

General Education: Science, Technology, Engineering and Mathematics (STEM)

15 credits required: 4 credits (minimum) from Mathematics & 7 credits (minimum) from Science

2023-2024

Students must take a minimum of 15 credits in STEM following these requirements:

- A minimum of 4 credits are required from the Mathematics list
- Complete at least two courses in two different disciplines (different course prefixes) from the Science list
 - Minimum of 7 Science credits required
 - at least one of the Science courses must include or be taken with the accompanying laboratory
- No more than 4 credits from the Restricted STEM list may be counted toward the STEM requirement
- Some courses are on the STEM list and the HASS list, but each course can satisfy only one requirement

Some degree programs specify some or all STEM requirements; students should check with their academic advisor for specific requirements

Mathematics

- Minimum of 4 credits required

| | | |
|---------|--|---|
| BUS2300 | Quantitative Problem Solving | 3 |
| MA1020 | Quantitative Literacy | 4 |
| MA1030 | College Algebra I and | |
| MA1031 | College Algebra II with Trigonometry | 6 |
| MA1032 | Precalculus | 4 |
| MA1120 | Single-Variable Calculus with Integrated Precalculus I | 4 |
| MA1135 | Calculus for Life Sciences | 4 |
| MA1160 | Calculus with Technology I | 4 |
| MA1161 | Calculus Plus with Technology I | 5 |
| MA2720 | Statistical Methods | 4 |
| PSY2720 | Statistics for the Behavioral Sciences | 4 |
| SS2720 | Statistics for Social Sciences | 4 |

Science

- At least two courses in two different disciplines are required; at least one must include or be taken with the accompanying laboratory
- Courses or course-groups satisfying the laboratory requirement are designated by an asterisk (*)
- Minimum of 7 credits required

| | | |
|---------|--|-----|
| BL1010* | General Biology I | 4 |
| BL1020* | General Biology II | 4 |
| BL1040* | Principles of Biology | 4 |
| BL1100* | General Biology I (plus BL1110**) | 4 |
| BL1200* | General Biology II (plus BL1210**) | 4 |
| BL1400* | Principles of Biology (plus BL1410**) | 4 |
| BL2010* | Anatomy & Physiology I (plus BL2011) | 4 |
| BL2160* | Botany | 4 |
| BL2940 | Human Nutrition | 3 |
| BL3970 | Current Health Issues | 3 |
| BL4090 | Tropical Island Biology | 2 |
| CH1000 | Introductory Chemistry | 3 |
| CH1112* | University Chemistry – Studio Lab I | 5 |
| CH1150* | University Chemistry I (plus CH1151/1153) | 4/5 |
| FW1035* | Wood Anatomy and Properties | 3 |
| FW2060 | Fundamentals of Environmental Sustainability | 3 |

Science cont'

| | | |
|----------|--|---|
| FW3075 | Introduction to Biotechnology | 3 |
| FW3330* | Soil Science | 4 |
| FW3610* | Ornithology | 4 |
| FW3620 | Field Ornithology | 1 |
| FW4120 | Tree Physiology | 3 |
| FW4128 | Conservation Genetics | 3 |
| FW4240* | Mammalogy | 4 |
| GE2000* | Understanding the Earth | 3 |
| KIP3100* | Exercise Assessment and Prescription | 3 |
| KIP3700* | Lifetime Fitness | 3 |
| PH1090* | The Physics Behind Music (plus PH1091**) | 4 |
| PH1110* | College Physics I (plus PH1111) | 4 |
| PH1140* | Applied College Physics I (plus PH1141) | 4 |
| PH1160* | Honors Physics I-Mechanics (plus PH1161 or PH1100) | 5 |
| PH1600* | Introductory Astronomy (plus PH1610**) | 3 |
| PH2100* | University Physics I-Mechanics (plus PH1100) | 4 |
| SS3221* | Archaeological Sciences (plus SS3222) | 4 |

**This laboratory is optional with the associated course. If the laboratory is not taken, the associated course can count as a Science course, but it will not satisfy the laboratory portion of the requirement.

