



CIS - Database Design Certificate

This certificate prepares the students to understand the entire database design, programming methodology and life cycle. This certificate is designed for students who require programming skills in Relational Database Management Systems (RDBMS) and Structured Query Language (SQL) techniques using ORACLE or Microsoft Access.

Total Units: 12.5-19

First Year

Semester 1

4 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
CISA 320 Introduction to Database Management	1		
CISP 300¹ Algorithm Design/Problem Solving	3	Intermediate Algebra	F, S, Su

¹ CISP 300 is a suggested elective; it is a pre-req for some courses

Semester 2

1.5-5 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
CISA 321 Intermediate Database Management or	1	CISA 320	F(O), S(O)
CISP 370 Beginning Visual Basic or	4	Advisory: CISC 310 or CISP 300	Check Class Schedule for offering
CISP 400 Object Oriented Programming with C++ or	4	CISP 360	Check Class Schedule for offering
CISC 498 Work Experience in Computer Information Science - Core	0.5-4		F(O), S(O). Su(O)

¹ Suggestion-CISP 360 is a pre-req for some courses; Students need a minimum of 4 units from this list of courses.

Career Options/Outlook:

Computer Programmers create, modify, and test the code, forms, and scripts that allow computer applications to run. Work from specifications drawn up by software developers or other individuals. May assist software developers by analyzing user needs and designing software solutions. May develop and write computer programs to store, locate, and retrieve specific documents, data, and information.

Career opportunities require more than two years of college study.

A sample of reported job titles:

Analyst Programmer, Application Programmer Analyst, Computer Programmer, Computer Programmer Analyst, Internet Programmer, Java Developer, Programmer, Programmer Analyst, Web Applications Programmer, Web Programmer

Projected job openings in California for Public Relations Specialist (2020-2030):

1,510

Year 2

Semester 3-minimum of 4 units

1-4 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
CISC 305¹ Introduction to the Internet or	1	CISC 302 or 310	Check Class Schedule for offering
CISC 306¹ Introduction to Web Page Creation or	1	CISC 305 or intermediate level of Internet proficiency	Check Class Schedule for offering
CISW 300¹ Web Publishing or	3	CISC 305	Check Class Schedule for offering
CISW 400¹ Client-side Web Scripting or	4	CISW 300; Advisory CISP 300	Check Class Schedule for offering
CISW 410¹ Database-Driven Web Applications	4	CISW 300; Advisory: CISP 300	Check Class Schedule for offering

¹ A minimum of 4 units is required from this list of courses.

Semester 4

3 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
CISP 350 Database Programming	3	CISA 320 and 3 units in any programming Language	F(O)

Semester 5

3 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
CISP 356 Relational Database Design and Information Retrieval	3	CISP 350	F(P)

^You must have passed the prerequisite course(s) with a "C" or better; Corequisite must be taken during the same semester; Advisory means it is recommended but not required to enroll in the course.

*(O) = online available (P) = partially online

Projected growth in California (2020-2030):

-3% decline

Median Salary in California with advanced degree (2021):

Median wage with advanced degree:
\$105,080/yr

Source:

<https://www.onetonline.org/link/summary/15-1131.00>

About this map:

This program map represents one possible pathway to complete the program. Please see a counselor to create an education plan that is customized to meet your needs. This map is not a guarantee of course

availability or financial aid applicability.

Zero Textbook Costs (ZTC):

The Zero Textbook Costs designation and logo are added to any course that provides free access to all required instructional materials. These are typically shared with students through Canvas. Courses that are designated as ZTC may still require students to purchase supplemental materials such as lab coats, a calculator, art supplies, etc. See full definitions and searching tips on the [Zero Textbook Costs page](#) of the college website.

Catalog Year: 2026-2027
Published October 02,
2026

Counselor Contact: Chris Torres or Ea Edwards | Faculty Contact: Mohammed Osman