

Academic Programs

UMBC Major Programs

The Bachelor of Arts (B.A.) degree is awarded unless otherwise noted.

Acting (B.F.A.)
 Africana Studies
 American Studies
 Ancient Studies
 Anthropology, Cultural
 Biochemistry and Molecular Biology (B.S.)
 Biological Sciences (B.S. or B.A.)
 Bioinformatics and Computational Biology (B.S.)
 Business Technology Administration (B.A.)
 Chemical and Biochemical Engineering (B.S.)
 Chemistry (B.S. or B.A.)
 Computer Science (B.S.)
 Computer Engineering (B.S.)
 Dance
 Economics
 Emergency Health Services (B.S.)
 English
 Environmental Science (B.S.)
 Environmental Studies
 Financial Economics (B.S.)
 Geography and Environmental Sciences (B.S. or B.A.)
 Health Administration and Policy
 History
 Information Systems (B.S. or B.A.)
 Interdisciplinary Studies (B.S. or B.A.)
 Management of Aging Services
 Mathematics (B.S. or B.A.)
 Mechanical Engineering (B.S.)

Modern Languages and Linguistics
 French
 German
 Russian
 Spanish
 Applied Linguistics
 Language and Cultural Studies
 Music
 Philosophy
 Physics (B.S.)
 Political Science
 Psychology (B.S. or B.A.)
 Social Work
 Sociology
 Statistics (B.S.)
 Theatre
 Visual and Performing Arts (B.A.)
 Visual Arts

UMBC Minor Programs

Africana Studies
 American Studies
 Ancient Studies
 Anthropology, Cultural
 Applied Politics
 Art History and Theory
 Astronomy
 Biological Sciences
 Chemistry
 Computer Art
 Computer Science
 Dance
 East-Asian History
 Economics
 Emergency Health Services
 English Studies
 Environmental Geography
 Gender and Women's Studies
 Geography and Environmental Sciences
 History

International Affairs
 International Economics
 Judaic Studies
 Legal Policy
 Literature
 Mathematics
 Modern Languages and Linguistics
 Linguistics
 Music
 Philosophy
 Photography
 Physics
 Political Science
 Political Thought
 Psychology
 Public Administration
 Religious Studies
 Social Welfare
 Sociology
 Statistics
 Theatre
 Writing
 Creative
 Journalism
 Professional
 Rhetoric and Communications

Certificate Programs

Cartography
 Communication and Media Studies
 Decision Making Support
 Education
 Finance
 French
 Geographic Information Science Applications
 German
 Human Context of Science and Technology
 Intercultural Communication
 M.B.A. Preparatory Studies
 Management Economics
 Network Administration
 Personnel and Industry Psychology
 preprofessional Studies in Accounting
 Public Administration
 Russian
 Spanish

Web Development
 Women's Studies

Preprofessional and Allied Health Programs

Four-year study at UMBC:

pedental
 prelaw
 premedical
 preoptometry
 Prephysical Therapy
 Preveterinary Medicine

Two- or three-year study at UMBC:

pedental Hygiene
 premedical and Research Technology
 Prenursing
 Prepharmacy

UMBC offers undergraduate programs in the physical and biological sciences, social and behavioral sciences, engineering, mathematics, information systems, humanities, and visual and performing arts. These programs include 39 major degree programs leading to the bachelor's degree, 41 minor programs and 20 certificate programs. Many students pursue multiple interests by completing double majors or combining a minor or certificate program with their major program.

Each academic department has specific requirements for completion of major, minor or certificate programs. Completion of all requirements for the major, along with completion of other graduation requirements, results in the award of the Bachelor of Arts (B.A.) degree, Bachelor of Fine Arts (B.F.A.) degree, or Bachelor of Science (B.S.) degree.

In addition to the special Honors College curriculum available to qualified students, honors programs are available in many departments. Combined bachelor's/master's programs also are offered in many disciplines.

In addition to the standard major, minor and certificate programs, students can design interdisciplinary degree programs through the Interdisciplinary Studies Program. (For more information, see page 117.)

