

NEW CURRICULUM FOR FALL 2026

Applied Technology (APTEC)

APTEC 1110

Introduction to Industrial Maintenance

3 Credit Hours

Students will learn about the opportunities that exist within the field of industrial maintenance. The class will allow students to experience introductory skillsets that industrial maintenance technicians experience in the industrial workforce. (2 lecture hours, 2 lab hours)

APTEC 2220

Industrial Operations & Instrumentation

3 Credit Hours

This class will be an industrial managerial capstone class designed to give students a high level understanding of systems and how they work together. The class will bring all of the life systems, packaging systems, facility systems, and electrical systems overview together for students. (2 lecture hours, 2 lab hours)

Prerequisite: APTEC 1110

Art (ART)

ART 2105

Experiences in Art Education

3 Credit Hours

Introduction to the field of art education. Students will examine the history and theories of art education as a foundation for creating and facilitating their own meaningful art experiences for a classroom environment. Through these exploration and experimentation processes, students will develop their own preliminary theories and motivations for teaching art as part of a reciprocal relationship to their own active art making practices. (2 lecture hours, 2 lab hours)

Prerequisite: ART 1151 with a grade of C or better and ART 2211, ART 2212 or ART 2213 with a grade of C or better, or consent of instructor

Course types: General Education: Fine Arts (A.A.S., A.G.S.), General Education: Humanities (A.A.S., A.G.S.)

ART 2107

Art and Community

1-3 Credit Hours

Practical experience working with a community to plan, design, and create an artwork or project based on community needs. Students will be introduced to contemporary community art and social practice examples as inspiration for their collaborative work. Off-site field visits and meetings with involved communities will be required. (2-6 lab hours)

Prerequisite: ART 2221 with a grade of C or better, or equivalent, or consent of instructor

Course types: General Education: Fine Arts (A.A.S., A.G.S.), General Education: Humanities (A.A.S., A.G.S.)

ART 2153

Pigment to Paint

1-3 Credit Hours

Exploration of natural earth and plant pigments transformed into watercolor, oil, gouache, egg tempera, and print inks. Students will learn how to turn plant dyes into pigment using the laking process as well as how to properly process earth pigments found in the natural environment. Coursework will culminate in a personal color palette created for use in projects. (2-6 lab hours)

Course types: General Education: Fine Arts (A.A.S., A.G.S.), General Education: Humanities (A.A.S., A.G.S.)

ART 2154

Dye the Rainbow: Natural Color for Fabric

1-3 Credit Hours

Exploration of natural plant dyes for application on fabric. Students will learn how to properly prepare fabric with mordants for natural dye processes, create vibrant dye baths from dye plants, develop and maintain an indigo vat, and modify colors using chemistry. (2-6 lab hours)

Course types: General Education: Fine Arts (A.A.S., A.G.S.), General Education: Humanities (A.A.S., A.G.S.)

ART 2159

Advanced Topics in Natural Color

3 Credit Hours

Independent exploration of natural color topics. Each student will develop an individual course plan to further refine their skills and concepts. (6 lab hours)

Prerequisite: ART 2152 or consent of instructor

Course types: General Education: Fine Arts (A.A.S., A.G.S.), General Education: Humanities (A.A.S., A.G.S.)

ART 2223

Painting Stretched: Expanded Approaches to Painting

3 Credit Hours

Exploration of expanded approaches to painting that incorporate sculptural forms, site-specific installation, and found objects, connecting the language and gestures of painting to the broader field of contemporary art. Students will engage with both traditional and experimental media, with emphasis on grounds, supports, adhesives, and pigments. Topics include investigations of scale, the role of material as both content and concept, and the study of contemporary artists working in the expanded field of painting. (6 lab hours)

Prerequisite: ART 2221 with a grade of C or better, or consent of the instructor

Course types: General Education: Fine Arts (A.A.S., A.G.S.), General Education: Humanities (A.A.S., A.G.S.)

ART 2254

CAD 3D Modeling for Jewelry

3 Credit Hours

Introduction to computer-aided design (CAD) as a creative and technical tool for jewelry and small-scale object design. Students will learn to use 3D modeling software to design precise digital models suitable for rendering, prototyping, and production. (6 lab hours)

Course types: General Education: Fine Arts (A.A.S., A.G.S.), General Education: Humanities (A.A.S., A.G.S.)

