
BS IN MECHANICAL & ENERGY ENGINEERING

DEGREE IN THREE ACADEMIC MAP

2017-2018 CATALOG YEAR

This is an unofficial simplified checklist effective fall 2018. Degree requirements may change. You may need elective courses to help reach a minimum of 127 Total Hours & 42 Advanced Hours. Check with an advisor.

Must earn at least a grade of “C” in each course above except for most University Core courses.

MECHANICAL & ENERGY ENGINEERING

(Bachelor of Science (B.S.) degree with a major in Mechanical & Energy Engineering)

Department of Mechanical & Energy Engineering Discovery Park F-201; (940) 565-2400 Faculty Advisors: Dr. Mark Wasikowski, Dr. Xiaohua Li, Dr. Cherish Qualls Mark.Wasikowski@unt.edu , Xiaohua.li@unt.edu , cherish.qualls@unt.edu	Engineering Advising Office Discovery Park A-101; (940) 565-4201 Academic Advisors: Mia Dallas, Rachel Smith, Adrian Stephens Mia.Dallas@unt.edu , Rachel.Smith@unt.edu , Adrian.Stephens@unt.edu
University Core	Major Requirements (Grades with a C or better)
<p><u>COMMUNICATION</u></p> <ul style="list-style-type: none"> ▪ 1 Course (3 Hours) ▪ Grade of “C” or better is required <p><u>AMERICAN HISTORY I</u></p> <ul style="list-style-type: none"> ▪ 1 Course (3 Hours) <p><u>AMERICAN HISTORY II</u></p> <ul style="list-style-type: none"> ▪ 1 Course (3 Hours) <p><u>FEDERAL GOVERNMENT/POLITICAL SCIENCE</u></p> <ul style="list-style-type: none"> ▪ 1 Course (3 Hours) 	<p><u>MECHANICAL & ENERGY ENGINEERING</u></p> <ul style="list-style-type: none"> ▪ MEEN 1000, Discover Mechanical & Energy (3 Hours) ▪ MEEN 2110, Engineering Data Analysis (2 Hours) ▪ MEEN 2210, Thermodynamics I (3 Hours) ▪ MEEN 2240, Programming for Mechanical Engr. (3 Hours) ▪ MEEN 2301, Mechanics I (3 Hours) ▪ MEEN 2302, Mechanics II (3 Hours) ▪ MEEN 2332, Mechanics III (3 Hours) ▪ MEEN 3100, Manufacturing Processes (3 Hours) ▪ MEEN 3110, Thermodynamics II (3 Hours)

STATE GOVERNMENT/POLITICAL SCIENCE

- 1 Course (3 Hours)

CREATIVE ARTS

- 1 Course (3 Hours)

LANGUAGE, PHILOSOPHY, & CULTURE

- 1 Course (3 Hours)

SOCIAL & BEHAVIORAL SCIENCES

- 1 Course (3 Hours)

Major Requirements (Grades of C or better)

TECHNICAL COMMUNICATIONS

- TECM 2700, Technical Writing (3 Hours)

MATHEMATICS

- MATH 1710, Calculus I (4 Hours)
- MATH 1720, Calculus II (3 Hours)
- MATH 2700, Linear Algebra (Vector Geometry (3 Hours)
- MATH 2730, Multivariable Calculus (3 Hours)
- MATH 3410, Differential Equations (3 Hours)

SCIENCES

- PHYS 1710, Mechanics (3 Hours) & PHYS 1730, Mechanics Lab (1 Hour)
 - PHYS 2220, Electricity & Magnetism (3 Hours) & PHYS 2240, Electricity & Magnetism Lab (1 Hour)
 - CHEM 1410, General Chemistry I (3 Hours) & CHEM 1430, General Chemistry I Lab (1 Hour)
- OR**
- CHEM 1415, Chemistry for Engineers (3 Hours) & CHEM 1435, Chemistry for Engineers Lab (1 Hour)

- MEEN 3120, Fluid Mechanics (3 Hours)
- MEEN 3130, Machine Elements (3 Hours)
- MEEN 3210, Heat Transfer (3 Hours)
- MEEN 3230, System Dynamics & Controls (3 Hours)
- MEEN 3240 Laboratory I (2 Hours)
- MEEN 3242, Laboratory II (1 Hour)
- MEEN 3250, Analytical Methods (3 Hours)
- MEEN 4150, Design I (3 Hours)
- MEEN 4250, Capstone Design (3 Hours)
- ENGR 1304, Engineering Graphics (3 Hours)
- ENGR 2405, Circuit Analysis (3 Hours)

OR

EENG 2610, Circuit Analysis (3 Hours)

- MTSE 3000, Fundamentals of Materials Sci. & Engr. I (3 Hours) & MTSE 3003, Fundamentals Lab (1 Hour)
- (3 Hours)
- CSCE 4925, Information Technology Capstone II (3 Hours)

ENERGY ELECTIVES

- 1 Energy Elective course (3 hours) chosen from list below
 - 1 Energy Elective course (3 hours) chosen from list below
- MEEN 3125 MEEN 4310 MEEN 4332
MEEN 4350 MEEN 4110 MEEN 4315
MEEN 4335 MEEN 4410 MEEN 4112
MEEN 4320 MEEN 4335 MEEN 4810
MEEN 4300 MEEN 4330 MEEN 4340