Restricted STEM

- No more than 4 credits
- No course may count in a degree audit toward both STEM and HASS requirements

| | | |
|---------|--|-----|
| BL1020 | General Biology II | 4 |
| BL1200 | General Biology II | 3 |
| CH1122 | University Chemistry Studio Laboratory II *** | 5 |
| CH1160 | University Chemistry II (plus CH1161/1163) *** | 4/5 |
| CMG1000 | Introduction to Construction Management | 3 |
| CS1121 | Introduction to Programming I | 3 |
| CS1122 | Introduction to Programming II | 3 |
| CS1131 | Accelerated Introduction to Programming *** | 5 |
| CS1142 | Programming at the Hardware Software Interface | 3 |
| EC3002 | Microeconomic Theory | 3 |
| EC4050 | Game Theory/Strategic Behavior | 3 |
| EC4100 | Mathematical Economics | 3 |
| EC4200 | Econometrics | 3 |
| EET1120 | Circuits I | 4 |
| EET1411 | Basic Electronics | 4 |
| ENG1001 | Engineering Problem Solving | 2 |
| ENG1003 | Introduction to Computer Aided Drafting | 1 |
| ENG1100 | Engineering Analysis | 2 |
| ENG1101 | Engineering Analysis and Problem Solving | 3 |
| ENG1102 | Engineering Modeling and Design | 3 |
| HU3700 | Philosophy of Science | 3 |
| HU3701 | Philosophy of Technology | 3 |
| KIP1500 | Foundations of Kinesiology | 3 |
| MIS2100 | Introduction to Business Programming | 3 |
| PH1210 | College Physics II (plus PH1200) | 4 |
| PH1360 | Honors Physics II (plus PH1361) | 3 |
| PSY3060 | Physiological Psychology | 3 |
| SAT1700 | Cyber Ethics | 3 |
| SND4120 | Transducer Theory | 3 |

Restricted STEM cont'

| | | |
|----------|---|-----|
| SND4121 | Transducer Theory Lab | 1 |
| SS2050 | Fundamentals of GIS | 3 |
| SS2200 | Introduction to Archaeology | 3 |
| SS3210 | Field Archaeology | var |
| SS3230 | Archaeology of Industry | 3 |
| SS3250 | Biological Anthropology | 3 |
| SS3510 | History of American Technology | 3 |
| SS3511 | History of Science in America | 3 |
| SS3580 | Technology and Society in History | 3 |
| SS3581 | History of Science | 3 |
| SS3820 | Ethical, Legal, and Societal Implications (ELSI) of Nanotechnology | 3 |
| SS4009 | Survey Methods | 3 |
| SS4050 | GIS Applications for Social Science | 3 |
| THEA2310 | Drafting for the Entertainment Industry | 3 |

***A maximum of 4 credits will count toward STEM requirements

Any course at the 2000-level or higher in the following STEM disciplines (with the exceptions of BE2100, CM3410, ENG2060, ENG3060, ENG4060, and ENG4070):

Biological Sciences (BL), Chemistry (CH), Computer Science (CS), Engineering (BE, CE, CEE, CM, EE, ENG, ENVE, GE, MEEM, MY, MSE, SSE), Forest Resources and Environmental Science (FW), Geological Sciences (GE), Kinesiology (KIP), Mathematics (MA), Physics (PH), Technology (EET, MET, SAT, SU, TE)

APPROVED TRANSFER COURSES

The following courses are available **ONLY** by transfer.

Mathematics

MA1XXX Approved Transfer STEM Math Elective var

Science

BL1XXX Approved Transfer Science-Biology var

BL2XXX Approved Transfer Science-Biology var

BLL1XXX* Approved Transfer Lab Science-Biology var

BLL2XXX* Approved Transfer Lab Science-Biology var

CH1XXX Approved Transfer Science-Chemistry var

CH2XXX Approved Transfer Science-Chemistry var

CHL1XXX* Approved Transfer Lab Science-Chemistry var

CHL2XXX* Approved Transfer Lab Science-Chemistry var

FW1XXX Approved Transfer Science-Forestry var

FW2XXX Approved Transfer Science-Forestry var

FWL1XXX* Approved Transfer Lab Science-Forestry var

FWL2XXX* Approved Transfer Lab Science-Forestry var

GE1XXX Approved Transfer Science-Geology/Mining var

GE2XXX Approved Transfer Science-Geology/Mining var

GEL1XXX* Approved Transfer Lab Science-Geology/Mining var

GEL2XXX* Approved Transfer Lab Science-Geology/Mining var

KIP1XXX Approved Transfer Science-Kinesiology var

KIP2XXX Approved Transfer Science-Kinesiology var

KIPL1XXX* Approved Transfer Lab Science-Kinesiology var

KIPL2XXX* Approved Transfer Lab Science-Kinesiology var

PH1XXX Approved Transfer Science-Physics var

PH2XXX Approved Transfer Science-Physics var

PHL1XXX* Approved Transfer Lab Science-Physics var

PHL2XXX* Approved Transfer Lab Science-Physics var

SCI1XXX Approved Transfer Science var

SCI2XXX Approved Transfer Science var

SCIL1XXX* Approved Transfer Lab Science var

SCIL2XXX* Approved Transfer Lab Science var

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