Program Outcomes

Aviation Maintenance Technology (AMT)
Audio/Video Production (AVP)
Chemical Technology (CMT)
Civil Engineering Technology
Architectural Major (CETA)
Construction Management Major (CETC)
Surveying Major (CETS)
Computer Network Administration (NETA)
Computer Support Major (CSA)
Computer Network Engineering Technology (NETC)
Cyber-Security Major (NETCCS)
Computer Programming and Database Management
Computer Information Systems Major (CINS)
Computer Software Development Major (CSD)
Software Engineering Technology Major (SET)
Electrical Engineering Technology
Biomedical Equipment Major (BMT)
Electronics Systems Major (ESET)
Power Systems Major (PSET)
Electro-Mechanical Engineering Technology (EMET)
Energy Major (EMETE)
Laser Major (EMETL)
Environmental Engineering Technology (EVT)
Stormwater Management Major (EVTS)
Water and Wastewater Major (EVTW)
Graphic Design (GRD)
Graphic Imaging Technology (GIT)
Land Surveying (LS)
Mechanical Engineering Technology
Design Major (METD)
Manufacturing Management Major (METM)
Web and Multimedia Design (WEB)
Welding (WLD)

Aviation Maintenance Technology

Program	Learning	Outcomes
110510111	Leaning	outcomes

1. Identify, inspect, repair, and fabricate fluid lines and fittings including rigid and flexible fluid and pneumatic components.

2. Identify, inspect, install, torque, and safety aircraft hardware.

3. Identify various types of corrosion on aircraft structure, use proper cleaning and treatment techniques.

4. Read, interpret and analyze aircraft technical data, engineering drawings, sketch and record repair schemes for aircraft.

5. Perform ground operations and servicing of aircraft including taxiing, towing, marshaling, tie-down, engine run, fuel and oil servicing.

6. Understand mechanic privileges and limitations in accordance with Federal Aviation Regulations.

7. Review aerodynamics and the application theory and concepts associated with physics of aircraft flight.

8. Understand and demonstrate concepts of electricity including troubleshooting faults and electrical installations.

9. Understand and complete FAA required maintenance forms and records for aircraft maintenance.

10. Understand concepts and techniques related to aircraft weight and balance, perform weight and balance calculations and documentation.

11. Utilize technical applications of algebra, geometry, and statistical analysis as necessary for employer requirements.

12. Inspect, maintain, and repair metallic and non-metallic aircraft primary, secondary, and tertiary structural assemblies.

13. Inspect, maintain, and repair landing gear, hydraulic and pneumatic systems, fuel system, HVAC systems, electrical, fire and smoke protection systems, auxiliary power units, and oxygen systems.

14. Inspect, maintain, and repair aircraft reciprocating engines, propellers, aircraft turbine engines.

Audio/Video Production

	Program Learning Outcomes
1.	Understand the technical operation of equipment and software across multiple disciplines, to create media.
2.	Create media both independently as a member of a film/video or audio production team.
3.	Create the most efficient path for professional project workflow and completion.
4.	Evaluate and align multimedia deliverables with industry standards and requirements.
5.	Create audio/visual messages and stories effectively and creatively to diverse audiences.
6.	Apply professional practices and vocabulary in workplace.

Chemical Technology

Program Learning Outcomes

1. Students will determine and demonstrate safe lab practices and use of lab safety resources.

2. Students will utilize basic laboratory equipment and techniques.

3. Students will develop an ability to apply written, oral and graphical communication in both technical and non-technical environments, and an ability to identify and use appropriate technical literature.

4. Students will effectively utilize lab tools in accurate/precise solution preparation.

5. Students will apply a variety of lab calculations common in chemical analysis

6. Students will be able to compile and evaluate experimental data.

7. Students will design and conduct an individual research project showing mastery of experimental design and project completion.

Civil Engineering Technology - Architectural Major

Program Learning Outcomes

1. An ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities.

2. An ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge.

3. An ability to function effectively as a member of a technical team.

4. An ability to identify analyze, and solve narrowly defined engineering technology problems.

5. An ability to apply written oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.

Civil Engineering Technology - Construction Management Major

Program Learning Outcomes

Graduates of the CET Program shall demonstrate:

1. An ability to apply knowledge, techniques, skills and use modern tools, mathematics, science, engineering and technology to solve well-defined engineering technology level problems appropriate to the discipline

2. An ability to design solutions for well-defined technical program and assist with the engineering design of systems, components, or processes appropriate to the discipline.

3. An ability to apply written, oral, and graphical communications in well-defined technical and non-technical environments and an ability to use appropriate technical literature and online resources.

