# UMBC MATH PATHS for INCOMING FRESHMEN 

New freshmen in all majors must complete a math course in their first year at UMBC

## MATH PATHS for STEM MAJORS

| Sample Majors: | Summer Session | Fall Semester | Subsequent Semesters |
| :---: | :---: | :---: | :---: |
| Biology (B.A.) or Information Systems | MATH106* <br> COLLEGE ALGEBRA | MATH155 <br> APPLIED CALCULUS | Additional math courses specific to intended major. |
| Biochemistry, Chemistry, Computer Science, Engineering, Math, and Physics | MATH106* <br> COLLEGE ALGEBRA <br> MATH150 <br> PRE - CALCULUS | MATH151 <br> CALCULUS/ANALYTICAL GEOMETRYI |  |
|  | *Does NOT fulfill a GEP requirement for any major but prepares you to take a GEP math course |  |  |

For many STEM degrees, students must take or test out of MATH150 BEFORE they can take required subject courses for their major. Only introductory math courses are shown here - most STEM degree programs will require additional math courses.

## MATH PATHS for ARTS \& HUMANITIES and SOCIAL SCIENCES MAJORS

## MATH PATHS for EXPLORATORY (UNDECIDED) MAJORS

Incoming students who are unsure about their intended major or are interested in a variety of majors should talk to an advisor in the Office for Academic and Pre-Professional Advising at Orientation to determine which math path is most appropriate for their potential academic and degree plans.

## UMBC MATH REQUIREMENTS

Math course requirements vary by major. For some majors, one math course taken in the first year fulfills the graduation requirement. For students pursuing a STEM degree, multiple math courses are required, including math courses which must be taken prior to or in conjunction with other subject courses in their major.

|  | WHAT? | WHO? | REQUIREMENTS |
| :---: | :---: | :---: | :---: |
| All Majors | MATH104 <br> Quantitative Literacy <br> Recommended for Arts and Humanities/Social Sciences Majors | Students pursuing an Arts and Humanities or Social Sciences major who haven't had a math course in recent years or who need to "brush up" on their math skills. <br> Students who place into MATH104 but want to take MATH120 or STAT121 in the fall. | LRC99 - minimum grade of " C " <br> - OR - <br> Milestone level: $\mathbf{1}$ or $\mathbf{2}$ on placement exam |
|  | MATH106 <br> Algebra and Elementary Functions <br> Recommended for STEM Majors | Students pursuing a STEM major who haven't had a math course in recent years or who need to "brush up" on their math skills. <br> Students who placed into MATH106 but want to take MATH150 or MATH155 in the fall. | LRC99 - minimum grade of "C" <br> - OR - <br> Milestone level: $\mathbf{2}$ or $\mathbf{3}$ on placement exam |
| STEM Majors | MATH150 <br> Pre-calculus | Students who did not place into MATH151, but who need MATH151 in the fall to stay on track in their major. | MATH106 or MATH106Y - minimum grade of "C" <br> - OR - <br> Milestone level: $\mathbf{4}$ or $\mathbf{5}$ on placement exam |
|  | MATH151 <br> Calculus and Analytical Geometry I | Students who have not previously satisfied this requirement, or those who need MATH151 as a pre- or co-requisite for a fall science, engineering or math course. | MATH150 - minimum grade of "C " <br> - OR - <br> Milestone level: $\mathbf{5}$ on placement exam |
| STEM, Arts, Humanities, and Social Sciences | MATH155 <br> Applied Calculus | This course meets the general education math requirement and is an option for biology (B.A.) majors as well as several other majors. | MATH106 or MATH106Y - minimum grade of "C" - OR - <br> Milestone level: $\mathbf{4}$ or $\mathbf{5}$ on the placement exam |
| Arts, Humanities, and Social Sciences | MATH120 <br> Intro to Contemporary Mathematics | This course meets the general education math requirement and is often taken by Arts and Humanities majors. | MATH104/MATH106 or MATH104Y/MATH106Y minimum grade of " C " <br> - OR - <br> Milestone level: 3, 4, or $\mathbf{5}$ on placement exam |
|  | STAT121 <br> Intro to Statistics for the Social Sciences | This course meets the general education math requirement and is often taken by Social Sciences majors. | MATH104/MATH106 or MATH104Y/MATH106Y minimum grade of "C" <br> - OR - <br> Milestone level: 3, 4, or 5 on placement exam |

*This chart is not intended as a substitute for academic advising. Regardless of AP credits and/or college level math credits, all incoming freshmen MUST take the Math Placement Exam. During UMBC's Summer Orientation, you will meet with an academic advisor to review the math requirements and course sequence for your intended major. Your advisor will recommend your first math course, which you may take through the Summer Bridge program.

## Get on Track for the Fall!

Get started this summer. Dawg Days: Jumpstart offers MATH104 (Quantitative Literacy), MATH106 (College Algebra), MATH120 (Intro to Contemporary Mathematics), MATH150 (Pre-Calculus), MATH151 (Calculus), and MATH155 (Applied Calculus) in a six week summer session. Participants in Dawg Days: Jumpstart receive individualized academic support in a small classroom setting, as well as extensive advising during their transition to UMBC and throughout their first year.

For more information about UMBC's introductory math requirements and Dawg Days: Jumpstart, contact summerbridge@umbc.edu.


