American Studies Minor: 18 s.h.

approved list, at least one of which must be at the 300 level or above.

COURSE DESCRIPTIONS

AFAM 201: 3 s.h.

Introduction to African-American Studies (D, G3)

Provides an overview of African-American culture and history. African-American perspectives and contributions in the areas of literature, art, theatre, music, politics, economics, science and technology, medicine, male-female relationships, family, the church and the media will be

AFAM 401: 3 s.h.

Senior Seminar in African-American Studies

An examination and discussion of current research issues in African-American studies. May be taken in conjunction with a 2-3-credit independent study.

AFAM 496: 3 s.h.

Topics in African-American Studies

Presents a detailed investigation on a topic of current interest in African-American studies. Topics will be announced.

APPROVED AFRICAN-AMERICAN STUDIES COURSES

Descriptions of these courses may be found under the appropriate departmental listing. No more than one course may be taken from the same discipline grouping (the four groupings are humanities, social sciences, science and mathematics, and education).

ANTH 226: 3 s.h.

Comparative Societies (G3, W)

HIST 272: 3 s.h.

African-American History I (G3, W)

HIST 273: 3 s.h.

African-American History II (G3, W)

HIST 282: 3 s.h.

Transatlantic Slave Trade (G3)

ENGL 333: 3 s.h.

African-American Literature I (G1, D, W)

ENGL 334: 3 s.h.

African-American Literature II (G1, D, W)

ANTH 344: 3 s.h.

Gender, Race & Class (P)

EDUC 403: 3 s.h.

Cultural Diversity (D, P)

EDUC 433: 3 s.h.

Gender & Race Issues in Children's Literature (D, P)

ENGL 347: 3 s.h.

Studies of Ethnicity in Film (G1)

ENGL 429/629: 3 s.h.

Black Women Writers

HIST 401: 3 s.h.

Cultural Interactions in the Atlantic: 1450-1820 (P)

HIST 494/ENGL 494/MUSI 494: 3 s.h.

Perspectives on the Harlem Renaissance (P)

MATH 102: 3 s.h.

Survey of Mathematical Ideas in Nonwestern Cultures (D, G2)

MUSI 369: 3 s.h.

Introduction to West African Music and Dance

PSYC 318: 3 s.h.

Psychology of Racism (D, P)

SOCY 307: 3 s.h.

African-American Social Thought (G3)

SOCY 441: 3 s.h.

Urban Sociology

SOWK 313: 3 s.h.

Family Violence (P)

SOWK 350: 3 s.h.

Encounter in Human Diversity (D, P)

SSCI 212: 3 s.h.

The Black Woman (G3)

ALLIED HEALTH TECHNOLOGY

See Biology

ANTHROPOLOGY

See Criminology, Sociology & Anthropology

APPLIED ENGINEERING, SAFETY & TECHNOLOGY

College of Science and Technology

Professor Litowitz, chairperson

Professor Brusic, TECE coordinator

Assistant Professor Painter, AETM coordinator

Associate Professor Ogutu, OSEH coordinator

Assistant Professor Johnson, MFET coordinator

Professor Warner, TECI Graduate Program coordinator

Professors Bell, David, McCade, Snyder

Assistant Professors Khalighi, Legutko

Instructor English

in applied engineering and technology or a B.S. in applied engineering and technology management, a B.S. in occupational safety

Students may participate in the activities of the Technology & Engineering Education Collegiate Association; Association of Technol-

for professions in technology, may also be extended to department majors who excel.

Manufacturing Engineering Technology, B.S.

Students in the Bachelor of Science in manufacturing engineering technology major will be introduced to the fundamentals and advanced concepts of engineering, materials and production processes used within industry. The program provides in-depth technical content of advanced manufacturing, with emphasis on automated manufacturing, robotics, and computer-aided draft-

to design, develop and construct projects independently as well as in small groups. Technologies commonly used by major corporations are emphasized throughout the curriculum. Juniors and seniors are encouraged to participate in a cooperative education or internship experience to further enhance their knowledge in technical areas within an industrial environment.

Occupational Safety & Environmental Health (OESH), B.S.

The OESH program is designed for persons interested in the safety, industrial hygiene and environmental health professions. OESH includes general education studies, with emphasis on the sciences and core studies in the technical and managerial as-

improvement of the program is guided by an advisory committee of safety professionals. Graduates of this program typically

specialists. The OESH minor should be an attribute to majors in biology, business administration, chemistry, applied engineering and technology management, political science and nursing. OESH is nationally accredited by the Accreditation Board for Engineering and Technology (ABET).

ence courses: Select one grouping from CHEM 103 and 104; or CHEM 111 and BIOL 100; or CHEM 111 and PHYS 103 or 104. Additional course in Technology Management (3 credits): Select one from ITEC 392; OSEH 221, 320, 321, 323, 333; BUAD 161, 352; MGMT 353, 357; PSYC 329; SOCY 318.

392, 400; OSEH 221, 320, 323, 333; BUAD 161, 352; MGMT 353, 357; PSYC 329; SOCY 318.

PHYS 103 or 104, 131, 132. Mathematics (6-7 credits): MATH 130 and one of MATH 151, 160 or 161. ENGL 312, 316, 318 or 319.

Applied Engineering & Technology Minor: 18 s.h.

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Automation & Intelligent Robotics Engineering Technology (ARET), B.S.: 120 s.h.

Manufacturing Engineering Technology (B.S.): 120 s.h.

Directed elective (3 credits): Select from ITEC 300, 376, 392, 400, 446, 467.

Occupational Safety & Environmental Health (OESH) Major (B.S.): 120 s.h.

130 and 151; ITEC 130 and 392; and ENGL 312, 316, 318 or 319.

Occupational Safety Minor: 18 s.h.

Technology & Engineering Education (EDTE) Major (B.S.Ed.): 129 s.h.

K-12 Teacher Certification

103, CHEM 205, PHYS 103 or PHYS 104 is strongly recommended); two general education MATH courses and one general education ENGL literature course.

ITEC 301: 3 s.h.**Technology and Its Impact on Humans (P)**

Analysis of the development of technology and its impact on humans, and a realization of the importance of human technological behavior on the environment, social/cultural systems and the future. Students use analytical skills on a written independent research project, and oral skills to

ITEC 346: 3 s.h.**Architectural Drawing and Design**

Principles of residential design. Emphasizes the development of a complete set of original working drawings; computer-aided design (CAD); pre-

ITEC 347: 3 s.h.**Engineering Visualization**

Study of the relationships of three-dimensional lines, angles, surfaces and solids by projecting three-dimensional reality onto a two-dimensional surface, such as a computer screen. Students gain the necessary tools and principles to graphically visualize, manipulate and solve engineering

ITEC 348: 3 s.h.**Green Building and Sustainable Systems**

and application of renewable energy, natural building materials and ecological landscape into building design and community development is

ITEC 351: 3 s.h.**Digital Imaging**

Create digital images using cameras and scanners. Set up and characterize a digital workstation and produce digitally imaged products. Hands-on

ITEC 355: 3 s.h.**Contemporary Printing****ITEC 356: 3 s.h.****Desktop Publishing (W)****ITEC 357: 3 s.h.****Packaging and Specialty Printing**

In-depth study of problems and processes related to printing and converting in package, label and specialty printing. Students study and experi-

ITEC 364: 3 s.h.**Digital Electronics**

Practical applications of digital logic for processing electronically encoded information. Covers numbering systems, logic design, basic gates, se-

ITEC 375: 3 s.h.**Polymer and Ceramic Technology**

Design, development and production of polymer and ceramic products. Covers contemporary pattern and molding materials along with industrial

ITEC 376: 3 s.h.**Wood Technology****ITEC 382: 3 s.h.****Automated Manufacturing**

A comprehensive experience in the design, programming and implementation of computer-controlled manufacturing processes. Emphasis is placed on understanding machine code, utilizing computer-aided design and manufacturing (CAD/CAM) software, and identifying proper process

342, or permission of instructor.

ITEC 392: 3 s.h.**Introduction to Industrial Training (W)****ITEC 425: 3 s.h.****Industrial Robotic Systems**

ITEC 427: 3 s.h.
Programmable Logic Controllers

ITEC 494: 3 s.h.
Total Quality Management

ITEC 498: 1-3 s.h.
Independent Study in Applied Engineering, Safety & Technology
See the *h j f l k l m q*

ITEC 499: 1-3 s.h.
Department Honors Thesis
Completion and defense of thesis research. See the *h y j l e j f l y d g f g j k* section of this catalog. Contact the Department of Applied Engineering,

COURSE DESCRIPTIONS

F Y f g Y Z j a Y l a g f E Y f m Y [l n j a _ L] [` f g d _ q

NFMT 311: 3 s.h.
Materials, Safety and Equipment Overview for Nanofabrication

Focuses on issues encountered in the practice of "top down" and "bottom up" nanofabrication and the safe operation and maintenance of nano-
during "Capstone Semester."

NFMT 312: 3 s.h.
Basic Nanofabrication Processes

lege during "Capstone Semester."

NFMT 313: 3 s.h.
Materials in Nanotechnology

In-depth, hands-on exposure to depositing and etching a wide variety of materials, including dielectrics, semiconductor organics, polymers, metal-
312. Completed at Penn State University in State College during "Capstone Semester."

NFMT 314: 3 s.h.

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OSEH 221: 3 s.h.
Industrial Fire Prevention, Protection and Control

OSEH 222: 3 s.h.
Construction Safety
Methodology for the anticipation, recognition, evaluation and control of safety and health hazards associated with construction industries.

OSEH 120.

OSEH 320: 3 s.h.
Safety Engineering Principles

OSEH 321: 4 s.h.
Industrial Hygiene—Chemical and Biological Hazards
Anticipation, recognition, evaluation and control of chemical and biological hazards in the workplace. Topics include toxicology, gases, vapors,

EDTE 291: 3 s.h.**Foundations of Technology Education**

An introduction to the social, historical and philosophical foundations of technology education leading to contemporary programs. Provision is

“C” or higher for admission to Advanced Professional Studies (APS).

EDTE 391: 3 s.h.**Curriculum and Instruction in Technology Education (W)**

Professional teacher preparation in curriculum design and instructional planning and delivery. Major topics involve developing a philosophical basis for contemporary curriculum writing, content selection, instructional objective design, lesson planning and the use of instructional technology and computers in conjunction with several technology education teaching strategies. Field experiences provided within technology education classes

EDTE 490: 3 s.h.**Integrative Learning Using Experiential Strategies**

The purpose of this course is to engage students in curriculum planning, design and assessment that will enable them to identify, use and evaluate experiential and integrative teaching-learning strategies that facilitate connections between all subjects in grades PreK to grade 6 (e.g.,

290 and ITEC 344. For Integrative STEM Education Methods minors only.

EDTE 461: 12 s.h.**Student Teaching**

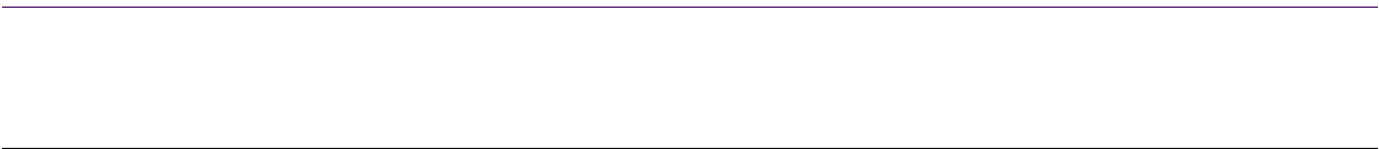
Student teachers are assigned full-time to selected cooperating teachers in the Lancaster area. They are supervised by University faculty and gain

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EDTE 491: 1 s.h.**Seminar in Technology Education**

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to become self-employed artists, or graphic designers who wish to further their education in graduate school programs in studio art.

The Department of Art & Design encourages highly motivated students to participate in internship and cooperative education opportunities that exist in both the public and private sectors. These opportunities are described in the section of this catalog.

Applicants for the B.F.A. in art, B.A. in art or the B.S.Ed. in art education programs, including transfer applications, must submit an drawings from direct observation. Applicants for the B.Des. in interactive and graphic design are to submit a design review. For this degree the applicants may either complete three design projects or submit a design portfolio. The design portfolio should include 10-15 pieces that show design thinking. The works can be in any medium, be it computer generated, hand drawn or physically built.

COURSE REQUIREMENTS

Art Major (B.A.): 120 s.h.

and graphic design, convergent art or advanced drawing. Students must take at least one course at the second level of a studio discipline. Students

Specialization

Students interested in interactive and graphic design may choose to pursue a B.Des. in interactive and graphic design, B.A., or a B.F.A. with a

DESN 307: 3 s.h.**Visual Communication Design History (P)**

History of visual elements and technological processes involved in an informed view of design from the beginning of pictographic language to the present. Covers four main areas of investigation: an analysis of the evolution of formal or visual attributes; the relationship between design and

ART 313: 3 s.h.**Art in America (G1)**

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ART 133: 3 s.h.

DESN 244: 3 s.h.
Typography II

instructor.

DESN 246: 3 s.h.
Intro to Sequence, Motion and Visual Communication

DESN 247: 3 s.h.
Introduction to Web, Experience and Interaction Design

Focuses on the fundamentals of user-centered design and 30 -1.187 TdKility is9005605600570054004C00550ed87 Tdo004D000nT 3>-12.3Abass90iiv>004C

DESN 375: 3 s.h.
Illustration

DESN 444: 3 s.h.
Visual Communications and Graphic Design II (W)

and DESN 144 or permission of instructor.

ART 445: 3 s.h.
Advanced Computer Art

DESN 446: 3 s.h.
Advanced Computers in Design

DESN 447: 3 s.h.
Advanced Web Design

DESN 480: 3 s.h.
Special Topics in Design

DESN 493: 3 s.h.
Portfolio

Capstone class for B.A. or B.F.A. students, with a concentration in graphic and interactive design for B.Des. students. The course is designed to

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ART 352: 3 s.h.
Painting I

ART 354: 3 s.h.
Painting II

ART 452: 3 s.h.
Painting III

or permission of instructor.

ART 454: 3 s.h.
Painting IV

ART 552, 554: 3-6 s.h.
Painting

ART 353: 3 s.h.
Watercolor I

ART 355: 3 s.h.
Watercolor II

ART 453: 3 s.h.
Watercolor III

or permission of instructor.

ART 455: 3 s.h.
Watercolor IV

ART 553, 555: 3-6 s.h.
Watercolor and Related Media

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ART 167: 3 s.h.

Experimental Photography (G1)

ART 306: 3 s.h.

Introduction to Photography: Darkroom (G1)

ART 376: 3 s.h.

Intro to Photo: Digital (G1)

Beginning digital course that introduces the basic skills and concepts associated with digital photography as used by contemporary visual art-

ART 406: 3 s.h.

Intermediate Photography: Darkroom

ART 409: 3 s.h.

Advanced Photography

ART 365: 3 s.h.

Intaglio Printmaking I

Explores multiple approaches to creating intaglio prints. Starts at an introductory level technically and builds into an intermediate understanding

ART 582, 583: 3-6 s.h.
Sculpture

ART 291: 3 s.h.

Intro: Fine Art Metals/Jewelry (G1)

Introduces jewelry and metals as a form of artistic expression. The student seeks creative solutions to visual problems while employing various

ART 391: 3 s.h.

Fine Art Metals/Casting (G1)

Continued development of individual artistic expression in jewelry and metals, with emphasis on artistic inventiveness and personal style. Covers lost wax casting for jewelry scale work, alternative casting methods, mold making, chain making and marriage of metals. Critical analysis

ART 491: 3 s.h.

Fine Art Metals/Form Emphasis

Further study of jewelry and metals as an art form in which the student is encouraged to develop an original aesthetic style while exploring and

ART 492: 3 s.h.

Advanced Fine Art Metals/Jewelry

student awareness of historical and contemporary jewelry/metalwork while incorporating concept with craft. Problem solving and critical analysis

ART 591, 592: 3-6 s.h.

Fine Art Metals

ART 295: 3-6 s.h.

Ceramics I: Handbuilding (G1)

Introduces ceramic materials and processes utilizing handbuilding and sculpting methods. Emphasis on the productive, critical, cultural and his

ART 345: 3 s.h.
Introduction to Computer Art

ART 368: 3 s.h.
Collage

ART 445: 3 s.h.
Advanced Computer Art

ART 486: 3 s.h.
Special Topics in Studio Art

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ART 490: 3 s.h.
Beyond Making: Strategies for Success

art career. Students will build their formal portfolio, conduct an exhibition of their work and learn standard art business practices such as exhibiting work, networking, advertising, branding, marketing and self-promotion. Entrepreneurial practice is utilized while students learn to write professional

ART 494: 3 s.h.
Studio Capstone: Thematic Exploration in the Visual Arts
 Capstone studio seminar focuses on a rotating theme. Studio assignments are used to encourage creative problem solving and intellectual risk

ART 498: 1-3 s.h.
Independent Study in Art
 For further information on independent study, see the section.

