

MECHANICAL ENGINEERING

Recommended Program Sequence

Bachelor of Science Degree

(57 Units in Engineering, 123 Total Units)

| | | |
|-----------------|--------------------|-----------------------|
| Student _____ | ID# _____ | Adviser _____ |
| Telephone _____ | Catalog Year _____ | Graduation Date _____ |
| Email _____ | | |

ADVISING SHEET

MAJOR CODE: 054402

2020-2021

| 1 ST (Fall) SEMESTER | | | | 2 ND (Spring) SEMESTER | | | |
|--|---------------------|-----------------|----------|--|--------------------|-----------------|----------|
| Units | Grade | Sem | Transfer | Units | Grade | Sem | Transfer |
| ME 1 | Intro to ME | 1 | ___ | ME 2 | Cmpt App in ME | 1 | ___ |
| ME 26 | Engr Graphics | 3 | ___ | CHEM 1A | Gen Chemistry | 3 | ___ |
| ECE71/CSCI40 | (Intro Prog) | 3/4 | ___ | CHEM 1AL | Gen Chemistry Lab | 2 | ___ |
| GE Area A2 | ENGL 10 | 3 | ___ | MATH 76 | Math Analysis II | 4 | ___ |
| MATH 75 | Math Analysis I | 4 | ___ | PHYS 4A | Mech+Wave Motion | 3 | ___ |
| GE Area B2 ² | Life Sciences | <u>3</u> | ___ | PHYS 4AL | Lab Mech+Wave | 1 | ___ |
| | | 17/18 | ___ | GE Area D1 | HIST 11 or 12 | <u>3</u> | ___ |
| | | | | | | 17 | |
| 3 RD (Fall) SEMESTER | | | | 4 TH (Spring) SEMESTER | | | |
| ME 31 | Engr Materials | 3 | ___ | ME 95 | Manuf Processes | 2 | ___ |
| ME 32 | Engr Materials Lab | 1 | ___ | CE 20 | Engr Mech Statics | 3 | ___ |
| MATH 77 | Math Analysis III | 4 | ___ | ECE 91 | Intro Elec Engr | 3 | ___ |
| PHYS 4B | Elec+Mag+Heat | 3 | ___ | ECE 91L | Elec Cir Lab | 1 | ___ |
| GE Area A1 | Oral Communication | 3 | ___ | MATH 81 ⁴ | Applied Analysis | 3 | ___ |
| GE Area C2 | PHIL 20 | <u>3</u> | ___ | PHYS 4C | Light + Mod Phys | 3 | ___ |
| | | 17 | ___ | GE Area D2 | PLSI 2 | <u>3</u> | ___ |
| | | | | | | 18 | |
| 5 TH (Fall) SEMESTER | | | | 6 TH (Spring) SEMESTER | | | |
| ME 112 | Engr Mech: Dyn | 3 | ___ | ME 116 | Fluid Mechanics | 3 | ___ |
| ME 115 | Instu & Meas Lab | 1 | ___ | ME 118** | Fluid Mech Lab | 1 | ___ |
| ME 136 | Thermodynamics | 3 | ___ | ME 156 | Adv Thermo | 3 | ___ |
| ME 125 | Engr Stat & Expt | 3 | ___ | ME 134 ¹ | Kinematics of Mach | 3 | ___ |
| CE 121 | Mech of Mtls | 3 | ___ | ME 140 | Adv Engr Analysis | 3 | ___ |
| | | 13 | ___ | | | 13 | |
| 7 TH (Fall) SEMESTER | | | | 8 TH (Spring) SEMESTER | | | |
| Technical Area Course³ | | <u>3</u> | ___ | Technical Area Course³ | | <u>3</u> | ___ |
| ME 135 | Intro Dsgn-Sr Cap I | 3 | ___ | ME 155 | Sr Cap Design II | 3 | ___ |
| ME 145 | Heat+Mass Trans | 3 | ___ | ME 166 | Energy Sys Design | 3 | ___ |
| ME 154 | Dsgn of Mach Elem | 3 | ___ | ME 159 | Mech Sys Dsgn Lab | 1 | ___ |
| GE Area D3 ² | Social Sciences | 3 | ___ | GE Area M/I | PLSI 120 | <u>3</u> | ___ |
| | | 15 | ___ | | | 13 | ___ |

¹Also counts as major GPA

²See Catalog for G.E. Courses

³Take a minimum of 6 units in Group A (ME 122, 137, 142, 144, 146, 162 or 164 (to be offered in alternate years)). A maximum of 3 units from Group B (ME 180, 190, 191T) may be substituted for a course in Group A with faculty adviser's approval.

⁴Engr 101 may be taken as an alternative for Math 81 with adviser's approval.

*Math 75 is a pre/co-requisite for all engineering courses except ME 1.

**NOTE: Department approved writing course or equivalent must be taken in the junior year if the student fails the writing exam requirement.

Must have a minimum grade of "C" or better on all math, science and engineering courses.

Bachelor of Science Degree in Mechanical Engineering

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|--|----------------|
| Major Requirements | 66 |
| ME 1, 2, 26, 31, 32, 95, 112, 115, 116, 118, 125, 135, 136, 140 145, 154, 156..... | (40) |
| CE 20, 121..... | (6) |
| ECE 70/ECE 71/CSCI 40, ECE 91 and ECE 91L..... | (7) |
| Design Applications..... | (7) |
| ME 155, ME 159 and ME 166 | |
| Technical Area Courses..... | (7) |
| Take a minimum of three units from the courses offered in Group A: ME 137, 142, 144, 146, 162, or 164. A maximum of three units from Group B may be substituted for a course in Group A with faculty advisor's approval: ME 180, 190, 191T; ECE 121, 121L, 155 | |
| Other Requirements | 57 |
| 1. General Education | 36 |
| COMM 3, 7, or 8 (GE Area A1); ENGL 10 (GE Area A2); HIST 11 or 12 (GE Area D1) and select one course from each of the following GE Areas: B2, and D3 The following courses are required to satisfy both GE and major requirements: CHEM 1A (GE Area B1)MATH 75 (GE Area B4) PHIL 20 (GE Area C2).....PLSI 2 (GE Area D2) ME 134 (GE Area 1B).....PLSI 120 (GE Area M/I) | |
| 2. Additional Requirements | 21 |
| MATH 76, 77, 81; PHYS 4A, 4AL, 4B, 4C | |
| TOTAL | 123 |

Advising Notes:

1. Courses in mathematics, the physical sciences, or engineering taken CR/NC are not counted toward fulfillment of degree requirements in mechanical engineering.
2. Mechanical engineering majors might consider a math, physics, or business minor.
3. Since the mechanical engineering major curriculum is very demanding, many students, especially those not fully prepared in mathematics, chemistry and/or physics, take 4-1/2 or more years to graduate rather than the traditional 4 years.
4. *Advising is mandatory* in the Lyles College of Engineering. A registration hold will be placed on students who fail to see their adviser at least once per academic year.
5. *The Upper-Division Writing Skills* requirement has to be completed no sooner than the term in which 60 units of coursework are completed or no later than the term in which 90 units are completed. This requirement can be met by passing the university writing examination or by taking ENGR 105W or a department-approved writing course. Must be taken and passed with a letter grade of "C" or better in the junior year if the student fails the writing exam requirement.
6. With faculty adviser approval, ENGR 101 may be taken instead of MATH 81.