

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

Fill In Form

Business Programming Proposed Program Title	Fall 2017 Projected Program Start Date
El Camino College College	El Camino College District

Contact Information

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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

0702.00	Recommended Taxonomy of Program (TOP) Code
N/A	Units for Major-Degree
N/A	Total Units for Degree
22	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 program is intended for students interested in information systems and can lead to career opportunities as software specialists, web programmers, database developers, system software designers, or network administrators. A variety of courses will enable students to learn project management, perform systems analysis and design, create business software including websites, desktop applications, and mobile apps, manage business data using spreadsheets and databases, implement cybersecurity measures, handle help desk incident reports, and install and maintain small and large LANs (local area networks). Students will demonstrate their proficiency through performance in laboratory exercises and objective examinations. Program assessment is measured by program completion and periodic program review.

2. Provide a brief rationale for the program.

Business programming is an area of employment that continually has high demand and will continue to grow due to expanding and ever-changing technology. New growth areas will continue to arise from rapidly evolving technologies and from a fundamental shift in how we communicate, interact, collaborate, create, inform ourselves, prioritize, organize, buy, sell, and play, all resulting from the Social Web. There were over 2.2 billion active social media users in 2015 alone (www.socialmediatoday.com). The increasing uses of the Internet, the proliferation of web sites, cloud computing, and mobile technology requires that more software be offered over the Internet alone, and as businesses continue to develop customized software to meet their specific needs, business applications programmers will continue to be in demand. In addition, the growing use of handheld computers will create demand for new mobile applications and software systems.

While job prospects should be best for those with a bachelor's degree and relevant experience [Bureau of Labor Statistics Occupational Outlook Handbook, 2016-17 Edition], the CIS faculty and advisory board felt there are many entry level opportunities for students graduating with an AS degree or holding a certificate in a CIS concentrated area of study. In addition, the advisory board pointed out that there are entrepreneurial opportunities in the development of mobile apps that require training but no degree at all. The CIS Advisory Board highly recommended Business Programming as a certificate track.

Based on their recommendation, the CIS faculty conducted extensive research to reach the conclusion that developing a Certificate of Achievement in Business Programming would help to meet the needs and demands of the current and forecasted business market and the IT workplace.

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 Bureau of Labor Statistics predicts the 2014 to 2024 forecasted national job growth for all jobs is 7%. For the same time frame, software developers are projected to grow 17% nationally. (<http://www.bls.gov/ooh/computer-and-information-technology/software-developers.htm>).

Regional growth is even stronger. In Los Angeles County, 10-year growth (2012-2022), annual need, and wages for occupations targeted by this certificate are strong. Computer programmers (SOC 15-1131) is predicted to grow by 6.8% (560 jobs) and has median wages of \$45.04. Software Developers, Applications (SOC 15-1132) is predicted to grow by 20.4% (3,180 jobs) and has a median wage of \$48.01. Software Developers, Systems (SOC 15-1133) has similar growth projections (19.7%, 2,530 jobs, and median wages of \$55.93). Last, the strongest growth is predicted for Web Developers (SOC 15-1134) with 31.6% growth (1,750 jobs) and median wages of \$32.92. (<http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html>).

Moreover, the EDD predicts there will be 801 new jobs and 667 replacements jobs needed across the four aforementioned occupations each year (2012-2022). According to the Chancellors Office Data Mart, in 2014-2015, there were a total of 338 regional completions among the Los Angeles County community colleges in TOP codes 0702 (Computer Information Systems), 0704 (computer programming), and 0702 (computer information systems). With a projected 1,468 annual job openings for Los Angeles County, this would result in a Net Annual Labor Demand of 1,130 jobs. http://datamart.cccco.edu/Outcomes/Program_Awards.aspx

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@sccollege.edu)

College	Program	Who You Contacted	Outcome of Contact
Cerritos College	Programmer Certificate of Achievement	Yannick Real	Awaiting feedback
Fullerton Community College	Computer Information Systems Certificate	Douglas Benoit	No concerns
Santa Ana College	Computer Information Systems Certificate	Bart Hoffman	No concerns

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.sccollege.edu). (See PCAH pp. 143 and 171)

Courses	Course Number	Course Title	Units
Computer Information Systems	CIS 13	Computer Information Systems	3
Computer Information Systems	CIS 18	Systems Analysis and Design	3
Computer Information Systems	CIS 30	Introduction to eCommerce	3
Computer Information Systems	CIS 28	Database Management using Microsoft Access	3
Computer Information Systems	CIS 19	Internet, Security, and the Web	3
Choice of one of the two groups below:			
Group A: Computer Information Systems	CIS 16	Application Development and Programming using Visual Basic.NET	3
Group A: Computer Information Systems	CIS 134	ASP.NET with C# Business Programming	4
Group B: Computer Information Systems	CIS 136	Building Mobile Apps	3
Group B: Computer Information Systems	CIS 133	Mashup JavaScript, jQuery and AJAX	4

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