GRADUATE-LEVEL COURSES

the Graduate Catalog.

ART 533, 534: 3 s.h. each
Drawing

ART 552, 554: 3 s.h. each
Painting

ART 553, 555: 3 s.h. each
Watercolor and Related Media

ART 563, 564: 3 s.h. each
Printmaking

ART 567: 3 s.h.
Fine Art Photography

ART 582, 583: 3 s.h. each
Sculpture

ART 588, 589: 3 s.h. each
Topics in Art History

ART 591, 592: 3 s.h. each
Fine Art Metals

ART 596, 597: 3 s.h. each
Ceramics

AUTOMATION & INTELLIGENT ROBOTICS ENGINEERING TECHNOLOGY

See Applied Engineering, Safety & Technology

BIOCHEMISTRY

See Chemistry

BIOLOGY

College of Science and Technology

Associate Professor Wagner, chairperson

Associate Professor Cebra-Thomas, allied health coordinator

Professors Didier, Hardy, Hepfer, Hoover, Wallace

Associate Professors Haines, Horton

Millersville University is the sponsoring institution for the respiratory therapy program. After successfully completing three years of study at the University, students enter the 16-month clinical phase at UPMC Lititz. Admission into the clinical phase is competitive

Biology Major (B.S.): 120 s.h.**Pre-Medical Professions Option**

BIOL 101, 211, 221, 343, 362, 364, 254/255 or 318/435, 472. Electives to bring total biology credits to 43. 20 s.h. chemistry; 8 s.h. physics; 7 s.h. mathematics, including calculus (MATH 161).

Biology Major (B.S.): 120 s.h.**Pre-Podiatry Option**

BIOL 101, 211, 257, 356, 362, 364 and 435. 20 s.h. chemistry; 8 s.h. physics; MATH 161 or 163; 6 s.h. psychology. 24 s.h. transfer credits from the Pennsylvania College of Podiatric Medicine.

Biology Major (B.S.): 120 s.h.**Respiratory Therapy Option**

BIOL 101, 257, 352, 356, 362, 364 and 461. 16 s.h. chemistry; 4 s.h. physics; MATH 161 or 163. The student will be eligible to begin the clinical phase of the respiratory therapy clinical program at the completion of 84 s.h. After the successful completion of 36 s.h. in the clinical phase, the student will be eligible to apply for graduation for the B.S. biology degree, respiratory therapy option. In order to receive the respiratory therapy

ment as a respiratory therapist. See the [9-9 Health](#) section of this catalog for relevant respiratory therapy ADA information.

Biology Major (B.S.Ed.): 126 s.h.**Certification in Secondary Education**

BIOL 101, 211, 221, 343, 362, 364, 375 and 473. Electives to bring total biology credits to 32. 16 s.h. chemistry; 8 s.h. physics; 3 s.h. earth sciences

[9-9 Health](#) in this catalog for more information.

Biology Minor

BIOL 100 (B or higher) or BIOL 101 (C- or higher) and two from BIOL 211, 221, 343, 362 and 364. Electives at the 200–400 level to bring total biology credits to 20, with at least 6 s.h. at the 300 level or above.

Molecular Biology/Biotechnology Minor

BIOL 100 (B or higher) or BIOL 101 (C- or higher) and BIOL 362, 364, 462 and 466.

Bachelor of Science in Allied Health Technology

of time or credits.

A dual-degree program in athletic training is available for well-prepared students. During three years of study at Millersville, students

A four-year program prepares students for graduate or professional studies to become specialists in sports medicine, such as athletic trainers, physical therapists, physicians and physician assistants. The curriculum includes courses in nutrition, sports psychology, and the prevention and care of injuries.

After completing three years of undergraduate study, students in the allied health technology/medical technology program are eligible to apply to an accredited hospital-based medical technology program for one year of clinical laboratory experience, after which

Allied Health Technology Major (B.S.): 120 s.h.

Medical Technology (Clinical Laboratory Science) 3+1 Year Option

BIOL 100, 254, 255, 257, 362, 364, 454, 461. Directed electives to bring total biology credits to 31 to 33. MATH 130, 160; 16 s.h. chemistry; 4 s.h. physics. 26 s.h. of clinical laboratory study from a hospital program in medical technology approved by the National Accrediting Agency for Clinical Laboratory Sciences.

Allied Health Technology Major (B.S.): 120 s.h.

Nuclear Medicines Health Tec,+1 Year Option

BIOL 100, 254, 255, 257, 362, 364, 454, 461. Directed electives to bring total biology credits to 31 to 33. MATH 130, 160; 16 s.h. chemistry;

BIOL 211: 4 s.h.
Concepts of Zoology (G2, L)

odology (including simple statistical approaches) and evolution. Laboratory studies include microscopy, dissections, live observations, computer
 100 for biology majors.

BIOL 212/212H: 1 s.h.
Honors Zoology Seminar

Continuation of BIOL 211. Original investigations and/or readings and discussions of the zoological literature about the diverse adaptations of
 a grade of B- or higher and member of University Honors College, or 3.35 GPA, or instructor's permission.

BIOL 221: 4 s.h.
Concepts of Botany (G2, L)

integrated study of plant structure and function using angiosperms as principal examples. Includes brief discussions of plant and fungal diversity,
 100 for biology majors.

BIOL 222/222H: 1 s.h.
Problem Solving in Botany

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BIOL 291: 4 s.h.
Marine Biology (G2, L)

BIOL 318: 4 s.h.

Comparative Vertebrate Anatomy

Functional and comparative anatomy of selected vertebrates with developmental and evolutionary perspectives. Lab primarily consists of dissection and histological analyses of animals representing various vertebrate classes. Comparisons between animals at the same level, and to see permission of instructor.

BIOL 324: 4 s.h.

Plant Biochemistry

A study of enzymes and pathways involved in plant intermediary as related to plant cell structure, function and plant development. Topics include plant bioenergetics, biosynthesis of plant hormones and elicitor molecules, signal perception and transduction, and secondary metabolites (natural

BIOL 325: 3 s.h.

Plant Systematics

BIOL 221.

BIOL 327: 3 s.h.

Horticultural Science

Principles of horticultural science, including regulation of plant growth, propagation and breeding, plant nutrition, pruning, plant diseases and special

BIOL 329: 3 s.h.

Plant-Insect Interactions

The chemical and biological interactions between plants and insects will be extensively examined, with particular emphasis on the chemical ecology of important behaviors such as herbivory, oviposition and pollination. The chemical communications between plants and insects will be examined

BIOL 340: 3 s.h.

Perspectives in Environmental Awareness (P)

Interdisciplinary study of current environmental problems and their implications on future habitability of the planet. Physical, biological and social

BIOL 343: 4 s.h.

Principles of Ecology and Evolution

The basic concepts and principles of evolution and ecology. Topics include natural selection, genetic variation, macro- and microevolution, population genetics, evolutionary stable strategies, species concepts, biodiversity, extinction, reproductive strategies, population dynamics, the ecological niche concept, predation, competition, mutualism, parasitism, coevolution, biogeography, disturbance ecology, and ecosystem structure and func-

BIOL 344: 3 s.h.

Population and Community Ecology

An intermediate course that will explore population biology, species interactions, trophic structure, community organization, succession, island titative methods and manipulative experimental designs to verify fundamental principles and test new hypotheses. 2 hrs. lec., 3 hrs. lab.

BIOL 346: 3 s.h.

Ornithology (W)

BIOL 352: 3 s.h.

Nutritional Science (W)

Biological and biochemical roles of nutrients for the proper functioning of the human body. Designed for students with a more advanced understanding of chemistry and math. Nutrition concepts will be used to design and evaluate personal diet plans. No credit given if credit earned for C- or higher in BIOL 362, ENGL 110.

BIOL 454: 2 s.h.
Immunology

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BIOL 484: 3 s.h.

Mechanisms of Animal Behavior

This course explores the physiological mechanisms that regulate animal behavior. It begins by examining nervous and endocrine system physiology,

BIOL 296: 3 s.h.**Marine Ecology**

Interrelationships among animals, plants and physical and chemical aspects of the environment will be studied, with emphasis on adaptations for

BIOL 392: 3 s.h.**Marine Mammals**

The distribution, population size, physiology, evolution, adaptations and ecological relationships of marine mammals will be studied, with an emphasis on mammals of the Atlantic Ocean. This course will stress hands-on understanding of marine mammal physiology, behavior, population

BIOL 397: 3 s.h.**Marine Botany**

The taxonomy, ecology, distribution, life histories, physiology and economic status of marine and marine-fringe plants of the Middle Atlantic coast.

BIOL 495 or ESCI 465: 3 s.h.**Biological Oceanography**

221; ESCI 261.

GRADUATE-LEVEL COURSES**BIOL 564: 4 s.h.****Foundations of Genetics and Molecular Biology**

Concepts and principles essential for a basic understanding of genetics and molecular biology are covered. Topics include Mendelian genetics, gene mapping, molecular structure of the gene, gene expressions and regulation, chromatin structure, molecular methodologies, Human Genome

BIOL 589: 1–4 s.h.**Topics in Biology**

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RESP 410: 2 s.h.**Acute Cardiopulmonary Care**

for the B.S. in biology; BIOL 254 and 255 for the B.S. in allied health technology. Basic Life Support for Healthcare Providers, for both programs.

RESP 411: 2 s.h.**Respiratory Care Techniques I**

RESP 415: 3 s.h.

Technical Aspects of Mechanical Ventilation

microprocessor systems and the audiovisual alarm systems; a selection of current ventilator models are presented using workshops to provide

RESP 417: 3 s.h.

Respiratory Care Techniques III (W)

RESP 463: 3 s.h.
Clinical Practicum II

which all of the critical-care patient-care skills were presented, practiced in simulation, observed in patient care and practiced on patients. The expectation is that each student will progress to mastery in the assigned critical-care patient-care clinical skills. The former 100 hours will be devoted to supervised practice, and the latter 20 hours will consist of further practice, with a focus on skill assessment through direct observation

RESP 464: 10 s.h.
Clinical Practicum III

learning objectives while assigned to various content experts and specialists. The focus is on pulmonary rehabilitation, home care, sleep medicine, pulmonary diagnostics, neonatal/pediatric critical care, advanced airway care, pulmonary medicine and adult critical care patient management.

RESP 495: 2 s.h.
Respiratory Care Research

Each student selects, designs and conducts a research project, individually or with a research partner. The project culminates in a verbal presentation of the research and a manuscript from each student suitable for publication. Each project is assigned a faculty advisor to oversee and guide

Millersville University Program in Respiratory Therapy ADA Standards

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Professors Ghoreishi, Nakhai, Wang
Associate Professors Douglas, Hutto
Assistant Professor Nandedkar

Finance: BUAD 161, 162, 341, FIN 342, and either FIN 345 or 445.

Management: BUAD 251 and 12 credits in management.

Marketing: BUAD 231, MKTG 431, 436 and six credits in marketing.

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BUAD 161: 3 s.h.
Introduction to Financial Accounting

FIN (BUAD) 203: 3 s.h.
Personal Finance (G3)

planning, consumer credit, budgeting, insurance, retirement and estate planning. Does not count in any business administration option, but can count as business elective.

BUAD 341: 3 s.h.
Managerial Finance I (W)

FIN (BUAD) 342: 3 s.h.
Managerial Finance II

FIN (BUAD) 343: 3 s.h.
Real Estate Fundamentals

Introduces special characteristics of real estate and how real estate decisions are made. Includes real estate terms, laws, commercial and residential

FIN (BUAD) 344: 3 s.h.
International Finance

FIN (BUAD) 345: 3 s.h.
Investment Analysis

FIN (BUAD) 346: 3 s.h.
Principles of Bank Administration

FIN (BUAD) 347: 3 s.h.
Risk and Insurance

Introduces principles and mechanics of insurance. Includes the conceptual and historical framework of insurance and the actual mechanics of insur-

FIN (BUAD) 405: 3 s.h.
Special Topics in Finance

FIN (BUAD) 445: 3 s.h.
Financial Markets

FIN (BUAD) 447: 3 s.h.
Cases in Finance (W)

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BUAD 251: 3 s.h.
Principles of Management (G3, W)

Examines management processes of planning, organizing, leading and controlling, and provides basic knowledge of management history, manag-

BUAD 307: 3 s.h.
Management Information Systems

162, 251.

MGMT (BUAD) 351: 3 s.h.

Organization Theory

Introduction of the perspective of business as a system dedicated to the reduction of uncertainties. Topics include leadership, styles of manage-

BUAD 352: 3 s.h.

Human Resource Management

MGMT (BUAD) 375: 3 s.h.**Business Web Development**

Prepares individuals to plan, manage, supervise and market electronic business operations, products and services provided online via the internet.

Builds skills to develop a modern business website using technologies such as HTML, CSS and JavaScript. Includes coverage of web client-server architecture, security, performance issues, monetization, website promotion, web databases, integration, the omni-channel server-side script, and commercial

Builds student's knowledge of the process of data and information management, and the skills of identifying organization, al

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MKTG (BUAD) 337: 3 s.h.
Sales Force Administration

Planning, direction and control of the sales force. Includes recruiting, selecting, training, supervising, compensating, motivating and evaluating sales

MKTG (BUAD) 405: 3 s.h.
Special Topics in Marketing

MKTG (BUAD) 431: 3 s.h.
Marketing Research

higher in BUAD 231.

MKTG (BUAD) 435: 3 s.h.
International Marketing

MKTG (BUAD) 436: 3 s.h.
Marketing Strategy

Analysis of opportunities and problems confronting the marketing manager in decision making. Includes market segmentation, target marketing, positioning, market research, product life-cycle strategies, marketing-mix implementation and social responsibility. Emphasis on case analysis to

CHEMISTRY

College of Science and Technology

Associate Professor Miller, chairperson

Assistant Professors Albert, Allen, Mullen-Davis

able employment opportunities. The second option, in environmental chemistry, provides study in areas that involve the traditional chemistry of the atmosphere, hydrosphere, geosphere and biosphere. The third option is in polymer chemistry. Polymer chemistry

The fourth option, in nanotechnology, provides study in the control of materials at very small dimensions to make smaller, cheaper
 tion facility. Graduates can pursue graduate studies in materials science.

instrumentation plays a key role, including industry, forensics or graduate school.

For those students desirous of pursuing a career in high school teaching, the Bachelor of Science in Education degree (B.S.Ed.) provides a sound background in chemistry as well as the necessary methods courses.

expenses of college study. Beginning after the freshman year, students choosing this option may alternate periods of on-campus

information, see

COURSE REQUIREMENTS**Chemistry Major (B.S.): 120 s.h.**

47 s.h. in chemistry: CHEM 111, 112, 188, 231, 232, 251, 265, 326, 341, 342, 391, 392, 452, 465, 487, 488, 498 (1), plus 8-10 s.h. from CHEM 312,

(CHEM 452) or Analytical Chemistry (CHEM 465).

foreign language. A course in economics is also recommended.

Chemistry Major (B.S.): 120 s.h.**Biochemistry Option**

47 s.h. in chemistry: CHEM 111, 112, 188, 231, 232, 251, 265, 326, 327, 328, 341, 342, 465, 487, 488, 498 (1), plus 5 s.h. selected from CHEM

100, plus BIOL 364 and one of BIOL 362, 461, 462; MATH 161, 211, 311 and PHYS 231, 232.

foreign language. A course in economics is also recommended.

Chemistry Major (B.S.): 120 s.h.**Environmental Option**

46 s.h. in chemistry: CHEM 111, 112, 188, 231, 232, 251, 265, 341, 342, 375, 465, 476, 487, 488, 498 (1), plus 4 s.h. minimum selected from CHEM

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CHEM 103: 3 s.h.**General, Organic and Biochemistry I (G2, L)**

An introduction to the basic theories of general and organic chemistry, including nomenclature, reactions and problem solving. Appropriate for

CHEM 104: 3 s.h.**General, Organic and Biochemistry II (G2, L)**

Solutions, acids and bases, oxidation reduction and organic chemistry, including nomenclature and basic reactions with relevancy to biochemistry.

CHEM 110: 3 s.h.**Fundamentals of Chemistry**

An intensive review of the fundamentals of chemistry, with particular emphasis placed on solving chemistry problems. Topics include measure-

MATH 101 or MPT of 160 or higher.

CHEM 111: 4 s.h.**Introductory Chemistry I (G2, L)**

with a grade of C- or higher; and MPT of MATH 160 or higher or MATH 101 with a grade of C- or higher; or permission of instructor.

CHEM 112: 4 s.h.**Introductory Chemistry II (G2, L)**

with a grade of C- or higher; C for chemistry majors.

CHEM 113H: 1 s.h.**Honors Seminar for Introductory Chemistry**

The ideas of introductory chemistry are studied in extended depth, using problems, laboratory exercises, readings and discussion. Grades of B- or higher in both CHEM 112 and CHEM 113 will result in honors designation for the pair. The pair of courses counts as one entry in the science

CHEM 265: 4 s.h.
Quantitative Analysis (G2, L)

CHEM 312 (302): 3 s.h.
Chemistry in Nanotechnology

A study of principles, methods and applications of chemistry in nanotechnology, with a special emphasis on the chemistry of materials. Topics include synthesis, characterization and manipulation of nanomaterials, sensors, bioinspired nanomaterials, atomic force and scanning electron microscopy.

