

JEWELRY DESIGN

The Jewelry Design program offers a strong fine arts background in design, materials, and techniques. Further studies at the university level are encouraged; however, potential areas of employment exist in freelance jewelry design, sales, and activities related to retirement and recreational programs.

Program Outcomes

Upon the completion of the classes listed for the certificate for Jewelry Design, students will be able to:

1. Fabricate jewelry such as earrings, brooches, necklaces, from nonferrous metals including semi precious metals.
2. Differentiate between casted jewelry to fabricated jewelry and mass produced jewelry to hand crafted pieces.
3. Demonstrate a basic understanding of repair processes.
4. Design jewelry and complete the design by applying various metalsmithing techniques.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses			Units
	First Semester			
Color & Design 2-D Freehand Drawing	ART	A110	(3)	
	ART	A120	(3)	
Color & Design 3-D Sculpture 1 Jewelry 1	ART	A111	(3)	
	ART	A141	(3)	
	ART	A147	(3)	
Jewelry 2 Intro to Marketing	ART	A247	(3)	
	MKTG	A100	(3)	
Professional Studies Sculpture 2	ART	A180	(1)	
	ART	A241	(3)	
Total:			(25)	

ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Arts Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMPUTER INFORMATION SYSTEMS

The goal of the CIS program is to provide students with the technical skills and systems perspective necessary for entry-level positions in the computer and information industry. Students should not expect that they will necessarily meet the lower division requirements at specific colleges or universities. Students should consult the Transfer Information section of this catalog for specific transfer information.

BUSINESS APPLICATION DEVELOPMENT

Designed to provide a good foundation for students who are interested in developing computer applications. Students may choose courses in a number of areas to develop a general understanding of the field or they may choose to study a particular specialization or two in greater depth. In today's dynamic and changing technological environment, continuous professional upgrading is a requirement.

Program Outcome

Students will be prepared for employment in entry-level positions in the computer and information systems industries.

CERTIFICATE OF ACHIEVEMENT

CORE CURRICULUM

Required Courses

Course			Units
Financial Accounting	ACCT	A101	(4)
Intro to Computer Info Systems	CIS	A111	(3)
Intro to C# .NET Programming*	CS	A140	
(Or)			
Intro to VB .NET Programming*	CS	A142	(4)
(Or)			
Java Programming 1*	CS	A170	
Finite Math	MATH	A154	
(Or)			
Calculus 1	MATH	A180	
(Or)			(4)
Honors Calculus 1	MATH	A180H	
(Or)			
Calculus for Biol Mgmt & Soc. Sci	MATH	A157	
Total:			(15)

Courses marked by asterisk (*) may not be used to satisfy both the core requirement and the specialization requirement.

Students must complete the core curriculum plus 18 units from the following list of specialized application development courses. All courses do not need to be taken from the same area of specialization.

Introductory Programming

Course			Units
Intro to C# .NET Programming*	CS	A140	(4)
Intro to VB .NET Programming*	CS	A142	(4)
Java Programming 1*	CS	A170	(4)

Technical Programming

C++ Programming 1	CS	A150	(4)
Windows .NET Programming	CS	A152	(4)
Data Structures	CS	A200	(4)
Computer Architecture	CS	A216	(4)
C++ Programming 2	CS	A250	(4)
Java Programming 2	CS	A272	(4)

CONTINUED NEXT PAGE

Web Development

Course			Units
Intro to Web Page Design	CIS	A123	(2)
Intro to Dreamweaver	CIS	A128	(2)
Cascading Style Sheets (CSS) for Web Pages	CIS	A129	(2)
Bus Multimedia/Graphics	CIS	A132	(2)
Flash Programming	CIS	A141	(3)
JavaScript Programming	CIS	A171	(2)
JavaScript 2	CIS	A223	(2)
Digital Video for Business: Adobe Premier Pro	CIS	A232	(3)

Networking Environment

PC Concepts: Linux/Certification Prep	CIS	A106	(4)
MS Windows	CIS/BUS	A107	(1)
PC Concepts: A+ Certification Prep	CIS	A110	(4)
SQL Server Administration	CIS	A176	(4)
SQL Server Design & Implementation	CIS	A177	(4)
Network & Comm Technologies	CIS	A191	(4)
Network Systems Admin	CIS	A192	(4)
Network Infrastructure Admin	CIS	A193	(3)
Network Directory Services Admin	CIS	A194	(3)
Network Security Design	CIS	A196	(4)

Database

SQL Tuning Workshop	CIS	A178	(2)
PL/SQL II	CIS	A179	(2)
Intro to Database Concepts	CIS	A182	(4)
Oracle SQL Programming	CIS	A183	(4)
Oracle PL/SQL Programming	CIS	A184	(3)
Oracle Forms & Reports Developer	CIS	A185	(4)
Oracle Database Admin I	CIS	A187	(3)
Oracle Database Admin II	CIS	A188	(3)
SQL Tuning	CIS	A178	(2)
PL/SQL II	CIS	A179	(2)

(25)

Total: (28-40)

ASSOCIATE DEGREES

Complete the Certificate of Achievement and either the Associate in Arts or Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMPUTER PROGRAMMING

This certificate is designed to provide the student with comprehensive grounding in the theory and practice of modern computer programming. Based on the recommendations of the Association of Computing Machinery, the Computer Programming Certificate prepares students to work as entry-level programmers. Students should not expect that they will necessarily meet the lower division requirements at specific colleges or universities. Students should consult the Transfer Information section of this catalog for specific transfer information.

