Newport-Mesa Unified School District
Office of Secondary Curriculum and Instruction
High School Course of Study

Course Title	*Introduction to Engineering Design 1AB Re-Write*	**Course Code**	*KT352-353*

Transcript Title:	*Intro Engineering Design*	Grades Levels:	*9*	Board Adoption Date:	
Content Area:	***Engineering***	**GPA Scale:**	***4.0***	**Date Course Submitted:**	***3/16/18***
Credential Required:	*Yes--CTE*	Graduation Subject Areas:			
UC/CSU "A-G" Area Approvals:	*Yes*		School Site/person that wrote and submitted the course:	*Rich Mayfield*	
Recommend Skills:	*Strong Math Skills*				
Next course(s):	*Principles of Engineering*				

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DATE: **3/13/18**

INDUSTRY SECTOR: **Engineering and Architecture**

PATHWAY: **Engineering Design (152)**

CBEDS TITLE: **Introduction to Engineering and Architecture**

CBEDS Code: **7700**

HOURS:

Total	Classroom	Laboratory/CC/CVE
180 hours	57 hours	123 hours

JOB TITLE	ONET CODES	JOB TITLE	ONET CODES
Manufacturing Engineer	17-2199.04	Manufacturing Engineering Technologist	17-3029.06

COURSE DESCRIPTION:

Introduction to Engineering Design (IED) is a high school level foundation course in the PLTW Engineering Program. In IED students are introduced to the engineering profession and a common approach to the solution of engineering problems, an engineering design process. Utilizing the activity-project-problem-based (APB) teaching and learning pedagogy, students will progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills.

Through both individual and collaborative team activities, projects, and problems, students will solve problems as they practice common engineering design and development protocols such as project management and peer review. Students will develop skill in technical representation and documentation of design solutions according to accepted technical standards, and they will use current 3D design and modeling software to represent and communicate solutions. In addition the development of computational methods that are commonly used in engineering problem solving, including statistical analysis and mathematical modeling, are emphasized. Ethical issues related to professional practice and product development are also presented.

PREREQUISITES:

High School Name:	**Site Prerequisite:**
Estancia	N/A

A – G APPROVAL: ☒ **Yes** ☐ **No** ☐ **Desired**

ARTICULATION:

Newport-Mesa Unified School District
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High School Name:	**College Name:**	**College Course Title:**
N/A	N/A	N/A

LEVEL: ☒ **Introductory** ☐ **Concentrator** ☐ **Capstone**

CERTIFICATION:

High School Name:	**Embedded/Leads to:**	**Description:**
N/A	N/A	N/A

METHOD OF STUDENT EVALUATION:

- ✓ Pre and Post test
- ✓ Student Projects
- ✓ Written work
- ✓ Observation record of student performance
- ✓ Completion of assignments and worksheets

METHOD OF INSTRUCTION:

- ✓ Lecture
- ✓ Group and individual applied projects
- ✓ Demonstration
- ✓ Field Trips
- ✓ Guest Speaker

RECOMMENDED TEXTS:

Curriculum resources provided on my.pltw.org

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MODEL CTE PATHWAY:

Grade	Fall Semester	Spring Semester
9th	IED-1A	IED-1B
10th	POE-1A	POE-1B
11th	CIM-1A	CIM-1B
12th	EDD-1A	EDD-1B

CALIFORNIA CAREER TECHNICAL EDUCATION MODEL CURRICULUM STANDARDS
California Department of Education CTE Standards website: http://www.cde.ca.gov/ci/ct/sf/ctemcstandards.asp

Advanced Manufacturing and Engineering
KNOWLEDGE AND PERFORMANCE ANCHOR STANDARDS

1.0 Academics
Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Engineering and Architecture academic alignment matrix for identification of standards.

2.0 Communications
Acquire and accurately use Engineering and Architecture sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats. (Direct alignment with LS 9-10, 11-12.6)
2.1 Recognize the elements of communication using a sender–receiver model.
2.2 Identify barriers to accurate and appropriate communication.
2.3 Interpret verbal and nonverbal communications and respond appropriately.
2.4 Demonstrate elements of written and electronic communication, such as accurate spelling, grammar, and format.
2.5 Communicate information and ideas effectively to multiple audiences using a variety of media and formats.
2.6 Advocate and practice safe, legal, and responsible use of digital media information and communications technologies.

