Regional Occupational Program

Computer Aided Drafting and Design 2025-2026

COURSE DESCRIPTION

Computer Aided Drafting and Design (CAD) is a constantly evolving field that affects the way everyday products are designed, prototyped, and manufactured. This course provides entry-level training in drafting concepts and computer aided drafting and design occupations. Students will develop skills in making and using technical drawings. Instruction emphasizes software and system utilization to develop skills. Projects will develop skills in mechanical, architectural, civil, isometric drafting, program customization and communication. This course is especially beneficial to students interested in careers relating to production design, engineering, drafting, commercial art, graphic arts, as well as architecture and construction. Through hands-on activities students will develop knowledge and basic skills in entity creation, editing, dimensioning, file management and plotting.

Course Information

Course Length:	1 Year
Prerequisite:	No
Course Level:	Concentrator
UC:	No
Articulated:	No
Industry Cert.:	No
Industry Sector:	Engineering and Architecture
Pathway:	Engineering Design
CALPADS:	7730

O*Net SOC Codes

27-1021	Commercial and Industrial Designers
17-3027	Mechanical Engineering Technologists and Technicians
17-3011	Architectural and Civil Drafters

Legend

CTE - PS	CTE Pathway Standards
CRP	Career Ready Practices
CTE - AS	CTE Anchor Standards
CCSS	Common Core State Standards
ISTE	International Society for Technology in Education

Includes updates from the 24/25 Construction Advisory

Advisory Minutes

Computer Aided Drafting and Design

Course Orientation

a. Discuss objectives for this course, including competencies, teacher expectations, classroom policies, and procedures.
b. Identify and discuss the acquisition of transferable skills (communication, collaboration, creativity, and critical thinking) and their importance to being college and career ready and for future personal and professional success.
c. Review objectives, competencies, and course syllabus.
d. Discuss student and teacher expectations, including behavior, class rules, appropriate dress, pre-course knowledge, and grading policies, including enrollment and attendance requirements and procedures, and classroom/school safety and disaster procedures.
e. Discuss next steps in course sequence related to the career pathway, the need for reinforcement of basic skills, transferrable skills, and postsecondary and career options.
f. Discuss the Big Six: Career Ready Essentials and the Standards for Career Ready Practice as they relate to this course, all aspects of the industry sector, and being college and career ready.

Big Six: Career Ready Essentials

1. Effective Communication	CTE - PS	CRP	CTE - AS	CCSS	ISTE
a. Demonstrate effective verbal communication and conflict resolution skills. **b. Use the writing process to develop written communication with the appropriate tone, organization, and format for the identified audience.** c. Explain the effect of interpersonal skills on one's ability to communicate effectively and develop relationships. d. Describe the impact of ineffective communication on business relationships. e. Analyze the impact of vocabulary, body language, and tone on verbal communication. f. Demonstrate active listening skills. g. Accurately interpret industry-specific written communication. h. Model responsible and effective use of various communication technologies. i. Identify valid and reliable digital reference and resource materials. j. Gather information from multiple digital sources to compare and contrast, synthesize, and summarize. k. Identify and use appropriate communication and collaboration technologies. l. Utilize technology to problem solve, accomplish tasks, and to produce or publish products.		1 2 11	2 3 4 5 7 8 9 10 11	**LS** 9-10 11-12.6 **SLS** 11-12.2 9-10 11-12.1 11-12.1d **WS** 11-12.7 11-12.6	1b,c 2c 3b,c 5c 6b,c,d

2. Collaboration, Creativity, and Critical Thinking	CTE - PS	CRP	CTE - AS	CCSS	ISTE
a. Demonstrate critical thinking skills for a variety of purposes and in different settings. **b. Collaborate to reach consensus on an identical objective through the sharing of knowledge, tasks, and learning.** c. Discuss the importance of the critical thinking process to real-world applications.		2 4 5 7	2 3 4 5	**LS** 9-10 11- 12.6	1c 3c,d 4a-d 5c,d