4. An ability to conduct standard tests and measurements and to analyze, interpret, and report results.

5. An ability to function effectively as a member of a diverse technical team.

6. for CM: Graduates shall meet the students learning outcomes of ACCE (American Council for Construction Education) for associate degrees.

7. for the Architecture Technology Major: Graduates shall demonstrate proficiency in AutoCAD and Revit for buildings including MEP systems.

Civil Engineering Technology - Surveying Major

Program Learning Outcomes
ACCE
. Demonstrate effective communication, both orally and in writing.
. Demonstrate the ability to estimate quantities and costs for the bidding process in a construction project.
. Demonstrate the ability to schedule basic construction project.
. Demonstrate the ability to use current technology related to the construction process.
. Interpret construction documents (contract, specifications, and drawings) used in managing a onstruction project.
. Apply basic principles of construction accounting.
'. Use basic surveying techniques used in building layout.
. Discuss basic principles of ethics in the construction industry.
. Identify the fundamentals of contracts, codes, and regulations that govern a construction project.
0. Recognize basic construction methods, materials and equipment.
1. Recognize basic safety hazards on a construction site standard prevention measures.
2. Recognize the basic principles of structural design.
3. Recognize the basic principles of mechanical, electrical and piping systems.
BET
. An ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly lefined engineering technology activities.
. An ability to apply a knowledge of mathematics, science, engineering, and technology to engineering echnology problems that require limited application to principles but extensive practical knowledge.
. An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
. An ability to function effectively as a member of a technical team.
. An ability to identify, analyze, and solve narrowly defined engineering technology problems.
. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
. An understanding of the need for and an ability to engage in self-directed continuing professional levelopment
An understanding of and a commitment to address professional and ethical responsibilities, including respect for diversity.

9. A commitment to quality, timeliness, and continuous improvement.

Computer Network Administration

Program Learning Outcomes

- 1. Ability to use resources to solve technical problems involving operating systems and server software.
- 2. Manage multiple operating systems, systems software, and network services.
- 3. Ability to understand compliance issues and corporate and federal compliance regulations.
- 4. Demonstrate ability to function independently and as a member of a team.
- 5. Effectively communicate technical information verbally, in writing, and in presentations.
- 6. Ability to manage multiple tasks and deadlines.
- 7. Ability to demonstrate professionalism in the workplace and maintain user/client confidentiality.

Computer Network Administration Computer Support Major

Program Learning Outcomes

1. Ability to use resources to solve technical problems involving operating systems and hardware components.

2. Manage multiple hardware components and operating systems.

3. Ability to understand compliance issues and corporate and federal compliance regulations.

4. Demonstrate ability to function independently and as a member of a team.

5. Effectively communicate technical information verbally, in writing, and in presentations.

6. Ability to manage multiple tasks and deadlines.

7. Ability to demonstrate professionalism in the workplace and maintain user/client confidentiality.

Computer Network Engineering Technology

Program Learning Outcomes

1. Utilize technical, ethical and interpersonal skills to effectively work in a team.

2. Demonstrate the ability to configure and troubleshoot network systems.

3. Develop and implement solutions for networking and security problems, balancing business concerns technical issues and security.

4. Demonstrate a commitment to timeliness, quality, and continuous improvement.

5. Explain networking protocols and their hierarchical relationship in both hardware and software. Compare protocol models and select appropriate protocols for a particular design.

6. Demonstrate adequate preparation for career employment and/or pursuit of a baccalaureate degree program.

7. Effectively communicate technical information verbally, in writing and in presentations.

8. Document network systems.

9. Explain concepts and theories of networking and apply them to various situations, classifying networks, analyzing performance and implementing new technologies.

Computer Network Engineering Technology Cyber Security Major

Missing

Computer Programming and Database Management Computer Information Systems Major

Program Learning Outcomes

1. The graduate will be able to collect, disseminate, analyze, and apply the requirements for a specific software development project.

2. The graduate will be able to write, test, and maintain software applications utilizing current and relevant programming languages.

3. The graduate will be able to design and implement a normalized relational database(s) to meet the needs of the software development project.

4. The graduate will be able to effectively utilize databases and database management systems to organize, store, and retrieve data for the use in application software.

5. The graduate will be able to create application software that is intuitive for use by a wide range of users.

6. The graduate will be able to effectively articulate their ideas, recommendations, and solutions.

7. The graduate will be able to lead and/or participate effectively in teams.

8. The graduate will demonstrate their ability to utilize appropriate resources to broaden their knowledge and apply the industry's latest development tools, techniques, and standards.