3.0 Career Planning and Management
Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans. (Direct alignment with SLS 11-12.2)
3.1 Identify personal interests, aptitudes, information, and skills necessary for informed career decision making.
3.2 Evaluate personal character traits, such as trust, respect, and responsibility, and understand the impact they can have on career success.
3.3 Explore how information and communication technologies are used in career planning and decision making.
3.4 Research the scope of career opportunities available and the requirements for education, training, certification, and licensure.
3.5 Integrate changing employment trends, societal needs, and economic conditions into career planning.
3.6 Recognize the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.7 Recognize the importance of small business in the California and global economies.
3.8 Understand how digital media are used by potential employers and postsecondary agencies to evaluate

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candidates.
3.9 Develop a career plan that reflects career interests, pathways, and postsecondary options.

4.0 Technology
Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the Engineering and Architecture sector workplace environment. (Direct alignment with WS 11-12.6)
4.1 Use electronic reference materials to gather information and produce products and services.
4.2 Employ Web-based communications responsibly and effectively to explore complex systems and issues.
4.3 Use information and communication technologies to synthesize, summarize, compare, and contrast information from multiple sources.
4.4 Discern the quality and value of information collected using digital technologies, and recognize bias and intent of the associated sources.
4.5 Research past, present, and projected technological advances as they impact a particular pathway.
4.6 Assess the value of various information and communication technologies to interact with constituent populations as part of a search of the current literature or in relation to the information task.

5.0 Problem Solving and Critical Thinking
Conduct short, as well as more sustained, research projects to create alternative solutions to answer a question or solve a problem unique to the Engineering and Architecture sector using critical and creative thinking; logical reasoning, analysis, inquiry, and problem-solving techniques. (Direct alignment with WS 11-12.7)
5.1 Identify and ask significant questions that clarify various points of view to solve problems.
5.2 Solve predictable and unpredictable work-related problems using various types of reasoning (inductive, deductive) as appropriate.
5.3 Use systems thinking to analyze how various components interact with each other to produce outcomes in a complex work environment.
5.4 Interpret information and draw conclusions, based on the best analysis, to make informed decisions.

6.0 Health and Safety
Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Engineering and Architecture sector workplace environment. (Direct alignment with RSTS 9-10, 11-12.4)
6.1 Locate, and adhere to, Material Safety Data Sheet (MSDS) instructions.
6.2 Interpret policies, procedures, and regulations for the workplace environment, including employer and employee responsibilities.
6.3 Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.
6.4 Practice personal safety when lifting, bending, or moving equipment and supplies.
6.5 Demonstrate how to prevent and respond to work-related accidents or injuries; this includes demonstrating an understanding of ergonomics.
6.6 Maintain a safe and healthful working environment.
6.7 Be informed of laws/acts pertaining to the Occupational Safety and Health Administration (OSHA).

7.0 Responsibility and Flexibility
Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Engineering and Architecture sector workplace environment and community settings. (Direct alignment with SLS 9-10, 11-12.1)
7.1 Recognize how financial management impacts the economy, workforce, and community.

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7.2 Explain the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to changing and varied roles and responsibilities.
7.4 Practice time management and efficiency to fulfill responsibilities.
7.5 Apply high-quality techniques to product or presentation design and development.
7.6 Demonstrate knowledge and practice of responsible financial management.
7.7 Demonstrate the qualities and behaviors that constitute a positive and professional work demeanor, including appropriate attire for the profession.
7.8 Explore issues of global significance and document the impact on the Engineering and Architecture sector.

8.0 Ethics and Legal Responsibilities
Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms. (Direct alignment with SLS 11-12.1d)
8.1 Access, analyze, and implement quality assurance standards of practice.
8.2 Identify local, district, state, and federal regulatory agencies, entities, laws, and regulations related to the Engineering and Architecture industry sector.
8.3 Demonstrate ethical and legal practices consistent with Engineering and Architecture sector workplace standards.
8.4 Explain the importance of personal integrity, confidentiality, and ethical behavior in the workplace.
8.5 Analyze organizational culture and practices within the workplace environment.
8.6 Adhere to copyright and intellectual property laws and regulations, and use and appropriately cite proprietary information.
8.7 Conform to rules and regulations regarding sharing of confidential information, as determined by Engineering and Architecture sector laws and practices.