d. Evaluate the impact of creative thinking on problem solving and innovation in real-world applications. e. Compile work that demonstrates the process used to (elaborate, refine, analyze) evaluate original ideas and maximize creative efforts. f. Apply divergent and convergent thinking to the development of an original idea or solution. g. Examine real-world limits to adopting ideas. h. Demonstrate creative thinking (preparation, insight, evaluation, elaboration, and communication) to create a new idea or concept. i. Assume shared responsibility for collaborative work, and value the individual contributions made by each team member. j. Evaluate evidence, arguments, claims, and beliefs to identify connections. k. Identify bias, prejudice, propaganda, self-deception, distortion, and misinformation. l. Produce intellectual, informational, or material products that serve an authentic purpose. m. Work effectively and respectfully with those from diverse backgrounds or cultures. n. Demonstrate respect, trust, commitment, and the ability to compromise in collaborative projects.		9 10 11	7 8 9 11	**SLS** 9-10 11-12.1 11-12.1d 11-12.2 **WS** 11-12.7 11-12.6	6c 7b,c,d
3. Leaders and Teams: Roles and Responsibilities	**CTE – PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Determine the individual and team members' roles and responsibilities. **b. Demonstrate leadership skills and qualities (i.e., reliability, negotiation skills, initiative, positive reinforcement, recognition of others' efforts, problem-solving skills, conflict resolution, and delegation).** c. Explain the importance of technical, social, and communication skills to team success. d. Compare and contrast leadership styles and their effectiveness in various situations. e. Organize and delegate responsibilities in a team setting to encourage ideas, perspectives, and contributions from all team members. f. Develop a strong sense of team identity by brainstorming solutions, volunteering, assisting others, practicing respect and courtesy, and taking initiative. g. Examine situations in which a follower becomes the leader. h. Describe twenty-first-century skills required across all occupations. i. Identify and discuss the characteristics of a successful team (i.e., leadership, cooperation, and effective decision-making). j. Leverage social and cultural differences to increase innovation and quality of work.		7 8 9	3 7 8 9 11	**SLS** 11-12.2 9-10 11-12.1 11-12.1d **WS** 11-12.6	7a,c
4. Legal, Ethical, and Environmental Considerations	**CTE - PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Demonstrate industry specific ethical and legal practices. **b. Identify eco-friendly industry specific practices and resources.** c. Identify local, state, and federal regulatory agencies, entities, laws, and regulations.		5 7 8	3 5 7	**WS** 11-12.6 11-12.7	2a,b 3a,b 5c

d. Identify discrimination based on race, nationality, religion, gender, age, disability, or sexual orientation. e. Summarize the ethical and legal implications of workplace discrimination and harassment. f. Explain the concept of corporate citizenship. g. Examine an employer's role in protecting the health and welfare of employees, the community, and the environment. h. Analyze current environmental laws and regulations and their impact on industry. i. Compare and contrast both society's and industry's impact on the environment.		12	8 9 11	**SLS** 9-10 11-12.1 11-12.1d 11-12.2	6c
5. Personal Growth and Career Planning	**CTE - PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Demonstrate continued personal development and growth. **b. Develop and manage a personal growth and career plan.** c. Explain the relationship between sound financial habits and financial security. d. Create and manage a personal financial plan. e. Demonstrate initiative in achieving personal and professional goals. f. Apply time management strategies to meet deadlines. g. Demonstrate a growth mindset through flexibility and a positive attitude. h. Select and demonstrate appropriate job-search and retention techniques. i. Demonstrate strategies to prepare for employment. j. Demonstrate interpersonal skills appropriate for the workplace. k. Elaborate on the importance of perseverance to personal and professional success. l. Discover personal career interests, aptitudes, and skills.		1 2 3 4 6	2 3 4 7 8 11	**LS** 9-10 11-12.6 **SLS** 9-10 11-12.1 11-12.1d 11-12.2 **WS** 11-12.6	1a 3a,c 4d 6a,d 7b
6. Workplace Safety and Personal Wellness	**CTE - PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Demonstrate proper industry specific safe work practices to prevent injury or illness. **b. Assess the potential impact of goal setting on personal and professional success.** c. Describe the role of security and emergency procedures in workplace safety. d. Describe the effect of preventative measures on emergencies in the workplace. e. Identify and describe the causes, prevention, and treatment of common accidents. f. Identify local, state, and federal agencies that regulate workplace safety. g. Explain the role of the California Occupational Safety and Health Administration (Cal-OSHA) and the Environmental Protection Agency (EPA). h. Discuss the basics of system operations. i. Demonstrate the proper use of personal protective equipment (PPE). j. Explain the purpose of and accurately interpret a Safety Data Sheet (SDS). k. Identify hazardous materials and chemicals. l. Demonstrate proper procedures to respond to work-related accidents and injuries. m. Describe how ergonomics, housekeeping, and maintenance are related to accidents and injuries.		2 5 6 8 12	2 5 6 7 8 10 11	**LS** 9-10 11-12.6 **WS** 11-12.7 11-12.6 **SLS** 9-10 11-12.1 11-12.1d	1a,d 2a,d 5b

