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

15 credits required: 4 credits (minimum) from Mathematics & 7 credits (minimum) from Science 2016-2017

FH3700\*

Lifetime Fitness

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
  - o 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 <i>and</i>                  |     |
| MA1031  | College Algebra II with Trigonometry          | 6   |
| MA1032  | Precalculus                                   | 4   |
| MA1135  | Calculus for Life Sciences                    | 4   |
| MA1160  | Calculus with Technology I                    | 4   |
| MA1161  | Calculus Plus with Technology I               | 5   |
| MA2720  | Statistical Methods                           | 4   |
| MAA8888 | Approved Math Elective (transfer credit only) | var |
| PSY2720 | Statistics for the Behavioral Sciences        | 4   |
| SS4010  | Social Statistics                             | 3   |

### 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   |
|          | (only applies to Science list if transferred in as a first semester Biology course) |     |
| BL1040*  | Principles of Biology   | 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   |
| BL9900   | Approved Science – Biology (transfer credit only)                                   | var |
| BLL9900* | Approved Lab Sci – Biology (transfer credit only)                                   | var |
| CH1112*  | University Chemistry – Studio Lab I   | 5   |
| CH1150*  | University Chemistry I (plus CH1151/1153)   | 4/5 |
| CH9900   | Approved Science – Chemistry (transfer credit only)                                 | var |
| CHL9900* | Approved Lab Sci – Chemistry (transfer credit only)                                 | var |
| EH3100*  | Exercise Assessment and Prescription  | 3   |

| EU9/00   | Fliefillie Liffle22                                   | 3   |
|----------|---|-----|
| FW1035*  | Wood Anatomy and Properties                           | 4   |
| FW2010*  | Vegetation of North America                           | 4   |
| FW3075   | Introduction to Biotechnology                         | 3   |
| FW3320   | Fundamentals of Forest Genetics & Genomics            | 3   |
| FW3330*  | Soil Science  | 4   |
| FW3610*  | Ornithology   | 4   |
| FW3620   | Field Ornithology                                     | 1   |
| FW4120   | Tree Physiology                                       | 3   |
| FW4128   | Conservation Genetics                                 | 3   |
| FW4220*  | Wetlands  | 4   |
| FW4240*  | Mammalogy   | 4   |
| FW4260*  | Population Ecology                                    | 3   |
| FW9900   | Approved Sci – Forest/Env Sci (transfer credit only)  | var |
| FWL9900* | Approved Lab Sci – For/Env Sci (transfer credit only) | var |
| GE2000*  | Understanding the Earth                               | 3   |
| GE9900   | Approved Science – Geology (transfer credit only)     | var |
| GEL9900* | Approved Lab Sci – Geology (transfer credit only)     | var |
| 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   |
| PH9900   | Approved Science – Physics (transfer credit only)     | var |
| PHL9900* | Approved Lab Sci – Physics (transfer credit only)     | var |
| SS3220*  | Archaeological Sciences                               | 4   |
|          |   |     |

3

\*\*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   |
|---------|--|-----|
| 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   |
| EC4200  | Econometrics                                   | 3   |
| EET1120 | Circuits I                                     | 4   |
| EET1411 | Basic Electronics                              | 4   |
| EH1500  | Foundations of Kinesiology                     | 3   |
| 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   |
| FA2701  | Drafting for the Entertainment Industry        | 3   |

| FA4740  | Transducer Theory                                | 3   |
|---------|--|-----|
| FA4741  | Transducer Theory Lab                            | 1   |
| HU3700  | Philosophy of Science                            | 3   |
| HU3701  | Philosophy of Technology                         | 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   |
| SS2200  | Introduction to Archaeology                      | 3   |
| SS3210  | Field Archaeology                                | var |
| SS3230  | Archaeology of Industry                          | 3   |
| SS3250  | Human Origins & Evolution                        | 3   |
| SS3510  | History of American Technology                   | 3   |
| SS3511  | History of Science in America                    | 3   |
| SS3580  | Technology and Western Civilization              | 3   |
| SS3820  | Ethical, Legal, and Societal Implications (ELSI) |     |
|         | of Nanotechnology                                | 3   |
| SS4009  | Survey Methods                                   | 3   |
| SS4050  | GIS Applications for Social Science              | 3   |

<sup>\*\*\*</sup>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 exception of BE2100):
Biological Sciences (BL), Chemistry (CH), Computer Science (CS), Engineering (BE, CE, CM, EE, ENG, ENVE, GE, MEEM, MY, SSE), Forest Resources and Environmental Science (FW), Geological Sciences (GE), Mathematics (MA), Physics (PH), Technology (EET, MET, SAT, SU, TE)

# THE REST OF THIS PAGE INTENTIONALLY LEFT BLANK