M.S. in Mechanical Engineering

The Department of Mechanical Engineering offers a Master of Science in Mechanical Engineering and an undesignated Master of Science with a major in Engineering. Specific courses of study in the Mechanical Engineering major include fluid and thermal systems, and solid mechanics and machine design.

Admission Requirements

Applicants are expected to have a Bachelor of Science in Mechanical Engineering or a related field. Depending upon selected area of concentration, students may need to complete deficiency undergraduate coursework.

- An official transcript, with the four-year baccalaureate degree posted, from the degree-granting institution and copies of transcripts for all other relevant upper-division and graduate work at accredited U.S. institutions or equivalent work and degrees at foreign institutions.
- Statement of Purpose
- 2 Letters of Recommendation

Applicants whose degrees are from non-English speaking institutions are required to demonstrate English proficiency. Please consult the Graduate School (https://www.utep.edu/graduate/future-students/applicant-timelines.html) website for required scores.

General Degree Requirements

Both thesis and non-thesis options are available under these two degree programs. Students enrolled in a thesis option follow a 30-hour program that is composed of 24 hours of coursework and six (6) hours of thesis (MECH 5398 and MECH 5399).

Non-thesis students follow a 30-hour program. For the Mechanical Engineering degree, the non-thesis option can include up to six (6) credit hours for Graduate Projects (MECH 5396 and MECH 5397). All students enrolled in the Mechanical Engineering program must take at least 18 semester hours of course work within their major if they are following the thesis option, or 24 semester hours if they are following the non-thesis option.

No more than six (6) semester hours of approved upper-level undergraduate coursework can be used to satisfy the degree requirements in the Mechanical Engineering programs. All coursework must be approved by the student's academic advisor and by the Graduate School. Specific requirements for each master’s program are available in the program office.

Professional Masters in Mechanical Engineering Track

The College offers a M.S degree tailored to mechanical engineering professionals. The program is administered by the Department of Mechanical Engineering.

Requirements for the Professional Masters in Mechanical Engineering

The Professional MS in Mechanical Engineering is a 30-semester-hour non-thesis program. Coursework includes on of the following two options:

1. A minimum of fifteen (15) semester hours of mechanical engineering classes ((9) nine hours need to be 5000 level or higher).
2. Three (3) semester hours of a graduate project.
3. The balance of fifteen (15) semester hours in graduate classes that support the student's thematic focus.

Or

1. A minimum of eighteen (18) semester hours of mechanical engineering classes ((12) twelve hours need to be 5000 level or higher).
2. the balance of fifteen (15) semester hours in graduate classes that support the student's thematic focus.

The student is required to develop a course plan of the classes out of the mechanical engineering program that he/she wishes to take and a statement of how these classes satisfy the student's area of interest. This must be approved by the Graduate Program Director of the Department of Mechanical Engineering. Thematic areas may include the following: manufacturing, product development, management, systems, biomechanical, aerospace.

Degree Plan

Required Credits:30

Code	Title	Hours
MS in Mechanical Engineering (All courses require a grade of C or better)		
Major Electives:		
Required:		
MECH 5301	Mathl Methods for Mech Eng	
Select fifteen hours of the following:		15

MECH 5302	Solid Mechanics I	
MECH 5303	Heat Transfer I	
MECH 5306	Fluid Dynamics	
MECH 5310	Thermodynamics	
MECH 5312	Solid Mechanics II	
MECH 5318	Analytical Dynamics	
MECH 5351	Intro to 3D Eng & Additive Mfg	
MECH 5390	Special Topics Mechanical Engr	
MECH 5391	Individual Studies	
MECH 5396	Graduate Projects	
MECH 5397	Graduate Projects	
Other Electives:		6
Select six additional hours of graduate courses in BIOL, CE, CHEM, CS, ECON, EE, GEOL, IE, IMS, MATH, MECH, MFG, MGMT, MIT, MME, PHYS, SE:		
Thesis/Non-Thesis Option:		
Select one sequence below:		
Thesis Option:		**6**
MECH 5398 & MECH 5399	Thesis and Thesis	
Non-Thesis Track Option:		**6**
Select six additional hours of graduate courses in BIOL, CE, CHEM, CS, ECON, EE, GEOL, IE, IMS, MATH, MECH, MFG, MGMT, MIT, MME, PHYS, SE:		
Total Hours		**30**