ART 2303***On Location: Site Specific Art and Installation***

1-3 Credit Hours

Exploration of the art of a specific location. In addition to studying the history of a place and the art of the area, students will visit iconic and contemporary work at museum and outdoor locations while developing their own responsive work for a site-specific location. Students are encouraged to use materials found on site, consider the ethics of their approach, and experiment with forms such as video, performance, sculpture, and installation. (2-6 lab hours)

Prerequisite: ART 1101 with a grade of C or better, or equivalent, or concurrent enrollment in ART 1101, or consent of instructor. It is recommended that students have some art experience before taking this class.

Course types: General Education: Fine Arts (A.A.S., A.G.S.), General Education: Humanities (A.A.S., A.G.S.)

Computer and Information Science (CIS)

CIS 1215***3D Modeling I***

3 Credit Hours

In this course, students will learn how to plan, create, and export 3D models using polygon modeling techniques in industry standard software designed for entertainment. Topics include planning for 3D model construction, object modeling, environmental modeling, and character modeling. (1 lecture hour, 4 lab hours)

CIS 1216***Materials and Lighting***

3 Credit Hours

In this course, students will learn how to texture and light 3D models using industry standard tools and techniques designed for entertainment. Topics include preparing 3D models using unwrapping techniques (UV mapping), constructing and applying materials and shaders, lighting 3D assets and environments, and advanced rendering techniques. (1 lecture hour, 4 lab hours)

Prerequisite: CIS 1212 or CIS 1215 or MPTV 1215 with a grade of C or better.

CIS 2215***3D Modeling II***

3 Credit Hours

In this course, students will learn how to plan, create, prepare, and export 3D models using advanced sculpting techniques in industry standard software designed for entertainment. Topics include planning for advanced 3D assets, object sculpting, environmental sculpting, and character sculpting. (1 lecture hour, 4 lab hours)

Prerequisite: CIS 1215 or MPTV 1215 with a grade of C or better.

CIS 2334***Motion Capture Studio***

3 Credit Hours

In this course, students will be learning to use industry standard motion capture technology. Topics in motion capture include camera and volume calibration, human and prop preparation, live capture, and post clean up. (1 lecture hour, 4 lab hours)

Prerequisite: CIS 1212 or MPTV 2331 with a grade of C or better

CIS 2642***Introduction to Computer Vision (CV)***

4 Credit Hours

This course provides students with fundamental concepts in computer vision (CV) and image processing, including the basics of image formation, imaging geometry, image pre-processing, image classification, object detection and correction, motion estimation and tracking, and deep learning with neural networks. Emphasis on developing skills to create computer vision applications. (3 lecture hours, 2 lab hours)

Prerequisite: MATH 1635 and CIS 2646 with a grade of a C or better, or equivalent, or consent of instructor

CIS 2643***Introduction to Generative AI & Prompt Engineering***

3 Credit Hours

This course introduces students to fundamental principles, strategies, and practices necessary for working with and developing generative Artificial Intelligence (AI) and prompt engineering. (2 lecture hours, 2 lab hours)

CIS 2644***Ethics in Artificial Intelligence (AI)***

4 Credit Hours

This course introduces students to ethics and its relevance to Artificial Intelligence (AI). Students will explore the various components of ethics and understand its significance in the context of AI. Students will be introduced to real-world AI cases where AI is used to address social challenges and bring about positive impacts. They also gain an understanding of responsible AI and its importance in ensuring that AI technologies are developed and deployed ethically with accountability. (3 lecture hours, 2 lab hours)

Prerequisite: CIS 1655 and CIS 2640

CIS 2645***Security in AI***

4 Credit Hours

This course introduces students to the concepts of Artificial Intelligence (AI) as it applies to security. Also develops understanding of the need for AI in security by exploring recent case studies. Students learn the fundamental concepts of security and recognize how AI plays a crucial roles in enhancing security measures. (3 lecture hours, 2 lab hours)

Prerequisite: CIS 1655 and CIS 2640

CIS 2646***Deep Learning (DL)***

4 Credit Hours

This course provides an in-depth exploration of deep learning, a subset of machine learning that focuses on neural networks with many layers. Students will learn about the theoretical foundations and practical applications of deep learning, including topics such as Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), and Generative Adversarial Networks (GANs). Through hands-on projects and real-world case studies, students will gain experience in building, training, and deploying deep learning models using popular frameworks like TensorFlow and PyTorch. Upon completion, students will be equipped with the skills to tackle complex problems in areas such as computer vision, natural language processing, and artificial intelligence. (3 lecture hours, 2 lab hours)

