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714.480.7564
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PROGRAM APPROVAL APPLICATION
NEW or SUBSTANTIAL CHANGE or LOCALLY APPROVED
(This application may not exceed 3 pages)

Fill In Form

Computer Programming
Proposed Program Title

Fall 2017
Projected Program Start Date

Los Angeles Mission College (LAMC)
College

Los Angeles Community College District
District

Contact Information

Monte E. Perez, PhD
Voting Member

President of LAMC
Title

(818) 364-7795
Phone Number

PerezME@lamission.edu
Email

Goal(s) of Program (Check all that apply):

☒ Career Technical Education (CTE)   ☐ Transfer   ☐ Other

Type of Program (Check all that apply):

☐ Certificate of Achievement 12-17 (or 17-27 quarter) units   ☒ Certificate of Achievement 18+ semester (or 27+ quarter) units

☒ Associate of Science Degree   ☐ Associate of Arts Degree

Reason for Approval Request (Check One):

☐ New Program   ☒ Substantial Change   ☐ Locally Approved

Program Information

0707.10   Recommended Taxonomy of Program (TOP) Code

30   Units for Major-Degree

30   Total Units for Degree

15   Required Units-Certificate

Written Form

1. **Insert the description of the program, as it will appear in the catalog. (See PCAH pp. 142 and 170)**

   The A.S. Degree in Computer Programming provides a student with the necessary skills for the entry-level programmer. The program consists of core courses and additional skills in the programming emphasis area which include additional programming languages and foundation courses meant to best qualify our students for positions in industry and provide for their future growth. These include database and programming languages.

2. **Provide a brief rationale for the program.**

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Our intention is to offer an A.S. Degree with emphasis in one of three areas. A Certificate of Achievement in each emphasis area is also available without the A.S. degree. The Associate of Science in Computer Programming reflects substantial changes to our existing Associate of Art in Computer Science degree and is a necessary response to evolving industry standards.

We have included a certificate of achievement in programming to provide entry-level programmer job skills for students not wishing to pursue the A.S. degree. This flexibility will allow students to focus on their goals more clearly as well as offer a means for those in industry to enhance their skills.

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3. **Summarize the Labor Market Information (LMI) and employment outlook (including citation for the source of the data) for students exiting the program. (See PCAH pp. 85-88, 136, 147, 148, 165, 168, and 176)**

The Computer Programming Certificate of Achievement will prepare students for entry-level employment opportunities as Computer Programmer (SOC #11-02), Software Developers, Applications (15-1132), and Software Developers, Systems Software (15-1133). The following summarizes the LMI in LA County:

- The 2016-2026 job change is projected to be 4,499 (6.8% growth). Annual openings are projected to be 2,332 .
- Average entry-level wage is $37.90 (10 %) with an average median wage of $48.36
- There were 346 average regional completions in 2015 in Computer Programming as reported by EMSI.

With 2,223 annual job openings and 346 related regional completions there is an annual net demand of 1,887 openings.

EMSI 2017

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4. **List similar programs at other colleges in the Los Angeles and Orange County Region which may be adversely impacted. (There is space for 10 listings, if you need more, please contact laocrc@rsccd.edu)**

College	Program	Who You Contacted	Outcome of Contact
Cerritos	AA	**Connie Boardman;** Dean of Science/Eng/Math Jack Wilson & Phuong Nguyen – CIS Co- Chairs	No Reply
East Los Angeles	C	Chelstrom, Gina - CTE Pathways Ass. Dean Lipscomb, Roderick C. – CSIT/CSI Chairperson	No Reply
El Camino	C		No Reply
Glendale	C	Jan Swinton – Dean Rory Schlueter –Dept Chair	Approved
Long Beach City	C	Michelle Grimes-Hoffman	Approved
LA City College	C/AA	Alex Davis	Approved

Revised Thursday, June 08, 2017

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Los Angeles Pierce	AA /AS / C	Tom Vessella – Dean Natalia Grigoriants - Chair	Suggested Title Change and Review of TOP Code.
Los Angeles Southwest	AS	Ricky Hodge – Dean James Hicks - Chair Business	No Reply
Los Angeles Valley	AS / C	Laurie Nalepa, EdD - Dean	No Reply
Mt. San Antonio	AS / C	David TieuBarry Andrews - Co-Chair Vic Zamora - Co-Chair	No Reply
Pasadena City College	AS / C	Lynell Wiggins - Director	No Reply
Santa Monica	AS / C	Patricia Ramos	No Reply
Coastline	C	Nancy S. Jones, Ed.D. Dean of Business and CTE	Approved

5. **List all courses required for program completion, including core requirements, restricted electives and prerequisites. (There is space for 20 listings, if you need more, please contact laocrc@rsccd.edu). (See PCAH pp. 143 and 171)**

Courses in grey are core courses required for any Associate Degree regardless of emphasis. Courses in blue are additional courses required for the Computer Programming Certificate of Achievement (15 units). In addition to these, the Associate Degree in Computer Programming requires those courses in yellow.

Courses	Course Number	Course Title	Units
Core	CoSci 401	Introduction to Computers & Their Uses	3
Core	CoSci 407	Programming Logic	3
Core	CoSci 430	Data Analytics	3
Core	CoSci 434	Introduction to Oracle: SQL	3
Core (1 language other than that required for Emphases)	CoSci 408	Visual Basic	3
	CoSci 439	Programming in C	3
	CoSci 440	Programming in C++	3
	CoSci 452	Programming in Java	3
	CoSci 462	Programming in JavaScript	3
Computer Programmer - Required	CoSci 450	Web Application Development	3
Computer Programmer - Required	CoSci 452	Programming in Java	3

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Computer Programmer - Required	CoSci 462	Programming in JavaScript	3
Computer Programmer – Required for Associate	CoSci 416	Computer Architecture and Organization	3
Computer Programmer – Required for Associate	CoSci 436	Introduction to Data Structures	3

6. Include any other information you would like to share.

In all cases, students will learn how to adapt to the ever-changing sets of tools and technology.

The A.S. Degree is an umbrella degree that incorporates a core curriculum (grey), common to all and three different emphases: Computer Programming (blue), Cyber Security (orange) and Full Stack Development (green). Courses in yellow are required for the A.S. degree in computer programming.

IT Professionals may improve their skills as programmers through courses in SQL, JavaScript, and web applications.