

# Mechanical Engineering

| FIRST YEAR                       |   | SECOND YEAR                                     |                                      | THIRD YEAR                          |  | FOURTH YEAR                        |                            |
|----------------------------------|---|---|--------------------------------------|-------------------------------------|--|------------------------------------|----------------------------|
| FALL                             | SPRING  | FALL  | SPRING                               | FALL                                | SPRING   | FALL                               | SPRING                     |
| WRIT 150<br>4                    | GESM (GE B)#<br>4                               | GE C<br>4                                       | AME 208<br>PHYS 152, (MATH 245)<br>4 | GE C<br>4                           | MASC 310L<br>4   | GE B<br>4                          | WRIT 340<br>WRIT 150<br>4  |
| AME 101L<br>(MATH 125)<br>4      | GE A*<br>4                                      | AME 201<br>MATH 125 or 126 or 226<br>4          | AME 204<br>AME 201<br>4              | AME 301<br>AME 201, (MATH 245)<br>4 | AME 310<br>PHYS 151 and MATH 125<br>or 126 or 226<br>4 | AME 431<br>AME 310, (AME 309)<br>4 | GE D<br>4                  |
| MATH 125<br>(GE F)*<br>4         | MATH 126 or<br>MATH 129*<br>MATH 125<br>4       | MATH 226 or<br>MATH 229<br>MATH 126 or 129<br>4 | MATH 245<br>MATH 226 or 229<br>4     | AME 308<br>AME 204, (AME 301)<br>4  | AME 309<br>AME 201, (MATH 245)<br>4                    | TECHNICAL<br>ELECTIVE<br>4         | TECHNICAL<br>ELECTIVE<br>4 |
| CHEM 105aL or<br>MASC 110L*<br>4 | PHYS 151L (GE E)<br>MATH 125 or 126 or 226<br>4 | PHYS 152L<br>PHYS 151L, (MATH 226)<br>4         | PHYS 153L<br>PHYS 152<br>4           | AME 341aL<br>PHYS 152, AME 208<br>4 | AME 341bL<br>AME 341a<br>4                             | AME 441aL<br>AME 341a, 341b<br>4   | CAPSTONE<br>ELECTIVE<br>4  |
| ENGR 102<br>2                    | ITP 168<br>2                                    | OPTIONAL<br>ELECTIVE<br>2                       | OPTIONAL<br>ELECTIVE<br>2            | AME 302a<br>MATH 245<br>2           | OPTIONAL<br>ELECTIVE<br>2                              | OPTIONAL<br>ELECTIVE<br>2          | OPTIONAL<br>ELECTIVE<br>2  |

## MATHEMATICS (16 UNITS)

**MATH 125:** Calculus I\*

**MATH 126 or MATH 129:** Calculus II\*

**MATH 226 or MATH 229:** Calculus III

**MATH 245:** Mathematics of Phys. and Engr.

## PHYSICS (12 UNITS)

**PHYS 151L:** Mechanics and Thermodynamics

**PHYS 152L:** Electricity and Magnetism

**PHYS 153L:** Optics and Modern Physics

## CHEMISTRY/MATERIALS SCIENCE (4 UNITS)

**CHEM 105aL:** General Chemistry\*

or **MASC 110L:** Materials Science

## GENERAL EDUCATION (32 UNITS)

**GE A** The Arts (1 Course)\*

**GE B** Humanistic Inquiry (2 Courses)

**GE C** Social Analysis (2 Courses)

**GE D** Life Sciences (1 Course)\*

**GE E** Physical Sciences (1 Course)\*

**GE F** Quantitative Reasoning (1 Course)\*

**GE G,H** Global Perspectives (2 Courses)\*

**GESM** General Education Seminar (1 Course)

## WRITING (8 UNITS)

**WRIT 150:** Writing and Critical Reasoning

**WRIT 340:** Advanced Writing

## ENGINEERING (68 UNITS)

**AME 101L:** Introduction to Mechanical Engineering

**AME 201:** Statics

**AME 204:** Mechanics of Materials & Structures

**AME 208:** Mathematical Methods in Engineering

**AME 301:** Dynamics

**AME 302a:** Systems

**AME 308:** Computer-Aided Engineering

**AME 309:** Dynamics of Fluids

**AME 310:** Engineering Thermodynamics I

**AME 341aL:** Measurement & Instrumentation Laboratory

**AME 341bL:** Measurement & Instrumentation Laboratory

**AME 431:** Heat Transfer

**AME 441aL:** Senior Projects Laboratory

**AME CAPSTONE ELECTIVE**

**ENGR 102:** Engineering Freshman Academy

**ITP 168:** Introduction to MATLAB

**MASC 310L:** Materials Behavior & Processing

**TECHNICAL ELECTIVES**

## SPECIAL NOTES

Courses with the \* symbol may be satisfied with AP, IB or A-Level exams. See page 18 for more information.

**GESM#:** GESM can be taken from GE categories: A, B, C, or D. Courses listed in the guide are options for a four-year course plan.

**GE:** Engineering students are encouraged to satisfy GE-G and GE-H with a course that also satisfies a Core Literacy. GE-H may be satisfied by AP/IB. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 17 for more information and consult your advisor for detailed assistance.

**PHYSICS REQUIREMENT:** PHYS 161-163 and PHYS 171-173 are acceptable towards this requirement.

**AME CAPSTONE:** See academic advisor for approved list of courses.

**TECHNICAL ELECTIVES:** Any upper-division course in engineering, chemistry, physics or mathematics.

**OPTIONAL ELECTIVES:** Consult with your academic advisor to explore optional elective courses. These courses are not required.