

Mechanical Engineering and Physics

Department Information

- **Department Web Site:**
www.ndsu.edu/me/ (<http://www.ndsu.edu/me/>)
- **Credential Offered:**
B.S.M.E.
- **Official Program Curriculum:**
catalog.ndsu.edu/undergraduate/program-curriculum/mechanical-engineering-physics/ (<http://catalog.ndsu.edu/undergraduate/program-curriculum/mechanical-engineering-physics/>)

Engineering and physics are closely related disciplines. Mechanical engineering combines engineering physics and applied mathematics with materials science to design mechanical systems and novel materials. It requires knowledge of core areas of physics, such as mechanics, thermodynamics, theory of elasticity, electricity and magnetism. Modern materials science requires understanding of quantum physics. Therefore, the demand is growing for engineers with multidisciplinary training that includes both fundamental knowledge of physics and practical problem-solving skills. The Mechanical Engineering and Physics double major program is designed to allow students to complete the core requirements of both majors in a four-year degree. Graduates of the program will have a unique background qualifying them to work in industry or to pursue graduate studies in engineering, physics or related fields of science and technology.

Students will earn a Bachelor of Science in Mechanical Engineering (B.S.M.E.) degree with a second major in physics.

Sample Program Guide

IMPORTANT DISCLAIMER: A Sample Program Guide provides an unofficial guide of program requirements and should be used by prospective students who are considering attending NDSU in the future. It is NOT an official curriculum and should NOT be used by current NDSU students for official degree planning purposes. Note that the official curriculum used by current NDSU students can vary from the Sample Program Guide due to a variety of factors such as, but not limited to, start year, education goals, transfer credit, and course availability.

To ensure proper program completion, enrolled students should utilize Degree Map (<https://www.ndsu.edu/registrar/degreemap/>) and Schedule Planner (<https://www.ndsu.edu/onestop/degree-map-and-planning/>) in Campus Connection and consult regularly with their academic advisor to ensure requirements are being met.

Freshman			
Fall	Credits	Spring	Credits
MATH 165		4 MATH 166	4
ENGL 110 (or placement)		3 ENGL 120	3
CHEM 121		3 CHEM 122	3
ME 111		2 ME 212	3
PHYS 171		1 ME 221	3
Humanities & Fine Arts Gen Ed		3 Wellness General Education	2
		16	18
Sophomore			
Fall	Credits	Spring	Credits
MATH 129		3 MATH 266	3
MATH 265		4 COMM 110	3
IME 330		3 PHYS 252	4
ME 222		3 PHYS 252L	1
ME 223		3 ME 213	3
		ME 351	3
		16	17
Junior			
Fall	Credits	Spring	Credits
ENGL 321		3 ECE 301	3

ME 331	4	ME 361	3
ME 352	3	ME 442	3
PHYS 355 (ME Tech Elective)	3	ME 454	3
PHYS 411	3	PHYS 350 (ME Tech Elective)	3
PHYS 411L	1	PHYS 361 (ME Tech Elective)	3

17 **18**

Senior

Fall	Credits	Spring	Credits
ECE 306		1 ME 412	3
ME 443		3 ME 462	3
ME 457		3 ME 421	3
ME 461		3 Physics Elective	3
PHYS 485		3 Social & Behavioral Science Gen Ed	3
Social & Behavioral Science Gen Ed/ Global Perspectives		3 ENGR 327	3

16 **18**

Total Credits: 136

Degree Notes:

- Students who transfer any 30 or more credits into the program are not required to take ME 111.
- No grade less than 'C' is accepted to fulfill any of the degree requirements.
- Admission to the dual major requires a minimum 2.70 GPA
- A 2.50 cumulative GPA is required for graduation.