9.0 Leadership and Teamwork
Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the SkillsUSA career technical student organization. (Direct alignment with SLS 11-12.1b)
9.1 Define leadership and identify the responsibilities, competencies, and behaviors of successful leaders.
9.2 Identify the characteristics of successful teams, including leadership, cooperation, collaboration, and effective decision-making skills, as applied in groups, teams, and career technical student organization activities.
9.3 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace setting.
9.4 Explain how professional associations and organizations and associated leadership development and competitive career development activities enhance academic preparation, promote career choices, and contribute to employment opportunities.
9.5 Understand that the modern world is an international community and requires an expanded global view.
9.6 Respect individual and cultural differences and recognize the importance of diversity in the workplace.
9.7 Participate in interactive teamwork to solve real Engineering and Architecture sector issues and problems.

10.0 Technical Knowledge and Skills
Apply essential technical knowledge and skills common to all pathways in the Engineering and Architecture sector, following procedures when carrying out experiments or performing technical tasks. (Direct alignment with WS 11 -12.6)
10.1 Interpret and explain terminology and practices specific to the Engineering and Architecture sector.

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10.2 Comply with the rules, regulations, and expectations of all aspects of the Engineering and Architecture sector. 10.3 Construct projects and products specific to the Engineering and Architecture sector requirements and expectations.
10.4 Collaborate with industry experts for specific technical knowledge and skills.

11.0 Demonstration and Application
Demonstrate and apply the knowledge and skills contained in the Engineering and Architecture anchor standards, pathway standards, and performance indicators in classroom, laboratory and workplace settings, and through the SkillsUSA career technical student organization.
11.1 Utilize work-based/workplace learning experiences to demonstrate and expand upon knowledge and skills gained during classroom instruction and laboratory practices specific to the Engineering and Architecture sector program of study.
11.2 Demonstrate proficiency in a career technical pathway that leads to certification, licensure, and/or continued learning at the postsecondary level.
11.3 Demonstrate entrepreneurship skills and knowledge of self-employment options and innovative ventures.
11.4 Employ entrepreneurial practices and behaviors appropriate to Engineering and Architecture sector opportunities.
11.5 Create a portfolio, or similar collection of work, that offers evidence through assessment and evaluation of skills and knowledge competency as contained in the anchor standards, pathway standards, and performance indicators.

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CR = Classroom LAB/CC = Laboratory/Shop/Community Classroom

1	**DESIGN PROCESS**	**CR**	**LAB/CC**	**STANDARDS**
	The goal of Unit 1 is to introduce students to the broad field of engineering and a design process that engineers use to develop innovative solutions to real problems. Students become familiar with the traditional big four disciplines of engineering and the extensive array of career opportunities and engineering problems addressed within each discipline. A design process is presented as a structured method for approaching and developing solutions to a problem. The art and skill of brainstorming is emphasized as students begin to develop skill in graphically representing ideas through concept sketching. • Lesson 1.1- Cable Car Challenge • Lesson 1.2- Aerodynamic Distance Challenge • Lesson 1.3- Concept Sketching • Lesson 1.4- Product Improvement • Lesson 1.5- Deep Dive • Lesson 1.6- Discover Engineering • Lesson 1.7- What is it? • Lesson 1.8- Paper Bridge Challenge • Lesson 1.9- Design Innovation	16	2	**Academic:** R.1,7,10 W.2,4-10 SL.1,2,4-6 L.1,2,6 RSIT 11-12.2 RHSS 11-12.2,7,10 RLST 11-12.2,7,10 AD 12.3 PE 12.1,2 US 11.5,6,8,11 WH 10.3,9,11 CSR 1,4 SEP 6 CC 3,6,7 ETS 2.A **CTE Anchor:** 1.0 2.0 3.1-5 4.0 5.1 10.0 **CTE Pathway:** C1.0 C2.0
2	**TECHNICAL SKETCHING AND DRAWING**	**CR**	**LAB/CC**	**STANDARDS**
	The goal of Unit 2 is for students to develop an understanding of the purpose and practice of visual representations and communication within engineering in the form of technical sketching and drawing. Students build skill and gain experience in representing three-dimensional objects in two dimensions. Students will create various technical representations used in visualization, exploring, communicating, and documenting design ideas throughout the design process, and they will understand the appropriate use of specific drawing views (including isometric, oblique, perspective, and orthographic projections). They progress from creating freehand technical sketches using a pencil and paper to developing engineering drawings according to accepted standards and practices that allow for universal	4	12	**Academic:** AS.L.6 G.MG.1 F-IF 1,7,8 G-CO 12 SEP 4-8 ETS 2.A G-CO 12,13 SEP 5,6,8 CC 3 ETS 2.A **CTE Anchor:** 2.0