Program Outcome

Based on the recommendations of the Association for Computing Machinery, The Computer Programming Certificate prepares students to work as entry-level programmers, or useful to fulfill some of the requirements for transfer to a Computer Science program at a four-year university.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Computer Science Courses			Units
C++ Programming 1	CS	A150	(4)
Java Programming I	CS	A170	(4)
Data Structures	CS	A200	(4)
Computer Architecture	CS	A216	(4)
Software Engineering	CS	A220	(4)
C++ Programming 2	CS	A250	(4)
Theories of Computation	CS	A265	(1)

Total: (25)

Mathematics Courses

Intro to Stats (or Honors Intro Stats)	MATH	A160(H)	(3)
Calculus 1 (or Honors Calculus 1)	MATH	A180(H)	(8)
(And)			
Calculus 2 (or Honors Calculus 2)	MATH	A185(H)	(4)
(Or)			
Honors Calculus 1 and 2	MATH	A182H	(5)
Discrete Mathematics	MATH	A230	(5)
Applied Linear Algebra	MATH	A235	(3)
(Or)			
Intro to Linear Algebra & Differential Equations	MATH	A285	(4)
(Or)			
Honors Intro to Linear Algebra & Differential Equations	MATH	A285H	(5)

Subtotal (16-21)

Total: (41-46)

ASSOCIATE DEGREES

Complete the Certificate of Achievement and either the Associate in Arts or Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMPUTER INFORMATION SYSTEMS

This program will meet major requirements for the Associate in Arts or Associate in Science degrees but has not been articulated with any particular four-year institution. Students should not expect that they will necessarily meet the lower-division requirements at specific colleges or universities. Students should consult a counselor for specific transfer information.

This option provides the student with the lower-division transfer courses for some of the business oriented majors. Students are advised to check course transferability with an Orange Coast College counselor prior to enrolling in CIS courses.

Program Outcome

Students will be prepared for employment in entry-level positions in the computer and information systems industries.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Financial Accounting	ACCT	A101	(4)
Managerial Accounting	ACCT	A102	(4)
Business Law	BUS	A110	(3)
Intro to Computer Info Systems	CIS	A111	(3)
Intro to C# .NET Programming (Or)	CS	A140	(4)
Intro to VB .NET Programming	CS	A142	
Java Programming 1	CS	A170	(4)
Macroeconomics	ECON	A180	(3)
Microeconomics	ECON	A185	(3)
Calculus for Biol Mgmt & Soc. Sci (Or)	MATH	A157	(4)
Calculus 1	MATH	A180	
Total:			(32)

ASSOCIATE DEGREES

Complete the Certificate of Achievement and either the Associate in Arts or Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

CONVERGENCE TECHNOLOGIES

Completion of this certificate will enable students to acquire the skill needed by professionals in information and communication technologies to support the converged network that carries voice, data, image, and video traffic. This career is an emerging IT-related career that sees high demand and growth.

Program Outcomes

Students who receive the Convergence Technologies Certificate of Completion will be able to design and implement a converged network.

CERTIFICATE OF SPECIALIZATION

Required Courses

Courses			Units
PC Concepts: A+ Certification Prep	CIS	A110	(4)
Networking Essentials	CIS	A197	(4)
Routing and Router Configurations	CIS	A198	(3)
Convergence Technologies	CIS	A260	(3)
Select one (1) course from the following:			
Fundamentals of Wireless Networking	CIS	A261	(3)
Fundamentals of Voice over IP	CIS	A262	(3)
Home Technology Integration	CIS	A263	(3)
Enterprise Router Configurations 1	CIS	A265	(3)
Enterprise Router Configurations 2	CIS	A266	(3)
Small /Home Office: Case Study 1	CIS	A270	(3)
Total:			(17)

COMPUTER INFORMATION SYSTEMS

CERTIFICATE OF SPECIALIZATION

C ++ Programming

Completion of this certificate, issued through the Business and Computing Division, will enable students to apply for entry-level positions in C++ programming. A grade of "C" or better is required in all courses. All courses must be completed at Orange Coast College.

Program Outcome

Program completers will be able to write programs in C++ using classes, flow-of-control and fundamental data structure.

