SAN LEANDRO UNIFIED SCHOOL DISTRICT
COURSE PROPOSAL: Pre Apprenticeship Program (Multi Craft Core Curriculum, MC3) Course of Study
SECTION A. COVER PAGE

1. **Course Title: MC3 Pre Apprenticeship**	7. **Action** X New Course ▢ Course Revision ▢ Title Change Only
2. Date Submitted: **May 19, 2020**	8. **Grade Level**(s) ▢ 6 ▢9 ▢11 ▢ 7 ▢10 ▢12 ▢ 8
3. Transcript Title/Abbreviation(s) Pre Apprenticeship	**9. Prerequisites** none ▢ Required ▢ Recommended
4. Transcript Course Code/Course Number :	**10. Seeking Program Distinction?** ▢ YES (Check one below.) ▢NO ▢Honors ▢ AP X Other
5. Subject Area	11. **Is this a CTE course?** Yes and/or Elective
6. **Department** CTE & Elective	12. **Previously approved by UC?** ▢ YES X NO ▢ NA for 6th-8th Year approved Year removed
13. UC ELIGIBILITY **Already eligible?** ▢ NA for 6th-8th ▢**YES** **XNO** **a** ▢ **b**▢ **c**▢ **d**▢ **e**▢ **f**▢ **g**▢ **Proposing eligibility?**▢ NA for 6th-8th **X YES** ▢**NO** **a** ▢ **b**▢ **c**▢ **d**▢ **e**▢ **f**▢ **g** X Please mark one for approved eligibility or proposed eligibility.	14. **Unit Value/Course Credit/Length of Course** ▢ 0.5 (semester or half-year X 1.0 (one year equivalent) ▢ 2.0 (two-year equivalent) ▢ Other
15. School Contact and Course Developer Name: Josh Kampling and Matt Steinecke Phone: 618-4600 Email: msteinecke@slusd.us Position: Teacher/Administrator	
16. Approval Signatures: **Approval Date: 5/14/20** *Josh Kampling* Principal: *Matt Steinecke*	**DISTRICT OFFICE USE ONLY** **Date approved by Board Curriculum Committee 5/19/20** **Date approved by Board**

SECTION B. COURSE CONTENT

17. Course Description

This course has been developed to integrate skills and Concepts from the building and construction trades with Applied Mathematics and English as a natural progression students will apply the craft skills required to design and build a variety of scale structures that meet current code requirements. In addition, students will make real world connections between a construction math and English using written projects construction documents that include creating blueprints project packets and student-centered construction projects this course provides students the opportunity to apply academic knowledge and technical skills through Hands-On curriculum that meets pre-apprenticeship requirements for the National Building Trades Council.

This course will utilize multi-craft Core Curriculum MC3 as a comprehensive pre-apprenticeship curriculum (MC3). MC3 curriculum is nationally recognized and certified by all Union affiliates. It encompasses a comprehensive approach to soft and hard construction skills. It involves a blended learning platform of both online modules and in-person training. The overall program requires over 120 hours of apprenticeship preparedness 84 required hours and 36 optional hours

Required Units	**Elective Units**
A) Orientation and Industry Awareness- 8 hours B) Construction Trade Awareness- 8 hours C) Tools and Materials Hands on Training- 8 hours D) Basic Math for Construction- 40 hours E) Heritage of the American Worker-8 hours F) Diversity in the Construction Industry- 12 hours (i) Diversity Awareness- 4 hours (ii) Sexual Harassment- 8 hours	G) Construction Health and Safety- 22 hours (i) CPR and First Aid-8hrs (ii) First Aid- 8 hours/Osha-10- 10 hours (iii) Women's Health and Safety- 4 hours H) Blueprint Reading- 24 hours I) Green Construction- 4-8 hours J) Financial Responsibility- 4-8 hours

18. Course Goals and/or Major Student Outcomes

Pre-apprenticeship is a program or set of services designed to prepare individuals to enter and succeed in a Registered Apprenticeship program. Pre apprenticeships help individuals meet the entry requirements for apprenticeship programs and ensure they are prepared to be successful in their apprenticeship.
Students will receive a broad overview of Union Trades and acquire the needed skills to successfully navigate an apprenticeship program. Upon successful completion, students will be able to apply directly to an apprenticeship program with one of San Leandro's local chapters.

