LOS MEDANOS COLLEGE

ARTICULATION AGREEMENT **DATE DRAFTED**: June 24, 2020
VALID ACADEMIC YEARS: 2019-20 & 2020-21

LMC COURSE: COMSC-030 "Web Site Development-Part 1" & COMSC-031 "Web Site Development-Part II"

HIGH SCHOOL COURSE: Webpage Design

School: Mt. Diablo High School
Address: 2450 Grant St., Concord, CA 94520

A. **COLLEGE COURSE DESCRIPTION:** COMSC-030: This course will teach students how to program web pages for the Internet using HTML and XHTML, and other web software programs. Understanding the structure of HTML and XHTML is essential to edit and troubleshoot web sites. The course also includes web site design and layout, how Internet web sites perform, and how to create a web site for a business, eBay, educational, a non-profit organization, or personal use. COMSC-031: This course is an introduction to different web designing software programs used to design a web site. It covers the layout and organizing of content, photos, video, sounds and graphics on a web page, selecting a domain name, finding a web host, and how to uploaded web pages to the Internet. Students will design a web site for their business, educational, non-profit, or personal use.
HIGH SCHOOL CLASS DESCRIPTION: This one-year course provides training in webpage design and coding using HTML/CSS, PHP and JavaScript in addition to a foundation in multimedia design as it relates to web design. The skills learning in this course will enhance existing jobs such as photographer, computer programmer, and content developer for the expanding market on the World Wide Web. Instruction includes webpage design, coding, computer graphics and multimedia authoring and presentation.

B. **COLLEGE UNITS: 3**
C. **PRE-REQUISITES: NA**
D. **REQUIRED CONTENT FOR ARTICULATION:**

1. Orientation
The introductory unit provides students with an overview of the course, expected student learning outcomes, as well as the history, trends, and employment outlook in Web Design / Information Technology. Information in this unit will be presented by direct instruction from the teacher, student reading online materials (MrBenrud.com, CareerCruising.com) and classroom discussions. Learning will be assessed through a quiz, worksheets, journal entry in their online journal and through the creation of their Google Application account.

1. Course objectives, expectations, procedures
2. Introduction to website design
3. History of web design
4. Current trends in web design
5. Employment outlook / opportunities

2. Cloud Computing and Personal Portfolios

This will provide students with a basic understanding of cloud computing, advantages/disadvantages and the cloud computing resources that will be used throughout this course. The importance of personal portfolios for academic and career purposes will be discussed. How to use Google Sites to create and maintain an online portfolio will be demonstrated by the teacher. Importance of how information is organized and displayed (User Oriented Design) will be discussed and skills for organizing and displaying information will be practiced and peer critiqued during in class work sessions and reinforced by completion of key assignments: **Google Account Setup, Personal Portfolio Setup, All About Me Website Project.**

1. Cloud Computing, sharing permissions, collaboration
2. Useful Cloud Tools
3. Personal Portfolios
4. Google Sites
5. User Centered Design (UCD)

3. Hand coding basics of HTML, CSS, JavaScript and PHP

Students will learn the basic tags, syntax and elements for these commonly used languages in web design. Direct instruction from the teacher will be used as well as self-paced learning via Codecademy.com, online tutorials (Lynda.com) and various help forums. Understanding hand coding basics is essential to students' ability to complete more complex tasks later in the class and the pathway and also provides students a better understanding of web design and function. The following key assignments will provide students with opportunities to learn and practice essential skills and knowledge for hand coding and all pages created will be added to students ongoing personal portfolio: **Code Academy Account Setup**, **Sandbox Website Setup, File Transfer Protocol (FTP)**, **Hand coding Basics in HTML, CSS, PHP and JavaScript**

1. Basic HTML tags and attributes
2. Basic CSS selectors and properties
3. Basic PHP and JavaScript coding

4. Introductory Standard Software

Students will learn to use industry standard software (Adobe Dreamweaver, Photoshop, Illustrator and Flash) to improve their efficiency while coding and incorporate more advanced features. Direct instruction, video tutorials and online help forums will be utilized. Not only do students need to learn to use current industry standard software, they also need to begin to develop the ability to make use of online tutorials and help forums. Since software changes quickly, this unit will allow students to practice self-directed learning as well as collaborating with peers for problem solving. The first key assignments in this unit allow students to practice skills using the different software: **Dreamweaver and Photoshop Introduction**, **Web-page Elements and Basic Image Editing, Specific Dreamweaver and Photoshop Tutorials**, **Code Academy Lessons HTML/CSS.** In a larger project, **Online Photo Album Website,** students will put together all skills learned in the unit to create the final product.

1. Learn uses, workspace layouts, tools and basic skills in Adobe Dreamweaver, Photoshop, Illustrator and Flash.
2. Introduction to File Transfer Protocol (FTP) in Adobe Dreamweaver.