Computer Programming and Database Management Computer Software Development Major

Program Learning Outcomes

1. The graduate will be able to collect, disseminate, analyze, and apply the requirements for a specific software development project.

2. The graduate will be able to write, test, and maintain software applications utilizing current and relevant programming languages.

3. The graduate will be able to design and implement a normalized relational database(s) to meet the needs of the software development project.

4. The graduate will be able to effectively utilize databases and database management systems to organize, store, and retrieve data for the use in application software.

5. The graduate will be able to create application software that is intuitive for use by a wide range of users.

6. The graduate will be able to effectively articulate their ideas, recommendations, and solutions.

7. The graduate will be able to lead and/or participate effectively in teams.

8. The graduate will demonstrate their ability to utilize appropriate resources to broaden their knowledge and apply the industry's latest development tools, techniques, and standards.

Computer Programming and Database Management Software Engineering Technology Major

Program Learning Outcomes

1. The graduate will be able to collect, disseminate, analyze, and apply the requirements for a specific software development project.

2. The graduate will be able to write, test, and maintain software applications utilizing current and relevant programming languages.

3. The graduate will be able to design and implement a normalized relational database(s) to meet the needs of the software development project.

4. The graduate will be able to effectively utilize databases and database management systems to organize, store, and retrieve data for the use in application software.

5. The graduate will be able to create application software that is intuitive for use by a wide range of users.

6. The graduate will be able to effectively articulate their ideas, recommendations, and solutions.

7. The graduate will be able to lead and/or participate effectively in teams.

8. The graduate will demonstrate their ability to utilize appropriate resources to broaden their knowledge and apply the industry's latest development tools, techniques, and standards.

Electro-Mechanical Engineering Technology

Program Learning Outcomes

1. The student will demonstrate an appropriate mastery of circuit analysis.

2. The student will demonstrate an appropriate mastery of CAD.

3. The student will demonstrate an appropriate mastery of circuit analysis.

4. The student will demonstrate an appropriate mastery of CAD. The student will demonstrate an ability to identify, analyze, and creatively solve technical and design problems.

5. The student will be able to apply fundamental knowledge to conduct experiments, analyze data, interpret, and apply results to improve processes.

6. The student will demonstrate an appropriate mastery of programmable controllers and motor control systems.

7. The student will demonstrate an appropriate mastery of programmable robots.

8. The student must complete and pass an OSHA 10 General Industry course.

Electro-Mechanical Engineering Technology Energy Major

Program Learning Outcomes

1. The student will be able to communicate as individuals, as well as function effectively on teams by applying oral and written skills.

2. The student will demonstrate knowledge of the importance of quality, timeliness, and continuous improvement.

3. The student will demonstrate an appropriate mastery of circuit analysis.

4. The student will demonstrate an appropriate mastery of CAD. The student will demonstrate an ability to identify, analyze, and creatively solve technical and design problems.

5. The student will be able to apply fundamental knowledge to conduct experiments, analyze data, interpret, and apply results to improve processes.

6. The student will demonstrate an appropriate mastery of programmable controllers and motor control systems.

7. The student will demonstrate an appropriate mastery of programmable robots.

8. The student must complete and pass an OSHA 10 General Industry course.

Electro-Mechanical Engineering Technology Laser Major

Program Learning Outcomes

1. The student will be able to communicate as individuals, as well as function effectively on teams by applying oral and written skills.

2. The student will demonstrate the knowledge of the importance of quality, timeliness, and continuous improvement.

3. The student will demonstrate an appropriate mastery of circuit analysis.

4. The student will demonstrate an appropriate mastery of CAD. The students will demonstrate an ability to identify analyze, and creatively solve technical and design problems.

5. The student will be able to apply fundamental knowledge to conduct experiments, analyze data, interpret, and apply results to improve processes.

6. The student will demonstrate an appropriate mastery of programmable controllers and motor control systems.

7. The student will demonstrate an appropriate mastery of programmable robots.

8. The student must complete and pass an OSHA 10 General Industry course.

Electrical Engineering Technology Biomedical Equipment Major

Program Learning Outcomes

1. An ability to select and apply knowledge of mathematics, science, engineering and technology to engineer technology problems that require the application of principles and applied procedures or methodologies.

2. An ability to function effectively as a member or leader on a technical team.

3. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.

4. An ability to conduct standard tests and measurements; to conduct, analyze and interpret experiments; and to apply experimental results to improve processes.