19. Course Objectives (standards)

Building and Construction Trades | BCT Building and Construction Trades Sector Description This sector provides a foundation in the Building and Construction Trades industry for secondary students in California.

Students engage in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and skill preparation in the Building and Construction Trades industry. The sector encompasses four career pathways:

Cabinetry, Millwork, and Woodworking; Engineering and Heavy Construction; Mechanical Systems Installation and Repair; and Residential and Commercial Construction.

These pathways emphasize processes, systems, and the way in which structures are built. The knowledge and skills are acquired in a sequential, standards-based pathway program that integrates hands-on, project-based, and work-based instruction. Standards included in the Building and Construction Trades sector are designed to prepare students for technical training, postsecondary education, and entry to a career.

<u>California Career Technical Education Model Curriculum Standards</u>
Building and Construction Trades 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 Building and Construction Trades academic alignment matrix for identification of standards.

2.0 Communications Acquire and accurately use Building and Construction Trades 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 California and global economies.
3.8 Understand how digital media are used by potential employers and postsecondary agencies to evaluate 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 Building and Construction Trades 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 to create alternative solutions to answer a question or solve a problem unique to the Building and Construction Trades 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 Building and Construction Trades sector workplace environment. (Direct alignment with RSTS 9-10, 11-12.4)

6.1 Interpret policies, procedures, and regulations for the workplace environment, including employer and employee responsibilities.
6.2 Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Set up a work area, or shop, to avoid potential health concerns and safety hazards, including but not limited to electrical (shock), wires (tripping), fumes (lung health), noise (hearing loss), fire (burns), and so forth, incorporating ergonomics.
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).
6.8 Report hazards found on the job site to supervisor/teacher.
6.9 Locate, and adhere to, Material Safety Data Sheet (MSDS) instructions.
6.10 Maintain proper use of safety apparel at all times, including but not limited to, eye protection, hearing protection, skin protection, head protection, footwear and protection from airborne particulate matter.

6.11 Comply with the safe handling, storage and disposal of chemicals, materials and adhesives in accordance with local, state, and federal safety and environmental regulations (OSHA, Environmental Protection Agency [EPA], Hazard Communication [HazCom], Material Safety Data Sheets [MSDS], etc.).
6.12 Demonstrate the proper care and safe use of hand, portable and stationary power tools.

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 Building and Construction Trades 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.
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 Building and Construction Trades 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 Building and Construction Trades industry sector.
8.3 Demonstrate ethical and legal practices consistent with Building and Construction Trades 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 Building and Construction Trades 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 Building and Construction Trades sector issues and problems.

10.0 Technical Knowledge and Skills Apply essential technical knowledge and skills common to all pathways in the Building and Construction Trades 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 Building and Construction Trades sector.
10.2 Comply with the rules, regulations, and expectations of all aspects of the Building and Construction Trades sector.
10.3 Construct projects and products specific to the Building and Construction Trades sector requirements and expectations.
10.4 Collaborate with industry experts for specific technical knowledge and skills.
10.5 Demonstrate the basic care, proper maintenance, and use of hand, portable, and stationary tools related to the Building and Construction trades.

11.0 Demonstration and Application Demonstrate and apply the knowledge and skills contained in the Building and Construction Trades anchor standards, pathway standards, and performance indicators in classroom, laboratory, and workplace settings, and through the SkillsUSA career technical student organizations.

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 Building and Construction Trades 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 Building and Construction Trades sector opportunities. 11.5 Create a portfolio, or similar collection of work, that offers evidence through assessment and evaluation of skills and knowledge comp

20. Course Outline

Unit A - Orientation and Industry Awareness

Unit A-1: Introduction
Objective:

- At completion of the session, the student will discuss the interrelationship of craft skills, construction industry stakeholders, and craft worker to the construction process and explain the interconnectedness of work processes in the progress of a construction job.