Students enrolled in two- or three-year preprofessional allied health programs fulfill semester hour and course requirements recommended for admission to the appropriate professional school and need not fulfill UMBC requirements for graduation. Requirements for the degree may be fulfilled at the professional school from which the degree is sought. (For more information, see Preprofessional and Allied Health Programs, page 150.)

Academic Divisions

The College of Arts, Humanities, and Social Sciences

UMBC's programs in the arts, humanities and social sciences offer a wide range of courses of study that prepare students for post-graduate education, careers and ongoing lifetime learning. Many programs offer a certificate or a minor in addition to the major, giving students many possibilities for creating an undergraduate degree that combines different disciplines and programs. Under the guidance of noted scholars and dynamic teachers, students also have the opportunity to enhance their academic experience by engaging in independent studies, undergraduate research projects, internships, living-learning communities, and capstone courses and experiences. Many departments also offer bachelor's/master's programs that accelerate the completion of a master's degree.

The College of Arts, Humanities, and Social Sciences is home to the Humanities Scholars Program, the Linehan Artist Scholars Program and the Sondheim Public Affairs Scholars Program, all of which provide scholarships for talented stu-

dents. The college also sponsors the Social Sciences Forum, the Humanities Forum and a variety of performances and exhibitions in the arts, which feature presentations by leading scholars, artists and public figures and provide important linkages among disciplines within the college and the university.

The College of Engineering and Information Technology (COE&IT)

The College of Engineering and Information Technology (COE&IT) prepares students for careers in the fields of engineering, computer science and information systems. COE&IT attracts talented students who are strong in math and science and possess an intellectual curiosity about technology and its role in the modern world. Engineering and IT students have frequent and direct contact with outstanding and diverse faculty, and they are encouraged to participate actively in their learning experience, including involvement in cutting-edge research in engineering science.

COE&IT offers innovative fully accredited undergraduate programs leading to baccalaureate (B.S.) degrees in chemical and biochemical engineering, computer engineering, computer science, mechanical engineering and information systems. The information systems program also offers a B.A. in Business Technology Administration. Accelerated B.S./M.S. programs are available in the above areas and in combinations such as computer/electrical engineering and chemical/environmental engineering.

Students get involved in hands-on lab and design projects and many participate in extensive internships in industry. Many also receive an early introduction to entrepreneurship, technology transfer and commercialization. Students conduct research in state-of-the-art facilities in fields such as bioengineering, environmental engineering, bioreactors and sensors, composite mate-

rials, computer graphics, data/Web mining, decision support, high-speed fiberoptic communication, human-computer interaction, mechatronics, medical imaging, optoelectronics, photonics, proteomics, wearable computers and wireless mobile, among others.

College of Natural and Mathematical Sciences

UMBC offers students several strong degree programs in the natural and mathematical sciences that prepare them for entry into graduate school, careers in teaching or immediate employment in the workplace. In the life sciences degrees are offered in biological sciences, bioinformatics and computational biology, chemistry, and biochemistry and molecular biology. All of these subjects can lead to a B.S. degree, and many of them can be taken as a B.A. or as a minor. There are several concentrations available in mathematics in addition to the core program for students preparing for graduate school, including applied mathematics, optimization and operations research, actuarial science and statistical science. There is also a stand-alone B.S. program in statistics, a B.S. program in physics and minors in both physics, and in astronomy. All departments offer accelerated B.S./M.S. programs, which enable qualified students the ability to receive a master's degree in about five years from the start of their undergraduate degree.

The College of Natural and Mathematical Sciences have strong Ph.D. graduate programs in all departments, which offer undergraduates the opportunity, to participate in cutting-edge research under the mentorship of top-rate faculty. Each year, large numbers of students take advantage of this opportunity and many become co-authors on articles in leading scientific journals.

The natural and mathematical science departments are noted for the quality of the academic advising, mentoring

and for the tutorial centers they run. All the departments have active councils of majors.