n. Demonstrate cyber ethics, cyber safety, and cybersecurity. o. Assess the potential impact of preventative physical and mental health measures on workplace safety.					
Computer Aided Drafting and Design Units of Instruction					
7. Introduction to CAD Programs and Systems	**CTE-PS**	**CRP**	**CTE- AS**	**CCSS**	**ISTE**
a. Demonstrate understanding of the history of drafting as a graphic language, and its impact on architectural and industrial design. **b. Demonstrate understanding that fabricating an object requires many steps that include planning, drawing, and revisions prior to manufacturing.** c. Discuss the development of architectural systems in relation to aesthetics, efficiency, and safety. d. Discuss the importance of perspective in pictorial drawings that allows the viewer to visualize a three-dimensional object. e. Compare traditional and technology-based drafting tools used within the architectural, engineering, and manufacturing industries.	C1.0	1 2 5 11	1 2 5 11	**LS** 9-10 11-12.6 **WS** 11-12.7	
8. Input Modes	**CTE - PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Demonstrate knowledge and basic skill in the elements and proper use of input modes. b. Demonstrate use of the relative mode with reference to the last plotter point. c. Demonstrate how to use the polar mode to measure and draw angles. d. Demonstrate use of the absolute mode using numerical values. e. Explain use of the view cube, ribbon and control panel, mouse controls.	C4.0 C4.1	1 2 4 5 11	1 2 4 5 11	**LS** 9-10 11-12.6 **WS** 11-12.6 11-12.7	
9. Reading Blueprints and Drawings	**CTE - PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Demonstrate understanding of the importance and purpose of reading blueprints, their applications, symbols, and their uses. **b. Demonstrate knowledge and basic skill in measuring systems and the measurement instruments involved in drafting and related fields.** c. Identify and describe symbols used with blueprints. d. Describe the process of scaling and computer reduction of blueprints and drawings. e. Explain the representation of line types: solid/object, center, hidden, etc. f. Communicate and interpret information clearly in industry-standard visual and written formats.	C3.3 C4.0 C4.1	1 2 4 5 11	1 2 4 5 11	**LS** 9-10 11-12.6 **WS** 11-12.6 11-12.7	

10. Drawing Fundamentals	CTE - PS	CRP	CTE - AS	CCSS	ISTE
a. Demonstrate understanding of how standardized procedures for drawings are essential by creating a common language for effective communication. **b. Demonstrate understanding that technical drawings are essential for all product design- regardless of its design, intended purpose, or material composition.** c. Demonstrate basic skills in using lines, circles, and other geometric shapes, as well as demonstrating proper use of the zoom command, OSNAP, and object menus. d. Discuss the importance of multi view drawings in the communication of ideas from the draftsman to the fabricator. e. Describe how two-dimensional pictorial drawings represent an object in a three-dimensional perspective allowing the viewer to visualize the object. f. Discuss the importance of proper lettering, including single stroke lettering, as well as other common technical styles, including standard font height, numbering, and dimensioning. g. Compare refined and unrefined sketches and the influence of sketch quality on perception of product idea creativity. h. Plan, prepare, and interpret drawings and models through traditional drafting and computer aided design (CAD) techniques.	C3.0 C3.1 C3.2 C5.1 C5.4 C10.0 C10.1 C10.2 C10.3 C10.4	1 2 4 5 10 11	1 2 4 5 11	**LS** 9-10 11-12.6 **WS** 11-12.6 11-12.7	

11. Editing and Modifying Commands	CTE - PS	CRP	CTE - AS	CCSS	ISTE
a. Demonstrate knowledge and basic skill in the function of editing commands by manipulating geometric entities to produce accurate drawings. b. Demonstrate competency in deleting, replacing, copying, and moving information. c. Compare basic editing and automatic editing. d. Describe and demonstrate how to change or make modifications: i.e., line density and styles, views, layers, color units, windows, grids, snaps, and command functions. e. Demonstrate grouping objects and modifying object properties.	C5.3	1 2 5 11	1 2 5 11	**LS** 9-10 11-12.6 **WS** 11-12.7	

