

Electronics Engineering Technology (EET)

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Electronics Engineering Technology provides students with a flexible curriculum, allowing graduates to pursue careers in diverse areas such as computer design and repair, digital systems, microcomputer systems, microelectronics, and telecommunications.

The EET curriculum provides students with an effective mechanism to transfer into an EET bachelor's degree program.

The Electronics Engineering Technology program is accredited by Engineering Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, phone (410) 347-7700.

Electronics Engineering Technology (EET)

All degree-seeking students must complete a First Year Experience (FYE) course as part of the first 12 credit hours taken at Cincinnati State.

Semester 1	Lec	Lab	Credits
EET 121	Digital Systems 1		3
CIT 190	Career Preparation: Engineering and Information Technologies		1
MAT XXX Mathematics Elective 1			4
ENG 101	English Composition 1		3
EET 131	Circuit Analysis 1		4
Semester 2			
ENG 10X English Composition Elective			3
PHY 151	Physics 1: Algebra and Trigonometry-Based		4
MAT XXX Mathematics Elective 2			4
EET 132	Circuit Analysis 2		4
EET 122	Digital Systems 2		4
Semester 3			
EET 291	Full-Time Cooperative Education 1: Electronics Engineering Technology		2
Semester 4			
COMM 110	Public Speaking		3
EET 251	Electronics		4
EMET 240	Programmable Logic Controllers, Motors, Motor Controls, and Kinematics		3
NETC 121	Network Communications 1		3
Semester 5			
EET 220	Microprocessor Systems		4
CULT 110	Social Issues in Technology		3
ECO 1XX Economics Elective			3
EMET 270	Robotics and Servomechanisms		4
EET 290	Electronics Engineering Technology Capstone Project		4
Semester 6			

EET 292	Full-Time Cooperative Education 2: Electronics Engineering Technology	2
Total Credits:		69

Electives

English Composition Elective

ENG 102	English Composition 2: Contemporary Issues	3
ENG 103	English Composition 2: Topics in Literature	3
ENG 104	English Composition 2: Technical Communication	3
ENG 105	English Composition 2: Business Communication	3

Economics Elective

ECO 105	Principles of Microeconomics	3
ECO 110	Principles of Macroeconomics	3

Mathematics Elective

Take one of the following series:

MAT 125 & MAT 126	Algebra and Trigonometry and Functions and Calculus
MAT 251 & MAT 252	Calculus 1 and Calculus 2

CIT Courses

CIT 100 Introduction to Engineering Technologies

2 Credits. 1 Lecture Hour. 3 Lab Hours.

A course that prepares students for success in Engineering Technologies fields including Biomedical, Civil, Environmental, Electrical, Industrial, and Mechanical. Topics include: investigating career pathways; and building skills in measurement, data collection and graphing, problem solving, research, and basic computation.

Prerequisites: None

View Sections (http://webapps.cincinnatiatstate.edu/wwwTools/MCL/default.aspx?course_number=100subject_code=CIT)

CIT 110 Introduction to Information Technologies

2 Credits. 1 Lecture Hour. 3 Lab Hours.

A course that prepares students for success in Information Technology fields. Topics include: investigating career pathways; and building skills in problem solving, research, basic computation, and other foundational concepts.

Prerequisites: None

View Sections (http://webapps.cincinnatiatstate.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=CIT)

CIT 120 Introductory Mathematics for Engineering Applications

5 Credits. 4 Lecture Hours. 2 Lab Hours.

A course on math used within the context of engineering applications. Topics include: algebraic manipulations of engineering equations, trigonometry, vectors and complex numbers, sinusoids, systems of equations, differentiation, integration, and differential equations.