CHEM 324: 4 s.h.
Plant Biochemistry

A study of enzymes and pathways involved in plant intermediary metabolism as related to plant cell structure, function and plant development. Topics include plant bioenergetics, biosynthesis of plant hormones and elicitor molecules, signal perception and transduction, and secondary

CHEM 326: 4 s.h.
Biochemistry I

The structure and physical and chemical properties of carbohydrates, lipids, nucleic acids and other biological compounds, and their importance

CHEM 327: 4 s.h.
Biochemistry II

enzyme mechanisms and energetics, membrane dynamics and transport, replication, transcription, protein translation and signal transduction.

a grade of C- or higher.

CHEM 328: 1 s.h.
Analytical Biochemistry Laboratory

Laboratory course designed to expand the technical experience of biochemistry students. Experiments focus on the analysis of major classes of

CHEM 341: 4 s.h.
Physical Chemistry I (W)

tion of the macroscopic behavior of gases and its theoretical explanations. Summary of the determination and application of additive properties.

CHEM 342: 4 s.h.
Physical Chemistry II (W)

or higher and ENGL 110, or permission of instructor.

CHEM 372/372H: 3 s.h.
The History of Chemistry and Society (D, P)

The history of the development of the science of chemistry from its roots in Egyptian and Greek societies through its specialization in the early 20th

one history course: HIST 101, 102 or 410 preferred.

CHEM 375: 4 s.h.
Environmental Chemistry (D, G2, L)

The application of modern chemical principles to the chemical and physical interactions among the hydrosphere, lithosphere, atmosphere and biosphere. Also discussed are the more recent topics in the areas of pollution, energy and waste control. (The laboratory covers the current, fun-

a grade of C- or higher.

CHEM 381: 4 s.h.

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CHEM 392: 1 s.h.
Advanced Laboratory II

with a grade of C or higher.

CHEM 435: 3 s.h.
Advanced Organic Chemistry

Current theories of organic chemistry, with major emphasis on physical aspects as applied to structure, reactions, spectroscopy and reaction

CHEM 452: 3 s.h.
Inorganic Chemistry

Theories of bonding and structure of inorganic elements and compounds, acid-base theories, coordination chemistry, organometallic chemistry,

CHEM 465: 4 s.h.
Analytical Chemistry (W)

CHEM 476: 4 s.h.
JPVPUVY

BACHELOR OF SCIENCE IN SPEECH COMMUNICATION COURSE REQUIREMENTS

COMM 400: 3-6 s.h.
Co-op/Internship in Communication

COMM 500: 3-6 s.h.
Co-op/Internship in Communication

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COMM 100/100H: 3 s.h.
Fundamentals of Speech

COMM 101: 3 s.h.
Introduction to Communication (G1)
 Focuses on the role of communication in everyday life. Emphasis on how communication shapes the construction of meaning, the maintenance

COMM 201: 3 s.h.
Theories of Communication (G1)

COMM 203: 3 s.h.
Small Group Communication (G1, W, D)
 Emphasis on the theory and practice of small group communication and problem solving. Group formation, teamwork, leadership, decision mak-

COMM 217: 3 s.h.
Interpersonal Communication (G1)
 Combines both theory and experiential application of interpersonal communication to provide students with a means to analyze relationships and

COMM 224: 3 s.h.
Introduction to Organizational Communication

COMM 225: 3 s.h.
Communication in the Nonprofit Sector (G1)

COMM 227: 3 s.h.
Communication, Culture and Community (G1, W, D)
 siveness. Explores issues of race, class, gender and ethnicity across various dimensions of contemporary life, especially through study of and/or

COMM 301: 3 s.h.
Communication Research (W)

COMM 317: 3 s.h.
Intercultural Communication (D, P)
 Explores the possibilities of communication between and among diverse cultures. Close study of cultural codes, symbolic interaction, nonverbal behavior and contexts of intercultural contact. Develops an understanding and appreciation of human diversity and competence in intercultural

COMM 333: 3 s.h.
Gender and Communication (D)
 Examines theoretical explanations for the social construction of gendered identity. Considers everyday communication practices and contexts to

COMM 342: 3 s.h.
Theories of Rhetoric

COMM 380: 3 s.h.

Digital Media Writing (W)

Writing and design course focuses on construction of promotional messages for digital media. Students will complete several projects, including 110 and junior standing.

COMM 401: 3 s.h.

Critical-Cultural Studies in Communication

COMM 403: 3 s.h.

Persuasion

COMM 429: 3 s.h.

Special Topics in Communication Studies

Content varies. Selected theoretical perspectives and communication issues examined in depth. Potential topics include power, ideology and

COMM 431: 3 s.h.

The Body in Communication (P)

Focuses on the ways that bodies communicate other than verbally, and how this process of embodied communication plays an active role in our

COMM 100, ENGL 110 and junior standing.

COMM 440: Leadership and Media

An introduction to the study and practice of leadership from a media perspective. Particular focus on the relationship between communicating and leading. Examination of leadership concepts and theories in organizational, group and public contexts. Students will analyze their personal leadership

COMM 441: 3 s.h.

Political Communication (G1, W)

Contemporary American political rhetoric focusing on national politics. Content varies. During election years, content includes campaign rhetoric, advertising and debates. In other years, the focus is administrative rhetoric and the interaction of Congress with the president on domestic and

COMM 450: 3 s.h.

Communication and Conflict Management (D, P)

COMM 461: 3 s.h.

Health Communication (P)

Focuses on the forms and functions of human interaction in a variety of healthcare settings, and on the ways that mediated messages promote and reinforce certain health values, beliefs, practices and products. Emphasizes the role of cultural context on the construction and interpretation

COMM 498: 1-3 s.h.

Independent Study in Communication

See the Independent Study section of this catalog.

COMM 206: 3 s.h.

Communication and Media Law (G1)

The legal parameters of freedom of expression under the U.S. legal system. Students explore legal and ethical issues related to media systems,

COMM 251: 3 s.h.

Public Relations I: Introduction to Principles and Theory (G1)

fall, spring.

COMM 305: 3 s.h.

Business and Professional Communication

COMM 351: 3 s.h.

COMM 330: 3 s.h.
Media and Women's Culture (P, D)

THEA 240: 3 s.h.
Script Analysis (G1)

THEA 300: Variable credit (3 cr. minimum)
Co-op Experience in Theatre

THEA 310: 3 s.h.
Costume for Stage and Media

THEA 312: 3 s.h.
History and Principles of Stage Design (G1)

THEA 315: 3 s.h.
Directing

THEA 317: 3 s.h.
London Theatre Tour (P)

THEA 340: 3 s.h.
History of Theatre I (G1, W)

ENGL 110, COMM 100.

THEA 341: 3 s.h.
History of Theatre II (G1, W)

Survey of European and American drama from the time of Ibsen to the present, tracing development of dramatic literature from the rise of realism

ENGL 110, COMM 100.

THEA 350: 3 s.h.
Theatre Management

Introductory survey of theatre management, which addresses concerns related to theatre. An overview of the theatre manager's role, with focus on

CSCI 121: 4 s.h.**Introduction to Internet Programming (G2)**

Designed to introduce internet programming to students who are not computer science majors. Topics include web-page design, scripting languages, graphics animation, image handling, event handling, document object model and graphical interface control objects. No credit toward

CSCI 140: 4 s.h.**Discrete Structures**

Discrete mathematical structures and their application to computer science, including formal mathematical notation and proofs, algorithms, computer-related arithmetic, propositional logic, predicate logic, set theory, graphics, relations and databases, functions, matrices and combinatorics.

CSCI 161: 4 s.h.**Introduction to Programming I (G2)****CSCI 162: 4 s.h.****Introduction to Programming II (G2)**

elementary data structures, and proper use of programming language and development tools. Abstract data types, classes and objects, recursion,

CSCI 330: 4 s.h.**Programming Languages**

and methods of software engineering. Programming language topics include binding, data control and sharing, type checking, object-oriented

in CSCI 362 (CSCI 330 can be taken concurrently with CSCI 362).

CSCI 340: 4 s.h.**Computational Models****PSYC/CSCI 350: 3 s.h.****Cognitive Science (P)**

COMM 100, ENGL 110, junior status. No credit given if credit earned in PSYC 314.

CSCI 362: 4 s.h.**Data Structures**

Abstract data types, objects, algorithm design and analysis, tree, graphs, sorting, searching, hashing, recursion. Emphasis on ADT, object-based, recursive algorithms. Abstract data types, objects, algorithm design and analysis, tree, graphs, sorting, searching, hashing, recursion. Emphasis on ADT, object-based, recursive algorithms.

CSCI 406: 1-4 s.h.
Topics in Computer Science

CSCI 475: 4 s.h.**3D Game Programming and Computer Animation**

Provides students with skills and solid technical foundation necessary to design, develop and deploy 3D games and related entertainment technology applications. Topics include 3D game programming, 3D graphics, game design, programming video game controllers, collision detection, force and motion calculations, networking multiplayer games, manipulating sound objects, physical modeling, projectiles, particle systems, physical constraints, deformation of virtual 3D objects, surface deformation, computer animation, forward and inverse kinematics, keyframe motion capture

CSCI 476: 4 s.h.**Parallel Programming**

Overview of parallel computing through study of parallel programming. Topics include message-passing, highly parallel computations, partitioning memory systems, parallel sorting algorithms, numerical algorithms, image processing, searching and optimization, and parallel programming using

CSCI 498: 1-4 s.h.**Independent Study in Computer Science****CSCI 489, 499: 1-4 s.h.****Departmental Honors in Computer Science**

further information, see the

section.

CONSTRUCTION MANAGEMENT

see Applied Engineering Safety & Technology Studies with U. of T. 2012 47.61948ed En0003>-9.1 80480003>-5.1 (UC)-1

Department Options and Minors

For sociology majors wishing to concentrate their studies in the areas of criminal behavior and criminal justice, the department has a criminology option within the sociology major. This program provides the student not only with a thorough knowledge of the American criminal justice system, but combines that knowledge with a broad understanding of American society and the principles of sociological method and theory.

may take a variety of forms, depending on the student's major or minor. Along with other activities, the department recommends participating in faculty-supervised research (ongoing research projects are conducted out of both the archaeology and social research labs), internships (see *Faculty* in the section), studying abroad for a semester or summer term, or becoming a departmental tutor.

There is an honors program for superior students. Further information may be obtained from the department or the *Faculty* section of this catalog.

the three, focusing exclusively on the American criminal justice system. The sociology minor, in broad terms, examines American society, while the student minoring in anthropology can focus on either archaeology or cultural anthropology. All of these minors

SOCY 308: 3 s.h.

Sociology of African-American and Latina(o) Education (D)

Social and historical analysis of the secondary and postsecondary experiences of African-American and Latina(o) youth in the United States,

SOCY 313: 3 s.h.

Sociology of Disaster (G3)

Behavioral and organizational response to environmental hazards and disasters. Case studies of major natural disasters and hazardous-materials incidents illustrate individual, group and societal challenges faced in such events. Issues include building a disaster-resistant community, the im-

SOCY 315: 3 s.h.

Race and Ethnic Relations (G3)

SOCY 316: 3 s.h.

Social Psychology (G3, W)

Introduction to sociological social psychology; how social interactions are created, become patterned and are susceptible to change; how society

3 s.h. of sociology or junior/senior status.

SOCY 317: 3 s.h.

Medical Sociology (G3)

Social and cultural factors in health and illness; social organization of the medical care system; structural and interactional aspects of healthcare.

SOCY 318: 3 s.h.

Sociology of Complex Organizations

SOCY 319: 3 s.h.

Social Stratification (G3)

SOCY 320: 3 s.h.

Sociology of Education (G3)

Analysis of education as a social institution and its relationship to other institutions; the roles of educator, administrator, student and parent; impli-

SOCY 329: 1-6 s.h.

Topics in Sociology

SOCY 331: 3 s.h.

Sociology of Policing and the Courts (G3)

Overview of the American system for the administration of justice focused on the apprehension, prosecution and adjudication of criminal defen-

SOCY 332: 3 s.h.

Modern Corrections (G3)

Contemporary American responses to crime. Concentrates on the origins, nature, functions and limitations of American correctional modalities.

SOCY 334: 3 s.h.

Juvenile Delinquency (G3)

SOCY 337: 3 s.h.

Gender and the Law (G3)

Analyzes how the courts and the law construct gender, and how these social constructions of gender in the law impact individuals, families,

system from a variety of perspectives and disciplines. Analyzes how the intersections of sexism, racism, heterosexism and classism impact the

SOCY 338: 3 s.h.

Sociology of Deviance

SOCY 339: 3 s.h.
Topics in Criminology

230 or permission of instructor.

SOCY 441: 3 s.h.
Urban Society

Historical and postmodern analysis of urban development, in particular the impact of demographic, political and socioeconomic structural changes

ANTH 320: 3 s.h.
Archaeological Method and Theory

of instructor.

ANTH 325: 3 s.h.
Medical Anthropology

Cross-cultural study of health and healing, including comparative medical systems, theories of disease, patients/healers in the context of culture, plus three additional anthropology credits.

ANTH 326: 3 s.h.
Anthropology of Religion

Anthropological exploration of human religious diversity, including thought and practice across various social and cultural contexts. Primary sidered. Examines religion as a form of cultural practice, how people utilize religion to orient themselves to the social worlds in which they live, the ways in which religion shapes peoples' lives, the vast diversity of thought and practice within particular religions, the nature of interreligious

ANTH 327: 3 s.h.
Urban Anthropology (G3)

and political activism as a form of agency among urban populations, immigration, settlement, the transition to living in an urban environment, the recent ascendancy and decline in certain cities in the United States and across the world. A comparative focus on urban communities both

ANTH 336: 3 s.h.
Language and Communication

Examines language as both a system and performance. Other key topics include language and identity, bilingualism, the critical age of language development, language shift vs. language maintenance, the development of pidgins and Creole languages (with a particular focus on Black

ANTH 344: 3 s.h.
Gender, Race and Class (P)

The intersecting role of gender, race and class on human social life in the United States and in other cultures. An interdisciplinary and comparative ANTH 121 and three additional anthropology credits.

ANTH 422: 3 s.h.
History of Anthropological Theory

ANTH 425: 1-6 s.h.
Field/Research Experience in Anthropology

ANTH 458: 3-6 s.h.
Senior Seminar in Anthropology

ANTH 489, 499: 1-4 s.h.
Departmental Honors in Anthropology

and recommendation by faculty mentor. For further information, see the section.

ANTH 498: 1-6 s.h.
Independent Study in Anthropology

For further information, see the section.

EARLY, MIDDLE & EXCEPTIONAL EDUCATION

College of Education and Human Services

Associate Professor Mehrenberg, chairperson

Professors Shettel, Wenrich

Associate Professors Colabucci, Heilshorn, P. Himmele, W. Himmele, Hossain, Josephson, Powers

Assistant Professors Boyle, Burke, Davis, Hower, Petula, Tamakloe, Wolfgang

Early Childhood Education

childhood education is designed to provide the student with an in-depth knowledge of subject matter and pedagogy appropriate for all

The student who completes the early childhood program at Millersville University receives a Bachelor of Science in Education degree -
tion Test (PECT). Each student is strongly urged to complete an academic minor from the University's list of approved minors, which includes a minor in Integrative STEM Education Methods.

Middle-Level Education (Grade 4–Grade 8) Major: 123 s.h.

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make application of their knowledge.

Student Teaching: 12 credits.

EDUC 323: 3 s.h.
Teaching Reading in the Content Areas

Advanced Professional Studies.

MDLV 335: 3 s.h.
Literature for Children and Young Adolescents

EDUC 433: 3 s.h.
Gender and Race Issues in Children's Literature (P, D)

ERCH 435: 3 s.h.
Literature for the Young Child

children's language, intellectual, emotional, social/moral and aesthetic/creative development is highlighted. A focus on children's responses to

ERCH 455: 3 s.h.
Teaching Mathematics to Young Children

ELED 489, 499: 1-4 s.h.
Departmental Honors

section of this catalog.

EDEL 461: 6 s.h.
EDEL 462: 6 s.h.
Student Teaching and Seminar

SPED 101: 3 s.h.
Orientation to Special Education

eligible to receive special education services across the continuum of educational environments. Included are historical considerations; educational and developmental needs of individuals with disabilities; and special education programs, services, resources and materials. In addition,

SPED 311: 3 s.h.
Assessment for Designing and Implementing Instruction (W)

This course enables teacher candidates to develop competencies for assessing students in an inclusive classroom setting, design instruction and make instructional decisions to enhance students' learning. Teacher candidates learn how to assess, analyze and interpret data from formal (standardized) and informal (traditional and alternative) testing sources and measurement. Teacher candidates learn how to interpret reports as relevant to students from diverse learning backgrounds and use these interpretive results along with behavioral observation, task analysis and other types

SPED 321: 3 s.h.
Serving Individuals with Severe and Multiple Disabilities in Inclusive Settings (W)

SPED 441: 3 s.h.
Effective Instruction for Students with Disabilities: Supports for Specialized Curriculum (Strand I)

The B.A. degree in earth sciences, with an option in geology, is designed to meet the needs of students who want exposure to

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ESCI 221: 4 s.h.

