

MECHANICAL ENGINEERING MAJOR

Program Tracking Sheet

Effective for students entering AY 2021-2022

| | |
|----------|------------------------|
| Name: | Class Year: |
| Advisor: | 2 nd Major: |

NOTES: Minimum total academic credit = 15 units

Residency Req.: Min. of 8 units must be completed at WPI

HUMANITIES AND ARTS (2 units)

All 5 HUA courses must be completed before beginning the Inquiry Seminar or Practicum.

Depth Component

Students must complete at least three thematically-related courses prior to the culminating Inquiry Seminar or Practicum in the same thematic area. At least one of the three courses should be at the 2000-level or above.

| | Course | Term | Grade | Units |
|---|--------------------|------|-------|-------|
| 1 | | | | 1/3 |
| 2 | | | | 1/3 |
| 3 | | | | 1/3 |
| 4 | HU 3900 or HU 3910 | | | 1/3 |

Breadth Component

Students must take at least one course outside the grouping in which they complete their depth component. To identify breadth, courses are grouped in the following manner.

- i. art/art history, drama/theatre, and music (AR, EN/TH, MU);
- ii. foreign languages (AB, CN, EN, GN, SP);
- iii. literature and writing rhetoric (EN, WR, RH);
- iv. history and international studies (HI, HU, INTL);
- v. philosophy and religion (PY, RE).

Exception: May take all six courses in a foreign language

| | | | | |
|---|--|--|--|-----|
| 5 | | | | 1/3 |
|---|--|--|--|-----|

Humanities Elective

| | | | | |
|---|--|--|--|-----|
| 6 | | | | 1/3 |
|---|--|--|--|-----|

PHYSICAL EDUCATION (4 PE classes = 1/3 unit)

| | | | | |
|---|--|--|--|------|
| 7 | | | | 1/12 |
| | | | | 1/12 |
| | | | | 1/12 |
| | | | | 1/12 |

SOCIAL SCIENCE (2/3 unit) ECON, ENV, GOV, PSY, SD, SOC, SS, STS, DEV, and ID2050

| | | | | |
|---|--|--|--|-----|
| 8 | | | | 1/3 |
| 9 | | | | 1/3 |

THE INTERACTIVE QUALIFYING PROJECT (1 unit)

| | | | | |
|----|--|--|--|-----|
| 10 | | | | 1/3 |
| 11 | | | | 1/3 |
| 12 | | | | 1/3 |

FREE ELECTIVES (1 unit)

| | | | | |
|----|--|--|--|-----|
| 13 | | | | 1/3 |
| 14 | | | | 1/3 |
| 15 | | | | 1/3 |

MATHEMATICS AND BASIC SCIENCE (3 2/3 units)

MATHEMATICS (6/3 units)

Must include Differential & Integral Calculus and Ordinary Differential Equations

| | | | | |
|----|---|--|--|-----|
| 16 | MA 1021 Calculus I | | | 1/3 |
| 17 | MA 1022 Calculus II | | | 1/3 |
| 18 | MA 1023 Calculus III | | | 1/3 |
| 19 | MA 1024 Calculus IV | | | 1/3 |
| 20 | MA 2051 Ordinary Differential Equations | | | 1/3 |
| 21 | MA 2071 Linear Algebra | | | 1/3 |

SCIENCE (3/3 unit)

One Chemistry and two Physics, OR one Physics and two Chemistry

| | | | | |
|----|--|--|--|-----|
| 22 | | | | 1/3 |
| 23 | | | | 1/3 |
| 24 | | | | 1/3 |

STUDENT SELECTED COURSES (2/3 unit)

From the general category of Mathematics and/or Basic Science

| | | | | |
|----|--|--|--|-----|
| 25 | | | | 1/3 |
| 26 | | | | 1/3 |

ENGINEERING SCIENCE AND DESIGN (6 1/3 units)

MECHANICAL SYSTEMS (4/3 unit)

| | | | | |
|----|----------------------------------|--|--|-----|
| 27 | ES 2501 Intro to Static Systems | | | 1/3 |
| 28 | ES 2502 Stress Analysis | | | 1/3 |
| 29 | ES 2503 Intro to Dynamic Systems | | | 1/3 |
| 30 | ME 4320/4322/4810 | | | |

THERMAL SYSTEMS (4/3 unit)

| | | | | |
|----|---------------------------------|--|--|-----|
| 31 | ES 3001 Intro to Thermodynamics | | | 1/3 |
| 32 | ES 3004 Fluid Mechanics | | | 1/3 |
| 33 | ES 3003 Heat Transfer | | | 1/3 |
| 34 | ME 4422/ME 4429 | | | |

OTHER COURSES (4/3 unit)

| | | | | |
|----|--|--|--|-----|
| 35 | ES 2001 Intro to Material Science | | | 1/3 |
| 36 | ECE 2010 Intro to ECE | | | 1/3 |
| 37 | ME 3901 Engineering Experimentation | | | 1/3 |
| 38 | Programming (ME 2312/ ME 4512/ BME 1004/ CS 1101 or CS 1004) | | | 1/3 |

MAJOR QUALIFYING PROJECT (3/3 unit)

| | | | | |
|----|--|--|--|-----|
| 39 | | | | 1/3 |
| 40 | | | | 1/3 |
| 41 | | | | 1/3 |

ELECTIVES (4/3 unit)

Note 1: Elective courses from engineering disciplines may be selected at the 2000 or higher level. They may also include ES and ME courses at the 1000 level.

| | | | | |
|----|--|--|--|-----|
| 42 | | | | 1/3 |
| 43 | | | | 1/3 |
| 44 | | | | 1/3 |
| 45 | | | | 1/3 |

Note 2: ES 3001 can be replaced by CH 3510 or PH 2101. If CH or PH is used to cover thermodynamics, this course counts as a science; another engineering elective is then required.

Note 3: ECE 2010 or any ECE course other than ECE 1799.