Prerequisites: AFL 085 and MAT 126 or MAT 152 or MAT 153 or appropriate placement test score

View Sections (http://webapps.cincinnatiatstate.edu/wwwTools/MCL/default.aspx?course_number=120subject_code=CIT)

CIT 150 Applied Technology Studies: Advanced Standing

30 Credits. 30 Lecture Hours. 0 Lab Hour.

Students complete courses or training programs or earn certifications that develop expertise in Engineering Technologies fields.

Prerequisites: Program Chair Consent

View Sections (http://webapps.cincinnatiatstate.edu/wwwTools/MCL/default.aspx?course_number=150subject_code=CIT)

CIT 190 Career Preparation: Engineering and Information Technologies

1 Credit. 1 Lecture Hour. 0 Lab Hour.

A course on career planning and exploration for students in Engineering Technologies and Information Technologies fields. Topics include: self assessment, career research, resume development, interview skills, job search strategies, and cooperative education policies and procedures.

Prerequisites: AFL 085 and MAT 120, or appropriate placement test score

View Sections (http://webapps.cincinnatiatstate.edu/wwwTools/MCL/default.aspx?course_number=190subject_code=CIT)

EET Courses

EET 100 Introduction to Electrical Engineering Technology

2 Credits. 1 Lecture Hour. 2 Lab Hours.

An introduction to concepts and measuring skills for the electronics field. Topics include: current, voltage, power, Ohm's law, series circuits, meter reading, software simulation use, and circuit construction.

Prerequisites: AFM 090 or appropriate placement test score

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=100subject_code=EET)

EET 101 Electronic Fundamentals 1

3 Credits. 2 Lecture Hours. 3 Lab Hours.

A course on electrical fundamentals for non-electrical majors. Topics include: DC and AC circuit theory, electrical motors and controls, electromagnetic devices, and transformers.

Prerequisites: AFM 095 or MAT 120, and AFL 085, or appropriate placement test scores

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=101subject_code=EET)

EET 102 Electronic Fundamentals 2

4 Credits. 3 Lecture Hours. 2 Lab Hours.

A continuation of EET 101. Topics include: number systems, codes, Boolean algebra, and combinational and sequential logic systems; digital circuits including comparators, decoders, and counters; diodes, bipolar junction transistors, and operational amplifiers; circuit construction; and troubleshooting.

Prerequisites: EET 101

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=102subject_code=EET)

EET 121 Digital Systems 1

3 Credits. 2 Lecture Hours. 2 Lab Hours.

A course on analyzing, designing, and troubleshooting digital logic circuits. Topics include: basic gates and PLDs, number systems and codes, Boolean algebra, circuit simplification, functions of logic circuits, latches, flip-flops, counters, timers, and memory.

Prerequisites: MAT 120 or appropriate placement test score

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=121subject_code=EET)

EET 122 Digital Systems 2

4 Credits. 3 Lecture Hours. 2 Lab Hours.

A continuation of EET 121. Topics include: counter design and cascading, shift registers, PLD applications, microprocessor registers, I/O, busses, DMA, memory expansion, and assembly language programming.

Prerequisites: EET 121

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=122subject_code=EET)

EET 131 Circuit Analysis 1

4 Credits. 3 Lecture Hours. 2 Lab Hours.

A course on DC electric circuits. Topics include: current, voltage, resistance, and power; laws applied to series, parallel, and series-parallel circuits; Thevenin's, Superposition, and Norton's theorems; steady state and transient behavior of capacitive and inductive devices; and magnetic properties.

Prerequisites: Take either MAT 121, MAT 122, MAT 123, MAT 125, MAT 126 or appropriate placement test score

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=131subject_code=EET)

EET 132 Circuit Analysis 2

4 Credits. 3 Lecture Hours. 2 Lab Hours.

A continuation of EET 131. Topics include: sinusoidal wave characteristics; complex numbers; phasors; transformers; RC, RL, and RLC networks; filter networks; three-phase and poly-phase systems; and power factor analysis.