Physical Geology (G2, L)

ESCI 222: 4 s.h.

Historical Geology (G2, L, W)

Methods of interpreting the geologic rock record, chronologic study of earth history and study of fossils as records of ancient life. Emphasis on the

ESCI 225: 3 s.h.

Geomorphology

ESCI 226: 3 s.h.

Geology of Earth Resources

Investigation of the geologic origin of Earth resources important to society (including energy resources, metals, industrial minerals and evaporites);

ESCI 321: 3 s.h.

Structural Geology

C- or higher in ESCI 222 and MATH 160 and PHYS 131 or 231.

ESCI 423: 3 s.h.

Applied Geophysics

Geophysical methods applied to environmental assessment, resource exploration and civil engineering issues. Topics covered include seismic

ESCI 221, MATH 161, and PHYS 132 or 232.

ESCI 424: 1 s.h.

Geology Assessment Exam

ESCI 426: 3 s.h.

Groundwater Geology

ESCI 427: 3 s.h.

Field Studies of Mountain Belts

ESCI 321 or 422.

ESCI 428: 3 s.h.

Planetary Geology (W)

Terrestrial geology in the context of the solar system; geochemical evolution of the solar nebula; planetary formation and evolution; comparative

ESCI 347: 3 s.h.
Satellite Meteorology

ESCI 448: 3 s.h.
Boundary Layers and Turbulence

ESCI 449: 3 s.h.
Radar Meteorology
Algorithms used in the display and interpretation of weather radar data; theory of electromagnetic radiation, principles of radar operation, Doppler

ESCI 468: 3 s.h.

Ocean Data Analysis and Presentation

167

resentation of oceanographic data. Course will cover the meaning of data and the common types of oceanographic data, methods of ocean data collection, the meaning and importance of metadata, databases in ocean science community, the idea of geospatial data and the importance of frame of reference and time and space scales of interest, the variety of ways to analyze and present oceanographic data, and how to present data

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ESCI 281: 3 s.h.

GIS Applications for the Earth Sciences

Introduction to the basic concepts of geospatial information systems (GIS) applications for earth sciences students. Emphasis is on the use of GIS applications for solving problems in the earth sciences. Limited to earth sciences majors or minors who have completed one of the introductory earth

ESCI 282: 3 s.h.

FORTRAN Programming for Earth Sciences Applications

ESCI 380: 3 s.h.

Remote Sensing and Image Interpretation

221 or 241 or 261.

ESCI 382: 3 s.h.

Water Wars: Science and Policy (P)

Interdisciplinary investigation of the causes and solutions of water crises. Topics such as the sources of fresh water, the use and consumption of

ESCI 385: 3 s.h.

Global Climate Change: Science and Policy (P)

Evolution of the earth's habitable atmosphere and oceans; mechanisms that control climate processes and change; past global climate change as

ESCI 386: 3 s.h.

Scientific Programming, Analysis and Visualization

ECONOMICS

College of Arts, Humanities and Social Sciences

Associate Professor Smith, chairperson

Professors Gumpfer, Suliman

Associate Professors Baker, Madden, McPherson

political economy.

Economics is the study of how a society is organized to produce and distribute material goods and services. It is a combination of

Economics Minor: 18 s.h.

ECON 307: 3 s.h.
Environmental Economics (G3, W)



EDFN 312: 3 s.h.

Women and Education: Socialization and Liberation (P)

This course uses philosophical analysis and a sociology-of-knowledge approach to examine women's and girls' experiences with respect to educational institutions as they exist in contemporary America. These concerns are explored dialectically, examining not only how educational institu-

EDFN 320/520: 3 s.h.

Instructional Technology in Elementary Education

Students use case studies to explore the uses of technology and its application in elementary education. Topics include computer basics, applications software, curriculum integration, evaluation of educational software, telecommunications and multimedia presentation systems. Students are

EDSE 321/521: 3 s.h.

Issues in Secondary Education

EDFN 330/530: 3 s.h.

Instructional Technology, Design and Assessment

Instructional design and assessment will be used as a basis for planning and evaluating the use of technology for student-centered teaching and

SPED 432: 3 s.h.
Curriculum and Methods for Students with Mild to Moderate Disabilities

SPED 434: 3 s.h.
Secondary Programming and Transition Planning for Youth with Disabilities

This course is intended to develop competencies for individual program planning and instructional management. It prepares students to develop strategies to deliver curriculum in inclusive environments through the Individualized Education Program (IEP). The transition components of the IEP will be emphasized to prepare secondary teachers to understand their role in developing goals, planning and selecting options for postsecondary

To stay on schedule, English B.S.Ed. students should take their "foundations block," EDFN 211 and EDFN 241, in their sophomore

HUMN 240 Greek Literature
 HUMN 250 Latin Literature
 All candidates will take ENGL 431: Comparative Literature.

Upon approval, a student may substitute an upper-level foreign language course for a humanities series course. For further information about the comparative literature option, please contact Dr. Jill Craven.

English Major (B.A. or B.S.Ed.)

English as a Second Language (ESL) Option

This option allows both liberal arts and secondary education students to pursue concentrated study in the area of teaching English as a second

they must complete the following courses, which can be credited as departmental electives:

ENGL 221 Introduction to Linguistic Analysis
 - or -
 ENGL 322 History of English
 ENGL 321 Transformational Grammar
 ENGL 463 Applied Linguistics
 ENGL 464 Teaching English to Speakers of Other Languages

All ESL students are encouraged to seek opportunities for ESL tutoring in addition to electing foreign language coursework. Also, ESL students

English Major (B.A. or B.S.Ed.)

Film Studies Option

aesthetics, terminology, methods of analysis, theoretical frameworks and interrelationships with society/culture. B.S.Ed. students may want to take

All candidates will take:

ENGL 240 Introduction to Film
 ENGL 481 History of Film

Candidates will select two of the following courses:

ENGL 347 Studies of Ethnicity in Film
 ENGL 482 Film and American Society
 ENGL 483 Politics, Film and Electronic Media
 ENGL 484 Brave New Worlds: Exploring Technology in Film
 PHIL 327 Philosophy in Film

English Major (B.A. or B.S.Ed.)

Journalism Option, 12 s.h.

The journalism option allows English majors to group their four electives into a cohesive set of courses in journalism. If B.A. students take this option and also minor in journalism, they must take Track 1 of the journalism minor. B.S.Ed. students may want to take this option to teach about journalism in high school.

Required Courses, 9 s.h.

ENGL 313 Fundamentals of Journalism
 ENGL 317 Editing for Publication - or -
 ENGL 330 Computer-Assisted Journalism

Electives, 3 s.h.

ENGL 250 The Press and Society
 ENGL 327 Feature Writing and Magazine Journalism
 ENGL 435 Journalism Through Women's Perspectives
 ENGL 473 Special Topics in Journalism

English Major (B.A. or B.S.Ed.)

Linguistics Option

The linguistics option enables English B.A. or B.S.Ed. majors to pursue in a formal way an interest in language study. Students enrolled in this option

they complete the following program of study:

1. One course in theoretical linguistics:
 ENGL 321 Transformational Grammar
2. One course in historical linguistics:
 ENGL 322 History of the English Language - or -
 ENGL 465 Special Topics in Language: Seminar (if its content is so oriented)

3. One course in applied linguistics:
 - ENGL 463 Applied Linguistics - or -
 - ENGL 465 Special Topics in Language: Seminar (if its content is so oriented)
4. One other course in linguistics:
 - ENGL 221 Introduction to Linguistic Analysis - or -
 - ENGL 462 Dialects of American English -or-
 - ENGL 464 Teaching English to Speakers of Other Languages - or -
 - ENGL 465 Special Topics in Language: Seminar

English Major (B.A. or B.S.Ed.)
Writing Studies Option

history of rhetoric and composition, literacy, theories of writing pedagogy, and writing and multimedia.

Required Core Courses, 15 s.h

ENGL 272 Introduction to Writing Studies
 ENGL 274 Craft of Writing
 ENGL 300 Internship
 ENGL 313 Fundamentals of Journalism

ENGL 466 Special Topics in Writing Studies

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British Literature Minor

406, 407, 408, 411, 412, 413, 414, 415, HUMN 400.*

*When its primary focus is British literature.

Creative Writing Minor

Capstone (3 credits):

ENGL 300 internship (publishing focused) or ENGL 499 creative thesis.

ESL/Linguistics Minor (18 credits)

ENGL 220 and 221; 12 credits from among the following courses: ENGL 321, 322, 460, 462, 463, 4AS5wina5ve thesis.ETdNon- ngts) Majors ETd ngts) Majors

ENGL 280: 3 s.h.**Rhetoric of the Color Line (D, W)**

Introduces students to the way race relations in this country have been shaped through racial dominance and resistance arguments, using the

ENGL 292: 3 s.h.**Science Fiction (G1, W)****ENGL 300/400: 3-6 s.h.****Internship**

sion of ELCM coordinator.

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ENGL 311: 3 s.h.**Advanced Composition (AW)**

Exploration, evaluation and writing across diverse and dynamic writing contexts to create rhetorically sophisticated texts, such as memoirs, so-discourses; innovative, multigenre researched writing; summaries, abstracts and literature reviews; and texts designed for websites, wikis and

ENGL 312: 3 s.h.**Technical Writing (AW)****ENGL 313: 3 s.h.****Journalism****ENGL 315: 3 s.h.****Advanced Reporting (W)****ENGL 316: 3 s.h.****Business Writing (AW)**

Informative and persuasive writing in business and industry. Extensive practice in writing letters, memorandums, proposals and reports. Emphasis

ENGL 327: 3 s.h.

Feature Writing and Magazine Journalism

Writing long-form features and enterprise stories, including photography, video and audio content to enhance story presentation on the internet.

ENGL 328: 3 s.h.

Ethics in Digital Media Journalism

Covers ethics of print-media publication. Focuses on the development of ethics in writing and changes in journalistic standards. May include

ENGL 330: 3 s.h.

Computer-Assisted Reporting

Data-driven journalism, looking at the collection of data, analysis in software such as SPSS and the writing of longer-form articles about research.

ENGL 331: 3 s.h.

Special Topics in Literature

ENGL 333/333H: 3 s.h.

African-American Literature I:

The Beginnings Through the Harlem Renaissance (D, G1, W)

ENGL 110.

ENGL 334/334H: 3 s.h.

African-American Literature II:

The Depression Through the Black Arts Movement (D, G1, W)

ENGL 110.

ENGL 336: 3 s.h.

New Dimensions to World Literatures (G1, D, W)

Introduction to non-Western literary traditions through a theme selected by the instructor. Students will increase their awareness and appreciation

ENGL 402: 3 s.h.
Middle English Language and Literature (W)

ENGL 424: 3 s.h.

The Emergence of Modern American Fiction: Realism and Naturalism to 1920

Studies stylistic, thematic and philosophic issues relating to literary realism and naturalism. Selections from writers including Twain, Howells, James,

ENGL 425: 3 s.h.

Modern American Fiction, 1920-1945

ENGL 426: 3 s.h.

Modern American Drama (G1, W)

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ENGL 427: 3 s.h.

Modern American Poetry

Study of major American poets, including Eliot, Pound, Frost, Stevens, Williams and others, or of a school such as the Imagists, the Fugitives and

ENGL 428: 3 s.h.

Contemporary American Literature: 1945–Present

ENGL 429: 3 s.h.

Seminar on Selected American Authors

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ENGL 460: 3 s.h.

Teaching ESL Listening and Speaking

ENGL 462: 3 s.h.

Dialects of American English (P)

junior status, and one course in linguistics or permission of instructor.

ENGL 463: 3 s.h.

Applied Linguistics (G1, W)

in linguistics or permission of instructor.

ENGL 464: 3 s.h.

Teaching English to Speakers of Other Languages

opportunities.

ENGL 465: 3 s.h.

Special Topics in Language: SeminarPH[

ENGL 486: 3 s.h.

Teaching Reading and Literature with Young Adults

in reading; creating appropriate learning contexts; expanding student choice and book selection; and alternative methods of assessing reading/

ENGL 487: 3 s.h.

Seminar in Teaching Writing (W)

Explores the nature of writing instruction by balancing three stances: that of the writer, teacher and researcher. Engages students in a writers'

ENGL 488: 3 s.h.

Teaching Secondary School English

social and psychological foundations block and admission to the Professional Development School. Must be taken during semester immediately prior to EDSE 461: Student Teaching and Seminar. Must be taken concurrently with courses in Advanced Professional Studies block (EDSE 321,

COURSE DESCRIPTIONS

**ENTR 201: 3 s.h.
Art of Entrepreneurship**

ENVIRONMENTAL HAZARDS AND EMERGENCY MANAGEMENT

Environmental hazards and emergency management is an 18-credit interdisciplinary minor that draws upon the expertise and resources of a number of academic management disciplines: emergency management, sociology, geography, industry and technology, and earth sciences.

The curriculum has been designed to meet the professional development needs of those undergraduates who may wish to seek employment in emergency management within government or private enterprise. The EHEM minor has been designed to also meet

conjunction with their primary career interests (e.g., the future journalist who may be reporting on environmental hazards, emergencies and disasters, or the future planner who may need to assess mitigation plans).

as electives which bring a student's total curriculum up to 120 credits. One course used to complete the EHEM minor may also be used to satisfy the student's major, when applicable.

Environmental Hazards and Emergency Management Minor: 18 s.h.

OSEH 221, SOCY 313, EHEM 205, 309, 315, 319.

REQUIRED AND RECOMMENDED EHEM COURSES (Course descriptions may be found under the appropriate departmental listing of courses.)

Required Courses

EHEM 201: 3 s.h.

Introduction to Emergency Management

EHEM 305: 3 s.h.

Disaster Management and Community Risk Reduction

ESCI 101: 3 s.h.

Earth Systems and Natural Hazards

OSEH 120: 3 s.h.

Fundamentals of Safety, Health and Environmental Issues

Elective Courses

CHEM 101: 3 s.h.

Chemistry! Better Things for Better Living

CHEM 103: 3 s.h.

General, Organic and Biochemistry

CHEM 111: 4 s.h.

Introductory Chemistry I

EHEM 205: 3 s.h.

Natural Hazards Impact Assessment and Mitigation

EHEM 309: 3 s.h.

Disaster Response and Recovery

EHEM 315: 3 s.h.

Business Continuity and Continuity of Operations

EHEM 316: 3 s.h.

Introduction to Terrorism, WMD and Homeland Security

EHEM 319: 3 s.h.

Emergency Management Planning

OSEH 221: 3 s.h.

Industrial Fire Prevention, Protection and Control

GEOG 295: 3 s.h.

Geographic Information Systems

GEOG 372: 3 s.h.

Urban and Regional Planning

EHEM 498: 3 s.h.

Internship or Special Independent Project in Emergency Management

SOCY 313: 3 s.h.

Sociology of Disaster

Suggested Courses

BUAD 251: 3 s.h.
Organization and Management

ESCI 221: 4 s.h.
Physical Geology

ESCI 245: 3 s.h.
Environmental Meteorology

ESCI 261: 4 s.h.
Introduction to Oceanography

ESCI 366: 4 s.h.
Ocean Resources

GEOG 281: 3 s.h.
Map Interpretation and Analysis

GEOG 336: 3 s.h.
Climate and Society

GOVT 112: 3 s.h.
State and Local Government

GOVT 205: 3 s.h.
Introduction to Public Safety

GOVT 241: 3 s.h.
Public Administration

PSYC 329: 3 s.h.
Industrial/Organizational Psychology

SOCY 101: 3 s.h.
Introduction to Sociology

SOCY 211: 3 s.h.
Social Problems

SOCY 318: 3 s.h.
Complexity of Organizations

COURSE DESCRIPTIONS

EHEM 201: 3 s.h.
Introduction to Emergency Management (G3)

EHEM: 316: 3 s.h.

Introduction to Terrorism, WMD and Homeland Security (G3)

An introduction into all aspects of terrorism, weapons of mass destruction and homeland security in our modern world. A study of the overall history of terrorism, legislation that oversees emergency management, and various methods for combating terrorism. How to manage an emergency

EHEM: 319: 3 s.h.

Emergency Management Planning

An introduction to planning methodologies and constructs as well as pitfalls and limiting factors in the development and execution of emergency management plans at the strategic, operational and tactical levels. Origins of emergency management planning, applicable policies and legisla-

ENVIRONMENTAL STUDIES

Five multidisciplinary minors are available that have been designed for students with an environmental interest. A full major in a

Elective Courses (Choose Two)

BIOL 204: 3 s.h.

