

B.S. in Engineering Technology



The Engineering Technology (Applied Systems Technology Concentration) Program is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.

Major Program Guide For: B.S. in Engineering Technology - Applied Systems Technology (On-Campus)

Suggested Course Sequence

- Total for Degree: 125 Credit Hours

Freshman Year							
Fall				Spring			
Course Prefix or Liberal Studies Requirement	Course Number	Course Title	Cr Hrs	Course Prefix or Liberal Studies Requirement	Course Number	Course Title	Cr Hrs
ENGR	199	Intro. Eng/Prac/Prin. I	3	ET	141	Engineering Materials and Processes	3
ENGR	132	Engineering Graphics	3	Wellness (C4)			3
MATH	146	Precalculus (C2)	4	Perspective			3
ENGL	101	Composition I (C1)	3	Perspective			3
Perspective			3	Perspective			3
<i>Semester Total: 16</i>				<i>Semester Total: 15</i>			

Sophomore Year							
Fall				Spring			
Course Prefix or Liberal Studies Requirement	Course Number	Course Title	Cr Hrs	Course Prefix or Liberal Studies Requirement	Course Number	Course Title	Cr Hrs
ENGR	200	Eng/Prac/Prin. II	3	ET	232	Engineering Statics	3
ME	231	3D Solid Modeling	3	MATH	170	Applied Statistics	3
MATH	153	Calculus I	4	CHEM	139	General Chemistry (C5)	4
PHYS	130	Introductory Physics I (C5)	4	COMM	201	Communications (C3)	3
ENGL	202	Composition II (C1)	3	Perspective			3
<i>Semester Total: 17</i>				<i>Semester Total: 16</i>			

Junior Year							
Fall				Spring			
Course Prefix of Liberal Studies Requirement	Course Number	Course Title	Cr Hrs	Course Prefix of Liberal Studies Requirement	Course Number	Course Title	Cr Hrs
ECET	301	Electrical Systems	3	ENGR	350	Eng/Prac/Prin. III	3
ET	331	Quality Systems	3	ET	351	Engineering Analysis	3
ET	310	Advanced 3D Computer Modeling and Rapid Prototyping	3	ENGR	352	Thermodynamics and Heat Transfer	3
ET	349	Rapid Tooling and Prototyping	3	ET	334	Lean Six Sigma	3
ET	332	Strength of Materials	3	ENGL	305	Technical Writing	3
ET	333	Strength of Materials Laboratory	1				
<i>Semester Total: 16</i>				<i>Semester Total: 15</i>			

Senior Year							
Fall				Spring			
Course Prefix or Liberal Studies Requirement	Course Number	Course Title	Cr Hrs	Course Prefix of Liberal Studies Requirement	Course Number	Course Title	Cr Hrs
ENGR	400	Engineering Capstone I	3	ENGR	450	Engineering Capstone II	3
ET	420	Advanced Engineering Materials	3	ET	425	Metrology and Reverse Engineering	3
ET	436	Engineering Economic Analysis	3	ET	472	Integrated Control Systems	3
ET	441	Power Transmission Systems	3	Technical Elective			3
Upper Level Perspective			3	Technical Elective			3
<i>Semester Total: 15</i>				<i>Semester Total: 15</i>			

NOTES:

- Total for Degree: 125 Credit Hours
- Students may finish earlier if they attend summer school at WCU or another approved institution
- Upper Level Perspective (ULP): An approved Upper Level Liberal Studies Perspectives course is required in one of the Liberal Studies Perspectives categories.

B.S. in Engineering Technology

Course Titles and Prerequisites

ECET 301 - Electrical Systems	PREQ: MATH 145 or 146
ENGR 199 – Intro.to Engineering Practices and Principles I	Freshman Engineering majors only
ENGR 200 - Engineering Practices and Principles II	PREQ: ENGR 199 with a grade of C or better.
ENGR 350 - Engineering Practices and Principles III	PREQ: ENGR 200 with a “C” or better.
ENGR 400 - Engineering Capstone I	PREQ: 350, with a “C” or better.
ENGR 450 - Engineering Capstone II	PREQ: 400, with a “C” or better.
ENGR 132 - Engineering Graphics	
ET 141 - Engineering Materials and Processes	
ME 231 - 3-D Solid Modeling	PREQ: ET 132.
ET 232 - Engineering Statics	PREQ: MATH 145 or 146; PHYS 130
ET 310 – Adv. 3D Computer Modeling and Rapid Prototyping	PREQ: ME 231.
ET 331 - Quality Systems	PREQ: MATH 170
ET 332 - Strength of Materials	PREQ: 232, MATH 140 or 153. COREQ: 333
ET 333 - Strength of Materials Laboratory	COREQ: ET 332
ET 349 - Rapid Tooling and Prototyping	REQ: PHYS 130, MATH 144 or 145 or 146, ET 231.
ET 351 - Engineering Analysis	PREQ: MATH 153, 170, PHYS 130, and ET 232.
ENGR 352 – Thermodynamics and Heat Transfer	PREQ: MATH 153 CHEM 139, PHYS 130, & ET 141.
ET 420 - Advanced Engineering Materials	PREQ: ET 141, ET 332, and CHEM 139
ET 425 - Metrology and Reverse Engineering	PREQ: ET 141, 232, 331 and 351, ME 231
ET 436 - Engineering Economic Analysis	PREQ: MATH 153; ET student junior standing.
ET 441 - Power Transmission Systems	PREQ: ET 232, 351.
ET 472 - Integrated Control Systems	PREQ: ECET 301 or 341; ET 351 or ECET 332
CHEM 139 - General Chemistry I	
MATH 146 – Precalculus	PREQ: (MATH 130), OR (SAT MATH score of 540 or higher), OR (AP CALCULUS score of 2 or higher), OR (ACT MATH of 23 or higher).
MATH 153 - Calculus I	PREQ: (MATH 146), OR (SAT MATH score of 580 or higher), OR (AP CALCULUS score of 2 or higher), OR (ACT MATH of 25 or higher).
MATH 170 - Applied Statistics	
PHYS 130 - Introductory Physics I	COREQ: PHYS 130 lecture and PHYS 130 lab.