BSA General Education

BSA General Education (Gen Ed) Requirements

The BSA General Education is a distinctive core curriculum that provides a foundation in humanities, social sciences, natural sciences, and mathematics. In addition, students are required to fulfill BXA-specific courses.

BSA General Education Requirements (16 courses, 135 units minimum)

1. Mathematics (2 courses, 20 units, 21-120 and 21-122 or 21-124 required)
2. Science (3 courses, 31 units, 03-121, 09-105, and 33-111 required)
3. First-year Courses (2 courses, 12 units, 76-101 and 99-101 or 99-102 required)
4. ENGAGE (3 courses, 3 units)
5. Cultural/Global Understanding (1 course, 9 units)
6. Humanities and Social Sciences (2 courses, 18 units)
7. BXA Required Courses (5 courses, 36 units minimum, 52-190 or 52-291, 52-391, 52-392, 52-401, 52-402)

Technical Breadth Requirements (5 courses, 51 units)

As a 21st Century practicing scientist or mathematician, our graduates will work with others from a variety of technical backgrounds. Therefore, all of our students will be broadly trained within the technical fields of science and math. Students will fulfill this training by completing five (5) introductory technical courses in the Mellon College of Science at Carnegie Mellon University.

A student must take the five (5) courses listed below. AP/IB/Cambridge credit may be used to fulfill some of these requirements, but STEM electives must be taken at CMU or at another university for transfer credit to reach the total of five (5) Technical Breadth courses. A list of STEM electives can be found in the MCS general education requirements. https://coursecatalog-new.web.cmu.edu/melloncollegeofscience/#forstudentsenteringinthefallof2015andbeyond

1. Mathematics (2 courses, 20 units)
   - 21-120 Differential and Integral Calculus 10
   - 21-122 Integration and Approximation 10
   or 21-124 Calculus II for Biologists and Chemists 10

2. Science (3 courses, 31 units)
   - 03-121 Modern Biology 9
   - 09-105 Introduction to Modern Chemistry I 10
   - 33-121 Physics I for Science Students 12

Nontecnical Breadth Requirements (8 courses, 42 units)

MCS aspires for all of our undergraduates to leave our campus with a strong sense of personal integrity, social responsibility, ethics, working with diverse others, global engagement, and personal health and well-being. The following non-technical breadth requirements will require students to develop a personalized plan for their course selection and meta-curricular participation to maximize their CMU experience. Our graduates will be well trained to be lifelong and life-wide learners that will lead the scientific community and the world at large.
BSA General Education, Continued

All candidates for BSA degree must complete the following non-technical breadth requirements:

3. **First-year Courses (2 courses, 12 units)**

   - 76-101 Interpretation and Argument (various topics by section) 9
     [http://www.cmu.edu/dietrich/english/first_year/index.html](http://www.cmu.edu/dietrich/english/first_year/index.html)
   - 99-101/102 Computing @ Carnegie Mellon 3

4. **ENGAGE (3 courses, 3 units)**

   The ENGAGE courses are self-directed learning opportunities (using the MyCORE online platform) designed to enhance students' engagement with wellness and community service. Choose three courses from the list below:

   - 38-110 ENGAGE in Service 1
   - 38-230 ENGAGE in Wellness: Looking Inward 1
   - 38-330 ENGAGE in Wellness: Looking Outward 1
   - 38-430 ENGAGE in Wellness: Looking Forward 1

5. **Cultural/Global Understanding (1 course, 9 units)**

   Cultural or global understanding course(s) may be taken at any time. Nine (9) or more units from the following group of courses will fulfill this requirement. Any student who finds an appropriate Carnegie Mellon course not on the list below that might fulfill this requirement should contact their academic advisor to review the course description to determine if it can be substituted. Cultural and global understanding courses that are taken while studying abroad can be used to fulfill this category. In addition, transfer courses will also be considered for this category.

   - 57-173 Survey of Western Music History * 9
   - 57-209 The Beatles 9
   - 57-306 World Music * 6
   - 70-342 Managing Across Cultures * 9
   - 73-331 Political Economy of Inequality and Redistribution * 9
   - 76-221 Books You Should Have Read By Now * 9
   - 76-227 Comedy 9
   - 76-232 Introduction to African American Literature * 9
   - 76-239 Introduction to Film Studies * 9
   - 76-241 Introduction to Gender Studies * 9
   - 76-386 Language & Culture * 9
   - 79-104 Global Histories 9
   - 79-201 Introduction to Anthropology 9
   - 79-202 Flesh and Spirit: Early Modern Europe, 1400-1750 9
   - 79-205 20th/21st Century Europe 9
   - 79-207 Development of European Culture 9
   - 79-221 Development and Democracy in Latin America 9
   - 79-229 Origins of the Arab-Israeli Conflict, 1880-1948 9
   - 79-230 Arab-Israeli Conflict and Peace Process since 1948 9
   - 79-240 The Development of American Culture 9
   - 79-241 African American History: Africa to the Civil War 9
   - 79-242 African American History: Reconstruction to the Present 9
Continued required courses for Cultural/Global Understanding

79-255 Irish History 6
79-261 The Last Emperors: Chinese History and Society, 1600-1900 9
79-265 Russian History: From the First to the Last Tsar 9
79-266 Russian History: From Communism to Capitalism 9
79-275 Introduction to Global Studies 9
79-281 Introduction to Religion 9
79-297 Dilemmas and Controversies in Anthropology 9
79-307 Religion and Politics in the Middle East 9
79-345 The Roots of Rock and Roll 9
79-349 The Holocaust in Historical Perspective 9
79-350 Early Christianity 9
79-357 History of Black American Music 6
79-377 Food, Culture, and Power: A History of Eating 9
80-100 Introduction to Philosophy 9
80-250 Ancient Philosophy 9
80-251 Modern Philosophy 9
80-253 Continental Philosophy 9
80-254 Analytic Philosophy 9
80-255 Pragmatism 9
80-276 Philosophy of Religion 9
82-xxx Any course from Modern Languages 9
99-241 Revolutions of Circularity 9
99-3xx Any of the Country Today courses 3

* Indicates co-requisites and/or prerequisites required.

6. Humanities and Social Sciences (2 courses, 18 units)
To fulfill this requirement, students must complete a minimum of two (2) nontechnical courses totaling at least 18 units in the Tepper School of Business and/or the Dietrich College of Humanities and Social Sciences. Courses counted toward the Cultural/Global Understanding requirement, and 76-101, do not count toward this requirement.

Check the MCS web site for courses from DC and Tepper that may NOT be used to satisfy this requirement because they are too technical in nature, plus a list of courses in other colleges (including SCS, CIT, Tepper, and Heinz College) that do satisfy this requirement.
http://www.cmu.edu/mcs/undergrad/advising/hss-finearts/deletions.html
http://www.cmu.edu/mcs/undergrad/advising/hss-finearts/additions.html

7. BXA Required Courses (5 course, 36 units minimum)
BXA-specific courses give students the opportunity to integrate their areas of concentration by focusing on interdisciplinary approaches and arts-based research techniques.

52-190 BXA Seminar I: Building the Wunderkammer 9
or 52-291 BXA Seminar II: Transferring Knowledge 9
52-391 BXA Junior Portfolio 0
52-392 BXA Seminar III: Deconstructing Disciplines 9
52-401 BXA Seminar IV: Capstone Fall 9
52-402 BXA Seminar V: Capstone Spring 9