Required Courses

Course			Units
C++ Programming 1	CS	A150	(4)
Data Structures	CS	A200	(4)
C++ Programming 2	CS	A250	(4)
Total:			(12)

Database Administration (Oracle)

Completion of this certificate, issued through the Business and Computing Division, will enable students to acquire the skills needed for advanced database administration. In addition, this certificate provides preparation for students seeking Oracle's Professional Level certification in Database Administration. A grade of "C" is required in all courses. All courses must be completed at Orange Coast College.

Program Outcomes

Students will be able to:

Design and develop a data Model.

Create, manage, backup and recover an Oracle database.

Monitor database performance using Oracle-supplied administration tools and SQL.

Required Courses

Course			Units
Intro to Database Concepts	CIS	A182	(4)
Oracle Database Admin I	CIS	A187	(4)
Oracle Database Admin II	CIS	A188	(3)
And minimum of 4 units from the following optional courses:			
PC Concepts: Linux/Certification Prep	CIS	A106	(4)
SQL Tuning	CIS	A178	(2)
PL/SQL II	CIS	A179	(2)
Oracle SQL Programming	CIS	A183	(4)
Oracle PL/SQL Programming	CIS	A184	(3)
Total:			(15)

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Database Developer (Oracle)

Completion of this certificate, issued through the Business and Computing Division, will enable students to acquire the skills needed for developing forms and reports using the Oracle database environment. In addition, this certificate will help prepare for the Oracle's Professional Level certification in Forms and/or Reports. A grade of "C" is required in all courses. All courses must be completed at Orange Coast College.

Program Outcomes

Students will be able to:

- Design and develop a data model.
- Use SQL to retrieve data, manipulate and manage database objects.
- Create, execute and maintain PL/SQL modules.

Required Courses

Course			Units
Intro to Database Concepts	CIS	A182	(4)
Oracle SQL Programming	CIS	A183	(4)
Oracle PL/SQL Programming	CIS	A184	(3)

And a minimum of 4 units from the following optional courses:

Course			Units
SQL Tuning	CIS	A178	(2)
PL/SQL II	CIS	A179	(2)
Oracle Forms & Reports Developer	CIS	A185	(4)
Database Administration I	CIS	A187	(4)

Total: (15)

Network Administration and Operations

Completion of this certificate will enable students to acquire the skills needed in the areas of technical operations and network management. In addition, this certificate provides preparation for students seeking industry-standard certification from CompTIA and Microsoft. A grade of "C" or better is required in all courses. All courses must be completed at Orange Coast College.

Program Outcome

Students who receive the Convergence Technologies Certificate of Specialization will be able to design and implement a small to medium network environment.

Required Courses

Course			Units
PC Concepts: A+ Certification Prep	CIS	A110	(4)
Network & Comm Technologies	CIS	A191	(4)
Network Systems Admin	CIS	A192	(4)

Select one (1) course from the following:

SQL Server Administration	CIS	A176	(4)
SQL Server Design & Implementation	CIS	A177	(4)
Network Infrastructure Admin	CIS	A193	(3)
Network Directory Services Admin	CIS	A194	(3)
Network Security Design	CIS	A196	(4)

Total: (15-16)

Office Applications

Completion of this certificate, issued through the Business and Computing Division, will enable students to apply for office personnel positions using Microsoft Office applications. A grade of "C" or better is required in all courses. All courses must be completed at Orange Coast College.

Program Outcomes

Students who receive the Office Applications Certificate of Specialization will be able to:

1. Use a computer operating system and computer applications for word processing, electronic spreadsheet creation, database management, multimedia presentations, and electronic personal management with competence.
2. Achieve personal development and responsibility for entering the job market.

Required Courses

Course			Units
MS Windows	CIS	A107	(1)
Microsoft Word 1	CIS	A131	(2)
PowerPoint	CIS/BUS	A133	(1)
Excel 1	CIS/BUS	A134	(2)
Intro to Microsoft Access	CIS	A135	(2)
Microsoft Outlook	CIS	A137	(1)

Total: (9)

Web Design

Program Outcome

Completion of this certificate, issued through the Business and Computing Division, will enable students to apply for entry-level positions in designing for the World Wide Web. A grade of "C" or better is required in all courses. As an added outcome, Web Design Certificate students will be able to create dynamic Web pages.

Complete five (5) courses from this list (must be taken at Orange Coast College.)

Required Courses

Course			Units
Intro to Web Page Design	CIS	A123	(2)
Intro to Dreamweaver	CIS	A128	(2)
Cascading Style Sheets (CSS) for Web Pages	CIS	A129	(2)
Bus Multimedia/Graphics	CIS	A132	(2)
Flash Programming	CIS	A141	(3)
JavaScript Programming	CIS	A171	(2)
JavaScript 2	CIS	A223	(2)

Total: (10-11)