Unit A-2: Overview of the Construction Industry
Objectives:

- At completion of the course, the student will describe the scope of each major part of the construction industry
- At completion of the course, the student will describe the roles of occupations indirectly related to the construction industry
- At completion of the course, the student will discuss the roles of governmental agencies of interest to the building trades
- At completion of the course, the student will describe construction careers after apprenticeship, including careers as a journeyperson in each craft, union and management leadership roles, and continuing education responsibilities

Unit A-3: Introduction to the Specific Trades
Objective:

- At completion of the course, the student will describe the roles of the principal occupations in the construction industry

Unit A-4: Attitudes and Behaviors
Objective:

- At completion of the course, the student will explain the relationship between job productivity employee welfare, and attitudes and behaviors on the job

Unit B - Construction Trades Awareness

Unit B-1: The Construction Industry: An Overview
Objectives:

- At completion of the course, the student will describe the demographics of the construction tradeAt completion of the course, the student will discuss industry projections of the future of the building trades
- At completion of the course, the student will identify the development of the apprenticeship from the fifth century B.C. to the modern times
- At completion of the course, the student will explain the role of contractor organizations and their relationships to the unions
- At completion of the course, the student will explain the structure of the union and its role in collective bargaining
- At completion of the course, the student will describe the National Building Trades Drug and Alcohol Program and its relationship to health and safety, productivity, and economic welfare of the principal stakeholders in construction work
- At completion of the course, the student will describe construction careers after apprenticeship, including careers as a journeyperson in each craft, union and management leadership roles, and continuing education responsibilities

Unit B-2: Apprentice Roles and Responsibilities
Objective:

- At completion of the course, the student will describe the apprentice's role in the building trades and the institutional structures and facilities which support the apprenticeship program, including the obligations of the indenture, the g , apprenticeship trust and school, and sponsor
- Unit B-3: Workers and Union Membership

- Objectives:
- At completion of the course, the student will describe the benefits and obligations of union membership

- At completion of the course, the student will describe the rights of workers: to be free from wrongful discrimination, sexual harassment, to earn fair wages, overtime requirements under law, to join a union and to organize, and to rights generally secured under a collective bargaining agreement, union constitutions, and labor law, and for an apprentice to be trained and educated; and describe the obligations of workers.
- At completion of the course, the student should know the importance of the Helmets to Hardhats program and veterans' in the construction industry.

Unit B-4: Motivation and Codes of Conduct
Objectives:

- At completion of the course, the student will describe and explain the codes of conduct for the crafts and the disciplinary process maintained by the craft unions and the apprenticeship program
- At completion of the course, the student will explain the relationship between job productivity, employee welfare, and attitudes and behaviors on the job
- At completion of the course, the student will explain the keys to success---motivation and leadership.

Unit B-5: Getting Along at Work
Objectives:

- At completion of this course the student will recognize the importance of effective communication and different forms of communication and how to avoid the barriers of communication.
- At completion of this course, the student will also recognize the importance of teamwork in construction
- At completion of this course, the student will understand discrimination and harassment on the job site and how to avoid conflict

Unit B-6: Interview Skills
Objectives:

- Explain the importance of interviews in the application and hiring process.
- Explain the interview process and expectations.
- Prepare for an interview and respond to interview questions.
- Demonstrate positive body language and non-verbal behavior.
- Demonstrate effective interviewing skills.
- Address interview questions that may not be legal.
- Identify communication styles related to gender

Unit C Tools and Materials Hands On Training
Objective

- At completion of this unit, you should be able to demonstrate an understanding of the purposes of tools universal across the building trades and how to use them

Unit D - Basic Math for Construction

Unit D-1: Self-Paced Math Refresher

Objectives:

- This section can be used as a refresher for students who require a review basic mathematics skills either before or at the beginning of Section 5
- This section can also be used as a diagnostic tool for instructors to use to gauge the level of understanding their students possess before the start of Section 5.

