



# COLLEGE OF ENGINEERING

IMPACT • ACCESS • INCLUSION



## Undergraduate Advising Form • MECHANICAL ENGINEERING CATALOG 2018-19

<b>SEM 1</b> <b>15</b> <b>HRS</b>	<b>ENGR 10 (0)</b> Freshman Seminar <input type="checkbox"/>	<b>MATH 106 (5)</b> Calculus I <input type="checkbox"/>	<b>CHEM 109 (4)</b> General Chemistry I <input type="checkbox"/>	<b>ENGR 100 (3)</b> Interpersonal Skills for Eng. Leaders OR: COMM 210, 283, or 286 <input type="checkbox"/>	<b>ACE Elective (3)</b> (5, 6, 7, or 9) <input type="checkbox"/>		
<b>SEM 2</b> <b>16</b> <b>HRS</b>	<b>MATH 107 (4)</b> Calculus II Pre: MATH 106 <input type="checkbox"/>	<b>CHEM 110 (4)</b> General Chemistry II <input type="checkbox"/>	<b>PHYS 211 (4)</b> General Physics I Co: MATH 106 <input type="checkbox"/>	<b>PHYS 221 (1)</b> Physics Lab I Co: PHYS 211 <input type="checkbox"/>	<b>CSCE 155N (3)</b> Comp Sci I: Eng. and Science Focus-MATLAB OR: CSCE 155E <input type="checkbox"/>		
<b>SEM 3</b> <b>17</b> <b>HRS</b>	<b>MATH 208 (4)</b> Calculus III Pre: MATH 107 <input type="checkbox"/>	<b>PHYS 212 (4)</b> General Physics II Pre: PHYS 211 Co: MATH 107 <input type="checkbox"/>	<b>MECH 223 (3)</b> Statics Pre: C or better in PHYS 211 & MATH 107 <input type="checkbox"/>	<b>BSEN 206 (3)</b> Engineering Economics Pre: Sophomore Standing <input type="checkbox"/>	<b>MECH 130 (3)</b> Intro to CAD <input type="checkbox"/>	<b>ENGR 20 (0)</b> Sophomore Seminar <input type="checkbox"/>	
<b>SEM 4</b> <b>16</b> <b>HRS</b>	<b>MATH 221 (3)</b> Diff. Equations Pre: MATH 208 <input type="checkbox"/>	<b>MECH 373 (3)</b> Dynamics Pre: MECH 223 & MATH 208 <input type="checkbox"/>	<b>MECH 325 (3)</b> Elastic Bodies Pre: MECH 223 & MATH 208 <input type="checkbox"/>	<b>MATL 360 (4)</b> Elastic Bodies Pre: PHYS 212 & CHEM 109 Co: MECH 223 <input type="checkbox"/>	<b>MECH 200 (3)</b> Engineering Thermo Pre: PHYS 212 & MECH 223 <input type="checkbox"/>		
<b>SEM 5</b> <b>16</b> <b>HRS</b>	<b>MECH 300 (3)</b> Thermal Systems Pre: MECH 200 & CSCE 155N <input type="checkbox"/>	<b>MECH 342 (3)</b> Kinematics Pre: MECH 130 & MECH 373 <input type="checkbox"/>	<b>MATH 314 (3)</b> Linear Algebra Pre: MATH 208 <input type="checkbox"/>	<b>ECEN 211 (3)</b> Electrical Eng I Co: MATH 107 or PHYS 211 <input type="checkbox"/>	<b>ECEN 231 (1)</b> Electrical Eng Lab Co: ECEN 211 <input type="checkbox"/>	<b>JGEN 200 (3)</b> Technical Comm Sub: ENGL 150 & ENGL 151 <input type="checkbox"/>	
<b>SEM 6</b> <b>15</b> <b>HRS</b>	<b>MECH 321 (3)</b> Eng. Statistics & Data Analysis OR: STAT/MATH 380 Pre: MATH 208 <input type="checkbox"/>	<b>MECH 343 (3)</b> Machine Design Pre: BSEN 206, MATL 360, MECH 325&342, JGEN 200 Co: MECH 321 <input type="checkbox"/>	<b>MECH 350 (3)</b> Dynamics & Controls Pre: MECH 373, ECEN 211, CSCE 155N Co: MATH 314 <input type="checkbox"/>	<b>MECH 310 (3)</b> Fluid Mechanics Pre: MECH 373, MATH 221 Co: MECH 200 <input type="checkbox"/>	<b>MECH 380 (3)</b> Mech Eng. Measure Pre: ECEN 231, JGEN 200 Co: MECH 350, 310, 321 <input type="checkbox"/>		
<b>SEM 7</b> <b>17</b> <b>HRS</b>	<b>MECH 420 (3)</b> Heat Transfer Pre: MECH 310 <input type="checkbox"/>	<b>MECH 370 (3)</b> Manufacturing Pre: MATL 360, MECH 325 <input type="checkbox"/>	<b>MECH 446 (3)</b> Design I Pre: MECH 300, 310, 343, 350 <input type="checkbox"/>	<b>MECH 488 (2)</b> Kinematics / Mechanics Lab Pre: MECH 342, 343 Co: MECH 380 <input type="checkbox"/>	<b>MECH Technical Elective (3)</b> <input type="checkbox"/>	<b>ACE Elective (3)</b> (5, 6, 7, or 9) <input type="checkbox"/>	
<b>SEM 8</b> <b>17</b> <b>HRS</b>	<b>MECH 447 (2)</b> Design II Pre: MECH 446 <input type="checkbox"/>	<b>MECH 487 (2)</b> Thermal Fluids Pre: MECH 380, 300 Co: MECH 420 <input type="checkbox"/>	<b>ENGR 400 (1)</b> Professional Ethics <input type="checkbox"/>	<b>MECH Design Elective (3)</b> <input type="checkbox"/>	<b>Senior Elective (3)</b> <input type="checkbox"/>	<b>ACE Elective (3)</b> (5, 6, 7, or 9) <input type="checkbox"/>	<b>ACE Elective (3)</b> (5, 6, 7, or 9) <input type="checkbox"/>