Human Biology (W)

BIOL 255: 4 s.h.

Human Anatomy and Physiology II

BIOL 435: 3 s.h.

Animal Physiology

BIOL 455: 3 s.h.

Cardiopulmonary Physiology

CHEM 232: 4 s.h.

Organic Chemistry II

CHEM 235: 4 s.h.

Short Course in Organic Chemistry

CHEM 375: 4 s.h.

Environmental Chemistry

ESCI 322: 3 s.h.

Environmental Hydrology

ESCI 329: 3 s.h.

Aqueous Geochemistry (W)

ESCI 349: 3 s.h.

Chemistry of the Atmosphere (P)

ESCI 426: 3 s.h.

Groundwater Geology

Land-Use Minor: 18-19 s.h.

This minor explores the physical and economic impact of human land-use practices and the ways in which land use can be sustainable both for human life and for the maintenance of essential biological diversity.

Core Courses

ECON 207: 3 s.h.

Environmental Economics

GEOG 372: 3 s.h.

Urban and Regional Planning

ENVI 495: 3 s.h.

Environmental Clinic

BIOL 241: 3 s.h.

Principles of Ecology

Elective Courses

Choose one of the following:

ESCI 225: 3 s.h.

Geomorphology

ESCI 322: 3 s.h.

Environmental Hydrology

ESCI 329: 3 s.h.

Aqueous Geochemistry (W)

ESCI 429: 3 s.h.

Weathering Systems Science

ENVI 330: 3 s.h.

Environmental Statistics and Risk Assessment

GEOG 227: 3 s.h.

Cities

GEOG 305: 3 s.h.

Energy Sustainability: A Geographic Perspective (W)

GEOG 333: 3 s.h.

Biogeography

Choose one of the following GIS courses:

ESCI 281: 3 s.h.

GIS Applications for the Earth Sciences

Elective Courses

Choose three of the following:

BIOL 241: 3 s.h.

Principles of Ecology

BIOL 445: 3 s.h.

Aquatic Biology

BIOL 447: 3 s.h.

Chesapeake Bay System (W)

CHEM 375: 4 s.h.

Environmental Chemistry

CHEM 476: 4 s.h.

Environmental Chemistry II

ESCI 322: 3 s.h.

Environmental Hydrology

ESCI 329: 3 s.h. (W)

Aqueous Geochemistry

ESCI 426: 3 s.h.

Groundwater Geology

COURSE DESCRIPTIONS

Course descriptions are found in the appropriate departmental section.

ENVI 495: 3 s.h.

Environmental Clinic

GEOGRAPHY

College of Science and Technology

Associate Professor Kelly, chairperson
Professors Cuthbert, Schreiber, Shanahan
Associate Professor Geiger
Assistant Professor Frost

Geography is the study of how people relate to their natural and human surroundings. Geography is a bridge discipline, an environmental science which brings together principles of physical sciences and other social sciences; a social science which looks at the spatial characteristics of culture, history, politics, economics and business decisions; and a liberal arts discipline which provides background for study in art, languages, literature, music, education and many other subjects. Geographers can bring to analyses of current issues an understanding of global interrelationships and specialized map-related skills. Many geographers develop professional skills in map interpretation, cartography and computer-based mapping and analysis. Geographic understanding and skills create the potential for employment in such diverse areas as planning and other government agencies, environmental and cartographic service companies, and the business community. Contact the department chairperson for more detailed information on career opportunities.

Geography majors and minors. A minor in geography brings an added dimension to any major, and current geography minors hold majors

General Geography Minor:

18 credits minimum, including GEOG 101, 281 and four geography electives determined with the approval of the geography chairperson, and must include two courses at the 300-400 level.

Sustainability Studies Minor:

18 credits minimum, including GEOG 120 or 141; GEOG 202, 408; GEOG 336 or 307; one from GEOG 30x, 33x, 372 or 40x; 3 s.h. in geography electives.

COURSE DESCRIPTIONS**GEOG 101: 3 s.h.****The Global Environment (G3)**

Global survey of human environment interactions focusing on people's use of natural resources and major related issues, including scarcity and environmental impacts. Comparisons between developing and developed countries and across cultures.

GEOG 120: 3 s.h.**Human Geography (G3, D)**

Cultural geography of race, ethnicity, gender and political systems. Emphasis on processes that create and maintain cultures and the geographies that these processes produce.

GEOG 130: 3 s.h.**Introduction to Environmental Science (G2)****GEOG 141: 3 s.h.****World Regional Geography (G3)**

Spatial patterns of environmental, cultural, social, economic and political developments in selected regions of the world. Emphasis on developed and less developed parts of the world.

GEOG 202: 3 s.h.**Environmental Sustainability (G3)**

Investigation of problems that have arisen through human use of earth's resources, and the technical, economic, policy and social options avail-

GEOG 222: 3 s.h.**Economic Geography (G3)****GEOG 223: 3 s.h.****Healthcare and Gender, Race, and Class (G3)**

Introduction to the geographical distribution of select contemporary diseases and their relationships to other healthcare issues. Distribution of, and access to, scarce healthcare resources along with impacts of gender, race and class on human life chances at global (especially developed versus developing countries), regional and local (such as urban versus rural) scales are evaluated.

GEOG 226: 3 s.h.**Political Geography (D, G3, W)****GEOG 227: 3 s.h.****Cities (G3)**

External relations and internal structure of urban areas throughout the world. Analysis of economic activities and growth of urban areas; environmental and social problems; public-policy demands.

GEOG 228: 3 s.h.**Geography of Sport (G3)**

Using a geographical basis, the course will examine a variety of topics, including landscapes of modern sport; place and space in sport; institutions

GEOG 229: 3 s.h.**Sustainable Tourism (G3)**

An investigation of the areal distribution of recreation and tourist activities and their positive and negative impacts; emphasis on environmental experiences.

GEOG 230: 3 s.h.**Physical Geography (G2)**

GEOG 307: 3 s.h.
U.S. Environmental Policy (G3)

GEOG 407: 3 s.h.**Global Environmental Policy and Negotiation (G3, W)**

Global political and economic forces and environmental change. Emphasis on spatial patterns and processes of transboundary environmental problems, the major pieces of international environmental policy, the negotiations process between states and nonstate actors in policy formation

status, ENGL 110, GEOG 307 or permission of instructor.

GEOG 408: 3 s.h.**Sustainable Development (D, P)**

Social, economic and environmental aspects of global sustainable development. Class discussion integrated with research and service learning

GEOG 488: 1-3 s.h.**Senior Thesis****GEOG 489, 499: 1-3 s.h.****Honors Courses/Thesis**

completion of basic courses and eligibility for departmental honors. See *Kh] [āc9[Y\] e ā GhhgjImf āā k\$-] hYjle] fIYd@gfgjk* section of this catalog.

GEOG 498: 3 s.h.**Independent Study in Geography**

Investigation of selected topic with individual research assignment; focus varies.

GEOLOGY

See Earth Sciences

GERMAN

See Language and Culture Studies

GERONTOLOGY

See Social Work

Assistant Professor Bethel, coordinator

The interdepartmental minor in gerontology is intended to help prepare students to function at the entry level in the rapidly developing

any of several baccalaureate degrees, it facilitates an appreciation of the special strengths and needs of the elderly, and the range of services and problems that relate to them.

GOVERNMENT AND POLITICAL AFFAIRS

College of Arts, Humanities and Social Sciences

Professor Glenn, chairperson

Associate Professors Bagchi, Greenawalt, Lawrence, Owen

ADMISSION REQUIREMENTS**COURSE REQUIREMENTS**

Government and Political Affairs (B.A.): 120s.h.

Complete both A and B:

A.

B.

Social Studies Major (B.S.Ed.): 120 s.h.

courses; two courses in economics, geography and government, and four in history. In consultation with an academic advisor, each student will select a concentration totaling 30 s.h. from the following disciplines: anthropology (0-6), economics (3-15), geography (3-15), government (3-15), history (3-15), psychology (0-6) and sociology (0-6). Economics, geography, government; and history courses should be taken at the 200 level or higher. Students who concentrate in government are highly encouraged to take 15 s.h. in government. The program also consists of 27 s.h. of professional education courses, two math courses and two courses in the humanities or sciences that support the concentration.

Government and Political Affairs Minor: 18 s.h.

18 s.h. with at least one course in each of the two following areas: American politics and international/comparative politics. 6 s.h. at the 300 level

COURSE DESCRIPTIONS

GOVT 111: 3 s.h.

Introduction to American Government (G3)

GOVT 112: 3 s.h.

Introduction to State and Local Government (G3)

GOVT 313: 3 s.h.

The American Presidency (G3, W)

Examination of the presidency and the executive branch of national government. Emphasis on the growth and development of presidential power.

GOVT 314: 3 s.h.

The American Judiciary (G3, W)

GOVT 315: 3 s.h.

Congress and Lawmaking (G3, W)

GOVT 323: 3 s.h.

Government and Politics of the Middle East (D, G3)

and the peace process. The impact of national, economic, gender and religious perspectives upon the region's politics will also be addressed.

GOVT 325: 3 s.h.

Modern Asia (G3)

GOVT 327: 3 s.h.

Canadian Government and Politics (P)

GOVT 331: 3 s.h.

Modern Political Thought

GOVT 332: 3 s.h.

Recent Developments in Political Theory

GOVT 333: 3 s.h.

American Political Thought (G3, W)

GOVT 341: 3 s.h.

Introduction to City Planning (P)

Study of the dynamics of human settlement patterns in the country and abroad. Examines public-policy alternatives regarding land use and de-

GOVT 351: 3 s.h.

International Law

GOVT 352: 3 s.h.

International Organizations (G3)

Study of various intergovernmental and nongovernmental associations representing a number of multinational groupings serving humanitarian,

GOVT 355: 3 s.h.

American Foreign Policy (G3)

Institutional and historical overview of American foreign policy. Formal, informal and institutional sources of foreign policy. Emphasis on post-WWII

GOVT 361: 3 s.h.

The Politics of Race and Ethnicity (G3, D)

Examination of the role of racial and ethnic minority groups in American politics and government. Focus on political resources and political status of minority groups in America, minority group representation and participation in American politics, the racial divide in American public opinion,

GOVT 401: 3 s.h.
Political Research Skills and Methods

-

GOVT 408: 3 s.h.
Seminar in Political Science

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GOVT 411: 3 s.h.
Constitutional Law: Separation of Powers and Federalism

GOVT 412: 3 s.h.
Constitutional Law: Civil Rights and Civil Liberties

GOVT 421: 3 s.h.
Democratic Transitions and Trends (W)

GOVT 431: 3 s.h.
Literature and Politics (W)

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COURSE REQUIREMENTS**History Major (B.A.): 120 s.h.**

HIST 101, 102, 105, 106, 406. Then 27 s.h. of history electives according to departmental guidelines, with at least 9 s.h. of these at the 300 level or above.

History Minor: 18 s.h.**Military Science Minor: 18 s.h.**

MILS 101, 102, 210, 211. Then 12 s.h. of electives, including at least one history course and 6 s.h. at the 300-level or above: GEOG 226, GEOG

HIST 210: 3 s.h.
Women and Western Civilization (G3)

HIST 213: 3 s.h.
Greeks and Romans (G3)

odically.

HIST 214: 3 s.h.
History of Christianity (G3, D)

HIST 215: 3 s.h.
Slaves and Masters in the Ancient World (G3)

Survey of the history of the political, social and economic factors of slavery in the Mediterranean world. No prior knowledge of history is re-

HIST 216: 3 s.h.
Vikings (G3)

periodically.

HIST 218: 3 s.h.
People and the Environment in Europe and the Americas, 1500 to the Present (G3, W)

An introduction to the methods and insights of environmental history in Europe and the Americas from 1500 to the present. It also discusses

periodically.

HIST 221: 3 s.h.
England to 1688 (G3)

Medieval, Tudor and Stuart England: the political, social, economic and cultural development of England from early medieval times to 1688.

HIST 222: 3 s.h.
Modern Britain (G3)

HIST 223: 3 s.h.
Traditional Germany (G3, W)

HIST 224: 3 s.h.
Modern Germany (G3, W)

HIST 225: 3 s.h.
Germany, 1945 to the Present (G3, W)

focuses on activities of the allied powers in the four occupational zones of the postwar era, the formation of East and West Germany, the collapse

HIST 291: 3 s.h.
Modern Middle East (G3)

HIST 308: 3 s.h.
Topics (G3)

HIST 313: 3 s.h.
History of the Middle Ages (G3, W)

HIST 314: 3 s.h.
The Crusades (D, G3)

The history of the European Crusade movement to the Levant, as it was then called. Will not concentrate on military operations, but rather on the social, cultural and political factors that led to and resulted from these expeditions. The course will consider these issues from the point of view of

HIST 320: 3 s.h.
Renaissance and Reformation (G3, W)

HIST 330: 3 s.h.
19th-Century Europe (G3, W)

ENGL 110.

HIST 334: 3 s.h.
Victorian England (G3, W)

The political, social, economic and intellectual development of England and the British Empire from the end of the Napoleonic wars to the outbreak

HIST 340: 3 s.h.
20th-Century Europe (G3, W)

HIST 342: 3 s.h.
Hitler and Nazism (G3, W)

ENGL 110.

HIST 351: 3 s.h.
17th-Century British America (G3, W)

HIST 352: 3 s.h.
Provincial and Revolutionary America, 1689-1789 (G3, W)

HIST 354: 3 s.h.
The New Nation (G3)

The United States 1789-1850: The formation of a national vision and culture; the development of political parties; the market revolution and social

HIST 355: 3 s.h.
Civil War and Reconstruction (G3)

HIST 356: 3 s.h.
The New Era, 1876-1919 (G3, W)

HIST 357: 3 s.h.
Modern U.S. History (G3)

HIST 359: 3 s.h.
The First World War (G3)

Examines the military strategy and tactics of the combatants during the First World War (1914-1918). It also examines the diplomacy preceding,

HIST 360: 3 s.h.
The Second World War (G3)

HIST 365: 3 s.h.
The Nightmare Years: America 1954-1974 (G3)

ENGL 110.

HIST 380: 3 s.h.
U.S.-Latin American Relations (G3)

HIST 381: 3 s.h.
History of West Africa to 1800 (G3)

Explores the internal dynamics of state formation in the medieval era, the development of sociopolitical and economic institutions, as well as the

HIST 383: 3 s.h.
European Imperialism in Africa (G3, W)

Provides an understanding of major themes in late 19th- and early 20th-century Africa, with a particular focus on the impact of European imperialism. Special attention given to the discussion of the historiography of imperialism related to Africa. Contempo-

HIST 388: 3 s.h.
20th-Century Africa (G3, W)

Surveys major developments in 20th-century Africa. Examines the ideas of race, cultural representation of others, colonial economic relations, decolonization, national liberation movements, debts, structural adjustment programs, democracy, post-apartheid South Africa, the emergence of

HIST 401: 3 s.h.
Cultural Interactions in the Atlantic World, 1450-1820 (P)

This perspectives course will compare the social, economic, political and religious relations of three areas: Africa, Europe and the native societies of

HIST 406: 3 s.h.
Senior Seminar

HIST 410: 3 s.h.
European Cultural and Intellectual History (G3)

5IST 406: 3 s.h.

5IST 406: 3 s.h.

HIST 498: 1-3 s.h.
Independent Study

For further information on independent study, see the



BIOL 212H: 1 s.h.**Honors Zoology Seminar**

Continuation of BIOL 211. Original investigations and/or readings and discussions of the zoological literature about the diverse adaptations of

and member of University Honors College, or 3.35 GPA, or instructor's permission.

BIOL 222H: 1 s.h.**Problem Solving in Botany**

of B- or higher and member of University Honors College, or 3.35 GPA, or instructor's permission.

BIOL 266H: 1 s.h.**Advanced Principles of Cell Biology**

transmission, control of muscle contraction, signal transduction, interrupted genes, cell recognition, etc.). Students explore and lead discussions on one of these topics. Completion of both BIOL 266H and **BIOL 362**

member of University Honors College, or 3.35 GPA, or instructor's permission.

CHEM 113H: 1 s.h.**Honors Seminar for Introductory Chemistry**

The ideas of introductory chemistry are studied in extended depth, using problems, laboratory exercises, readings and discussion. Grades of B- or better in both CHEM 112 and 113H will result in honors designation for the pair. The pair of courses count as one course in the G2 block and result

CHEM 372H: 3 s.h.**The History of Chemistry and Society**

The history of the development of the science of chemistry from its roots in Egyptian and Greek societies through its specialization in the early 20th

PSYC 318H: 3 s.h.

The Psychology of Racism (P)

Examination of individual and institutional racism in all its aspects, with an emphasis on the various psychological explanatory theories and sup-

SSCI 203H: 3 s.h.