Prerequisites: EET 131, MAT 125

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=132subject_code=EET)

EET 191 Part-Time Cooperative Education 1: Electronics Engineering Technology

1 Credit. 1 Lecture Hour. 20 Lab Hours.

Students seeking an associate's degree participate in their first part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: None

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=191subject_code=EET)

EET 192 Part-Time Cooperative Education 2: Electronics Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their second part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EET 191

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=192subject_code=EET)

EET 193 Part-Time Cooperative Education 3: Electronics Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their third part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EET 192

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=193subject_code=EET)

EET 194 Part-Time Cooperative Education 4: Electronics Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their fourth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EET 193

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=194subject_code=EET)

EET 195 Part-Time Cooperative Education 5: Electronics Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their fifth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EET 194

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=195subject_code=EET)

EET 196 Part-Time Cooperative Education 6: Electronics Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their sixth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EET 195

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=196subject_code=EET)

EET 198 First Year Special Topics in Electronics Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A course on selected topics related to Electronics Engineering Technology, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=EET)

EET 199 First Year Independent Project in Electronics Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A project related to Electronics Engineering Technology that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Electronics Engineering Technology faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=EET)

EET 220 Microprocessor Systems**4 Credits. 3 Lecture Hours. 2 Lab Hours.**

A course on designing, programming, and troubleshooting microprocessor systems and applications. Topics include: assembly language programming, interrupt and polled I/O, interrupt service routines, parallel ports, timer functions, serial interfaces, A/D converters, and external hardware interfaces.

Prerequisites: EET 122

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=220subject_code=EET)

EET 251 Electronics**4 Credits. 3 Lecture Hours. 3 Lab Hours.**

A course on semiconductor and amplifier theory and application. Topics include: diode circuits and basic power supplies; bipolar transistor, FET, thyristor, and operational amplifier theory; inverters; circuit construction; and troubleshooting.

Prerequisites: EET 132

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=251subject_code=EET)

EET 290 Electronics Engineering Technology Capstone Project**4 Credits. 2 Lecture Hours. 4 Lab Hours.**

Students design a system using analog and digital electronics concepts, and prepare and deliver a professional presentation of their completed project. Topics include: design theory, feasibility study, engineering economics, and presentation skills.

Prerequisites: EET 122, EET 251

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=290subject_code=EET)

EET 291 Full-Time Cooperative Education 1: Electronics Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their first full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: None

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=291subject_code=EET)

EET 292 Full-Time Cooperative Education 2: Electronics Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their second full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EET 291

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=292subject_code=EET)

EET 293 Full-Time Cooperative Education 3: Electronics Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their third full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EET 292

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=293subject_code=EET)

EET 294 Internship 1: Electronics Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their first unpaid field learning experience related to their degree. Students must follow applicable policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EET 131 and CIT 190

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=294subject_code=EET)

EET 295 Internship 2: Electronics Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their second unpaid field learning experience related to their degree. Students must follow applicable policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EET 294

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=295subject_code=EET)

EET 298 Second Year Special Topics in Electronics Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A course on selected topics related to Electronics Engineering Technology, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=298subject_code=EET)

EET 299 Second Year Independent Project in Electronics Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A project related to Electronics Engineering Technology that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Electronics Engineering Technology faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=299subject_code=EET)

EMET Courses**EMET 140 Electro-Mechanical Engineering Technology Foundations****2 Credits. 1 Lecture Hour. 2 Lab Hours.**

An introduction to project-based learning, safety, and professional practices for electro-mechanical and power systems projects. Students who pass the course receive an OSHA 10-hour certificate.

Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=140subject_code=EMET)

EMET 180 Process Instrumentation**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on process instrumentation theory and applications. Topics include: principles and practices of measurement and control of temperature, pressure, flow, level, and analytical quantities; and data acquisition for process instruments and controls.

