

*Computer Information Systems*  
**Database Design**

CIS Coordinator  
408-864-8877  
Bldg. F5 Rm. F51i

Business & Computer  
Systems Division  
Bldg. L1 Rm. L14  
408-864-8797

Counseling Center  
Student & Community  
Services Bldg. 2nd Fl.  
408-864-5400

Career Services Info.  
Student & Community  
Services Bldg. 2nd Fl.  
408-864-5400

Please visit the Counseling Center to apply for certificates and degrees, and for academic planning assistance.

***Certificate of Achievement Level Requirements***

A minimum "C" grade in each major course.

Note: A maximum of six (6) quarter units may be transferred from other academic institutions.

*Major courses for certificates and degrees must be completed with a letter grade unless a particular course is only offered on a pass/no-pass basis.*

**Database Design for Developers (Oracle)**  
***Certificate of Achievement***

The Database Design for Developers Certificate of Achievement includes database management system fundamentals, SQL, PL/SQL and performance tuning. Students become proficient in organizing essential information and abstract relationships into a database. They also learn to update, maintain, and repair databases and improve database performance. Database skills are applied by Software Engineers, Business Analysts, Database Architects, Database Administrators, Database Designers and Reporting Analysts.

*Student Learning Outcomes - upon completion, students will be able to*

- prepare and review a database design that includes logical and system representations.
- design, code and debug SQL and PL/SQL programs.
- apply performance tuning techniques to large-scale database applications.
- create, design and debug intermediate level programs with basic C programming language.
- create a database that is optimized to meet defined technical requirements.

1. Meet the requirements for this certificate level.

2. Complete the following.

CIS 15AG	Intro. to Computer Programming Using C	4.5
CIS 15BG	Intermediate Problem Solving in C	4.5
CIS 64A	Database Management Systems	4.5
CIS 64B	Introduction to SQL	4.5
CIS 64C	Introduction to PL/SQL	4.5
CIS 64D	Database Tuning	3
Total Units Required . . . . .		25.5