Explorations in the History of Ideas

B. Required Related Courses: 18 Foreign Language Credits

Students desiring more in-depth study of particular topics may register for INTL 491: Topics in International Studies (1-6 s.h.) and INTL 498: Independent Study (1-6 s.h.). Students also may register for seminar, topics and contemporary issues courses from various departments that change from semester to semester. These latter courses, along with the topics and independent study credits, may count under any of the major

Majors are strongly encouraged to study abroad. Study-abroad courses and international internship experiences may be counted toward the

International Studies Minor: 18 s.h.

International Studies Electives (12 s.h.): Students choose two from the following four areas and take two courses from each area. These courses cannot count toward the student's major.

Comparative Societies
Economic Interdependence
Global Environmental Issues

Students minoring in international studies are strongly encouraged to study abroad and to study a foreign language.

COURSE DESCRIPTIONS

INTL 201: 3 s.h. (G3)

Introduction to International Studies

INTL 488: 3 s.h.

Senior Seminar

INTL 491: 1-6 s.h.

Topics in International Studies

Investigation of topics on economic, environmental or political global systems or in-depth comparative study of international issues, cultures or

INTL 498: 1-6 s.h.

Independent Study

For further information, see the _____ section.

Descriptions of other courses approved for international studies may be found under the appropriate departmental listing of courses.

INTERSHIP

The minimum number of credits for any internship experience is three credits. The maximum number of credits allowed for one internship course is 12. For information on internships, see the _____ section.

COURSE DESCRIPTIONS

*300: 3-6 s.h.

Entry-level internship experience giving initial exposure to departmentally approved job assignment.

*400: 3-6 s.h.

*500: 3-6 s.h.

*Subject abbreviation is dependent upon the department through which the internship credit is earned (e.g., CSCI 300).

LANGUAGE AND CULTURE STUDIES

College of Arts, Humanities and Social Sciences

Professor Gaudry, chairperson

Associate Professors Antolin, Nimmrichter

of one of nine options, including language studies, culture studies and teacher education in French, German and Spanish. Each option includes a common core of 21 credits in the respective language.

Language Studies Minor in French, German, or Spanish

Consists of a minimum of 18 s.h. in the language of specialization, including 201,* 202,* 351 or 352, plus electives at the 300 or 400 level, for a total of 18 credits.

Culture Studies Minor in French, German, Japanese, or Spanish

Consists of a minimum of 18 s.h. in the language and culture of specialization, including 101,* 102,* 201,* , 202,* plus electives at the 300 or 400 level or HUMN courses about the culture of specialization, for a total of 18 credits. At least six credits must be at the 300 level.

*Higher-level courses may be substituted for these courses.

**Not all course numbers are available in each language.

COURSE DESCRIPTIONS**FREN 101: 3 s.h.**

Elementary French I (G1)

FREN 332: 3 s.h.

French Civilization II

French history, art and culture from 1789 to modern times. Emphasis will be given to painting in the 19th and 20th centuries. Outside readings and

FREN 333: 3 s.h.

French Civilization III

All aspects of contemporary France and/or Francophone countries: geography, economy, institutions and modern society. Emphasis on the study

FREN 351 and 352: 3 s.h. each

Composition and Oral Expression (G1, W)

FREN 353: 3 s.h.

Introduction to Phonetics

Phonetics and phonology of the French language. Correct pronunciation of standard French, free from the deformation resulting from interference

FREN 361 and 362: 3 s.h. each

Oral French I and II

FREN 411: 3 s.h.

French Poetry through the Ages

FREN 421: 3 s.h.

French Drama I

FREN 423: 3 s.h.

French Drama III

Symbolist drama, existentialist drama and the theatre of the absurd. The plays of Claudel, Giraudoux, Anouilh, Montherlant, Sartre, Camus, Beckett,

FREN 431: 3 s.h.

French Prose I

French Prose I

FREN 431: 3 s.h.

French Drama Illuse I

LANC 490: 3 s.h.**Language and Culture Studies Senior Seminar**

Capstone course for students with the culture studies option in which students compare and contrast various cultural topics from multiple inter-

FREN 498: 1-3 s.h.**Independent Study**

For further information on independent study, see the _____ section.

NOTE: The graduate courses in French listed below are open to undergraduates with the recommendation of the advisor and consent of the director of the French graduate program. (See the [?jY\mYl\]](#) ; [YlYg_](#) for course descriptions.) Undergraduate course number on left corresponds with graduate course number in parentheses.

FREN 486 (586): 3 s.h.**Seminar in 20th-Century Literature****FREN 491 (589): 3 s.h.****Current Topics****GERM 101: 3 s.h.****Elementary German I (G1)**

Introduction to language and culture. Fundamentals of grammar and syntax. Oral and written practice, short readings and practice in aural com-

GERM 102: 3 s.h.**Elementary German II (G1)****GERM 201: 3 s.h.****Intermediate German I (G1)**

Emphasis is placed on further developing skills through varied realistic exercises and in authentic real-life situations. Contemporary cultural and placement exam.

GERM 202: 3 s.h.**Intermediate German II (G1)**

Increased emphasis on developing a cross-cultural perspective by comparing the native with the target culture. Systematic treatment of grammar.

GERM 211: 3 s.h.**German for Business I (G1)**

Designed to introduce the student to the basic vocabulary and structure of business German. In addition to the employment of the four basic

GERM 212: 3 s.h.**German for Business II (G1)****HUMN 220: 3 s.h.****German Literature in English (G1, W)****HUMN 230: 3 s.h.****The Amish and Other Pennsylvania Germans (G1)**

The Amish and other Pennsylvania Germans, their history, culture, language and lifestyle, with emphasis on Lancaster County, Pa. Student written

GERM 301: 3 s.h.**Business German**

Advanced study of the four skills and translation. Extensive use of German language audiovisual materials and articles from business periodicals,

GERM 311 and 312: 3 s.h. each**Survey of German Literature I and II****GERM 331 and 332: 3 s.h. each****German Civilization I and II**

An introduction to German culture dealing with the history, economics, philosophy, religion, sciences, education, language, literature, art, architec-

GERM 351 and 352: 3 s.h. each
Composition and Oral Expression I & II (G1, W)

GERM 361 and 362: 3 s.h. each
Oral German I and II

GERM 370: 3 s.h.
Advanced Grammar and Stylistics

GERM 446 (541): 3 s.h.
History of the German-Speaking Peoples to the Congress of Vienna

GERM 447 (542): 3 s.h.
History of the German-Speaking Peoples from the Congress of Vienna to the Present

GERM 462 (531): 3 s.h.
Evolution of the German Language

GERM 471 (571): 3 s.h.
Aspects of Contemporary Germany

GERM 484 (584): 3 s.h.
Seminar in the Literature of the Classical Period

GERM 485 (585): 3 s.h.
Seminar in 19th-Century German Literature

GERM 486 (586): 3 s.h.
Seminar in 20th-Century German Literature

GERM 491 (589): 3 s.h.
Current Topics

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HUMN 163: 3 s.h.
Latin and Greek Terminology (G1)

HUMN 202: 3 s.h.
Classical Mythology (G1)

HUMN 391: 3 s.h.
Topics in the Humanities (G1, W)
In-depth investigation and development of a topic of current interest not covered in regularly scheduled courses. The topics will vary according to

)

LATN 101: 3 s.h.
Elementary Latin I (G1)

LATN 102: 3 s.h.
Elementary Latin II (G1)

LATN 101.

HUMN 163: 3 s.h.
Latin and Greek Terminology (G1)

HUMN 202: 3 s.h.
Classical Mythology (G1)

LATN 201: 3 s.h.
Intermediate Latin I (G1)

LATN 202: 3 s.h.
Intermediate Latin II (G1)

HUMN 391: 3 s.h.**Topics in the Humanities (G1, W)**

In-depth investigation and development of a topic of current interest not covered in regularly scheduled courses. The topics will vary according to

RUSS 202: 3 s.h.
Intermediate Russian II (G1)

HUMN 370: 3 s.h.
Russian Folk Culture (P)

HUMN 391: 3 s.h.
Topics in the Humanities (G1, W)
In-depth investigation and development of a topic of current interest not covered in regularly scheduled courses. The topics will vary according to

SPAN 312: 3 s.h.
Survey of Spanish Literature II

SPAN 412: 3 s.h.**Spanish Poetry II**

Continuing development of Spanish or Spanish-American poetry from the Golden Age to the end of the 19th century. Main works of representative

SPAN 421: 3 s.h.**Spanish Drama I**

Traces the development of Spanish drama from its beginnings, with a study of representative plays of Spain's Golden Age. Lectures, discussions,

SPAN 422: 3 s.h.**Spanish Drama II**

A study of the Spanish theatre from 1700 through the 19th century. Includes the neoclassic, romantic and realist dramatists such as Echegaray, Tamayo

SPAN 431: 3 s.h.**Spanish Prose I**

Development of narrative in Spain from the 13th-century origins of these forms to the end of the 17th century. Includes historical, didactic, narra-

311 or 312 or 313 or 314.

SPAN 432: 3 s.h.**Spanish Prose II****SPAN 433: 3 s.h.****Spanish-American Prose****SPAN 460: 3 s.h.****Introduction to Translation and Interpretation**

351 and 352.

SPAN 470: 3 s.h.**Spanish Linguistics**

Introduction to Spanish phonetics. Comparative study of the morphology and the syntactic structures of Spanish and English. To be taken before

SPAN 446 (541): 3 s.h.
History of Spanish Civilization

SPAN 447 (542): 3 s.h.
History of Spanish-American Civilization

SPAN 451 (551): 3 s.h.
Geography of Spain, Physical and Economic

SPAN 461 (561): 3 s.h.
History of Hispanic Art

SPAN 462 (531): 3 s.h.
Evolution of the Spanish Language

SPAN 471 (571): 3 s.h.
Aspects of Contemporary Spain

SPAN 472 (57) 3 s.h.

LATS 488: 3 s.h. (W)
Latino Studies Senior Seminar

LATS 491: 3 s.h.
Topics in Latino Studies

LATS 498: 1-6 s.h.
Independent Study

Allows students to pursue an academic area of interest not available through an established course under the guidance and supervision of a faculty member. For further information, see the section of the catalog, and consult with the director of Latino studies or your advisor.

APPROVED LATINO STUDIES COURSES

Descriptions of these courses may be found under the appropriate departmental heading.

CORE COURSES (6 credits)

LATS 201: Introduction to Latino Studies
LATS 300: Internship
LATS 488: Latino Studies Senior Seminar
LATS 498: Independent Study

Race, Culture and Ethnicity (9 credits) (choose three credits from at least two different groups)

ANTH 226: Comparative Societies (Latino Cultures)
ANTH 227: Culture through Film (Latino)
ANTH 344: Gender, Race and Class
GEOG 343: Latin America
HIST 284: Modern Latin America
HIST 380: U.S.-Latin American Relations
SOCY 216: Human Population
SOCY 308: Sociology of African-American and Latino Education
LATS 325: Afro-Latino Cultural Experiences

HUMN 380: Latino Issues of Identity
SPAN 201: Intermediate Spanish I
SPAN 202: Intermediate Spanish II
SPAN 313: Survey of Spanish-American Literature
SPAN 361: Oral Spanish I

EDUC 403: Cultural Diversity: Pluralism in the Classroom

Latino Electives (choose one)

ECON 203: Introduction to World Economics
ECON 226: Area Studies (with approval of LATS)
EDUC 433: Gender and Race Issues in Children's Literature
HIST 283: Colonial Latin America
INTL 491: Topics in International Studies (with approval of LATS)
LATS 491: Topics in Latino Studies
MATH 102: Survey of Mathematical Ideas in Non-European Culture
PHIL 407: Political and Social Philosophy
PSYC 318: The Psychology of Racism
SPAN 314: Survey of Spanish-American Literature II
SPAN 333: Spanish-American Civilization I
SPAN 334: Spanish-American Civilization II

MANAGEMENT

See Business Administration

MANUFACTURING ENGINEERING TECHNOLOGY

See Applied Engineering, Safety & Technology

MARINE BIOLOGY

See Biology

MARKETING

See Business Administration

MATHEMATICS

College of Science and Technology

courses may be substituted with departmental permission. These three courses must include at least one of MATH 422, 435, 467 or 472; others may be substituted by departmental permission.

B. Required Related Courses: 18-22 s.h.

1. CSCI 161
2. PHYS 231
3. One of the following options:
 - a. three courses (at least three credits each) chosen from the biology, chemistry, computer science, earth sciences and physics departments, which count toward a major in that department, and to include at least one of BIOL 375, CSCI 162, ESCI 340, 341, 342 or PHYS 232, or
 - b. four courses (at least three credits each) chosen from a single department, which count toward a major in that department.

Mathematics Major (B.S.Ed.): 120 s.h.

Secondary Education Certification

A. Mathematics Courses Required: 46-49 s.h.

536, 566, 592. Selected 500-level courses may be substituted with departmental permission.

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B. Required Related Courses: 8 s.h.

MATH 102: 3 s.h.**Survey of Mathematical Ideas in Non-European Cultures (D, G2)**

A survey of mathematical ideas developed by non-European cultures, including but not limited to those of Africans, Asians and native North, Central

evaluation before registration. MATH 100 and MATH 102 may not both be taken for general education credit.

MATH 104: 3 s.h.**Fundamentals of Math I (G2)**

Mathematics content that elementary and special education teachers of mathematics at any level need to know and understand before beginning

number systems, structure of algorithms, number theory, properties of integers, rational numbers and real numbers, and beginning geometry and

math placement testing/evaluation before registration.

MATH 105: 3 s.h.**Fundamentals of Math II (G2)**

An extension of MATH 104; covers additional mathematics topics relevant to teaching elementary mathematics. Includes algebra, additional study in geometry and measurement, probability and statistics, graphing and further emphasis on problem solving and reasoning. For early childhood

MATH 107: 3 s.h.**Survey of Mathematics in Sports and Games**

A liberal arts course for students who will not be scheduling a technical/professional mathematics course. Topics in mathematics through the lens of sports, athletic competitions and games. Introductory modules may include (but not be limited to) number theory, geometry/measurement, algebra, probability, statistics, voting methods and graph theory. No credit under G2 block for math or science majors. Only one of MATH 100, 102,

MATH 108: 3 s.h.**Survey of Mathematics in Art and Music**

A liberal arts course for students who will not be scheduling a technical/professional mathematics course. Topics in mathematics through the lens

higher or MPT 100.

MATH 110: 2 s.h.**Trigonometry**

For students preparing to take calculus who need additional background in trigonometry. Beginning with angles, numerical trigonometry and triangle

MATH 120: 2 s.h.**Logic for Information Technology**

Discrete mathematics and its applications to technology, including formal mathematical notation, propositional logic, predicate logic, set theory,

MATH 130: 3 s.h.**Elements of Statistics I (G2)**

intervals. No credit toward a math or four-year computer science major, or under block G2 for majors in the College of Science and Technology

registration. Credit will be given for only one of MATH 130, 234 or 235.

MATH 151: 4 s.h.**Calculus for the Management, Life and Social Sciences (G2)**

Elementary calculus and its applications in business, economics, life and social sciences. Functions, limits and continuity. The derivative, applica-

parts. Exponential and logarithmic functions; applications to growth and decay problems; improper integrals. No credit toward a major or minor in

given for only one of MATH 151, 161 or 163.

MATH 160: 4 s.h.**Precalculus (G2)**

For students preparing to take Calculus I (MATH 161) who need additional background. Covers topics in which beginning calculus students are

before registration; or C- or higher in MATH 101.

MATH 161: 4 s.h.**Calculus I (G2)**

MATH 310: 3 s.h.
Introduction to Mathematical Proof (W)

MATH 370: 3 s.h.**Operations Research**

Principles of model building; examples selected from linear optimization, network analysis, dynamic programming, probabilistic decision theory,

higher in MATH 322 and one of MATH 235, 333 or 335, or permission of instructor.

MATH 372: 3 s.h.**Financial Mathematics I****MATH 375: 3 s.h.****Numerical Analysis**

MATH 465: 3 s.h.
Real Analysis II

$n \rightarrow n$ $n \rightarrow m$; extreme values; implicit and inverse function theorems;

MATH 467: 3 s.h.
Partial Differential Equations

MATH 471: 3 s.h.
Mathematical Modeling

Applications of mathematics to real-world problems drawn from industry, research laboratories, the physical sciences, and engineering and the

MATH 472: 3 s.h.
Financial Mathematics

C- or higher in MATH 335 or 333, and MATH 372.

MATH 483: 3 s.h.
Point-Set Topology

MATH 536: 3 s.h.
Statistical Methods II

MATH 537: 1 s.h.
Statistical Problem Solving Seminar

MATH 566: 3 s.h.
Complex Variables

MATH 577 (597): 3 s.h.
Problems in Applied Mathematics

MATH 592: 3 s.h.
Graph Theory

MEDIA AND BROADCASTING

See Communication & Theatre

MEDICAL LABORATORY SCIENCE

See Biology, Medical Technology

MEDICINE

See Biology and Chemistry

METEOROLOGY

See Earth Sciences and Physics

MOLECULAR BIOLOGY

See Biology

MULTIDISCIPLINARY STUDIES

College of Education and Human Services; College of Arts, Humanities and Social Sciences; College of Science and T

Educational Studies

agencies and new education start-ups.