Prerequisites: EMET 140, EET 131

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=180subject_code=EMET)

EMET 191 Part-Time Cooperative Education 1: Electro-Mechanical Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their first part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=191subject_code=EMET)

EMET 192 Part-Time Cooperative Education 2: Electro-Mechanical Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their second part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 191

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=192subject_code=EMET)

EMET 193 Part-Time Cooperative Education 3: Electro-Mechanical Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their third part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 192

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=193subject_code=EMET)

EMET 194 Part-Time Cooperative Education 4: Electro-Mechanical Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their fourth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 193

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=194subject_code=EMET)

EMET 195 Part-Time Cooperative Education 5: Electro-Mechanical Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their fifth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 194

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=195subject_code=EMET)

EMET 196 Part-Time Cooperative Education 6: Electro-Mechanical Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their sixth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 195

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=196subject_code=EMET)

EMET 198 First Year Special Topics in Electro-Mechanical Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A course on selected topics related to Electro-Mechanical Engineering Technology, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=EMET)

EMET 199 First Year Independent Project in Electro-Mechanical Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A project related to Electro-Mechanical Engineering Technology that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Electro-Mechanical Engineering Technology faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=EMET)

EMET 210 Energy Efficiency and Audits**3 Credits. 2 Lecture Hours. 2 Lab Hours.**

A course on concepts related to energy consumption. Topics include: conducting energy audits for residential, commercial and industrial locations; conserving energy; reducing energy consumption; and applying renewable energies.

Prerequisites: None

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=210subject_code=EMET)

EMET 220 Photovoltaic and Solar Thermal Devices**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on planning, installing, and maintaining solar energy devices. Topics include: photovoltaic electrical systems, passive and thermal solar systems, and geothermal systems.

Prerequisites: EMET 210

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=220subject_code=EMET)

EMET 225 Solar and Renewable Energy**4 Credits. 3 Lecture Hours. 3 Lab Hours.**

A course on planning, installing, and maintaining solar and renewable energy devices. Topics include: photovoltaic electrical systems, solar thermal systems, fuel cell technology, and wind turbine technology.

Prerequisites: EMET 210

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=225subject_code=EMET)

EMET 230 Fuel Cells and Wind Devices**3 Credits. 2 Lecture Hours. 2 Lab Hours.**

A course on planning, installing, and maintaining alternative energy sources. Topics include: converting chemical energy to electricity; fuel cell components, power efficiencies, and applications; electrolysis; and wind turbine components.

Prerequisites: EMET 210

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=230subject_code=EMET)

EMET 240 Programmable Logic Controllers, Motors, Motor Controls, and Kinematics**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on programmable logic controllers, motors, and variable speed drives and mechanisms. Topics include: operating, troubleshooting and controlling circuits; calculating speed, torque, horsepower, and efficiency; and machine kinematics.

Prerequisites: EET 132

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=240subject_code=EMET)

EMET 245 Laser Foundations and Safety**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on the operational theory and safe use of lasers. Topics include: properties of laser light, elements of the laser, laser classifications, structure of the eye, and hazards associated with laser light.

Prerequisites: MAT 121 or appropriate placement test score EMET 140

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=245subject_code=EMET)

EMET 250 Servomechanisms**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on negative feedback for closed-loop servo systems. Topics include: transducers for sensing system parameters; proportional, proportional-derivative, and proportional-integral-derivative positional control systems; computer control of servo-control systems; and simple closed-loop controls.

Prerequisites: EET 132, EMET 140

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=250subject_code=EMET)

EMET 255 Optical Components, and Geometrical and Wave Optics**4 Credits. 3 Lecture Hours. 3 Lab Hours.**

A course on optical elements used in photonics applications. Topics include: lens, mirrors, prisms, laser modulators and Q-switches, optical power, and energy measurements.

Prerequisites: EMET 245

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=255subject_code=EMET)

EMET 260 Robotics**3 Credits. 2 Lecture Hours. 2 Lab Hours.**

A course on robotics and factory automation. Topics include: analyzing industrial robotics applications in automated manufacturing environments, evaluating mechanical and electrical components, programming and operating robots, choosing robots for industrial applications, and applying quality assurance techniques.