Unit D-2: Basic Math Review

Objectives:

- At the end of this session, students should be able to understand the main processes of mathematics.
- At the end of this session, students should be able to know how to work-out fraction problems and understand the differences between the four types of fractions.
- At the end of this session, students should be able to add, subtract, divide and multiply both fractions and whole numbers.
- At the end of this session, students should be able to understand how to add, subtract, divide and multiply both decimals and decimal fractions.
- At the end of this session, students should be able to obtain percentages.
- At the end of this session, students should be able to identify all units of measurement.
- At the end of this session, students should be able to identify and add, subtract, divide and multiply all compound units.
- At the end of this session, students should be able to identify ratios and proportions.
- At the end of this session, students should be able to identify and calculate square roots.

Unit D-3: Formulas for Related Math in the Pipe Trades

Objectives:

- At the end of this session, students should obtain the basic skills needed for successful problem solving.
- At the end of this session, students should understand the definition (and difference) of the terms formula and equation, and the different types of formulas and equations used throughout the trades.
- At the end of this session, students should know the definition of variables and the different types of variables used throughout the trades.

- At the end of this session, students should be able to use the skills learned from unit 2 and apply them to the different formulas and equations presented throughout this unit.
- At the end of this session, students should be introduced to the different lines, plane surfaces, and space enclosed by surfaces.
- At the end of this session, students should clearly see the importance of basic math skills in construction.

Unit D-4: Metric Measurements
Objectives:

- At the end of this session, students should know and understand the basic metric units of the metric system (formerly known as the International System of Units (SI)).
- At the end of this session, students should understand moderate-level metric mathematics.
- At the end of this session, students should be able to identify the different prefix's of the basic metric units.
- At the end of this session, students should know how to convertFahrenheit degrees to Celsius degrees and vice versa.
- At the end of this session, students should know how to apply the metric system to different aspects of the trades within the construction industry.

Unit D-5: Additional Projects, Exams and Assignments
Recommended Instruction:

- Instructor's should implement these resources for practice and assessment of the material.

Unit E - Heritage of the American Worker
Unit E-1: The Guild Tradition
Objectives:

- At the end of this session, students should be able to explain the differences between guilds and unions.
- At the end of this session, students should understand the connection between the political revolution and political-economic activities of workers' organizations in the first decades after the revolution.
- At the end of this session, students should identify linkages between labor history and American history.
- At the end of this session, students should understand the significance of the beginning of Apprenticeship and the history of craft unions.
- At the end of this session, students should note the significance of local organizations who took part in the labor movement.

Unit E-2: Building Trades and the Formation of the Labor Movement
Objectives:

- At the end of this session, students should be able to explain the need and relevance at the close of the 19th and early 20th centuries for both a day of labor rest and day of labor agitation.
- At the end of this session, students should be able to explain the role of limitations of work hours and the 8-hour movement.
- At the end of this session, students should be able to explain the importance of craft unions within the labor movement.
- At the end of this session, students should be able to explain the important distinction of the Knights nof Labor and the American Federation of Labor.
- At the end of this session, students should be able to compare the developments within the labor movement that which led to growth and the others that led to decline.
- At the end of this session, students should be able to link education and craft unionism.
- At the end of this session, students should be able to explain how social and legal context affect union procedures (primarily on secret communications).
- At the end of this session, students should be able to explain the role of leadership within the formation of the building trades unions along with how the AFL's success preserved in the future of the nation.

Unit E-3: Davis Bacon and Prevailing Wage
Objectives:

- At the end of this session, students should understand the causes of Davis-Bacon.
- At the end of this session, students should understand the original purpose of the act.
- At the end of this session, students should understand the difference between state prevailing wage statutes and the federal Davis-Bacon act.
- At the end of this session, students should have a good understanding of what Davis Bacon Related acts are and the purpose that they serve in the labor industry.

Unit E-4: Fitzgerald Act and Registered Apprenticeship
Objectives:

- At the end of this session, students should understand the progress of Apprenticeship systems throughout history.
- At the end of this session, students should understand the purpose of the Fitzgerald act.
- At the end of this session, students should know the current involvement of the Building Trades and the Apprenticeship system today.

