

The Technical Certificate (T.C.) in Computer Programming Specialist is designed for developers who wish to specialize in software development technologies and languages.

Students will learn the fundamentals of program design and systems design, data structures, data communications, customer support operations, and advanced programming in specific languages.

<input checked="" type="checkbox"/> Task
<input type="checkbox"/> View career information at http://www.fscj.edu/careercoach
<input type="checkbox"/> Meet with your advisor each term.
<input type="checkbox"/> Satisfy the technical certificate graduation requirements.

Certification and Licensing

The Oracle courses in the database certificate also provide a foundation for persons preparing for the Oracle Certified Professional (OCP) exams.

Articulation

This certificate articulates directly into the Computer Information Technology (2153) (A.S.) degree. Students may pursue one or more certificates to develop or upgrade their skills in a particular field or pursue the A.S. degree and earn technical certificates while completing the requirements for the degree. Contact an advisor to determine the career education path that is best for you.

Advising

(904) 598-5676 or net@fscj.edu.

Recommended Roadmap

This roadmap provides general guidance about recommended courses. For specific guidance about your individual academic degree plan, please see an advisor. Also refer to the College Catalog for additional information. **Full-time students will refer to the term-by-term recommendations**, and **part-time students will take courses in the order listed**. A minimum grade of C or higher must be achieved in all professional and professional elective courses.

Term 1

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	COP 1000C: Introduction to Computer Programming	3	All	All
<input type="checkbox"/>	CGS 1100C: Microcomputer Applications for Business and Economics	3	All	All
<input type="checkbox"/>	MAN 2582: Introduction to Project Management	3	All	All

Term 2

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	CTS 2437C: SQL Server I - Fundamentals or CTS 2440: Oracle SQL and PL/SQL	3 or 4	All	All
<input type="checkbox"/>	COP 2822C: Web Technologies	4	All	All
<input type="checkbox"/>	CIS 2321: Information Systems	3	All	All
<input type="checkbox"/>	Professional Elective	3	All	All

Term 3

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	Professional Elective	3	All	All
<input type="checkbox"/>	Professional Elective	3	All	All

Total Program Credit Hours

The Computer Programming Specialist T.C. program requires a **minimum of 28 credit hours**. Total program hours may vary based on the student's individual degree plan. Please see an advisor for individual guidance.

Professional Elective Coursework Options: C Languages Track

Minimum Credit Hours: 9

Note: COP 2360C is a prerequisite for COP 2823C.

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	COP 2220C: C Programming	3	All	All
<input type="checkbox"/>	COP 2334C: Object-Oriented Programming with C++	3	All	All
<input type="checkbox"/>	COP 2360C: Introduction to C#	3	All	All
<input type="checkbox"/>	COP 2823C: ASP.NET Programming	3	All	All

Important for You to Know

This academic roadmap does not include developmental education courses in reading, writing, and/or mathematics that you may be required to take. Students who place into developmental education courses are required to complete designated developmental education courses with a grade of C or higher regardless of program of study. In addition, it does not include MAT 1033: Intermediate Algebra, which, for many students, is a prerequisite course for MAC 1105.

The Technical Certificate (T.C.) in Computer Programming Specialist is designed for developers who wish to specialize in software development technologies and languages.

Students will learn the fundamentals of program design and systems design, data structures, data communications, customer support operations, and advanced programming in specific languages.

<input checked="" type="checkbox"/> Task
<input type="checkbox"/> View career information at http://www.fscj.edu/careercoach
<input type="checkbox"/> Meet with your advisor each term.
<input type="checkbox"/> Satisfy the technical certificate graduation requirements.

Certification and Licensing

The Oracle courses in the database certificate also provide a foundation for persons preparing for the Oracle Certified Professional (OCP) exams.

Articulation

This certificate articulates directly into the Computer Information Technology (2153) (A.S.) degree. Students may pursue one or more certificates to develop or upgrade their skills in a particular field or pursue the A.S. degree and earn technical certificates while completing the requirements for the degree. Contact an advisor to determine the career education path that is best for you.

Advising

(904) 598-5676 or net@fscj.edu.

Recommended Roadmap

This roadmap provides general guidance about recommended courses. For specific guidance about your individual academic degree plan, please see an advisor. Also refer to the College Catalog for additional information. **Full-time students will refer to the term-by-term recommendations, and part-time students will take courses in the order listed.** A minimum grade of C or higher must be achieved in all professional and professional elective courses.

