

## 2007-08 Catalog: Programs of Study

### Bioinformatics (4100)

#### Advanced Technical Certificate

The goal of the advanced technical certificate in Bioinformatics is to provide students with the skills and knowledge required to support the data systems employed by companies pursuing bioinformatics. While this program is primarily designed for students who have completed the Database Technology A.S./A.A.S. degree, students from other degree programs can benefit from the course offerings. The program includes a set of five core classes that present the fundamentals of biotechnology and bioinformatics through lecture and laboratory exercises. Students may then choose from a pool of electives to best meet their individual educational and career goals.

Students entering this program must have completed at least a two-year degree in a computer-related field and have fulfilled all prerequisites to courses in the certificate program.

#### Career Opportunities, Rapid Placement

Bioinformatics professionals are needed in law enforcement forensics, DNA analysis, biotechnical research, medical and pharmaceutical research. Jacksonville has a good number of organizations using bioinformatics, including Mayo Clinic, Shands Jacksonville and Xomed. There is currently an estimated shortage of 200,000 bioinformatics professionals in the United States and this figure is growing. An FCCJ intranet site posts jobs targeting our students. You may also post your resume and receive e-mails about job-related topics.

#### Annual Salaries

Local entry-level salaries are in the \$40,000 range. National average salaries are in the \$60,000 range.

#### Application Procedure

Students entering this program must have completed at least a two-year degree in a computer-related field and have fulfilled all prerequisites to courses in the certificate program.

#### Cost

Estimated cost of tuition is \$1,594 (tuition rated for Florida residents as of 7/06). Contact the program manager for additional costs (textbooks, fees, materials).

#### Need More Information? Contact:

**Rick Nelson**, South Campus, 904.646.2061

**Kevin Pegg**, Advanced Technology Center, 904.598.5621

#### Required Courses

The following is a list of courses required for this program presented in a recommended sequence of completion. The sequence is only a suggested guide, and there is no requirement to follow the sequence precisely. Students in this program may register for any course as long as the student has met any prerequisites for that course. Where a "professional elective" is indicated in the course sequence, students may choose any course from the group of professional electives that follows the full course sequence.

Course Number and Title	Credits
<b>BSC 2010C</b> Principles of Biology I	4
<b>BSC 1421</b> Introduction to Biotechnology	1
<b>BSC 1404C</b> Introduction to Biotechnology Methods	3
<b>BSC 2435</b> Introduction to Bioinformatics	3
<b>COP 2004</b> Introduction to PERL Programming	3
<b>Credit Hours</b>	<b>14</b>

#### Professional Electives (minimum 10 credit hours)

<b>CET 2886</b> Securing Linux/Unix	3
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<b>COP 1000</b>	Introduction to Programming and Algorithm Design	3
<b>COP 2347</b>	Linux Network Administration	3
<b>COP 2745</b>	Advanced Oracle PL/SQL Programming	3
<b>CTS 2830</b>	Oracle Web Development	3
<b>COP 2812</b>	Introduction to XML	3
<b>COP 2822</b>	Web Technologies	4
	<b>Credit Hours</b>	<b>10</b>
	<b>Total Credit Hours</b>	<b>24</b>

The following are suggested electives from courses listed above based on experience.

**Recommended for students with database experience**

<b>COP 2347</b>	Linux Network Administration	3
<b>COP 2745</b>	Advanced Oracle PL/SQL Programming	3

**Recommended for students with programming experience**

<b>COP 2812</b>	Introduction to XML	3
<b>COP 2822</b>	Web Technologies	4
<b>CTS 2830</b>	Oracle Web Development	3

**Recommended for students with Unix experience**

<b>CET 2886</b>	Securing Linux/Unix	3
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Please see the technical certificate **Graduation Requirements**.

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To request information, contact the Learner Support Center at [info@fccj.edu](mailto:info@fccj.edu) or 904.646.2300.

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