MECHANICAL ENGINEERING TECHNOLOGY ASSOCIATE IN APPLIED SCIENCE

Program Description

Mechanical Engineering Technology involves assisting engineers in designing, developing, testing, and manufacturing machinery, products and equipment. To qualify for these positions, which command excellent salaries, job applicants should have a resume that includes an associate degree.

The Greenville Technical College Mechanical Engineering Technology (MET) program delivers textbook knowledge and hands-on practice with the software and technology of the industry, preparing graduates to enter the field and succeed.

The body of knowledge covered in the Certified Manufacturing Technologist (CMfgT) examination, which is included in the certification program of the Society of Manufacturing Engineer's (SME) Manufacturing Engineering Certification Institute (MECI) may be covered.

Mission Statement

The Mechanical Engineering Technology program will equip graduates to use their knowledge and training to provide technical support and/or quality design to manufacturing/engineering processes for their employer and encourage staying abreast of changing technologies through continued lifelong learning.

Entrance Requirements

High school diploma or GED

Type of Program

Day or evening

Program Accreditation

The MET Associate in Applied Science program is accredited by the Engineering Technology Accreditation Commission of ABET, https://www.abet.org/.

Transfer Options/Continuing Education

Students planning to transfer and pursue a bachelor's degree in engineering are strongly urged to utilize Greenville Technical College's academic advising services. The transfer process for specific career pathways is very specific and leaves little opportunity for error in choosing classes. It is very important that students discuss curriculum and transfer requirements with their assigned academic advisor and with a transfer advisor at the four-year institution of their choice. It is most beneficial to the student if these discussions begin as soon as the choice to transfer to a four-year institution has been made.

- The MET Department has a 2+2 cooperative agreement with the University of South Carolina-Upstate for students to complete a Bachelor of Science in Engineering Technology Management.
- The MET Department has a cooperative agreement with Western Carolina University for students to complete a Bachelor of Science in Engineering Technology.
- Transferring to a four-year engineering technology program — If a student desires to pursue a Bachelor of Science in Engineering Technology from a four-year university, it is recommended he/she pursue schools that have ETAC/ABET accreditation in the program of interest. This should simplify the acceptance of all or the majority of the course work taken at Greenville Tech to other institutions with ETAC/ABET-accredited programs.
- Transferring to a four-year engineering program — If a student wishes to pursue a bachelor of science in engineering from a four-year university, it is recommended he or she pursue schools that have EAC (Engineering Accreditation Commission)/ABET accreditation in the program of interest.
- In addition, required general education courses, such as ENG 101 English Composition I*, and many of the social science and humanities electives should transfer to the four-year college or university of interest as well. Keep in mind that if there is any desire to transfer to another college or university, the student should discuss transfer requirements early in his or her academic career with a representative from the college or university to which he or she plans to transfer. It is also important to share this information with the student's MET advisor at Greenville Tech.

Visit our web page at https://www.gvltec.edu/met/.

Recommended Program Schedule

Listed below is the ideal grouping of courses in order by semester. This plan assumes a full-time schedule. Note, however, that many variables can affect this plan, and not every course is offered every semester. Please see your advisor to map out your own personalized progression toward graduation.

The course schedule listed is designed for students who begin the program with ENG 101 English Composition I* and MAT 110 College Algebra* based on the college placement.

Note: Please contact your advisor for recommended evening schedules.

First Semester		**Hours**
EGR 130	Engr Tech Applications & Programming [1,2]	3
EGR 170	Engineering Materials [1]	3
EGT 110	Engineering Graphics I	4
MAT 110	College Algebra	3
ENG 101	English Composition I [3]	3
	Total Semester Hours	**16**
Second Semester		
EGR 175	Manufacturing Processes	3
Select one of the following:		3
EGR 275	Introduction to Engineering/Computer Graphics (Solid Works) [4]	
EGR 210	Introduction to Engineering CAD (AutoCAD) [4]	
MAT 111	College Trigonometry	3
PHY 201	Physics I [1]	4
SPC 205	Public Speaking	3
	Total Semester Hours	**16**
Third Semester		
EET 227	Electrical Machinery	3
EGR 194	Statics and Strength of Materials [1]	4
Select one of the following:		4

PHY 202	Physics II [1]	
CHM 110	College Chemistry I [3]	
QAT 109	Introduction to Metrology	1
	Total Semester Hours	**12**
Fourth Semester		
Select one of the following:		3-4
MAT 140	Analytical Geometry and Calculus I [1,3]	
MAT 120	Probability and Statistics	
MET 211	Strength of Materials [1,2]	4
MET 214	Fluid Mechanics	3
MET 235	Manufacturing Engineering Principles Principles	2
Technical Elective I [5,6]		3
	Total Semester Hours	**15-16**
Fifth Semester		
MET 231	Machine Design	4
EGR 255	Engineering Tech Senior Systems Project	2
Technical Elective II [6]		3
Humanities Elective [7]		3
Social Science Elective [7]		3
	Total Semester Hours	**15**
	Total Required Credit Hours	**74-75**

1 Substitutable courses: Many of the MET program's courses are either the same, or closely related to, the engineering courses that are a part of the Associate in Science Degree with an Engineering Transfer Track. The primary difference is that the engineering courses in the transfer program are based on calculus, while the courses in the MET program are based primarily on algebra and trigonometry. Therefore, any student who is considering pursuing a Bachelor of Science degree in engineering may wish to consider taking the calculus-based courses instead.

- Take EGR 269 Engineering Disciplines and Skills instead of EGR 130 Engr Tech Applications & Programming[2]
- Take EGR 206 Introduction to Materials Science instead of EGR 170 Engineering Materials
- Take PHY 221 University Physics I instead of PHY 201 Physics I
- Take EGR 260 Engineering Statics instead of EGR 194 Statics and Strength of Materials
- Take PHY 222 University Physics II instead of PHY 202 Physics II
- Take EGR 204 Mechanics of Materials instead of MET 211 Strength of Materials[2]

2 Students who substitute EGR 269 Engineering Disciplines and Skills for EGR 130 Engr Tech Applications & Programming and/or EGR 204 Mechanics of Materials for MET 211 Strength of Materials must take an additional credit hour for each to meet the total hours required for graduation.

3 Courses that usually transfer to Clemson or the University of South Carolina.

4 EGR 275 Introduction to Engineering/Computer Graphics and EGR 210 Introduction to Engineering CAD are Engineering Transfer courses to Clemson.

5 Department head approved co-op may be used to substitute for up to three (3) hours of technical electives.

6 Please see advisor for technical elective list.

7 Students planning to continue in or transfer to a 4-year program should consider taking one of these courses. South Carolina Act 26 of 2021, the "REACH Act", requires undergraduate students completing a baccalaureate degree to complete a three-credit course that requires, at a minimum, the reading of the U.S. Constitution, the Declaration of Independence, the Emancipation Proclamation, five Federalist Papers, and one document foundational to the African American Struggle; collectively known as the "Founding Documents." Therefore, students graduating from the BAS.MFG program are required to successfully complete either PSC 201 (American Government) as the social science requirement or one of the general education elective requirements OR HIS 201 (American History – Discovery to 1877) as the humanities requirement or one of the general education elective requirements.

Note: Cooperative education is highly recommended by the department. Technical electives may come from any Engineering Technology program or department head approval required for an industrial technology course.