Unit E-5: A Changing Face in the Labor Movement
Objectives:

- At the end of this session, students should be able to explain how unions deal with both economic and social justice.
- At the end of this session, students should be able to identify how changes in population create organizational challenges and opportunities for unions.
- At the end of this session, students should be able to connect contemporary struggles for social and economic equity to struggles in earlier periods.

Unit E-6: Project Labor and Community Workforce Agreements
Objectives:

- At the end of this session, students should understand the objectives of PLA's and know the importance of them to the labor industry.
- At the end of this session, students should be able to see the progress of PLA's throughout history.
- At the end of this session, students should understand the difference between PLA's and Community Workforce Agreement's.
- At the end of this session, students should have an understanding on the different types of projects that involved PLA's.

Unit E-7: Additional Labor History Resources

- This material includes the text from the old curriculum. Use if you have extra time to allot to this section.

Unit F - Diversity in the Construction Industry
Unit F-1: Diversity Awareness
Objectives:

- Explain the importance of a diverse workforce in the construction industry.
- Identify the importance of the construction industry to diverse populations.
- Identify the historical and social roots of under-representation of women and minorities in the trades.
- Explain the barriers and challenges to building a diverse construction workforce and an equitable worksite
- Explain what it means to be a culturally competent person and organization
- Identify equal employment opportunity and non-discrimination rights in the workplace and classroom

Unit F-2: Preventing Sexual Harassment
Objectives:

- Define the legal definition of sexual harassment and identify the evolution of laws pertaining to sexual harassment.
- Recognize and define different forms of sexual harassment.
- Explain why sexual harassment is a problem in the construction workplace.
- Identify who is harmed by sexual harassment.
- Describe the role of employers, unions, and workers in preventing and addressing sexual harassment.
- Demonstrate action steps to take in response to witnessing or experiencing sexual harassment.

Unit G

Unit G-1: CPR and First Aid

Objectives:

- Recognize a life threatening emergency and take action.
- Recognize breathing and cardiac emergencies that call for CPR.
- Perform CPR on adults.
- Provide Rescue Breathing when needed.
- Use an Automated External Defibrillation unit, (AED), by the guidelines of The American Red Cross

After completing the First Aid course the applicant will know how to:

- Use the Emergency Medical Services (EMS) system effectively.
- Recognize when 911 should be activated and support the most common situations until further help arrives.
- Treat sudden illness, including poisonings and heat and cold emergencies.
- Determine the best response to medical emergencies like: Heart Attacks, Strokes, Allergic Reactions, Cardiac Arrest, Seizures

Unit G-2: Smart Mark OSHA 10-Hour Training

- All instructions are listed in the document “Smart Mark Instructions and Analysis” in the Instructor’s materials of Section 3b.

Unit G - 3: Health and Safety Issues for Women

Objectives:

- Describe why gender matters in health and safety issues in the construction industry.
- Describe how health and safety issues are impacted by gender.
- Describe how issues that are specific to gender can be safety concerns.
- Demonstrate what individuals can do to protect themselves and their co-workers.
- Promote equitable health and safety practices and policies in the workplace.

Unit H

Unit Ha-1: Module 1- Basic Blueprint Reading Principles

Objectives:

- Define blueprint and blueprint reading.
- Define plans and specifications.
- Describe how plans and specifications are prepared.
- Describe the purpose and importance of a set of plans.
- Identify and define various parts of a set of plans.

Unit Ha-2: Boilermakers Animated Blueprint Lessons

Objectives:

- Define the purpose of blueprints
- Identify the three types of drawings
- Distinguish among various types of lines

Unit Hb: Module 2- Plans and Drawings

Objectives:

- Identify the various views of a drawing that are included in a set of plans and their relationship to each other.
- Identify and define material symbols, abbreviations, and lines used in drawings.
- Describe proper handling procedures for plans and drawings.

