

## PROGRAM SUMMARY

- **Credit Hours:** 124
- **Concentrations:** Applied Energy
- **Declaring the Major:** Students may declare a major in Mechanical Engineering Technology at the time of admission. Students in good academic standing may submit a Change of Major form at any time to declare a major in Mechanical Engineering Technology. Orientation and/or advising sessions are required for new students.
- **Advising (For the Major):** Required upon admission to the major and before each semester. Assigned advisors provide group advising sessions, followed by individual advising by appointment.
- **Advising (For General Education):** By Academic Advisors in the department.
- **Minimum Grades/GPA:** GPA of 2.0 in the major required for graduation. Grades of C or better required in all freshman-level courses as shown on Suggested Plan of Study.
- **Teacher Licensure:** No.
- **Evening Classes Available:** Some upper division (junior/senior) classes are available late afternoon or evening on a rotating basis. It is highly unlikely that students would be able to complete degree requirements through evening courses alone.
- **Weekend Classes Available:** No.
- **Other Information:** Students who complete an Associate in Applied Science Degree (AAS) in a related field before enrolling at UNC Charlotte are eligible for the Mechanical Engineering Technology 2+2 Program, which allows students to complete their BSET degrees with a minimum of two additional years of coursework.
- **Contact(s):** Mr. Daniel Hoch, Program Director ([dhoch2@uncc.edu](mailto:dhoch2@uncc.edu))  
 Ms. Kara Smith, Academic Advisor ([ksmit444@uncc.edu](mailto:ksmit444@uncc.edu))

## PROGRAM REQUIREMENTS

The Mechanical Engineering Technology (MET) program prepares graduates of the BSET program for careers across a broad spectrum of technologies. In general, coursework in the program includes experience in the following areas: mechanical design, computer aided drafting, statics, mechanisms, manufacturing processes, engineering materials, strength of materials, machine design, dynamics, fluid mechanics, thermodynamics, heat transfer and instrumentation. The first two years of Mechanical Engineering Technology concentrate on fundamentals of mathematics and science along with the development of written and oral communications skills. The third and fourth years of the BSET program provide students with classes intended to expand upon the fundamentals covered in the first two years. Greater emphasis is placed on principles rather than on introductory topics. Computer simulation, as well as more advanced mathematical tools, allows treatment of technologies in greater depth and over a wider range. The program culminates in a Capstone Project in which a student is expected to demonstrate not only an understanding of mechanical technologies, but also the ability to plan, execute, and provide written and oral reports about a project.

Areas	Credit Hours	Description
<b>Pre-Major/ Prerequisites</b>	-	Any student declaring a major in the Mechanical Engineering Technology program at UNC Charlotte must submit a Change of Major application for review. AAS transfer students must fulfill a series of specified prerequisite courses before proceeding with upper-division coursework. All new MET majors are required to meet with the MET Academic Advisor for pre-registration advising. Students must adhere to all prerequisite requirements for all courses. Prerequisite requirements cannot be waived and no exceptions will be approved.
<b>Major</b>	77	The Mechanical Engineering Technology curriculum is highly structured and some major courses are offered once a year. Some courses required for the major also fulfill the General Education writing and oral requirements. Major courses generally have the ENER, ETGR and ETME prefixes.
<b>General Education (not satisfied by other major requirements)</b>	35	Writing & Inquiry (UWRT 1103); Mathematics & Logical Reasoning (MATH 1103 & STAT 1220); Social Science (ANTH 1101/GEOG 1105/ECON 1101, 2101 or 2102/POLS 1110/SOCY 1101); 3 Natural Science Courses (PHYS 1101/1102 with Labs & CHEM 1251); Themes of Liberal Education (LBST 110X, and LBST 2101, 2102, 211X or 2301, with one designated as CTC).
<b>Related Work</b>	-	
<b>Foreign Language</b>	-	
<b>Electives</b>	12	Students must complete four major elective courses of 3 credit hours each. Major electives are selected from the list of approved core electives, or approved by the advisor.
<b>Total Credit Hours</b>	124	