5. Discovering online learning resources for self-paced learning

Students will learn to use the web to 'self-educate' in an area of personal interest that relates to web design. Building on practice in the previous unit, students will independently access online tutorials and help forums for instruction. The teacher will act as a facilitator and help with problem solving. From this unit on, students will be required to include evidence of self-paced, independent learning in every unit project. Key assignments for this unit provide multiple opportunities for students to use tutorials and forums for learning: **Self-selected Dreamweaver Tutorial**, **Self-selected Photoshop Tutorial**, **Help Forum Post**, **Codecademy PHP**, **Codecademy JavaScript**. In the final project for the unit, **Graphic User Interface (GUI) Project,** students will improve the Photo Album Website created in the previous unit by revising and adding features using new skills. Students will also document their use of self-directed learning resources.

1. Learn how to locate and use technical tutorials (video and written) for Adobe Dreamweaver, Photoshop, Illustrator, Flash and coding (HTML/CSS, PHP and JavaScript).
2. Learn how to locate and use help forums for Adobe Dreamweaver, Photoshop, Illustrator, Flash, and coding (HTML/CSS, PHP and JavaScript).
3. Learn proper forum etiquette.

6. Project Planning and Intermediate Coding

Students will learn about the importance of planning a web based project and the process for doing so. Teacher directed discussions will focus on strategies for planning and development and introducing the next level of coding skills. Key assignments will allow students to practice skills, continue to practice self-directed learning through online tutorials and forums, work with peer groups to problem solve and critique progress, and then put it all together in a unit project. Key assignments for this unit are: **Project Plan, Self-selected Code Tutorial**, **Self-selected Adobe Application Tutorial**, **Help Forum Post** and **Fan Website Project.**

1. Learn the importance of and how to develop a project plan for a web project that includes project objectives, wire-frame design, and target audience.
2. Learn compound selectors in CSS and learn IF and ElseIF in PHP and JavaScript

7. Data Collection and Retrieval Using Forms, PHP, and Database

Students will learn to use HTML forms, PHP and MySQL database to collect, store, retrieve and use data. Key assignments for this unit build necessary skills: In **Forms Introduction,** students create basic forms to collect data. In, **Project Plan,** students develop a project plan for the "Fan Website" project, and in **Help Forum Post**, students create a forum question asking for help with some aspect related to the current unit. After these skills have been mastered, students will complete the **Course Registration Website Project** which includes skills learned while also requiring students to incorporate skills learn through self-directed learning resources (tutorials and/or help forums). Finally, this unit contains a key assignment targeting literacy skills related to the content area: **Position Paper on Pirating / Copyright Project:** Write a position paper explaining your thoughts on issues with Pirating and Copyright online.

1. Forms and form elements
2. Operators in PHP and JavaScript
3. Database connection, create table, insert, query and fetch.

8. Teamwork, Communication, and Project Management

Students will learn skills and strategies for building a strong team with good communication in-order to meet project deadlines. The key assignments in this unit, **Electronic Communication**, **Project Plan, Help Forum Post** require students to continue refining skills they have learned in the class while also demonstrating the ability to use online resources to communicate, and work as a team. The **Retail Website Group Project** requires students to put together multiple skills learned in the class and work successfully as a team to complete the assignment.

1. Communication tools and etiquette.
2. Team roles and responsibility.
3. Deadlines and quality control
4. Client Communication

9. Content Management Systems using Joomla

Students will learn skills and strategies for building a strong team with good communication in-order to meet project deadlines. Key assignments: **Project Plan** and **Help Forum Post** reinforce skills learned in previous units with new information presented in this unit. The **Travel Review Website Project** challenges students to complete a complex project using Joomla.

1. What a CMS is and how it is different from sites built using individual files for pages.
2. Features, templates and extensions in Joomla!
3. Advantages and disadvantages of using a CMS

10. Careers in Code

Student will explore career options in the fields of web design and information technology. Students will complete **Career Research** using CareerCruising.com, Salary.com and job search websites and **Lifestyle Research** use the Internet to research costs of housing, cars, insurance and other living expense. Using information gathered, students will complete the **Career and Lifestyle Website Project** as a culminating project demonstrating their computer and web design skills as well as showcase evidence of their post-secondary planning.

1. Understanding the daily routines, income scales, required education and skills for careers in Web Development and Information Technology.
2. Research living expenses and expected salaries in different cities around the country.
3. Developing a personal life plan and budget for your futures.

E. REQUIRED COMPETENCIES (PERFORMANCE OBJECTIVES) FOR ARTICULATION

F. METHODS FOR END OF COURSE ASSESSMENT:

Reading informational text: Throughout the course, students will access and read online technical information related to the skills they are learning. The instructor will model how to use the structures of the various online texts to access information efficiently and will provide questions and activities to assist students in developing strong reading comprehension skills.

All aspects of Common Core ELA: RST Grade 11 - 12 Reading Standards for Literacy in Science and Technical Subjects will be addressed in the context of this course with a special emphasis on the following:

- Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
- Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.

- Integrate and evaluate multiple sources of information presented in diverse formats and media in order to address a question or solve a problem.
- Synthesize information from a range of sources into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
- By the end of grade 12, read and comprehend science/technical texts in the grades 11 - 12 text complexity band independently and proficiently.