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	interpretation of their design. • Lesson 2.1- Isometric Sketching • Lesson 2.2- Perspective Sketching • Lesson 2.3- Glass Box • Lesson 2.4- Multiview Sketching • Lesson 2.5- Sketching Practice • Lesson 2.6- Choremaster Challenge			5.0 10.0 11.0 **CTE Pathway:** C3.0 C5.0
3	**MEASUREMENT AND STATISTICS**	**CR**	**LAB/CC**	**STANDARDS**
	The goal of Unit 3 is for students to become familiar with appropriate practices and the applications of measurement (using both U. S. Customary and SI units) and statistics within the discipline of engineering. Students will learn appropriate methods of making and recording measurements, including the use of dial calipers, as they come to understand the ideas of precision and accuracy of measurement and their implications on engineering design. The concepts of descriptive and inferential statistics are introduced as methods to mathematically represent information and data and are applied in the design process to improve product design, assess design solutions, and justify design decisions. Students are also provided with practice in unit conversion and the use of measurement units as an aid in solving practical problems involving quantities. A spreadsheet program is used to store, manipulate, represent, and analyze data, thereby enhancing and extending student application of these statistical concepts. • Lesson 3.1- Linear Measurements • Lesson 3.2- Unit Conversion • Lesson 3.3- Making Linear Measurements • Lesson 3.4- Linear Dimensions • Lesson 3.5- Applied Statistics • Lesson 3.6- Fling Machine Challenge • Lesson 3.7- Statistical Analysis • Lesson 3.8- Precision and Accuracy • Lesson 3.9- Manufacturing a Box	8	6	**Academic:** AS.W.2,4,10 AS.SL.1 AS.L.6 N.Q.1-2 A.CED.3 F.IF.7.a G.MG.1 S.ID.1,4 RLST 11-12.2,10 F-TF 1 N-Q 3 SEP 4-6 CC 3 ETS 2.A **CTE Anchor:** 5.0 9.0 10.0 11.0 **CTE Pathway:** C4.0
4	**MODELING SKILLS**	**CR**	**LAB/CC**	**STANDARDS**
	This unit introduces students to a variety of modeling methods used to represent systems, components, and processes in design. Students are provided experience in interpreting and developing multiple forms of models common to engineering. They create graphical models to precisely define design parameters. Student learn to develop mathematical representations (in the form of linear	4	20	**Academic:** AS.SL.2,5 AS.L.2,6 N.Q.1-3 A.SSE.1 A.CED.1,2,4 A.REI.3,10

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	functions) to represent relationships, identify patterns and inform design decisions. Computer modeling is introduced, and students use modeling software to create CAD models to represent simple objects in a virtual 3D environment. The modeling software also provides an efficient method for students to create technical documentation of objects. Students are also provided opportunities to create physical models of design elements and use the models for testing purposes. ● Lesson 4.1- Software Modeling Intro ● Lesson 4.2- Model Creation ● Lesson 4.3- Motion in One Direction ● Lesson 4.4- Mathematical Modeling ● Lesson 4.5- Cams in Motion ● Lesson 4.6- Design a Cam			F.IF.1,2,5,6,7.a F.BF.1 F.LE.5 G.MG.1,3 S.ID.6-8 S.IC.1 SEP 4-6,8 CC 3-4 ETS 2.A G-GMD 5 G-MG 3 **CTE Anchor:** 4.0 10.0 11.0 **CTE Pathway:** C6.0 C7.0 C8.0 C9.0 C10.0
5	**GEOMETRY OF DESIGN**	**CR**	**LAB/CC**	**STANDARDS**
	In this unit students are provided opportunities to investigate two- and three-dimensional geometric concepts and apply statics to engineering decision making and problem solving. Fluency in these geometric concepts is essential in every phase of the design process as problems are defined, potential solutions are generated to meet physical constraints, alternate design solutions are compared and selected, final designs are documented, and specifications are developed. Geometric concepts are also important in the appropriate application of geometric and dimensional relationships and constraints for effective use of three-dimensional computer modeling environments that employ parametric design functionality. In this unit students develop an understanding of static equilibrium and use geometric concepts and physical properties to solve a wide variety of problems including estimating costs, investigating physical properties to identify materials, and iterating designs to meet design specifications. Students will also use 3D computer models to compute physical properties that can be used in problem solving and creation of design solutions. ● Lesson 5.1- Calculating Properties of Shapes ● Lesson 5.2- Geometric Constraints and CAD	6	6	**Academic:** AS.W.10 AS.SL.1 AS.L.1,2,6 N.Q.1-3 N.VM.1,3 A.CED.4 A.REI.3,4.b F.IF.7a G.GDM.3,4 G.MG.1-3 SEP 4-6,8 CC 3 ETS 2.A **CTE Anchor:** 10.0 11.0 **CTE Pathway:** C9.0

