

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

**Fill In Form**

Full Stack Development  
 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

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 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**

0709.10      Recommended [Taxonomy of Program \(TOP\) Code](#)

30 units      Units for Major-Degree

60 units      Total units for Degree.

21 units      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 Full Stack Development provides necessary skills required to design and code and web applications. The program consists of core and advanced web application programming skills sets. Core skills include introduction to computers, networking, databases, programming logic and design and a programming language. The emphasis in Full Stack Development introduces the fundamental concepts of web applications. It will provide a comprehensive coverage of both client-side and server-side development. The students will build desktop and mobile applications. The students will learn programming languages, and scripting languages. They will also learn relational databases and NoSQL databases. The program will use an explorative and collaborative environment full of valuable insights on how to adapt to changing trends and tools in emerging technology.

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

Our intention is to offer an A.S. Degree with different emphases. Each emphasis be a standalone Certificate of Achievement. A certificate in full stack development where the developer understands front end, middleware and back end. To create a for credit certificate for students ready for internships while pursuing their degrees or students wanting to advance their careers. Currently there are private coding boot camps that provide the training in a short period and at a high cost to the students. Los Angeles Mission College wants to teach the same skills to its students, in a short period but at lower cost and for credit.

**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 Full Stack Development Certificate of Achievement will prepare students for entry-level employment opportunities as Web Developer (SOC #15-1134). The following summarizes the LMI in LA County:

- The 2016-2021 job change is projected to be 944 (15% growth). Annual openings are projected to be 281.
- Average entry-level wage is \$16.34 (10 %) with an average median wage of \$28.89.
- There were 20 average regional completions in 2012-15 in Web Design and Development as reported by the Centers for Excellence in the Regional Labor Market Assessment, Los Angeles County, August 2016.

With 281 annual job openings and 20 related average regional completions there is an annual net demand of 261 openings.

COE August 2016

**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@rscdd.edu](mailto:laocrc@rscdd.edu))**

College	Program	Who You Contacted	Outcome of Contact
Glendale	AS / C	CS/IS Coordinator Rory Schlueter	Approved
Long Beach City	C	Chair Gene Carbonaro	Approved
Pierce	AS/C	Chair Natalia Grigoriants	Suggested title change
Saddleback College	AS/C	Chair Larry Perez	No response
West Los Angeles	AA / AS / C	Division Chair Anna Chiang	Approved
LA City College	C/AA	Aracely Aguiar – Dean	Approved
	AA	Alex Davis - DeanC	

Cerritos Community College –		Jack Wilson onnie Boardman	No Response
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**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@rscsd.edu](mailto:laocrc@rscsd.edu)). (See PCAH pp. 143 and 171)**

Courses in grey are core courses required for any Associate Degree. In green are ones required for Full Stack Development Certificate of Achievement (21 units).

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
Full Stack Web Application Developer - Required	CoSci 450	Web Application Development	3
Full Stack Web Application Developer - Option A	CoSci 408	Visual Basic	3
Full Stack Web Application Developer - Option A	CoSci 409	Advanced Visual Basic .NET	3
Full Stack Web Application Developer - Option B	CoSci 462	Programming in JavaScript	3
Full Stack Web Application Developer - Option B	CoSci 463	Full-Stack Web Application Development	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.

Certificate recommended by the CSIT Advisory Committee.

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).