5. A commitment to quality, timeliness, and continuous improvement.

6. The ability to apply project management techniques to electrical/electronic(s)/biomedical systems development.

7. Proficiency in the application of circuit analysis and design, network systems, healthcare software, analog and digital electronics, electric motor technology, and engineering standards to the building, testing, operation, and maintenance of electrical, electronic and biomedical systems.

8. Exceptional troubleshooting skills based on hands-on knowledge of key biomedical instrumentation.

Electrical Engineering Technology Electronics Systems Major

Program Learning Outcomes

1. An ability to select and apply knowledge of mathematics, science, engineering and technology to engineer technology problems that require the application of principles and applied procedures or methodologies.

2. An ability to function effectively as a member or leader on a technical team.

3. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and the ability to identify and use appropriate technical literature.

4. An ability to conduct standard tests and measurements; to conduct, analyze and interpret experiments; and to apply experimental results to improve processes.

5. A commitment to quality, timeliness, and continuous improvement.

6. The ability to apply project management techniques to electrical/electronic(s) systems development.

7. Proficiency in the application of circuit analysis and design, computer programming, associated software, analog and digital electronics, microcontroller technology, and engineering standards to the building, test, operation, and maintenance of electrical/electronic(s) system.

8. Integrate and synthesize technical information to resolve discrepancies requiring electrical or electronic knowledge.

Electrical Engineering Technology Power Systems Major

Program Learning Outcomes

1. An ability to select and apply a knowledge of mathematics, science, engineering and technology to engineering technology problems that require the application of principles and applied procedures or methodologies.

2. An ability to function effectively as a member of leader on a technical team.

3. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.

4. An ability to conduct standard tests and measurements; to conduct, analyze and interpret experiments; and to apply experimental results to improve processes.

5. A commitment to quality, timeliness, and continuous improvement.

6. The ability to apply project management techniques to electrical/electronic(s) systems development.

7. Proficiency in the application of circuit analysis and design, utilization of network systems, associated software, analog and digital electronics, multiphase analysis, and power systems standards/codes to the building, testing, operation, and maintenance of high-power distribution systems.

8. Integrate and synthesize technical information to resolve discrepancies requiring electrical knowledge.

Environmental Engineering Technology

	Program Learning Outcomes
1.	Students will apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined environmental engineering problems.
2.	Students will design solutions for well-defined environmental engineering technology problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.
3.	Students will apply written, oral and graphical communication in well-defined technical and non-technical environments, while identifying and using appropriate technical literature.
4.	Students will perform standard tests, measurements and experiments then analyze and interpret the results.
5.	Students will perform effectively as a member of a technical team.

Environmental Engineering Technology Stormwater Management Major

	Program Learning Outcomes
1.	Students will apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined environmental engineering problems.
2.	Students will design solutions for well-defined environmental engineering technology problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.
3.	Students will apply written, oral and graphical communication in well-defined technical and non-technical environments, while identifying and using appropriate technical literature.
4.	Students will perform standard tests, measurements and experiments then analyze and interpret the results.
5.	Students will perform effectively as a member of a technical team.

Environmental Engineering Technology Water and Wastewater Major

	Program Learning Outcomes
1.	Students will apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined environmental engineering problems.
2.	Students will design solutions for well-defined environmental engineering technology problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.
3.	Students will apply written, oral and graphical communication in well-defined technical and non-technical environments, while identifying and using appropriate technical literature.
4.	Students will perform standard tests, measurements and experiments then analyze and interpret the results.
5.	Students will perform effectively as a member of a technical team.

Graphic Imaging Technology

Program Learning Outcomes

1. Utilize the Adobe Creative Suite (Illustrator, Photoshop and InDesign) as it pertains to preparing files for the print process.

2. Ability to implement prepress techniques to ensure files are prepped correctly for each printing process studied: offset, flexography, screen and digital printing.

3. Determine proper project cost estimation and imposition of layout based on press type, paper and quantity.

4. Understand paper characteristics such as weight, finish, grain, and its impact on the different print processes.

5. Comprehend proper graphic file formats, resolutions, color modes, bit depth and the impact on print materials.

6. Screen printing: can determine most appropriate mesh count and procedures to produce acceptable printed materials.

7. Flexographic printing: understand plate-making procedures and evaluation to determine plate specifications and usability; comprehend the basic structure of a flexographic press including parts and operating procedures.

8. Offset Lithography: have knowledge of the fundamentals of how to create and produce lithographic projects, comprehend the basic structure of an offset litho press including parts and operating procedures.

9. Create ICC profiles for output devices using standardized equipment such as colorimeters.

10. Utilize a spectrophotometer and comprehend data readings of print and ink materials.

11. Able to test and evaluate ink for each print process based on viscosity, adhesion, finish, cure methods, longevity and pH.