Environmental Hazards and Emergency Management

Educates those interested in protecting and building disaster-resilient communities. Emergency-management professionals are organizations, in private-sector emergency-management consulting, and in information technology, among others.

Science Writing

COURSE REQUIREMENTS

Both new and transfer students interested in the music education curriculum are advised to read the *Journal of Music Education* and *Journal of Music Therapy*.

Music Education Major (B.S.Ed.): 126 s.h.

K-12 Certification

37 s.h. MUSI 112, 212, 312, 412, 131, 231, 331, 381, 481, 362, 363, 369, 141, 151, 251, 152, 153, 156; six credits recommended music electives;

See *Journal of Music Education* and *Journal of Music Therapy* for more information.

See *Journal of Music Education* for more information.

Music Major (B.A.): 120 s.h.

encouraged to take multiple music elective courses and general education electives.

Music Major (B.A.) – Concentration in Performance: 120 s.h.

Music Industry Major – Concentration in Management (B.S.): 120 s.h.

MUSI 124: 0-.5 s.h.
Commercial Music Lab Band

MUSI 126: 0-.5 s.h.
Marauder Men's Glee Club

MUSI 128: 0-.5 s.h.
Marching Band Camp

MUSI 129: 0-.5 s.h.
Marching Band

MUSI 220: 0-.5 s.h.
Concert Band

MUSI 224: 0-.5 s.h.
Jazz Lab Band

MUSI 226: 0-.5 s.h.
University Choir

MUSI 227: 0-.5 s.h.
Women's Choir

MUSI 323: 0-.5 s.h.
Chamber Orchestra

MUSI 324: 0-.5 s.h.
Commercial Music Ensemble

MUSI 420: 0-.5 s.h.
Wind Ensemble

MUSI 423: 0-.5 s.h.
Orchestra

MUSI 424: 0-.5 s.h.
Jazz Ensemble

MUSI 427: 0-.5 s.h.
Chorale

MUSI 131: 2 s.h.
Class Piano I

and original piano compositions are included. Solo, duet and ensemble literature are studied and performed. This course is designed to be taken

MUSI 140: 3 s.h.
The Singing Voice in Musical Theatre (G1)

healthcare of the voice, development of stamina to perform eight shows a week for a year or more, and basic theory in order to read and learn

MUSI 141: 1 s.h.
Class Voice

control and the fundamentals of correct breathing is pursued through the use of suitable solo and choral literature. 2 hrs. lab. Enrollment limited to

Major Performance

MUSI 154, 155, 254, 255, 354, 355, 454, 455: 1 s.h.

fall, spring.

Instrumental Class Instruction

The instruments of the band and orchestra. Emphasis on basic skills for performance through materials and methods suitable for school instruction.

MUSI 151: 1 s.h.

MUSI 251: 1 s.h.

MUSI 152: 1 s.h.

Woodwinds I. Open to music majors only or permission of instructor.

MUSI 252: 1 s.h.

MUSI 156: 1 s.h.

Brass I. Open to music majors only or permission of instructor.

MUSI 256: 1 s.h.

MUSI 153: 1 s.h.

Percussion I. Open to music majors only or permission of instructor.

MUSI 253: 1 s.h.

MUSI 171: 3 s.h.

Introduction to Music Education

MUSI 190: 3 s.h.

Music Industry I

MUSI 193: 3 s.h.

Computer Applications in Music Production I

MUSI 201: 3 s.h.

Music and Sound in Cinema (G1)

MUSI 202: 3 s.h.

American Broadway Musicals (G1)

MUSI 203: 3 s.h.

Understanding the Language of Music Through ... [Singing] [Keyboard] [Guitar] [Song Writing] (G1, D)

The course begins with the elements of rhythm and pitch, and progresses to the introduction of scales, intervals and tonality; notation of rhythm and meter, rudiments of harmony and the concept of musical structure and form. Sight singing and ear training are pursued concurrently with keyboard and written theory. (This is a more in-depth course than MUSI 103, and the focus will include more complex repertoire and harmonic understanding.) Musical materials will include selected multicultural folk music and art music examples. The use of a broad range of individualized musical materials, active exploration and personal discovery will lead the student to grasp the nature of the interactions and relationships

MUSI 207: 3 s.h.

Love Songs Through the Ages (G1, D)

Exploration of sex-positive themes in vocal music. This course addresses diversity through a discussion of sex positivity and how this idea relates to feminism and topics within the Lesbian, Gay, Bisexual, Transgender and Questioning (LGBTQ) community, and with other related top-

MUSI 212: 3 s.h.
Solfège, Harmony and Analysis II, According to the Kodály Concept

style, introduces principles of voice leading, nonchord tones, using diatonic common chords. Investigates the harmonization of melodies and harmonic progressions through a wide range of activities. Musical materials will include selected multicultural folk music and art music examples.

MUSI 231: 2 s.h.
Class Piano II

Primary and secondary harmonies are explored in selected multicultural folk songs, art songs and original piano compositions. MUSI 231 is designed this course.

MUSI 263: 3 s.h.
Popular Music (G1, D)

Musical derivatives and development of American pop, jazz and rock styles. Lecture, live and recorded musical demonstration, discussion and

MUSI 265: 3 s.h.
Symphonic Music (G1)

Emphasis on listening and analytical observation.

MUSI 267: 3 s.h.
Survey of American Music (G1)

American music from the colonization period to the present. Composers, their works, musical organizations and folk music in relation to historical

MUSI 100 or permission of instructor.

MUSI 280: 3 s.h.
Technology in the Music Classroom

Students explore the uses of technology and its application as instructional resources and content delivery devices in the modern K-12 classroom.

MUSI 290: 3 s.h.
Music Industry II

copyright issues, the economics of the music industry, digital distribution, music publishing, entrepreneurship, and current business trends in the

MUSI 293: 3 s.h.
Computer Applications in Music Production II

MUSI 294: 3 s.h.
Live Audio Production

MUSI 295: 3 s.h.
Studio Recording I

MUSI 301: 3 s.h.
Music in Early Childhood (G1, W, D)

Music in Early Childhood (prekindergarten and kindergarten) examines music through the lens of the culture(s) of young children, which, though of children's songs as well as the music they hear, and the kinds of musical engagements that are particular to young children. The uses, functions and meanings of music for young children are emphasized. Musical materials to be studied will include selected multicultural folk music, as well as art and commercial music examples. The culture of childhood and the music in the culture of young children is one of the primary

MUSI 303: 3 s.h.
Latino Music in the United States (G1, D)

This course will use the study of Latino music in the United States to create greater understanding of self by examining how music shapes our cultural and personal identities, to promote cross-cultural understanding by investigating the many diverse genres encompassed by Latino musically.

MUSI 304: 3 s.h.**Artist Management**

Artist Management is a focused examination, observation and participation class drawing on all of the facets of creating and operating an artist business model. The class will analyze the many facets of the modern music business and how it can be incorporated into practice. Students will be witness to the day-to-day operations of artists who record, tour, negotiate, survive and thrive. Students will participate in the discussions and decisions of the day-to-day operations of artists who are making recordings, marketing them either independently or in conjunction with a

290.

MUSI 312: 3 s.h.**Solfège, Harmony and Analysis III, According to the Kodály Concept**

This course provides in-depth coverage of the structures of seventh chords, secondary dominants and modulations, and aesthetics of common harmonization of melodies and selected harmonic progressions through a wide range of activities. Musical materials will include selected multicult-

MUSI 313: 3 s.h.**Seminar in Jazz Theory and Improvisation**

Basic to intermediate/advanced-level jazz theory concepts and improvisation with practical application. Information provided in this course is supplementary for students who wish to teach instrumental music and those pursuing graduate studies or professional careers in instrumental music.

MUSI 315: 1 s.h.**Music Composition**

The art of music composition through examination of the creative process, rhythmic manipulation, melodic development, counterpoint and harmonic permission of instructor.

MUSI 317: 3 s.h.**The Art of Teaching Elementary Music, According to the Kodály Concept**

This course is designed to prepare students for teaching general music through the integration of multicultural content and practices related to the learner in an elementary school environment. Emphasis is on leading the young learner to understand musical concepts through a variety of behaviors (singing, playing instruments, moving, reading and writing, creating and listening). Also included are issues related to musical literacy

MUSI 330: 3 s.h.**Live Audio II**

This course will explore advanced concepts in the technology utilized for live sound production. Topics will include electronics, block diagrams,

MUSI 369: 3 s.h.**Introduction to West African Music (P, D)**

Survey course designed to provide an in-depth analysis of West African culture and history, focusing on the musical traditions found in this region. The evolution of musical instruments will be presented. Moreover, the process of musical innovation and acculturation in West Africa, and the impact of

110, ENGL 110 and junior status.

MUSI 371: 3 s.h.**Foreign Language Diction 3.0**

tion in this course is mandatory for students who wish to teach vocal music, those pursuing graduate studies or a professional singing career, and

MUSI 372: 3 s.h.**The Art of Teaching Middle-Level Music, According to the Kodály Concept**

Study of the organization, pedagogy and practice of the middle and secondary school general classroom, including focus on multicultural and popular music, folk song study and analysis. Field experiences include teaching 6th-, 7th- and 8th-grade general music classes and observing high-school-level orchestra, band and choral rehearsals. Students review basic guitar skills throughout the semester while also reviewing their

permission of instructor. Updated/current clearances needed.

MUSI 373: 3 s.h.**The Art of Instrumental Techniques**

Professional Studies; MUSI 152, 153, 156, 171, 381 or permission of instructor.

MUSI 374: 3 s.h.**Undergraduate Seminar in Percussion Methodology and Pedagogy**

Basic methodologies and pedagogical review relevant to teaching all areas of percussion performance. The information provided in this course is mandatory for students who wish to teach percussion methods, those pursuing graduate studies or a professional career in percussion performance, and necessary for instrumental music directors at all levels.

MUSI 377: 2 s.h.**Piano Pedagogy and Instructional Materials**

instruction. 1 hr. lec., 2 hrs. lab.

take this course instead of MUSI 231.

MUSI 380: 3 s.h.**History of the Recording Industry (P)**

have impacted artists and their audiences, and the development of various styles of music, culture and the companies who built the foundation

MUSI 381: 2 s.h.**Conducting I****MUSI 390: 3 s.h.****Marketing and Promotion in the Music Industry**

Designed to give students a comprehensive understanding of marketing and promotion in the music industry. It will give insight into the marketing tactics employed by labels, concert promoters, distributors, independent agents and artists in the marketplace. This course will provide the

MUSI 392: 3 s.h.**Music in the Nonprofit Sector**

grants, resumés and publishing will be discussed, as well as networking and guest lecturers. Students will have the opportunity to create a hands-on class project.

MUSI 395: 3 s.h.**Studio Recording II****MUSI 396: 3 s.h.****Synthesis and Sampling**

Advanced course focusing on theory/operation of hardware, virtual synthesizers and digital audio samplers. Learn how to identify and manipulate

NUCLEAR MEDICINE TECHNOLOGY

See Biology

NURSING

College of Science and Technology

Associate Professor Kuhns, chairperson

Assistant Professors Hartmann, Monn, Lambert, Moyer

Instructor Minter

(B.S.N.) degree. This program is designed for registered nurses who are graduates of accredited diploma or associate-degree nursing programs with a GPA of 2.0.

The goals of the nursing program are to provide an atmosphere and opportunities that develop intellectual curiosity, critical thinking, and sound reasoning and judgment; provide knowledge from the humanities and the physical, biological, psychological and social sciences to complement nursing theory and practice; provide a theoretical and clinical foundation in nursing to prepare a professional nurse who provides rational evidence-based and humanistic healthcare within institutional and community settings; and provide a basis for graduate education in nursing.

COURSE REQUIREMENTS

Nursing Major (B.S.N.): 120 s.h.

division nursing credits on admission.

School Nurse Certification (K-12)

COURSE DESCRIPTIONS

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NURS 315: 3 s.h.

Scientific Advances in Healthcare: An Integrated Perspective (P)

Major contemporary health trends and issues will be presented. Discussion will identify the integration of certain biological, psychosocial, edu-

NURS 316: 3 s.h.

Women, Health and Healthcare: Controversies and Dilemmas (P)

Examines the physical, psychosocial, economic, cultural, ethnic, racial and political factors that impact women's health. Case studies of current

NURS 320: 3 s.h.

Conceptual Basis of Professional Nursing Practice

Nursing, change and systems theories with application to healthcare delivery. Emphasis on decision making and the nurse as change agent.

NURS 330: 3 s.h.

Ethics of Healthcare Innovations

Introduces the student to the ethical dimension of nursing practice. Focuses on moral reasoning, ethical theories, values, virtues and other principles. Examines contemporary clinical trends and health issues trends within the context of ethical care. Models of ethical decision making are

NURS 360: 4 s.h.
Assessment and Diversity in Nursing Practice (D)

ent is a contextual (cultural) review. Cultural assessment is crucial to providing cultural care, which enables providers to deliver services that are respectful of and responsive to the health beliefs, practices, and cultural and linguistic needs of diverse patients. Cultural competency is critical to

as a preprofessional or pretheological degree. In order to supplement knowledge obtained in another major, some students choose philosophy as a second major or as a minor.

COURSE REQUIREMENTS

Philosophy Major (B.A.): 120 s.h.

Philosophy-Psychology Double Major (B.A.): 120 s.h.

philosophy course

Philosophy Minor

Physics/Philosophy Option

See Physics.

COURSE DESCRIPTIONS

PHIL 100: 3 s.h.

Introduction to Philosophy (G1)

A beginning study of some of the major philosophical issues and thinkers.

PHIL 120: 3 s.h.

Introduction to Ethics (G1)

PHIL 313: 3 s.h.

PHIL 401: 3 s.h.

Philosophy and Neuroscience: Brains, Persons and Culture (G1)

Examination of the interrelation between philosophy and neuroscience. Topics covered include perception, the nature of consciousness, the self

three credits in philosophy or permission of instructor.

PHIL 407: 3 s.h.

Political and Social Philosophy (G1)

COURSE DESCRIPTIONS**PHYS 101: 3 s.h.****Survey of Physics (G2)**

An elementary treatment of fundamental concepts of classical and modern physics. Selected examples from classical mechanics, electromagnetism,

PHYS 103: 4 s.h.**Elements of Physics (G2, L)**

An elementary treatment of fundamental concepts of classical and modern physics. Selected examples from classical mechanics, electromagnetism,

PHYS 104: 4 s.h.**Applied Physics (G2, L)**

A study of the application of mathematics to practical problems in physics, using Newtonian ideas and emphasizing applications to devices such as machines and engines, and systems such as electrical circuits. 3 hrs. lec., 2 hrs. lab. No credit in block G2 for majors in the College of Science

or above.

PHYS 117: 3 s.h.**General Astronomy (G2)**

Astronomy for a general audience; emphasis on the physical nature of the universe. Terrestrial astronomy, light, telescopes, spectra, stars, stellar evolution, galaxies, cosmology, the solar system. 3 hrs. lec. and discussion. No credit in block G2 for majors in the College of Science and Tech-

PHYS 131: 4 s.h.**Physics I with Algebra (G2, L)**

An introductory algebra-based course. Fundamental laws and properties of matter, mechanics and heat. Problems dealing with these laws. 3 hrs.

fall, spring, summer.

PHYS 132: 4 s.h.**Physics II with Algebra (G2, L)**

Continuation of PHYS 131. Fundamental laws and properties of electricity, magnetism, waves, sound, light and radiation. 3 hrs. lec., 1 hr. recitation

PHYS 205: 3 s.h.**Musical Acoustics (G2, L)**

Intended for musicians dealing with the physical nature of sound and sound sources, and the relation of these to music and musical instruments.

PHYS 230H: 1 s.h.**General Physics Seminar (G2)**

The ideas of introductory physics in extended depth in the language of calculus, using problems, laboratory exercises, readings and discussion. Grades of B- or higher in both PHYS 231 and 230H will result in honors designation for the pair. The pair of courses count as one entry in the

PHYS 231: 5 s.h.**Physics I with Calculus (G2, L)****PHYS 232: 5 s.h.****Physics II with Calculus (G2, L)**

Continuation of PHYS 231. An introductory course in classical physics dealing with electricity, magnetism and optics. 3 hrs. lec., 1 hr. recitation,

PHYS 233: 3 s.h.**Modern Theories of Waves and Particles**

Selected topics from the areas of waves and optics, special relativity, an introduction to the concepts and development of modern physics and

PHYS 266: 3 s.h.**Electronics****PHYS 302: 3 s.h.****Physics and the Evolution of Western Civilization (P)**

The history of the mechanization of the world picture. A study of physics in the evolution of Western civilization and thought relating the impact

course, COMM 100, ENGL 110 and junior status.