TECHNICAL ELECTIVES

- 1 Technical Elective course (3 hours) chosen from list below
 - 1 Technical Elective course (3 Hours) chosen from below
- MEEN 4120 MEEN 4151 MEEN 4415
MEEN 4800 MEEN 4130 MEEN 4152
MEEN 4488 MEEN 4930 MEEN 4140
MEEN 4160 MEEN 4510 MFET 4190

Year 1 at UNT

FALL	Hrs.
MATH 2730 (MATH 1720)	3
PHYS 2220 (MATH 1720, PHYS 1710, 1730)	3
PHYS 2240 Lab	1
MEEN 2301 (MEEN 1000, PHYS 1710, 1730)	3
MEEN 2240 (MEEN 1000 Co MATH 2700)	3
MATH 2700 (MATH 1720)	3
<i>Total Hours</i>	16

SPRING	Hrs.
MATH 3410 (MATH 1720, coreq MATH 2700)	3
ENGR 1304	3
MEEN 2302 (MEEN 2301, MATH 1720)	3
MEEN 2332 (MEEN 2301)	3
TECM 2700	3
MEEN 2110 (MATH 2700, MEEN 1000)	2
<i>Total Hours</i>	17

SUMMER	Hrs.
MEEN 2210 (MEEN 1000, MATH 1720, PHYS 1710)	3
<i>Total Hours</i>	3

Year 2 at UNT

FALL	Hrs.
MEEN 3110 (MEEN 2210)	3
MEEN 3120 (MATH 2730, 3410, MEEN 2210, 2332)	3
MEEN 3240 (MEEN 2110, MEEN 2210, MATH 3410)	2
MEEN 3250 (MEEN 2240, MATH 3410)	3
MTSE 3000 (see note 5)	3
MTSE 3003 (see note 5)	1
<i>Total Hours</i>	<i>15</i>

SPRING	Hrs.
EENG 2610 or ENGR 2405 (Analysis see note 4)	3
MEEN 3130 (MEEN 2332, ENGR 1304)	3
MEEN 3210 (MEEN 3110, 3120, 3250)	3
MEEN 3230 (MEEN 2302, MATH 2700, 3410)	3
MEEN 3242 (MEEN 3240, 3120, 3210)	1
<i>Total Hours</i>	<i>13</i>

Year 3 at UNT

FALL	Hrs.
MEEN 3100 (MEEN 2332, MTSE 3000, 3003)	3
MEEN 4150 (see note 6)	3
Energy Elective (see note 7)	3
Technical Elective (see note 7)	3
<i>Total Hours</i>	<i>12</i>

SPRING	Hrs.
MEEN 4250 (MEEN 4150)	3
Energy Elective (see note 7)	3
Technical Elective (see note 7)	3
<i>Total Hours</i>	<i>9</i>

Required prerequisite (s) indicated in parentheses

Notes:

Note 1: MATH 1710 requires one of the following as prerequisite: completion of MATH 1650 with a grade of "C" or higher; or completion of MATH 1610 with a grade of "C" or higher; or Freshman Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 & 1430 requires MATH 1100, College Algebra, or placement into a higher level math course as prerequisite. CHEM 1415 & 1435 requires MATH 1650, Pre-Calculus, or placement into a higher level math course as prerequisite.

Note 3: MEEN 1000 requires MATH 1650, Pre-Calculus, or placement into a higher level math course as prerequisite.

Note 4: EENG 2610 or ENGR 2405 require MATH 1720 as prerequisite and PHYS 2220, 2240 as prerequisite or corequisite.

Note 5: MTSE 3000, 3003 requires PHYS 1710 and CHEM 1410, 1430 or CHEM 1415, 1435 as prerequisite.

Note 6: MEEN 4150 requires EENG 2610 or ENGR 2405, MEEN 3130, MEEN 3210, MEEN 3230, MEEN 3242 & completion or concurrent enrollment in MEEN 3100 as prerequisite.

Note 7: Must complete appropriate prerequisite(s) for energy & technical electives. Please check with an advisor.

Must earn at least a grade of “C” & a minimum 2.5 GPA in Communications Core, TECM 2700, MATH 1710, MATH 1720, PHYS 1710, PHYS 1730, MEEN 1000, MEEN 2210, MEEN 2301, & MEEN 2302 as foundations to enroll in advanced courses.

<i>Credits Which Could Be Earned Prior to Enrollment at UNT –AP, IB, CLEP, DC, Transfer:</i>	<i>Credits Which Should Be Earned Prior to Enrollment at UNT –AP, IB, CLEP, DC, Transfer:</i>
Communications Core HIST 2610 HIST 2620 PSCI 2305 PSCI 2306 Creative Arts Core Language Philosophy Culture Core Social Behavioral Sciences Core	MEEN 1000 (via ENGR 1201) MATH 1710 MATH 1720 PHYS 1710 & 1730 CHEM 1410 & 1430

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met & a degree audit must be created in order to progress in the program to a timely graduation.