## **MECHANICAL ENGINEERING COLLEGE REQUIREMENTS**

- Students may repeat a maximum of three engineering courses
- Students may take any one engineering course a maximum of two times
- Pass/No Pass is only an option for up to 12 credits of ACE courses in the humanities and social sciences. Pass/No Pass is not an option for other required courses or technical electives
- Students can be reviewed for professional admission twice within one department. If they do not receive professional admission after the second review, they can change their major. If they stay in the College of Engineering they must meet the professional admission criteria of their new major after one review or they must change their major outside of the college.
- Must fulfill the requirements of the catalog year of admission, can change to a subsequent catalog year in consultation with an advisor
- 30 of the last 36 degree hours must be registered for and completed at UNL or UNO
- College probation
  - Students with a cumulative GPA of less than 2.4 will be placed on college probation
  - Students move back to good academic standing when their cumulative GPA is 2.4 or higher
  - Students will be dismissed from the College of Engineering after two sequential semesters on college probation
  - Students cannot graduate from the College of Engineering while on college probation

## **DEPARTMENT REQUIREMENTS**

- PHYS 222 General Physics Lab II (1 cr) may substitute for PHYS 221 General Physics Lab I
- Choose one ACE elective from each of the four ACE Student Learning Outcomes (SLO) 5, 6, 7, or 9.
- Written communication - JGEN 200 can be substituted for ENGL 150 & ENGL 151
- The capstone design sequence must be taken in the order shown in the curriculum and should be taken in the last two semesters of the program (MECH 446 and 447).
- Design and technical electives must be chosen from a list of approved 400-level mechanical engineering elective courses provided by the department every semester.
- Senior electives may be either another mechanical engineering technical or design elective, or, with prior approval from your advisor, a 300-level or higher engineering, science, or math course.
- Professional admission - mechanical engineering students will be reviewed for professional admission upon completion of MECH 223 and 43 credit hours (and 12 UNL credit hours for transfer students). To be granted professional admission, a student must:
  - Earn a major GPA of 2.7 or higher at time of review
  - Have no more than 4 withdraws on their record
  - Have no more than 3 repeated courses
  - One must earn professional admission after two reviews or change their major. The second review will occur in the subsequent semester of first review.