2007-2008 Career Planning Guide

BIOTECHNOLOGY

Spokane Community College

Spokane Community College
1810 North Greene Street
Spokane, Washington 99217-5399
www.scc.spokane.edu

Completion Award: A.A.S. Degree

Start: Fall, Winter

Tuition and Fees: http://www.ccs.spokane.edu/fees.html

Approximate Quarterly Cost: (subject to change without notice)

Books	$ 100

PROGRAM WEBSITE: http://www.scc.spokane.edu/?biotech

Program Description

Biotechnology is a fascinating and rapidly changing field. Many of the techniques used in the industry today were known only to a few scientists in the world less than a decade ago. Scientists working in research and industry use biotechnology techniques to uncover the molecular basis for human diseases and for the production of new drugs and treatments, the enhancement of agricultural products, and the remediation of environmental problems. The SCC biotechnology program prepares students for work in commercial or public research laboratories that rely on this cutting-edge technology. The curriculum provides a basic foundation in science disciplines including chemistry, biology, microbiology, genetics and immunology, as well as coursework in communications, mathematics and computer science. Students will build a working knowledge of molecular biology, recombinant DNA and tissue cultures through a broad-based program of lectures, hands-on laboratory experiences and work-based learning opportunities.

Job opportunities in biotechnology are increasing rapidly as new technologies are increasing, especially in the areas of medicine and agriculture. The completion of the human genome sequence promises to revolutionize the relationship between biotechnology and medicine, and similar results are expected in agriculture from the sequencing of genomes of major crop species. The biotechnology industry has more than tripled in size between 1992 and 2000. The Spokane region is home to an emerging biotechnology cluster with more than 50 biotech and biomedical firms (Spokane Area Economic Development Council) and is adjacent to a national biotechnology center in the Puget Sound region.

Career Opportunities

Entry-level salaries range from $20,000 to $25,000 depending on education and experience. With experience, lab technicians may be promoted to supervisory positions. Positions available to graduates include laboratory assistant, laboratory specialist or research technologists. Potential employers include universities, biotechnology companies, pharmaceutical labs, fisheries and natural resource management organizations.

Suggested Course of Study 2007-2008

Consult Adviser/Counselor for Program Planning and Selection of Electives

BIOTECHNOLOGY

A.A.S. Degree: SCC

A.A.S. Degree

FIRST YEAR

First Quarter

			Credits
BIOL	101	General Biology	5
BIOL	120	Scientific Investigation	5
ENG	101	English Composition	5
			15

Second Quarter

			Credits
BIOTC	120	Cell Culture Techniques	5
BIOTC	122	Good Manufacturing Practices	1
BOT	111	Botany: Plant Structure and Function[1]	5
SPCH	220	Intercultural Communication	5
			11-16

Third Quarter

			Credits
BIOL	233	Genetics	5
BIOTC	129	Introduction to Protein Chemistry	2
BIOTC	201	Scientific Communication	3
MATH	111	Pre-Calculus I	5
			15

Fourth Quarter

			Credits
BIOTC	240	Biotechnology Internship[2]	1-5
			1-5

A.A.S. Degree (continued)

SECOND YEAR **Credits**

Fifth Quarter

			Credits
BIOTC	251	Recombinant DNA	5
CHEM	141	Advanced General Chemistry	5
PHYS	101	General Physics	5
			15

Sixth Quarter

			Credits
BIOTC	220	Instrumental Analysis	1
BIOTC	261	Fermentation	5
CHEM	142	Advanced General Chemistry	5
MBIOL	231	General Microbiology	5
			16

Seventh Quarter

			Credits
BIOTC	237	Introduction to Immunology	5
BIOTC	289	Biotechnology Project Internship[2]	1-3
CHEM	143	Advanced General Chemistry	5
ZOOL	122	Vertebrate Zoology[1]	5
			11-18

90-100 credits are required for an A.A.S. degree.
A.A.S. degrees must have a minimum of 90 credits.

[1] Students may choose between BOT 111 **or** ZOOL 122 but are encouraged to take both.

[2] Permission of the instructor is required for these courses.

IMPORTANT: Courses with the BIOTC prefix are NOT generally transferable to four-year institutions. Articulation agreements are currently being negotiated with universities in this area.