12. Dimensioning	CTE - PS	CRP	CTE - AS	CCSS	ISTE
a. Demonstrate knowledge and basic skill in proper dimensioning techniques by hand and by computer, i.e., lines, symbols, extension lines, numerals and notes, scale, vertical, horizontal, radial, and radial. **b. Demonstrate knowledge and basic skill in proper dimensioning technique by hand and by computer, i.e., angular, parallel, diametric, details, limits, etc.** c. Identify the meaning and importance of geometric terminology and its proper use for accurate communication. d. Discuss why it is important to know the intended design of the 'part' and how it will be positioned with other parts in final assembly. e. Explain why dimensions and notes are important elements in technical drawing. f. Describe various drafting applications and the proper dimension standards for each.	C3.2 C5.4 C8.0 C8.1 C8.2 C9.2	1 2 4 5 11	1 2 4 5 11	**LS** 9-10 11-12.6 **WS** 11-12.6 11-12.7	

g. Describe and demonstrate use of cam technology and ANSI dimension standards. h. Discuss the fundamental rules for dimensioning, i.e., size versus position dimensions, crossing extension or dimension lines, numbering by geometric type, and actual versus scaled size. i. Explain the interaction between sketching dimensions and the resulting solid mode, as well as geometric and parametric relationships.					
13. Work Files	**CTE - PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Demonstrate knowledge and basic skill in the creation and organization of working files. b. Discuss project components in the design and documentation of model creation. c. Describe how naming conventions help create and organize files. d. Describe the importance of maintaining organized project files and its contents for drawing management.	C11.0	1 2 4 5 11	1 2 4 5 11	**LS** 9-10 11-12.6 **WS** 11-12.6 11-12.7	
14. Sectional Views	**CTE - PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Demonstrate knowledge and basic skill in the application and functions of sectional views. **b. Describe hidden features of an object using sectional views to determine proper cutting planes.** c. Create full and half sectional views. d. Describe offset sections. e. Identify and describe section lining symbols.	C6.0 C6.1 C6.2	1 2 4 5 10	1 2 4 5 11	**LS** 9-10 11-12.6 **WS** 11-12.6 11-12.7	
15. Printer and Plotter Operations	**CTE - PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Demonstrate knowledge and basic skill in the proper technique of scaling and to create industry-quality drawings. b. Explain the process for setting plotting specifications. c. Describe how to make modifications, such as changing pens, paper selection, etc. d. Describe the blueprint process. e. Explain how plot style tables and pen configurations impact a drawings appearance.		1 2 4 5 11	1 2 4 5 11	**LS** 9-10 11-12.6 **WS** 11-12.6 11-12.7	
16. Working and Pictorial Drawings	**CTE - PS**	**CRP**	**CTE - AS**	**CCSS**	**ISTE**
a. Demonstrate understanding of the importance of pictorial drawings and basic skill in isometric, axonometric, oblique, exploded, and assembly pictorial drawings. b. List the components of a working drawing. c. Describe the purpose of a working drawing. d. Describe and demonstrate how cabinet and cavalier components are used.	C5.1 C10.4	1 2 4 5 11	1 2 4 5 11	**LS** 9-10 11-12.6 **WS**	

e. Create isometric and non-isometric lines. f. Demonstrate use of curves and ellipses. g. Describe and demonstrate assorted perspectives. h. Describe and demonstrate solid modeling.				11-12.6 11-12.7	

Standards Alignment

The curricula have been aligned with the CTE Model Curriculum Standards released in 2013. Each industry sector was updated to meet the increased rigor and relevancy requirements of the Common Core State Standards. The curriculum also includes the new Standards for Career Ready Practices.

Standards for Career Ready Practice

1. *Apply appropriate technical skills and academic knowledge.*
2. *Communicate clearly, effectively, and with reason.*
3. *Develop an education and career plan aligned with personal goals.*
4. *Apply technology to enhance productivity.*
5. *Utilize critical thinking to make sense of problems and persevere in solving them.*
6. *Practice personal health and understand financial literacy.*
7. *Act as a responsible citizen in the workplace and the community.*
8. *Model integrity, ethical leadership, and effective management.*
9. *Work productively in teams while integrating cultural and global competence.*
10. *Demonstrate creativity and innovation.*
11. *Employ valid and reliable research strategies.*
12. *Understand the environmental, social, and economic impacts of decisions.*

CTE Anchor Standards—Common Core English Language Arts Alignment

Anchor Standard 1: Academics

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the industry sector alignment matrix for identification of standards. Note: alignment listed within each sector.

Anchor Standard 2: Communications

Language Standard: Acquire and accurately use general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the (career and college) readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. LS 9-10, 11-12.6

Anchor Standard 3: Career Planning and Management

Speaking and Listening Standard: Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data. SLS 11-12.2

Anchor Standard 4: Technology

Writing Standard: Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments and information.