The Erickson School of Aging Studies

The Erickson School of Aging Studies integrates education, research, policy and practice related to the aging U.S. population through innovative undergraduate, graduate and certificate programs and applied research. The school prepares students for a wide array of careers, ranging from business and entrepreneurship to public policy and advocacy.

The Erickson School offers an undergraduate major in Management of Aging Services that attracts highly talented and career-oriented students interested in using knowledge from many disciplines to address the challenges of an aging society. Students find internships in companies, non-profit/advocacy organizations or governmental agencies to gain practical experience with issues in action and career paths. In addition, the school's William E. Colson Scholarship Fund provides support to qualified undergraduates.

The Center for Aging Studies, the Erickson School's research branch, provides ample opportunities for students to participate in research. The center engages in research funded by the National Institutes of Aging on a variety of basic and applied issues, such as quality of care in assisted living, physician care of older adults, the role of food in long-term care, and aging and health disparities.

The Graduate School

UMBC's 34 graduate programs include master's and doctoral programs in the physical and life sciences, engineering, the fine arts and humanities, social sciences, policy and behavioral sciences, health and social services fields, and other interdisciplinary fields of study. Many programs offer combined bachelor's/master's programs for undergraduate students of exceptional academic ability.

Because UMBC is a research university with strong graduate programs, undergraduate students are able to make contact with professors who are working at the frontiers of their disciplines. UMBC faculty members regularly provide numerous on-campus research experiences in their laboratories and in the field. These research opportunities often enhance undergraduate students' success in graduate or professional school or in their careers. The Graduate School offices are located in the Administration Building, second floor. **For more information, call 410-455-2537 or e-mail umbcgrad@umbc.edu.**

The Honors College

The UMBC Honors College is a special option for students seeking a community of like-minded people for whom the quest for knowledge is its own reward. The Honors College seeks to develop the individual student, to foster a sense of membership in an intellectual community, and to instill learning as a way of life in and out of class. For more information, see Honors College on page 109.

Interdisciplinary Studies

UMBC's interdisciplinary studies program offers students the opportunity to explore multiple areas of academic interest by designing their own course of study. Individually designed majors, tailored to specific education and career goals, are ideal for students who wish to be engaged in a collaborative academic environment and to work closely with faculty and staff.

The interdisciplinary studies program draws faculty from the entire UMBC community and from resources in the region. Students develop proposals for B.A. or B.S. degrees with faculty guidance and are encouraged to integrate independent study, internships, research and creative work into their programs. A sampling of majors students have recently created include: anthropology and women's studies, biomedical ethics,

Chinese language and culture, community health, criminal justice, environmental ethics and policy, human-computer interaction, international and global studies, music and religious studies, neuroscience, science journalism.

Graduates from the interdisciplinary studies program enter careers with investment firms, the media, environmental organizations, allied health companies and all levels of the government, and they have received advanced training and degrees in medicine, divinity and law, among others.

Office of Undergraduate Education

The Office of Undergraduate Education concentrates on providing an honors experience to all UMBC undergraduates through small-group, intellectual experiences aimed to enhance student success. Students participate in programs such as the First-Year Seminars, Introduction to an Honors University course sections, undergraduate research, capstone courses, living-learning communities, the Honors College and programs for exceptional scholars: Meyerhoff, Linehan, CWIT, Sondheim, Humanities. These programs help students address transition issues as they join the UMBC community and progress through the undergraduate experience.

The Office of Undergraduate Education encourages students to participate in research as an undergraduate as a way to enhance their educational experience, graduate school applications and résumé. Research can be done in any major or field of study. Examples of current student research in a variety of fields can be found at www.umbc.edu/undergrad_edu.

The Office of Undergraduate Education offers three specific research opportunities:

- (1) Undergraduate Research Awards of up to \$1,500 are granted competitively to students seeking to conduct research at UMBC with a mentor
- (2) Undergraduate Research and Creative Achievement Day (URCAD), held each April, is an on-campus conference featuring more than 100 current UMBC students presenting research they conducted during the year
- (3) The *UMBC Review*, published annually, features academic papers written by students.