12. Develop creative thinking skills to solve problems used in lab situations that simulate "real world" experiences.

13. Foster the ability to work as a team and coordinate a project from concept to finish.

14. Develop communication and management skills through team projects.

Graphic Design

Program Learning Outcomes

1. Demonstrate an understanding of fundamental design principles.

2. Demonstrate competency in working with, creating, and navigating brand standards (designing under existing restrictions, as well as creating guidelines for future designers).

3. Demonstrate a proficiency of typography and typographic principles, in both small amounts (poster, infographics, etc.) and large-scale applications (200+ words, body copy, etc.).

4. Students will be able to think and speak critically about their own design and typographic language work and the work of others.

5. Demonstrate proficiency in using Adobe Creative Suite.

6. Demonstrate proficiency in the area of design for packaging applications.

7. Demonstrate knowledge and application of user interface/user experience design for both web and mobile applications.

8. Demonstrate proficiency in motion graphics and basic principles of animation.

9. Demonstrate an ability to ideate and visually represent creative ideas through use of hand-drawn sketches.

Land Surveying

Program Learning Outcomes – Associate's Degree

Associate degree program student outcomes must include the following:

1. An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to the discipline.

2. An ability to conduct experiments or test theories, as well as to analyze and interpret data.

3. An ability to function on teams.

4. An understanding of professional and ethical responsibility.

5. An ability to communicate effectively.

Program Learning Outcomes – Bachelor's Degree

Baccalaureate degree program student outcomes must include, but are not limited to the following:

1. An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to the discipline.

2. An ability to formulate or design a system, process, procedure or program to meet desired needs.

3. An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions

4. An ability to communicate effectively with a range of audiences

5. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts

6. An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Mechanical Engineering Technology Design Major

Program Learning Outcomes

1. Students will have the ability to conduct standard tests and measurements, and to conduct, analyze and interpret experiments.

2. Students will have an ability to function effectively as a team member of a technical team.

3. Students will have an ability to design systems, components, or processes to solve engineering technology problems.

4. Students will have the ability to identify, analyze, and solve narrowly defined engineering technology problems.

5. Students will have the ability to apply written, oral, and graphical communication in technical environments.

6. Students will demonstrate a commitment to quality, timeliness, and continuous improvement.

Mechanical Engineering Technology Manufacturing Management Major

Program Learning Outcomes

1. Students will have the ability to conduct standard tests and measurements, and to conduct, analyze and interpret experiments.

2. Students will have an ability to function effectively as a team member of a technical team.

3. Students will have the ability to design systems, components, or processes to solve engineering technology problems.

4. Students will have the ability to identify, analyze, and solve narrowly defined engineering technology problems.

5. Students will have the ability to apply written, oral, and graphical communication in technical environments.

6. Students will demonstrate a commitment to quality, timeliness, and continuous improvement.

Web and Multimedia Design

Program Learning Outcomes

1. Apply and use HTML coding language for web development.

2. Demonstrate the ability to use CSS to style the appearance and layout of web pages throughout a site.

3. Demonstrate the ability to use JavaScript enabling them to develop and maintain dynamic and interactive web pages.

4. Demonstrate proficiency utilizing Adobe Illustrator.

5. Demonstrate proficiency utilizing Adobe Photoshop.

6. Demonstrate proficiency utilizing Adobe Dreamweaver.

7. Demonstrate proficiency using Adobe Animate.

8. Apply fundamentals in many other Adobe Creative Cloud programs; InDesign, Premier, After Effects, Lightroom, Acrobat Pro, Character Animator, Media Encoder, etc.

9. Ability to successfully communicate, present, and defend portfolios and projects.

10. Ability to assess and speak critically about their own Web Designs and the work of other design teams in the industry.

11. Develop and deliver a competitive professional portfolio site with CV and cover letters that passes industry review.

Welding

Program Learning Outcomes

1. Students will have the ability to weld in (flat, horizontal, vertical, and overhead positions) using the basic welding processes SMAW, GMAW, FCAW, and GTAW & pipe.

2. Students will have the ability to perform metal layout processes.

3. Students will have the ability to cut metals using (oxyfuel and, plasma, arc) cutting process.

4. Students will have the ability to apply the principles of metallurgy during the welding process.

5. Students will have the ability to read and interpret basic blueprints and welding symbols to fabricate components.

6. Students will have the ability to apply basic math and measurements as applied to welding processes.

7. Students will have the ability to follow industry safety practices.

8. Students will receive OSHA 10 credential.