Writing for a variety of purposes: Students will be doing reflective writing in journals throughout the course. In addition, many key assignments ask students to write for a specific purpose, including informative/explanatory text for web sites, arguments for design choices, and evaluations of online material.
All aspects of Common Core ELA: Grade 11 - 12 WHST Writing Standards for Literacy in History/Social Sciences, Science and Technical Subjects will be addressed in the context of this course with a special emphasis on the following:

- Write informative/explanatory texts, including the narrations of… technical processes.
- Produce clear and coherent writing in which the development, organization, and style are appropriate to the task, purpose and audience.
- Conduct short as well as more sustained research projects to answer a question or solve a problem. Narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
- Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information in to the text selectively to maintain the flow of ideas, avoiding plagiarism and over reliance on any one source and following a standard format for citation.
- Draw evidence from informational texts to support analysis, reflection, and research.
- Write routinely over extended time frames and shorter time frames for a range of discipline specific tasks, purposes, and audiences.

Unit Vocabulary Words: Students will be introduced to industry vocabulary related to the topics covered in the unit.

Personal Portfolio Management: Students will regularly update their portfolio to include links to assignments (classwork, projects, tutorials and help forum posts), journal entries, and assignment reviews.

Reflective Writing (assignment review) – Students create a link to their work (classroom assignments and projects) and then write an evaluation of each assignment completed in class. The review includes what they liked/disliked, how it could be improved and other ways they can use the skills/technologies learned in the assignment. Reflective evaluations and analysis entries are approximately 100–200 words.

Journal Writing – Students are required to write one journal (blog) entry after every unit of the class is completed (approximately ten per year). Students summarize skills, strategies and tools they learned in addition to how they might use them later in life or school. Journal entries are approximately 500 words in length.

Forums and Tutorials – Students are required to complete online tutorials independently and request help via an online forum at least once during every unit, starting in unit four. Requests must be clearly written and provide sufficient detail. Tutorials must be accompanied by a 200-300 word evaluation of the tutorial. Additionally, every project from unit four on will require student to incorporate skills learned via tutorials and/or forums in their unit project.

Unit Quizzes - Online quiz used to check for understanding of the basic aspects of the unit. Vocabulary, identification and understanding of specific code and/or tools will be checked using these unit quizzes.

E. PROCEDURES AND/OR CRITERIA FOR COURSE ARTICULATION:

1. Complete the Webpage Design course at Mt. Diablo High School with a grade of "B" or better.
2. Receive a "B" or better on the agreed upon college/high school final exam procedure.
3. Be recommended for credit by the high school teacher.
4. Apply for admission at Los Medanos College.
5. Register for CATEMA for electronic recommendation of college credit **within the academic year in which credit was earned.**
6. Upon completion of the above, the student will receive on his/her LMC and CCCCD (California Community College District) transcript the units of credit for LMC's COMSC-030 & 031 courses.
7. College transcripts will reflect the **FINAL EXAM GRADE** earned and will be notated as *Credit by Exam.

**Distance Learning Circumstances:*
Final Exam "Procedure" will still need to be fulfilled whether the high school class meets in person or moves to a distance learning platform. If the high school class moves to an online learning environment, all efforts will be made to enable students to earn college credit, however due to circumstances beyond the high school/college control, course content may not be able to be completed in order to fulfill the articulation agreement requirements.

F. TEXTBOOKS OR OTHER SUPPORTING MATERIALS:

INSTRUCTIONAL MATERIALS:
Websites

Title	Affiliated Institution or Organization	URL
Lynda.com, Inc	Lynda.com, Inc	http://www.lynda.com/
Career Cruising	Career Cruising, Inc	http://public.careercruising.com/en/about/
Adobe TV	Adobe Systems Incorporated	http://tv.adobe.com/channels/
Adobe Communities	Adobe Systems Incorporated	https://forums.adobe.com/welcome
Tizag.com	Erack Network	http://www.tizag.com/
w3schools.com/php	Refsnes Data	http://www.w3schools.com/php/

Title	Affiliated Institution or Organization	URL
GHS Technology Help	Grossmont Union High School District	https://sites.google.com/a/guhsd.net/technologyhelp/google-sites
Codecademy	Codecademy	https://www.codecademy.com/

Title	Course material type
Adobe Dreamweaver	Software
Adobe Photoshop;	Software
Adobe Illustrator	Software
Adobe Flash	Software
Joomla Content Management System	Software
Google Applications	Software

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COLLEGE SIGNATURES

Natalie Hannum — Date
LMC Vice President of Instruction

Ryan Pedersen — Date
LMC Dean of Mathematics & Sciences

Louie Giambattista — Date
LMC Computer Science Department Chair/Faculty

Joenil Mistal — Date
LMC Faculty

HIGH SCHOOL/ROP/DISTRICT SIGNATURES

Lorne Barbosa — Date
Principal, Mt. Diablo High School

Dr. Robert Martinez — Date
MDUSD Superintendent

Josie Kirkland — Date
Faculty, Mt. Diablo High School