Anchor Standard 5: Problem Solving and Critical Thinking

Writing Standard: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem, narrow or broaden the inquiry when appropriate, and synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. WS 11-12.7

Anchor Standard 6: Health and Safety

Reading Standards for Science and Technical Subjects: Determine the meaning of symbols, keywords, and other domain-specific words and phrases as they are used in a specific scientific or technical context. RSTS 9-10, 11-12.4

Anchor Standard 7: Responsibility and Flexibility

Speaking and Listening Standard: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly and persuasively. SLS 9-10, 11-12.1

Anchor Standard 8: Ethics and Legal Responsibilities

Speaking and Listening Standard: Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the work. SLS 11-2.1d

Anchor Standard 9: Leadership and Teamwork

Speaking and Listening Standard: Work with peers to promote civil, democratic discussions and decision making; set clear goals and deadlines; and establish individual roles as needed. SLS 11-12.1b

Anchor Standard 10: Technical Knowledge and Skills

Writing Standard: Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. WS 11-12.6

Anchor Standard 11: Demonstration and Application

Demonstrate and apply the knowledge and skills contained in the industry-sector anchor standards, pathway standards, and performance indicators in the classroom, laboratory, and workplace settings, and the career technical student organization. Note: no alignment evident for this standard. WS 11-12.6

CTE Model Curriculum Standards—Industry Sectors and Pathways

Engineering and Architecture

C. Engineering Design Pathway

C1.0 Understand historical and current events related to engineering design and their effects on society.

C3.0 Understand the sketching process used in concept development.

C3.1 Apply sketching techniques to a variety of architectural models.

C3.2 Produce proportional two- and three-dimensional sketches and designs.

C3.3 Present conceptual ideas, analysis, and design concepts using freehand, graphic, communication techniques.

C4.0 Understand measurement systems as they apply to engineering design.

C4.1 Know how the various measurement systems are used in engineering drawings.

C5.1 Understand the concepts and procedures necessary for producing drawings.

C5.3 Understand the various techniques for viewing objects.

C5.4 Use the concepts of geometric construction in the development of design drawings.

C6.0 Understand the applications and functions of sectional views.

C6.1 Understand the function of sectional views.

C6.2 Clarify hidden features of an object using a sectional view and appropriate cutting planes.

C8.0 Understand and apply proper dimensioning standards to drawings.

C8.1 Know a variety of drafting applications and understand the proper dimensioning standards for each.

C8.2 Apply dimension to various objects and features.

C9.2 Interpret geometric tolerancing symbols in a drawing.

C10.0 Understand the methods of applying text to a drawing.

C10.1 Describe the processes of lettering and/or text editing.

C10.2 Implement standard methods of title block creation and use.

C10.3 Develop drawings using notes and specifications.

C10.4 Plan, prepare, and interpret drawings and models through traditional drafting or computer-aided design (CAD) techniques.

C11.0 Understand the methods of creating both written and digital portfolios.

ISTE Standards for Students

1. Empowered Learner- Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.

a) Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them, and reflect on the learning process itself to improve learning outcomes.

b) Students build networks and customize their learning environments in ways that support the learning process.

c) Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways

d) Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

2. Digital Citizen- Students recognize the rights, responsibilities, and opportunities of living, learning, and working in an interconnected digital world, and they act and model in ways that are safe, legal, and ethical.

a) Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

b) Students engage in positive, safe, legal, and ethical behavior when using technology, including social interactions online or when using networked devices.

c) Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

d) Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

3.Knowledge Constructor- Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.

a) Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

b) Students evaluate the accuracy, perspective, credibility, and relevance of information, media, data, or other resources.

c) Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

d Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories, and pursuing answers and solutions.

4. Innovative Designer- Students use a variety of technologies within a design process to identify and solve problems creating new, useful, or imaginative solutions.

a) Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts, or solving authentic problems.

b) Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

c) Students develop, test, and refine prototypes as part of a cyclical design process.

d) Students exhibit a tolerance for ambiguity, perseverance, and the capacity to work with open-ended problems.

5. Computational Thinker- Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

a) Students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models, and algorithmic thinking in exploring and finding solutions.

b) Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

c) Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

d) Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

6. Creative Communicator- Students communicate clearly and express themselves creatively for a variety of purposes using platforms, tools, styles, formats, and digital media appropriate for their goals.

a) Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

b) Students create original works or responsibly repurpose or remix digital resources into new creations.

c) Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models, or simulations.

d) Students publish or present content that customizes the message and medium for their intended audiences.

7. Global Collaborator- Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

a) Students use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.

b) Students use collaborative technologies to work with others, including peers, experts, or community members, to examine issues and problems from multiple viewpoints.

c) Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

d) Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.