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	• Lesson 5.3- Determining Density • Lesson 5.4- Calculating Properties of Solids • Lesson 5.5- CAD Model Features • Lesson 5.6- Physical Property Analysis • Lesson 5.7- Force Stability • Lesson 5.8- Yard Art Design			
6	**REVERSE ENGINEERING**	**CR**	**LAB/CC**	**STANDARDS**
	Unit 6 exposes students to the application of engineering principles and practices to reverse engineer a consumer product. Reverse engineering involves disassembling and analyzing a product or system in order to understand and document the visual, functional, and/or structural aspects of its design. In this unit students will have the opportunity to assess all three aspects of a product's design. Students will learn the visual design elements and principles and their application in design. They will perform a functional analysis to hypothesize the overall function and sequential operations of the product's component parts and assess the inputs and outputs of the process(es) involved in the operation of the product. Students will physically disassemble the product to document the constituent parts, their properties, and their interaction and operation. After carefully documenting these aspects of the visual, functional, and structural aspects of the product, students will assess the strengths and weaknesses of the product and the manufacturing process by which it was produced. • Lesson 6.1- Visual Design Principles and Elements Identification • Lesson 6.2- Visual Analysis • Lesson 6.3- Functional Analysis • Lesson 6.4- Structural Analysis • Lesson 6.5- Product Reverse Engineering Presentation	4	14	**Academic:** AS.W.2,4,6,10 AS.SL.1,2,4,5 AS.L.1,2,6 A.CED.1,2 LS 11-12.1,2 RLST 11-12.2,4,7 WS 11-12.2,4-8 WHSST 11-12.2,6 SEP 7-8 ETS 2.A,B **CTE Anchor:** 1.0 2.0 4.0 5.0 6.0 8.0 9.0 **CTE Pathway:** C11.0
7	**DOCUMENTATION**	**CR**	**LAB/CC**	**STANDARDS**
	In unit 7 students will enhance their basic knowledge of technical drawing representations learned earlier in the course to include the creation of alternate (section and auxiliary) views and appropriate dimensioning and annotation of technical drawings. Students will also be introduced to the reality of variation in dimensional properties of manufactured products. They will learn the appropriate use of dimensional tolerances and alternate dimensioning methods to specify acceptable ranges of the physical properties in order to meet design criteria. Students will apply this knowledge to create engineering working drawings	4	12	**Academic:** AS.W.2.4,6,9,10 AS.SL.1,2,5 AS.L.1,2.6 N.Q.3 G.GMD.4 G.MG.1,3 SEP 8 CC 3 ETS 2.A LS 11-12.1,2