Term 1

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	COP 1000C: Introduction to Computer Programming	3	All	All
<input type="checkbox"/>	CGS 1100C: Microcomputer Applications for Business and Economics	3	All	All
<input type="checkbox"/>	MAN 2582: Introduction to Project Management	3	All	All

Term 2

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	CTS 2437C: SQL Server I - Fundamentals or CTS 2440: Oracle SQL and PL/SQL	3 or 4	All	All
<input type="checkbox"/>	COP 2822C: Web Technologies	4	All	All
<input type="checkbox"/>	CIS 2321: Information Systems	3	All	All
<input type="checkbox"/>	COP 2837C: Introduction to Programming with Visual Basic.NET	3	All	All

Term 3

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	COP 2823C: ASP.NET Programming	3	All	All
<input type="checkbox"/>	COP 2842C: Internet Programming	4	All	All

Total Program Credit Hours

The Computer Programming Specialist T.C. program requires a **minimum of 28 credit hours**. Total program hours may vary based on the student's individual degree plan. Please see an advisor for individual guidance.

Important for You to Know

This academic roadmap does not include developmental education courses in reading, writing, and/or mathematics that you may be required to take. Students who place into developmental education courses are required to complete designated developmental education courses with a grade of C or higher regardless of program of study. In addition, it does not include MAT 1033: Intermediate Algebra, which, for many students, is a prerequisite course for MAC 1105.

The Technical Certificate (T.C.) in Computer Programming Specialist is designed for developers who wish to specialize in software development technologies and languages.

Students will learn the fundamentals of program design and systems design, data structures, data communications, customer support operations, and advanced programming in specific languages.

<input checked="" type="checkbox"/> Task
<input type="checkbox"/> View career information at http://www.fscj.edu/careercoach
<input type="checkbox"/> Meet with your advisor each term.
<input type="checkbox"/> Satisfy the technical certificate graduation requirements.

Certification and Licensing

The Oracle courses in the database certificate also provide a foundation for persons preparing for the Oracle Certified Professional (OCP) exams.

Articulation

This certificate articulates directly into the Computer Information Technology (2153) (A.S.) degree. Students may pursue one or more certificates to develop or upgrade their skills in a particular field or pursue the A.S. degree and earn technical certificates while completing the requirements for the degree. Contact an advisor to determine the career education path that is best for you.

Advising

(904) 598-5676 or net@fscj.edu.

Recommended Roadmap

This roadmap provides general guidance about recommended courses. For specific guidance about your individual academic degree plan, please see an advisor. Also refer to the College Catalog for additional information. **Full-time students will refer to the term-by-term recommendations**, and **part-time students will take courses in the order listed**. A minimum grade of C or higher must be achieved in all professional and professional elective courses.

Term 1

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	COP 1000C: Introduction to Computer Programming	3	All	All
<input type="checkbox"/>	CGS 1100C: Microcomputer Applications for Business and Economics	3	All	All
<input type="checkbox"/>	MAN 2582: Introduction to Project Management	3	All	All

Term 2

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	CTS 2437C: SQL Server I - Fundamentals or CTS 2440: Oracle SQL and PL/SQL	3 or 4	All	All
<input type="checkbox"/>	COP 2822C: Web Technologies	4	All	All
<input type="checkbox"/>	CIS 2321: Information Systems	3	All	All
<input type="checkbox"/>	COP 2551: Introduction to Object-Oriented Programming with Java or COP 2800C: Java 1	3	All	All

Term 3

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	COP 2805C: Advanced Java Programming	3	All	All

Term 4

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	COP 2806C: Developing Enterprise Applications Using Java EE	3	All	All

Total Program Credit Hours

The Computer Programming Specialist T.C. program requires a **minimum of 28 credit hours**. Total program hours may vary based on the student's individual degree plan. Please see an advisor for individual guidance.

Important for You to Know

This academic roadmap does not include developmental education courses in reading, writing, and/or mathematics that you may be required to take. Students who place into developmental education courses are required to complete designated developmental education courses with a grade of C or higher regardless of program of study. In addition, it does not include MAT 1033: Intermediate Algebra, which, for many students, is a prerequisite course for MAC 1105.