Unit Hc: Module 3- Scales and Dimensions

Objectives:

- Define the meaning of "scale."
- Use fractional rule to calculate measurements.
- Explain how an architect's scale is used to measure lines.
- Use the architect's scale to determine the actual length of a scaled line.
- Identify the difference between engineer and architect scales.
- Recognize, locate, and determine missing dimensions.

Unit I - Green Construction

Section 8a: Fundamentals of Green Construction

Objectives:

- Explore the history and movement of Green Construction
- Recognize the impact of traditional and Green Construction techniques

Section 8b: The Building Trades and Green Construction

Objectives:

- Describe the basics elements of green construction and green buildings and the part they will play as a construction worker on green job sites.

- Understand basic green building terms.
- Describe the role of green building certification and how it works.
- Recognize green awareness on construction projects, including sustainable site development, efficient use of water resources, energy conservation, the use of sustainable building materials, reducing and recycling construction waste and protecting indoor and outdoor environmental quality.

Unit J - Financial Literacy in the Construction Trades

Objectives:

- Participants will be able to identify the rationale for understanding financial literacy.
- Participants will be able to construct a budget
- Participants will be able to devise a strategy for savings and debt management
- Participants will be able to define financial services and products for financial security.

21. Instructional Materials:

All MC3 curriculum
https://nabtu.personalearning.com/

MC3 Program Construction Tool List:

1) Skill Saws
2) Reciprocal Saws
3) Impact Drills
4) Tape Measures
5) Hard hats
6) 2x4 2x6 2x8 2x10 2x12 USB Plywood (depends on what you are building)
7) 8 inch sinkers 16 inch sinkers-nails
8) Screws (depends on what you are building)
9) Hammers
10 Speed Squares
11) Levels (small and large)
12) T-squares (small and large)
13) Steel toed construction boots

14) Safety gloves
15) Chalk Lines or boxes
16) Safety Glasses
17) Vests

22. Instructional Methods and/or Strategies

- Peer critique and feedback
- PBL
- Quickwrites
- Jigsaw
- Hands on experiments
- Presentations

23. Assessment Methods and/or Tools

A combination of assessments administered using the online learning platform and hands on demonstration of skills learned. Presentations, formative and summative assessments will be used throughout the course.

24. Grading Policy

Grading will follow the San Leandro Unified School District's policy.

SECTION C

25. Context for Course

San Leandro Unified was awarded a Strong WorkForce K12 Grant titled: **Alternate Pathways to Career Success Through a Comprehensive Pre-Apprenticeship Program**

This pre apprenticeship pathway will support students with an alternate path to career success after high school in the areas of industrial arts and trades through a certified and nationally recognized Multi Craft Core Core Curriculum (MC3) pre-apprenticeship program at San Leandro Unified School District. Partners will be the San Leandro Adult School, Chabot College, and the Building & Construction Trades Council of Alameda County (BTCA) from support of their non profit Construction Trades Workforce Initiative (CTWI).

The goal of this course is to accomplish the following:

EXPAND ALTERNATE OPTIONS FOR CAREERS AFTER HIGH SCHOOL: The primary goal for this pathway is to implement an MC3 pre-apprenticeship course at Lincoln High that will offer students a year long CTE Capstone course during their junior or senior year. Students that complete the MC3 (Comprehensive pre-apprenticeship curriculum) course will receive a Building & Construction trades endorsed certificate of completion that is recognized nationally. The course will educate and expose students, school staff, and families to career opportunities in the union construction trades.

CLOSE OPPORTUNITY GAP: A second goal of this pathway improvement is to close the opportunity gap for historically disadvantaged students by offering alternatives to secure high wage careers. The proposed course will provide rigorous math, relevant job readiness skills and problem solving strategies that prepare students to be successful in state approved apprenticeships and college coursework.

EXPAND WORK BASED LEARNING THROUGH INTERNSHIPS: The proposed pathway will also offer students hands on work based learning opportunities through partnerships with our local industry and businesses. Specifically, students enrolled in this Capstone course will have a summer internship placement as they prepare for an apprenticeship program.