Prerequisites: EET 132, EMET 140

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=260subject_code=EMET)

EMET 265 Industrial Laser Systems**4 Credits. 3 Lecture Hours. 3 Lab Hours.**

A course on lasers used in industry. Topics include: types of industrial lasers; applying lasers for cutting, welding, drilling, and heat treating; and motion control.

Prerequisites: EMET 245

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=265subject_code=EMET)

EMET 270 Robotics and Servomechanisms**4 Credits. 3 Lecture Hours. 3 Lab Hours.**

A course on theory and applications of robotics and servomechanisms. Topics include: analyzing industrial robotics applications in automated manufacturing environments; programming and operating robots; transducers, proportional, proportional-integral, and proportional-integral-derivative positional control systems; and closed-loop controls.

Prerequisites: EET 132

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=270subject_code=EMET)

EMET 285 Electro-Mechanical Engineering Technology Capstone 1**1 Credit. 0 Lecture Hour. 2 Lab Hours.**

Students participate in a team design project. Topics include: design concepts, modeling, detail and assembly drawings, bill of materials, vendors, and costs of project design.

Prerequisites: EMET 140, EET 132

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=285subject_code=EMET)

EMET 290 Electro-Mechanical Engineering Technology Capstone 2**2 Credits. 1 Lecture Hour. 2 Lab Hours.**

A continuation of EMET 285. Students participate in the manufacturing, assembly, and testing of their product design, and prepare a presentation about the complete design process.

Prerequisites: EMET 285

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=290subject_code=EMET)

EMET 291 Full-Time Cooperative Education 1: Electro-Mechanical Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their first full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: None

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=291subject_code=EMET)

EMET 292 Full-Time Cooperative Education 2: Electro-Mechanical Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their second full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 291

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=292subject_code=EMET)

EMET 293 Full-Time Cooperative Education 3: Electro-Mechanical Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their third full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 292

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=293subject_code=EMET)

EMET 294 Internship 1: Electro-Mechanical Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their first unpaid field learning experience related to their degree. Students must follow applicable policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 140

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=294subject_code=EMET)

EMET 295 Internship 2: Electro-Mechanical Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their second unpaid field learning experience related to their degree. Students must follow applicable policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 294

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=295subject_code=EMET)

EMET 298 Second Year Special Topics in Electro-Mechanical Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A course on selected topics related to Electro-Mechanical Engineering Technology, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=298subject_code=EMET)

EMET 299 Second Year Independent Project in Electro-Mechanical Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A project related to Electro-Mechanical Engineering Technology that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Electro-Mechanical Engineering Technology faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=299subject_code=EMET)

ENG Courses

ENG 100 English Principles: Grammar and Structure

3 Credits. 3 Lecture Hours. 0 Lab Hour.

A comprehensive review of writing principles for business and professional communication. Topics include: grammar, punctuation, word usage, and techniques for reviewing and revising various business-related documents.

Prerequisites: AFL 085 or appropriate placement test score

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=100subject_code=ENG)

ENG 101 English Composition 1

3 Credits. 3 Lecture Hours. 0 Lab Hour.

An introduction to college writing focusing on understanding the writing process. Topics include: identifying audiences; developing a strong thesis; providing sufficient evidence for claims; and writing essays with grammatical, mechanical, and stylistic correctness.

Prerequisites: AFL 085 or appropriate placement test score

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=101subject_code=ENG)

ENG 102 English Composition 2: Contemporary Issues

3 Credits. 3 Lecture Hours. 0 Lab Hour.

A continuation of ENG 101. Topics include: critical reasoning; argumentation; the research process and the research paper; and reading, synthesizing, and responding critically to policy-driven research.

