SANTA ANA COLLEGE

NEW CREDIT PROGRAM

Certificate of Completion in Data Analytics		**Jason Sim**
TITLE OF PROPOSED PROGRAM		CONTACT PERSON
Santa Ana College	**Rancho Santiago**	**Assistant Professor**
COLLEGE	DISTRICT	TITLE
12/28/2020		
EFFECTIVE DATE	PROGRAM REVIEW DATE	PHONE NUMBER
		sim_jason@sac.edu
		EMAIL ADDRESS

TYPE OF PROGRAM (SELECT ONLY ONE):

☐ A.A. DEGREE

☐ A.S. DEGREE

☐ AA-T DEGREE

☐ AS-T DEGREE

☐ B.S DEGREE

PROGRAM GOAL (CHECK ALL THAT APPLY):

☐ CAREER TECHNICAL EDUCATION (CTE)

☐ TRANSFER

☑ CAREER TECHNICAL EDUCATION (CTE) AND TRANSFER

   OTHER

CERTIFICATE OF ACHIEVEMENT:

☐ 8 or fewer than 16 semester
(or 18 to fewer than 27 quarter) units

☑ 16 or greater semester
(or 27 or greater quarter) units

Planning Summary:

Program T.O.P Code		**Estimated FTE Faculty Workload**	
Units for Degree Major or Area of Emphasis (Minimum)		**Number of New Faculty Positions**	
Units for Degree Major or Area of Emphasis (Maximum)		**Estimated Cost New Equipment**	
Total Units for Degree (Minimum)		**Cost of New/Remodeled Facility**	
Total Units for Degree (Maximum)		**Estimated Cost Library Acquisitions**	
Annual Completers		**Gainful Employment**	**Apprenticeship**	**CTE Regional Consortium Approval**
Net Annual Labor Demand (CTE Only)				
Distance Education **Choose one**		☑ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

SANTA ANA COLLEGE

Associate in …………………………..

DEVELOPMENT CRITERIA NARRATIVE & DOCUMENTATION

Criteria A. Appropriateness to Mission

1. **Statement of Program Goals and Objectives**
   The program goals are to

2. **Catalog Description**
   The Certificate of Achievement for Data Analytics is designed for students who have an interest in working with datasets, database systems, SQL (Structured Query Language), Pandas, Jupyter and other related DA tools.

   The program goal for the Data Analytics is to train students in the area BIG data, write SQL queries, and aggregate large amounts of data. Other program goals are to create tables and merge multiple tables. The student will extensively use Pandas and the Jupyter notebook as the platform.
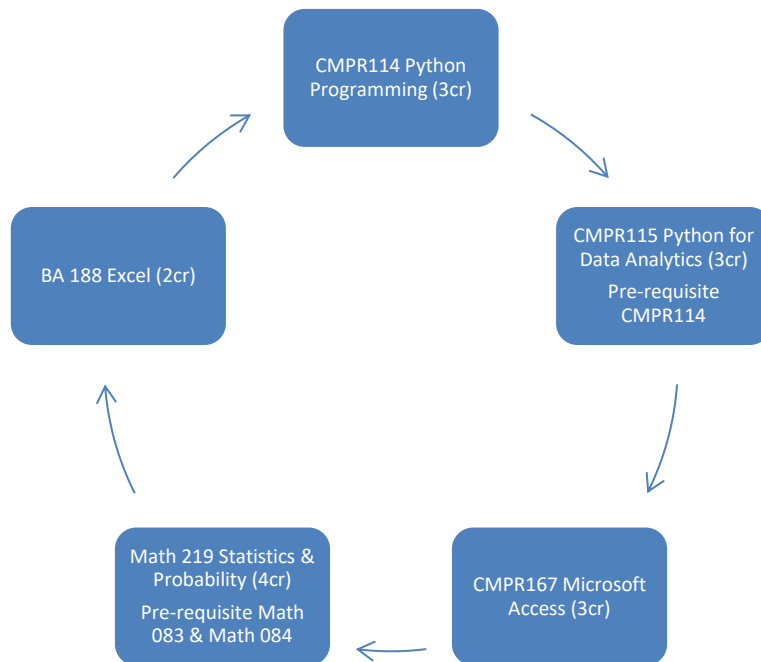
   The program is also tailored for working professionals who might want to change careers in BIG DATA or Data Analytics.