PHYS 311: 3 s.h.
Mechanics I

PHYS 395: 3 s.h.
Techniques in Mathematical Physics

PHYS 431: 3 s.h.
Solid-State Physics

phonons; semiclassical analysis of electrical and magnetic properties of insulators and metals; electron band theory of metals, insulators and

PHYS 435: 3 s.h.
Statistical Mechanics

include probability theory, the foundations of ensemble development and their application to classical, Fermi and Bose systems. Of special interest

PHYS 451: 1 s.h.
Advanced Physics Laboratory I

PHYS 452: 1 s.h.
Advanced Physics Laboratory II

PHYS 462: 3 s.h.
Advanced Electronics

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PRE-ATHLETIC TRAINING

See Biology and Wellness & Sport Sciences

PRE-LAW

their academic careers.

PRE-MEDICINE

See Biology and Chemistry

PRE-OPTOMETRY

See Biology

PRE-PODIATRY

See Biology

PSYCHOLOGY

College of Education and Human Services

Professors Gallagher, Tuleya-Payne

Assistant Professors Behun, Kaiser, Lopez, Sorhagen, Swords

honors program and a selection of elective courses for all Millersville University students. Psychology majors, through departmental advisement, usually plan a program that leads to one of three goals: (1) graduate with a bachelor's degree and enter the human

logical research methods.

Some undergraduate psychology courses are open to liberal arts and teacher education students. However, some laboratory, specialized and upper-level courses are open only to psychology majors and minors.

The cooperative education program in psychology is an optional arrangement whereby students combine practical on-the-job experience with their formal classroom instruction. The co-op program is available to all psychology majors who satisfy the de-
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section of this catalog.

DEPARTMENTAL POLICIES

Admission to the Major Policy

Current students at Millersville University will be permitted to declare psychology as a major only if they have a CGPA of 2.25 or higher, based on at least 15 credit hours, including PSYC 100, and if space is available. Decisions to accept new majors are based in part on space available and hence are competitive based upon previous academic performance, both in

University in order to be admitted to the psychology major.

Retention in the Major Policy

At the end of each semester, the psychology department will review the academic performance of its majors. If any student with zero to 29.5 earned credits has a CGPA below 2.0, or if any student with 30 to 59.5 earned credits has a CGPA below 2.25, he/she will
made. The department will specify minimal achievement during the probationary semester to continue in the major. If the student is

Students must successfully complete PSYC 100, 211 and two core electives prior to completing 90 credit hours.

Completion of the Major Policy

Students must complete at least three capstone credits. To be eligible for capstone credits, psychology majors must have earned at least 75 credits and have completed or be enrolled in their advanced laboratory course. The following can be taken for capstone credit: PSYC 454: History and Systems of Psychology; PSYC 455: Seminar in Psychology; PSYC 495: Directed Projects in Psychology; PSYC 489, 490, 499 Departmental Honors Courses; PSYC 498: Independent Study; COOP 300: Supervised Field Experience in Psychology.

Policy Regarding Advanced Placement (AP) Credit in Psychology

Entering students who receive a score of 3 on the Advanced Placement (AP) Examination in Psychology shall be awarded three credits for an elective course designated as a 100-level PSYC course. Entering students who receive a score of 4 or 5 on the AP examination shall be awarded three credits for PSYC 100.

Pass/Fail Restriction on Courses for Psychology Majors and Minors

COURSE DESCRIPTIONS**PSYC 100: 3 s.h.****General Psychology (G3)**

An introduction to the study of behavior and mental activity, including such aspects as motivation, emotions, sensation and perception; individual

PSYC 205: 3 s.h.**Popular Misconceptions in Psychology (G3, W)**

This course will provide an introduction to some of the most popular and persistent misconceptions in psychology. These misconceptions will

PSYC 100 and ENGL 110.

PSYC 211: 4 s.h.**Principles of Statistics and Experimental Design I (W)**

100; and MATH 101, 105, 204 or 130 with a minimum grade of C- or math placement into MATH 130 or above.

PSYC 212: 4 s.h.**Principles of Statistics and Experimental Design II**

211 and MATH 130 with a grade of C- or higher.

PSYC 215: 3 s.h.**Introduction to Physiological Psychology**

Serves as an introduction to the nervous system in relation to cognition and behavior. It will begin at the cellular level, building up to the systems

PSYC 357: 3 s.h.
Neuropsychology

PSYC 365: 3 s.h.
Human Memory

PSYC 400: 3 s.h. minimum
Cognitive Psychology

PSYC 498: 1-3 s.h.

Independent Study in Psychology

For further information on independent study, see the

section of this catalog.

GRADUATE-LEVEL COURSES

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PSYC 505: 3 s.h.

Recent Developments in Psychology

PSYC 511: 3 s.h.

Substance-Related Disorders

PSYC 525: 3 s.h.

Advanced Child Psychology

PSYC 526: 3 s.h.

Advanced Adolescent Psychology

PSYC 530: 3 s.h.

The Child in the Family System

PSYC 536: 3 s.h.

Applications of Biopsychology

PSYC 547: 3 s.h.

Applied Social Psychology

PUBLIC RELATIONS

See Communication & Theatre

RESPIRATORY THERAPY

See Biology

ROBOTICS AND CONTROL SYSTEMS TECHNOLOGY

See Applied Engineering, Safety & Technology

SECONDARY EDUCATION

See Educational Foundations

SOCIAL SCIENCES

College of Arts, Humanities and Social Sciences

SSCI 203H: 3 s.h.

Explorations in the History of Ideas (G3, W)

SSCI 212: 3 s.h.

The Black Woman (G3)

SOCIAL STUDIES

College of Arts, Humanities and Social Sciences

Social Studies (B.S.Ed.): 120 s.h.

This program is designed for students planning to teach economics, geography, government or history. The program consists of 30

advisor, each student will select a concentration totaling 30 s.h. from among the following disciplines: anthropology (0-6), economics (3-15), geography (3-15), government (3-15), history (3-15), psychology (0-6) and sociology (0-6). Economics, government and history courses should be at the 200 level or higher unless otherwise noted. The program also consists of 33 s.h. of professional education courses, two math courses and two courses in the humanities or sciences that support the concentration.

social studies. As part of that program, students should select a number of courses in anthropology, sociology and psychology to

teach anthropology, psychology and sociology.

SOCIAL WORK

College of Education and Human Services

Associate Professors Felizzi, Foels, Girvin, Johnson, Walsh

The social work program at Millersville University leads to a Bachelor of Arts degree in social work. Millersville's social work baccalaureate program is professionally accredited by the Council on Social Work Education. Based on the general education curriculum, the social work curriculum is designed to prepare students for beginning professional practice in social agencies and other settings

ate social work program educates students to be competent, evidence-informed social work professionals who embrace core social work values; enhance human and community well-being; promote social, economic and environmental justice; and advance human rights through generalist social work practice. The University and the program provide a learning environment that prepares students to work in an increasingly diverse society and to meet contemporary social, cultural, economic, political and global challenges.

Social Work Program Goals

To meet the purpose of the social work profession and the mission of Millersville University and the social work baccalaureate program, faculty seek to prepare students/graduates to:

Goal 1: Strengthen human connections and relationships

Goal 3: Engage to promote justice and human rights

Goal 4: Think globally; act locally

The curriculum is designed to help students integrate knowledge and theories from many academic disciplines with social work concepts, values and practice skills. Courses in the social work program attempt to develop an understanding of the human condition and human diversity. The social work major needs to understand biological, psychological and sociocultural aspects of human development; characteristics of human interaction with the social environment; the role, structure and function of social welfare

begin in the introductory courses and carry through to formal work in advanced courses. The culmination is 450 hours practicum during spring semester, wherein the student can integrate knowledge and skills in a social agency or other social service setting in the community.

5. Engage in policy practice.
6. Engage with individuals, families, groups, organizations and communities.
7. Assess individuals, families, groups, organizations and communities.
8. Intervene with individuals, families, groups, organizations and communities.
9. Evaluate practice with individuals, families, groups, organizations and communities.

Gerontology Minor

Millersville University has an interdisciplinary minor in gerontology. The program's objectives include increasing knowledge, examining values and improving skills to help students with their own aging, to live with aging people and to prepare them for careers helping the elderly. The program is also designed to improve the understanding and competence of students already working within this specialized area. Students must complete 18 credits to complete the minor.

2. Understand the aging process, including multiple dimensions within multiple contexts.
3. Be prepared for employment in professions dealing with aging or aging-related issues.

Social Justice Minor

Social justice is the core for all social work practice. The primary goals for the minor in social justice are to enhance sensitivity to vulnerable and at-risk populations, provide opportunity for critical review of social policies and the allocation of societal resources, and stimulate interest in advocacy and planned social change. This minor is intended to provide students with the knowledge and skills necessary to advocate from a social, economic and environmental justice framework.

1. Identify and apply core ethical values and principles utilized when advocating for social justice and human rights.
2. Understand how individuals, institutions and society perpetuate social, economic and environmental injustice and learn how to respond to promote positive social change.
3. Identify ways to advocate to promote positive social change.

COURSE REQUIREMENTS

Social Work Major (B.A.)

work courses. Six additional elective credits from SOWK 304, 305, 306, 307, 308, 309, 312, 313, 314, 315, 316, 475. SOWK 401-402 must be taken

Gerontology Minor: 15 credits

minor advisor.

Social Justice Minor: 15 credits

Select one of the following electives (3 credits): SOWK 304, 305, 306, 307, 308, 309, 312, 313, 314, 315, 316, 475.

COURSE DESCRIPTIONS

GERT 100: 3 s.h.

Interdisciplinary Introduction to Gerontology (G3)

SOWK 102: 3 s.h.

Modern Social Welfare Dilemmas (G3)

SOWK 201: 3 s.h.
Social Welfare Policy and Economics

SOWK 309: 3 s.h.**Social Work and Mental Health**

Application of theory and social work values to practice with mentally disordered people, their families and service systems relating to their needs. Consideration of various practice modalities, including direct intervention as well as social policy analysis, research and prevention.

SOWK 312: 3 s.h.**Social Work and Women's Strengths, Needs and Opportunities (W, G3)**

Scope and contribution of professional social work in regard to women's issues and concerns in contemporary society. Emphasis on the analysis of individual and community women's needs, the social and behavioral aspects of women's concerns, the essential practice components and skills

SOWK 313: 3 s.h.**Family Violence (P)**

Professionals and society at large have recognized violence in the family against children, spouses and the elderly as a social problem. Other emerging related issues include cross-cultural violence, partner violence in gay/lesbian relationships, courtship violence and date rape. Focus will also include

and junior status.

SOWK 314: 3 s.h.**Global Well-Being (D, P)**

This course is interdisciplinary and intercultural in nature. It is designed to prepare all students whose anticipated careers are primarily oriented to direct work with the global community, both domestically and internationally. There will be an emphasis on developing interpersonal communication

understanding global interconnection with oppression to foster social justice. The cornerstone of this course is service-learning opportunities on a

100, ENGL 110, 24 s.h. general education, junior standing.

SOWK 315: 3 s.h.**Grief and Bereavement in a Diverse World (D)**

This course will provide a framework for critical analysis of the dynamics of grief and bereavement. Combining a general social systems perspective, an ecological perspective and the problem-solving approach, this course will assist students in integrating knowledge about grief and bereavement into their knowledge of practice theory and human behavior at the micro, mezzo and macro levels. Students will appreciate the diversity of grieving practices and rituals among cultural, religious and ethnic groups. Bereavement dynamics across the life span are addressed. The impact of death

SOWK 431 (331): 3 s.h.
Social Work Statistics (W)

(with English); MDST — sport business (with business); and Allied Health — pre-athletic training and sports medicine (with biol-

with a master's degree in sport management, with a concentration in athletic management and athletic coaching.

Fitness or WELL 240: Health, Safety and Nutrition for the Developing Child may be used to satisfy the general education, connec-

Allied Health Technology Major, Pre-Athletic Training and Sports Medicine Options

See Biology

Multidisciplinary Studies Major, Sports Journalism and Sport Business Options

See Multidisciplinary Studies

COURSE REQUIREMENTS

Sport Administration (B.S.): 120 s.h.

Sport Business option courses:

Choose 12-15 s.h. from BUAD 202, 352; MGMT 372; MKTG 333, 335, 405 (Sport MKTG) and choose 3-6 credits from WSSD 360, 384, 410, 480 or 551, 486, 498.

Sport Coaching option courses:

WELL 240: 3 s.h.

**Health, Safety and Nutrition for the Developing Child
(For Education Majors Only)**

This course is designed to address the essential components of children's wellness. The course will present ways to promote children's health children; and meet children's essential nutritional needs through nutrition education and planning. Emphasis will be placed on preventive health

ELECTIVES

WSSD 310: 3 s.h.

Physical Education for the Elementary School

WSSD 480: 3 s.h.
Theory and Techniques of Coaching and Sport

WSSD 482: 3 s.h.
Coaching Effectiveness

tive sport strategies, practice planning and game tactics to assist athletic coaches in designing successful athletic programs.

WSSD 483: 3 s.h.
Legal Aspects of Sport

Instruction in prevention, treatment and care of athletic injuries. Legal and moral responsibilities in supervising elementary and secondary student-

WSSD 484: 3 s.h.
Psychosocial Foundations of Sport

WSSD 485: 3 s.h.
Performance Enhancement: Mental Training in Sport

WSSD 486: 3 s.h.
Topics

WSSD 492: 1-3 s.h.
Seminar in Sport Science

WSSD 551: 3 s.h.
Coaching of Sport

WSSD 582: 3 s.h.
Sport Psychology

WSSD 591: 3 s.h.
Exercise Physiology

WOMEN'S AND GENDER STUDIES

Associate Professor Christine Filippone, coordinator

including history, anthropology, communication, business, health, education and literature. The goal of the minor is to inform students about gender dynamics, women's contributions, perspectives and visions in our own and other cultures; to validate women's experiences; and to challenge the economic, political and social devaluation of women. Students electing the minor

search Methods in Women's and Gender Studies (WSTU 345) or Senior Seminar (WSTU 488) and three other electives from an

WSTU 345: 3 s.h.

Feminist Research Methods in Women's and Gender Studies (G3)

WSTU 391: 3 s.h.

Women in Mathematics and Science

Explores the lives and discoveries of women scientists and the impact they have had on science and society through the centuries. Focus is on

WSTU 488: 3 s.h.

Women's and Gender Studies Senior Seminar (G3, W)

Interdisciplinary and multicultural examination of how feminist perspectives and a focus on women and gender can restructure social institutions,

or permission of instructor.

WSTU 491: 1-4 s.h.

Topics in Women's and Gender Studies

SOCY 329

Topics: Feminist Theory

SOCY 337

Topics: Gender and the Law

SOWK 312

Social Work and Women's Strengths, Opportunities and Challenges (G3, W)

SOWK 313

Family Violence (P)

SSCI 212

The Black Woman (G3)

DIRECTORY

GOVERNING BOARDS

Tom Wolf

ADMINISTRATION

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President Daniel P. Leahy, Ph.D.

..... Felicia M. Graywood, D.Ed.

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Associate Provost for Academic Administration James A. Delle, Ph.D.

..... Lawrence A. Adams, Ph.D.

..... Nancy Korycinski, B.A., M.A.

Dean, College of Education and Human Services George P

CHAIRPERSONS OF DEPARTMENTS

College of Education and Human Services

Educational Foundations..... Timothy Mahoney, Ph.D.

Early, Middle and Exceptional Education.....

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Dean, College of Education and Human Services

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Prabhu, Vilas A. (2004). B.S., University of Bombay, India, 1970; M.S., Idaho State University, 1973; M.B.A., Southwestern Oklahoma State

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FACULTY

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- Farkas, Kerrie R. H.** (2003). B.A., The College of New Jersey, 1992; M.A., Ibid., 1994; Ph.D., Kent State University, 2003. Professor of English
- Felizzi, Mark** (2013). B.A., Delaware State University, 1978; M.S.W., Ibid., 1995; Ph.D., Widener University, 2011. Associate Professor of Social Work
- Fenwick, James W.**
of Mathematics
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Professor of Art & Design
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- Frank, Jennifer** (2013). B.A., Millersville University, 1999; M.S.W., Ibid., 2009; Ph.D., Bryn Mawr College, 2017. Assistant Professor of Social Work
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- Gallagher, Shawn P.** (2003). B.S., The Pennsylvania State University, 1990; M.A., University of Delaware, 1999; Ph.D., Ibid., 2002. Professor of Psychology
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University, 2000. Associate Professor of Psychology; Director, School Counseling Program
- Gates, Leslie** (2013). B.S.Ed., Millersville University, 2003; M.A., Shepherd University, 2006; Ph.D., University of Maryland, 2011. Associate Professor of Art & Design
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Accounting and Finance
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- Keefer, Daniel J.** (2001). B.S., East Stroudsburg University, 1993; M.S., University of Tennessee, 1995; Ph.D., University of North Carolina at Greensboro, 2001. Professor of Wellness & Sport Sciences; Chairperson, Department of Wellness & Sport Sciences
- Kelly, Jessica J.**
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- Kumar, A.**
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