Prerequisites: ENG 101

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=102subject_code=ENG)

ENG 103 English Composition 2: Topics in Literature

3 Credits. 3 Lecture Hours. 0 Lab Hour.

A continuation of ENG 101. Topics include: critical reading, argumentation, the research process and the research paper; and reading, synthesizing, and responding critically to literature.

Prerequisites: ENG 101

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=103subject_code=ENG)

ENG 104 English Composition 2: Technical Communication

3 Credits. 3 Lecture Hours. 0 Lab Hour.

A continuation of ENG 101. Topics include: audience analysis; planning, preparing, and revising technical and professional documents used for reference, persuasion, or instruction; using and reporting on research; and integrating visuals with text.

Prerequisites: ENG 101, and 8 credit hours in technical courses

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=104subject_code=ENG)

ENG 105 English Composition 2: Business Communication

3 Credits. 3 Lecture Hours. 0 Lab Hour.

A continuation of ENG 101. Topics include: planning, preparing, and revising business documents such as formal and informal business letters, emails, proposals, and reports; and using and reporting on research.

Prerequisites: ENG 101

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=105subject_code=ENG)

ENG 131 Creative Writing: Poetry

3 Credits. 3 Lecture Hours. 0 Lab Hour.

A workshop-oriented poetry writing course. Topics include: the invention process, revision, poetic form, and critical response to works of literature and student work.

Prerequisites: 6 Credit Hours of English Composition

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=131subject_code=ENG)

ENG 132 Creative Writing: Fiction

3 Credits. 3 Lecture Hours. 0 Lab Hour.

A workshop-oriented fiction writing course. Topics include: the invention process, revision, form of fiction, and critical response to works of literature and student work.

Prerequisites: 6 credit hours of English Composition

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=132subject_code=ENG)

ENG 134 Creative Writing: Writing for Children**3 Credits. 3 Lecture Hours. 0 Lab Hour.**

A workshop-oriented course on writing picture books, chapter books, and middle grade novels. Topics include: the invention process, revision, form of children's literature, and critical response to works of literature and student work.

Prerequisites: 6 credit hours of English Composition

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=134subject_code=ENG)

ENG 198 First Year Special Topics in English**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A course on selected topics related to English, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Vary by section

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=ENG)

ENG 199 First Year Independent Project in English**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A project related to English that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by English faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Vary by section

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=ENG)

ENG 205 Scriptwriting: Short**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on developing scripts for short form electronic media messages such as commercials and public service announcements. Topics include: analyzing audiences and products; applying basic concepts of marketing; conducting research; preparing copy platforms, scripts, and storyboards; and persuasively presenting concepts.

Prerequisites: 6 credits of English Composition (minimum grade C)

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=205subject_code=ENG)

ENG 210 Scriptwriting: Long**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on developing scripts for long form electronic media messages such as instructional and promotional video and documentaries. Topics include: analyzing audiences and products; conducting research; preparing documentation, scripts, and storyboards; and persuasively presenting concepts.

Prerequisites: 6 credits of English Composition (minimum grade C)

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=210subject_code=ENG)

ENG 215 Copywriting**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on developing promotional messages for print and online distribution. Topics include: analyzing audiences and products, conducting research, developing concepts, preparing copy platforms, selecting writing styles and formats, and designing materials.

Prerequisites: 6 credits of English Composition (minimum grade C)

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=215subject_code=ENG)

ENG 230 Writing Online Content**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on developing content for websites and web-supported publishing such as blogs and e-newsletters. Topics include: analyzing audiences and goals, choosing writing styles, creating and revising content, and applying best practices for online and digital document design.

Prerequisites: 6 credits of English Composition (minimum grade C)

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=230subject_code=ENG)

ENG 298 Second Year Special Topics in English**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A course on selected topics related to English, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Vary by section

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=298subject_code=ENG)

ENG 299 Second Year Independent Project in English

1-9 Credits. 0 Lecture Hour. 0 Lab Hour.

A project related to English that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by English faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Vary by section

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=299subject_code=ENG)