3. **Program Requirements**

Course #	Title	Units
CMPR114	Python Programming	3
CMPR115	Python for Data Analytics	3
CMPR167	Microsoft Access	3
MATH219	Statistics and Probability	3
BA188	Excel	3
Total		**15**

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Description of Courses:

CMPR114 Python Programming: Students will be introduced to the syntax of Python, the methods used to incorporate Python into creating business applications and using Python to create interactive forms. Students will also learn to enhance Business Applications using Interactive Programming utilizing forms, objects, looping constructs, variables, classes, and the use of various datatypes.

CMPR115 Python for Data Analytics: The student will learn fundamentals for Data Analytics using Python and will learn skills such as an introduction to data analysis, understanding data, data processing, writing python code, using IPython shell, reading and writing data using panda, interacting with databases, data manipulation, and data visualization using matplotlib.

CMPR167 Microsoft Access: Relational Database Management using Microsoft Access. Includes design, creation and maintenance of a RDBMS, reports and form generation, queries, importing and exporting data, macros and modules using Access Basic.

Math219 Statistics & Probability: Beginning course in statistics. Includes descriptive statistics, graphical displays of data, probability, confidence intervals, hypothesis testing, regression, contingency tables, ANOVA, and non-parametric statistics. Includes use of technology.

BA188 Excel: This course is designed for beginning and experienced computer users needing to build and update business technology skills to produce professional Excel worksheets. Learn proper techniques using current business standards to create, edit, format, export PDF, and print worksheets. Topics include insert images, graphics, charts, functions, and formulas. This course will prepare the student for the Microsoft Office Specialist (MOS) exam to earn an industry recognized certification.

Total Units: 15

4. Master Planning

Criteria B. Need

5. Enrollment and Completer Projections

Expectations for future enrollment: 30 per semester

6. Place of Program in Curriculum/Similar Programs

7. Similar Programs at Other Colleges in Service Area
Coastline College (Data Analytics, Certificate of Achievement)

Link: https://catalog.cccd.edu/coastline/pathways/technology/computer-information-systems/data-analytics-certificate-achievement/#requirementstext

8. Labor Market Information and Analysis (CTE only)
Note: Please see attachment #1

Over the next five years, there is projected to be 1,883 jobs available annually in the region due to new job growth and replacements, which is more than the 516 awards

conferred annually by educational institutions in the region.
o However, the Computer Occupations, All Other (15-1199) SOC code includes a variety of emerging occupations, including Business Intelligence Analysts (15-1199.08). Since the SOC code does not solely represent business intelligence analysts, the number of annual job openings is overstated.
• Over the past 12 months, there were 7,726 online job postings related to business intelligence analysts. The highest number of job postings were for data analysts, business analysts, business intelligence analysts, SAP consultants, and business consultants.
• The Bureau of Labor Statistics (BLS) lists a bachelor's degree as the typical entry-level education for computer occupations, all other.
o However, the national-level educational attainment data indicates 35.2% of workers in the field have completed some college or an associate degree.

Within Orange County, all the annual job openings for computer occupations, all other have entry-level wages above the county's living wage ($17.36).1
Supply:
• There are 16 community colleges in the region that issue awards related to computer information systems, conferring an average of 123 awards annually between 2016 and 2019.
• Between 2014 and 2017, there was an average of 393 awards conferred annually in related training programs by 11 non-community college institutions throughout the region.

9. Advisory Committee Recommendations (CTE only)

- **List of Advisory Committee Members, Job Titles, and Business Affiliations**

- **Minutes of the Advisory Committee meetings**

- **Summary of the Advisory Committee recommendations**

10. Regional Consortia Approval Meeting Minutes (CTE only)