Prerequisite: CIS 1655 and CIS 2640

English (ENGLI)

ENGLI 2000

Introduction to Writing Studies

3 Credit Hours

Introduces students to the academic discipline of writing studies, which treats writing as both a rhetorical activity and a subject of study. Emphasizes threshold concepts key to understanding disciplinary conversations. Students read, discuss, and write about contemporary writing studies scholarship. Students participate in scholarly discussions by conducting their own research and writing themselves into the conversations. (3 lecture hours)

Prerequisite: Course requires Reading Placement Category One and Writing Placement Category One.

ENGLI 2101

Understanding Rhetoric

3 Credit Hours

An examination of rhetoric as a force for shaping discourse, identity, and culture. Students explore how rhetoric and culture overlap and inform one another; how culture and knowledge are produced through relationships, materials conditions, and everyday practices; and how systems of power function through rhetoric. Students engage in research projects, studying cultures circulating environmental rhetorics, scientific rhetorics, feminist rhetorics, queer rhetorics, political rhetorics, indigenous rhetorics, or legal rhetorics. (3 lecture hours)

Prerequisite: Course requires Reading Placement Category One and Writing Placement Category One.

ENGLI 2260

Emerging Genres in Creative Writing

3 Credit Hours

Students develop their writing talent in emerging and experimental genres like digital storytelling, writing for video games, interactive fiction, and hybrid/multimodal forms. Students investigate the boundaries of traditional genres while developing original works that engage with evolving media and narrative technique. Emphasis is on the workshop model in which students provide and receive input on works written for class. This course emphasizes the craft of writing with attention to brainstorming, drafting, and revising as important stages of the writing process. Through analysis of published works, and the production of their own original works, students learn to use language creatively to achieve desired effects. They further consider how intention and audience guide creative choices. Students will explore how creative writing allows for the expression of many multicultural perspectives and how creative works help writers and readers to learn about themselves and the world around them. (3 lecture hours)

Mathematics (MATH)

MATH 1325

Mathematics for Elementary School Teachers I and II

5 Credit Hours

This course is designed to meet the requirements of the state certification of elementary teachers. Active participation in problem solving, conceptual understanding, and mathematical reasoning are foundations of this course. Students will spend time with properties of numbers, strategies, algorithms, and computation with whole numbers, integers, rational numbers, and real numbers. Other topics include functions, probability, statistics, non-metric geometry, and geometric measurement. This course requires students to perform strategies, methods, skills and/or calculations without the use of any assistance. Assistance includes but is not limited to charts, notes, formulas, and technology. An arithmetic skills assessment is a required mastery component and must be passed with a score of at least 80% for successful course completion. The arithmetic skills assessment is designed to measure a student's ability to perform arithmetic skills without the use of a calculation device or assistance. This course requires students to perform strategies, methods and/or skills where students perform calculations without the use of any assistance. (3 lecture hours, 4 lab hours)

Prerequisite: Demonstrated geometry competency (level 1), and MATH 0482 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying ACT or SAT math sub-score or a qualifying high school GPA with successful completion of a 4th year high school math class.

Course types: General Education: Mathematics (A.A.S., A.G.S.)

Motion Picture/Television (MPTV)

MPTV 1215

3D Modeling I

3 Credit Hours

Introduction to 3D modeling for entertainment media. Students will learn to plan, create, and export 3D models using polygon modeling techniques in industry-standard software designed for entertainment. Topics include planning for 3D model construction, object modeling, environmental modeling, and character modeling. (1 lecture hour, 4 lab hours)

MPTV 1216

Materials and Lighting

3 Credit Hours

Introduction to materials and lighting for entertainment media. Students will learn to texture and light 3D models using industry-standard tools and techniques designed for entertainment. Topics include preparing 3D models using UV mapping techniques, constructing and applying materials and shaders, lighting 3D assets and environments, and advanced rendering techniques. (1 lecture hour, 4 lab hours)

Prerequisite: CIS 1212 or CIS 1215 or MPTV 1215 with a grade of C or better or consent of instructor.