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	that document measurements collected during a reverse engineering process. These skills will also allow students to effectively document a proposed new design. Students will use 3D computer modeling software to model the assembly of the consumer product, as such a model can be used to replicate functional operation and provide virtual testing of product design. • Lesson 7.1- Dimensioning • Lesson 7.2- Sectional Views • Lesson 7.3- Tolerances • Lesson 7.4- Assembly Models • Lesson 7.5- Engineering Documentation • Lesson 7.6- Apollo 13 • Lesson 7.7- Product Enhancement			RLST 11-12.2,4,7 WS 11-12.2,4-8 WHSST 11-12.2,6 SEP 7-8 ETS 2.A,B **CTE Anchor:** 1.0 2.0 4.0 **CTE Pathway:** C10.0 C11.0
8	**ADVANCED COMPUTER MODELING**	**CR**	**LAB/CC**	**STANDARDS**
	In this unit students will learn advanced 3D computer modeling skills. These advanced skills include creating animated assembly views of multi-part products and using mathematical functions to represent relationships to enforce dimensional and motion constraints. Students will use the skills and knowledge previously built in the course to develop and document the solution to a design challenge using an iterative design process. • Lesson 8.1- Parametric Constraints • Lesson 8.2- Automata Design Challenge • Lesson 8.3- Air Vehicle Challenge	4	17	**Academic:** AS.W.2,4,10 AS.SL.1 AS.L.1,2,6 AS.SSE.1 A.CED.1-3 A.REI.3 F.LE.5 G.MG.1 SEP 4-6,8 CC 3-4 G-GMD 5 G-MG 3 CC 3 ETS 2.A **CTE Anchor:** 4.0 10.0 11.0 **CTE Pathway:** C6.0 C7.0 C8.0 C9.0 C10.0
9	**DESIGN TEAMS**	**CR**	**LAB/CC**	**STANDARDS**
	In this unit students will work as a collaborative team with geographically separate team members, thereby requiring virtual communications. Through the design	4	20	**Academic:** AS.R.1,7.10 AS.W.2,4,6-10 AS.SL.1,2,4-6

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	process, the team will experience shared decision-making as they work to solve a new design challenge. They will reflect on the ethical responsibilities of engineers as they investigate different materials, manufacturing processes, and the short and long term impacts that their decision making may potentially have on society or on the world. • Lesson 9.1- Product Life Cycle • Lesson 9.2- Engineering Design Breif • Lesson 9.3- Virtual Design Challenge • Lesson 9.4- Team Norms • Lesson 9.5- Product Research			AS.L.1,2,6 G.MG.1,3 CC 3,6,7 F-IF 1,7,8 SEP 4-8 F-TF 1 N-Q 3 G-CO 12,13 CC 3-4 G-GMD 5 LS 11-12.1,2 RLST 11-12.2,4,7,10 WS 11-12.2,4-8 WHSST 11-12.2,6 ETS 2.A,B **CTE Anchor:** 9.0 10.0 11.0 **CTE Pathway:** C2.0 C3.0 C4.0 C5.0 C6.0 C7.0 C8.0 C9.0 C10.0 C11.0
10	**DESIGN CHALLENGE**	**CR**	**LAB/CC**	**STANDARDS**
	In this unit students will work in small collaborative teams, implement the design process, and use skill and knowledge gained during the course to solve a culminating design challenge and document and communicate their proposed solution. • Lesson 10.1- Design Challenge	1	10	**Academic:** AS.R.7 AS.W.2,4,6,8-10 AS.SL.1,2,5 AS.L.1,2,6 G.MG.1,3 F-IF 1,7,8 SEP 4-8 ETS 2.A RLST 11-12.2,10 F-TF 1 N-Q 3 G-CO 12,13 SEP 4-8

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				CC 3-4,6,7 G-GMD 5 G-MG 3 LS 11-12.1,2 RLST 11-12.2,4,7 WS 11-12.2,4-8 WHSST 11-12.2,6 ETS 2.A,B **CTE Anchor:** 9.0 10.0 11.0 **CTE Pathway:** C2.0 C3.0 C4.0 C5.0 C6.0 C7.0 C8.0 C9.0 C10.0 C11.0
11	**EMPLOYMENT PORTFOLIO**	**CR**	**LAB/ C C**	**STANDARDS**
	Students will prepare a professional portfolio. 1. Portfolio showcases best professional level work 2. Portfolio is organized 3. Job application 4. Resume 5. References	2	4	**Academic:** AS.W.2.4,6,9,10 AS.SL.1,2,5 AS.L.1,2.6 LS 11-12.1,2 RLST 11-12.2,4,7 WS 11-12.2,4-8 WHSST 11-12.2,6 SEP 7-8 ETS 2.A,B **CTE Anchor:** 3.0 **CTE Pathway:** C11.0