# SUGGESTED PLAN OF STUDY

Freshman Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<b>Fall Semester</b>					
ETGR 1100L	Engineering Technology Computer Applications Lab	1			Must complete with a grade of C or better
ETGR 1201	Intro to Engineering Technology	2			Must complete with a grade of C or better
ETME 1111	CAD Modeling I	3			Must complete with a grade of C or better
MATH 1103	Pre-Calculus Math for Science & Engineering	3	X		Must complete with a grade of C or better
PHYS 1101	Introductory Physics I	3	X		Must complete with a grade of C or better
PHYS 1101L	Introductory Physics I Laboratory	1	X		Must complete with a grade of C or better
UWRT 1103	Writing and Inquiry in Academic Contexts I & II	3	X		Must complete with a grade of C or better
<b>Spring Semester</b>					
ETME 1112	CAD Modeling II	3			Must complete with a grade of C or better
MATH 1121 <u>OR</u> ETGR 2171	Calculus for Engineering Technology <u>OR</u> Engineering Analysis I	3			Must complete with a grade of C or better
PHYS 1102	Introductory Physics II	3	X		Must complete with a grade of C or better
PHYS 1102L	Introductory Physics II Laboratory	1	X		Must complete with a grade of C or better
LBST 110X	Arts & Society	3	X		Must complete with a grade of C or better
XXXX XXXX	Social Science Elective	3	X		Must complete with a grade of C or better

**32 Credit Hours for Year**

Sophomore Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<b>Fall Semester</b>					
ETME 2100	Sophomore Design Practicum	2			
ETME 2100L	Sophomore Design Practicum Laboratory	1			
ETME 2130	Applied Materials and Manufacturing I	3			
ETGR 2101	Applied Mechanics I	3			Must complete with a grade of C or better
STAT 1220	Elements of Statistics	3	X		
CHEM 1251	Principles of Chemistry	3	X		
<b>Spring Semester</b>					
ETGR 2106	Electronic Circuits & Devices	3			
ETGR 2122	Technical Programming	3			
ETME 2102	Mechanisms	3			
ETME 2131	Applied Materials and Manufacturing II	2			
ETGR 2272	Engineering Analysis II	3			Must complete with a grade of C or better
LBST 2XXX	LBST2101, 2102 or 221X	3	X		

**32 Credit Hours for Year**

Junior Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<b>Fall Semester</b>					
ETME 3113	Dynamics	3			
ETME 3123	Strength of Materials	3			
ETME 3123L	Stress Analysis Laboratory (W)	1	X	W	
ETME 3133	Fluid Mechanics	3			
ETGR 3171 <u>OR</u> ETGR 4272	Engineering Analysis III <u>OR</u> Engineering Analysis IV	3			
<b>Spring Semester</b>					
ETGR 3222	Engineering Economics	3			
ETME 3100	Junior Design Practicum	2			
ETME 3100L	Junior Design Practicum Laboratory	1			
ETME 3133L	Fluid Mechanics Laboratory (W)	1	X	W	
ETME 3143	Thermodynamics	3			
ETME 3150	Applied CAD Modeling and Simulation	3			
ETME 3213	Machine Design I	3			

**29 Credit Hours for Year**

Senior Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<b>Fall Semester</b>					
ETGR 4100	Capstone Design Project I (W,O)	2	X	W,O	Requires department approval
ETME 4143L	Thermodynamics and Heat Transfer Laboratory (W)	1	X	W	
ETME 4244	Applied Heat Transfer	3			
LBST 2XXX	LBST2101, 2102 or 221X	3	X		
XXXX XXXX	Major Elective	3			Chosen from approved major elective list
XXXX XXXX	Major Elective	3			Chosen from approved major elective list
<b>Spring Semester</b>					
ETGR 3295	Multidisciplinary Professional Development	1			
ETGR 4200	Capstone Design Project II (W,O)	2		W,O	
ELET 2241	Instrumentation and Controls	3			
ELET 2241L	Instrumentation Laboratory	1			
LBST 2301	Critical Thinking and Communication	3	X		
XXXX XXXX	Major Elective	3			Chosen from approved major elective list
XXXX XXXX	Major Elective	3			Chosen from approved major elective list

**31 Credit Hours for Year**

## **ADVISING RESOURCES**

- General Education Requirements for ALL Students: [ucol.uncc.edu/general-education](http://ucol.uncc.edu/general-education)
- Undergraduate Catalog: [catalog.uncc.edu](http://catalog.uncc.edu)
- Central Advising website: [advising.uncc.edu](http://advising.uncc.edu)
- University Advising Center website: [advisingcenter.uncc.edu](http://advisingcenter.uncc.edu)