MPTV 2215**3D Modeling II**

3 Credit Hours

Advanced course in 3D modeling for entertainment media. Students will learn to plan, create, prepare, and export 3D models using advanced sculpting techniques in industry-standard software designed for entertainment. Topics include planning for advanced 3D assets, object sculpting, environmental sculpting, and character sculpting. (1 lecture hour, 4 lab hours)

Prerequisite: CIS 1215 or MPTV 1215 with a grade of C or better or consent of instructor.

MPTV 2334**Motion Capture Studio**

3 Credit Hours

Introduction to motion capture for entertainment media. Students will learn to use industry-standard motion capture technology. Topics in motion capture include camera and volume calibration, human and prop preparation, live capture, and post cleanup. (1 lecture hour, 4 lab hours)

Prerequisite: CIS 1212 or MPTV 2331 with a grade of C or better or consent of instructor.

Music (MUSIC)**MUSIC 1194****Latin Jazz Ensemble**

1 Credit Hour

Rehearsal and performance of songs from Latin and Brazilian jazz repertoires. The course will also cover skills needed as a professional musician. Writing assignments, as appropriate to the discipline, are part of the course. (3 lab hours)

Prerequisite: Placement audition recommended

Course types: General Education: Fine Arts (A.A.S., A.G.S.), General Education: Humanities (A.A.S., A.G.S.)

Physical Education, Fitness, and Sports Studies (PHYS)**PHYS 2266****Fitness Assessment and Exercise Program Design**

3 Credit Hours

Application of fitness assessment standards and implementation into exercise programming. Practical experience in fitness assessment testing and techniques used in preparation for implementation in various fitness settings. Create and design exercise programs based upon various assessment results in preparation for education and/or certification. (2 lecture hours, 2 lab hours)

PHYS 2268**Advanced Principles of Weight Training**

3 Credit Hours

This course provides an advanced study of weight training principles, techniques, and programming strategies. Students will review biomechanics, refine performance in compound lifts, explore progression/regression strategies, training theory, and periodization. Emphasis is placed on advanced training methods and systems. Program design as well as practical application for strength, power, hypertrophy, endurance, and athletic performance will also be covered. Prior weight training experience is highly recommended. (2 lecture hours, 2 lab hours)

Prerequisite: Reading Category 1 required. Completion of PHYS 1171 or consent of instructor.

Applied Technology**Industrial Maintenance Certificate (<https://catalog.cod.edu/programs-study/applied-technology/industrial-maintenance-certificate/>)**

This certificate program will allow students an opportunity to pursue multiple apprenticeship opportunities. Students will gain exposure to multiple career paths in multiple industries. Students will complete program requirements and then select 6 courses from the emphasis tracks. Students may work with a faculty member to develop a custom emphasis track.

Computer and Information Science

For more information about Computer and Information Science, please visit the program page (<http://www.cod.edu/cis>).

Artificial Intelligence, A.A.S. (<https://catalog.cod.edu/programs-study/computer-information-science/artificial-intelligence-aas/>)

The Artificial Intelligence degree prepares students to design, implement, and evaluate AI solutions across diverse applications. This degree combines a foundation in computer science, data analytics, statistics, ethical consideration, security, and hands-on experience to develop robust AI systems. The curriculum covers core areas such as Machine Learning (ML), Deep Learning (DL), and Computer Vision (CV), providing hands-on experience with advanced algorithms.

Game 3D Modeling, Certificate (<https://catalog.cod.edu/programs-study/computer-information-science/game-3d-modeling-certificate/>)

The Game 3D Modeling certificate prepares the student to 3D model and develop video games using 3D modeling techniques used in the game industry.

Game Animation, Certificate (<https://catalog.cod.edu/programs-study/computer-information-science/game-animation-certificate/>)

The Game Animation certificate prepares the student to animate and develop video games using game animation techniques used in the game industry.

Game Audio Engineer, Certificate (<https://catalog.cod.edu/programs-study/computer-information-science/game-audio-engineer-certificate/>)

The Game Audio Engineer certificate prepares the student to audio engineer and develop video games using audio engineering techniques used in the game industry.

Game Narrative Design, Certificate (<https://catalog.cod.edu/programs-study/computer-information-science/game-narrative-design-certificate/>)

The Game Narrative Design certificate prepares the student to design narratives and develop video games using narrative design techniques used in the game industry.