

ARTICULATION AGREEMENT

DATE DRAFTED: April 10, 2019

VALID ACADEMIC YEAR(S): 2018-19, 2019-2020 & 2020-21

LMC COURSE: COMSC-041 "Programming with VisualBasic.Net"

HIGH SCHOOL COURSE: Computer Programming

School: Heritage High School

Address: 101 American Ave., Brentwood, CA 94513

- A. COLLEGE COURSE DESCRIPTION:** This is an introductory programming course using Microsoft Visual Basic.Net (VB.NET). It introduces students to the development of graphically oriented, event driven programs. Students will learn fundamental programming structures, as well as the use of the language to develop web based applications.
- B. UNITS:** 3
- C. PRE-REQUISITES:** NA
- D. REQUIRED CONTENT FOR ARTICULATION:**
1. THE COMPUTER
 - 1.1 Demonstrate a working knowledge of the computer: Computer hardware peripherals, parts, care and handling and operations.
 2. THE WINDOWS OPERATING SYSTEM
 - 2.1 Develop a basic understanding of the Windows operating system by performing file management tasks using common Microsoft Applications.
 - 2.2 Demonstrate the proper use and care of computer storage media
 - 2.3 Demonstrate knowledge of Microsoft Visual Basic Integrated Development Environment in order to create applications that are compatible with the Windows Operating System
 3. THE PRINTER
 - 3.1 Demonstrate a working knowledge of the printer: hardware, care and handling and operations.
 4. PROGRAM DEVELOPMENT
 - 4.1 Clearly define
 - 4.2 Develop a plan
 - 4.2.1 Develop and apply simple algorithms.
 - 4.3 Subdivide problems into logical modules.
 - 4.3.1 Create flowcharts to visually demonstrate the logical subdivisions and flow.
 - 4.4 Code the sequence of steps in a computer language.
 - 4.4.1 Code in VISUAL BASIC
 - 4.4.2 Write interactive Input/Output procedures.
 - 4.5 Enter the program and have the computer execute the sequence of instructions.
 - 4.6 Rework the program until accomplishes the required task.
 - 4.6.1 Debug and expand/enhance the program.

5. PROGRAMMING TOPICS

- 5.1 Introduction to VB Programming
- 5.2 Program and Graphical User Interface Design
- 5.3 Program Design and Coding
- 5.4 Variable and Arithmetic Operations
- 5.5 Decision Structures
- 5.6 Loop Structures
- 5.7 Creating Web Applications
- 5.8 Using Procedures and Exception Handling
- 5.9 Using Arrays and File Handling
- 5.10 Incorporating Databases with ADO.NET
- 5.11 Multiple Classes and Inheritance

E. REQUIRED COMPETENCIES (PERFORMANCE OBJECTIVES) FOR ARTICULATION

The student will:

1. Be introduced to computer programming.
2. Improve problem-solving and critical thinking skills through structured programming.
3. Design and implement fluently coded computer-based solutions from selected problems in an accepted high-level language.
4. Become familiar with ethical issues in computer technology.

F. METHODS FOR END OF COURSE ASSESSMENT:

TEACHING STRATEGIES AND PROCEDURES

Lectures, demonstrations, and hand-outs
Programming by imitation
Analysis of teacher provided materials
Study assignments from texts and quizzes
Classroom discussions
Individual and team programming on selected projects

GRADING CRITERIA:

Programming projects	20%
Final exam project	10%
Final exam	10%
Assessments	60%

G. PROCEDURES AND/OR CRITERIA FOR COURSE ARTICULATION:

1. Complete the Computer Programming course at Heritage High School with a grade of "B" or better (unless otherwise indicated).
2. Complete the LMC "Credit by Exam" procedure (**for this class, it is the high school class final**) with a grade of "B" or better.
3. Apply for admission at Los Medanos College.
4. Register for CATEMA for electronic submission of college credit **OR** complete an [LMC HS/Adult Ed. Grade Verification Form](#) , obtain copy of high school transcript and articulation agreement and submit to the LMC Office of Admissions & Records.
5. Upon completion of the above, the student will receive on his/her LMC and CCCCD (California Community College District) transcripts the grade of "A", "B" or "P" and the unit credit for the LMC COMSC-041 "course. Transcripts will reflect the grade on the final exam and be notated as *Credit by Exam.

H. TEXTBOOKS OR OTHER SUPPORTING MATERIALS

Microsoft Visual Basic 2017 for Windows, Web and Database Applications: Comprehensive
By Corinne Hoisington Publisher: Cengage Learning

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COLLEGE SIGNATURES

HIGH SCHOOL/AEC/ROP/DISTRICT SIGNATURES

Sally Montemayor Lenz, Ed.D.

Sally Montemayor Lenz, Ed.D. (May 21, 2019)

Sally Montemayor Lenz
LMC Interim Vice President of Instruction

Date

Carrie J Wells

Carrie J Wells (Jun 3, 2019)

Carrie Wells
Principal, Heritage High School

Date

Ryan Pedersen

Ryan Pedersen (Apr 22, 2019)

Ryan Pedersen
LMC Dean of Mathematics and Sciences

Date

Erik Faulkner

Erik Faulkner (Jun 4, 2019)

Erik Faulkner
LUHSD Asst. Superintendent, Educational Services

Date

Louie M. Giambattista

Louie M. Giambattista (Apr 17, 2019)

Louie Giambattista
LMC Computer Science Department Chair

Date

Robert Pardi

Robert Pardi (May 22, 2019)

Robert Pardi
Faculty, Heritage High School

Date

Cc: LMC Director of Admissions and Records
LMC K-12 Senior Program Coordinator
LMC Pathways Counselor/LMC CTE Counselor
School District Educational Services Dept.
High School Principal
High School CATEMA Contact












HHS COMSC-041 Artic 2018-21 FINAL

Final Audit Report

2019-06-04

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