

## BIOLOGY PROGRAM - Biotechnology Option Checklist

Courses used to satisfy the Biotechnology Option may only be used for the two additional upper division science courses requirement for the Biology major. Interested students should declare the Biotechnology Option in their junior year when they begin taking option courses. It is recommended that students taking this option take BI 460 and 461 (not BI 314) for the Biology Major Cell Biology Requirement. It is also strongly recommended that students interested in biotechnology gain research experience in an appropriate laboratory setting before graduation.

<b>Required Courses (9 credits):</b>				
✓	Course	Pre(Co)requisites <sup>1</sup>	Term <sup>2</sup>	Credits
	BB 493 Biochemistry Laboratory	BB 450 corequisite	Fall	3
	BB 494 Biochemistry Laboratory	BB 451 corequisite	Winter	3
	MB 310 Bacterial Molecular Genetics	MB 302 & BB 450 BB 451 corequisite	Winter	3
<b>Electives: Select a minimum of 12 credits from the following course list.</b>				
✓	Course	Pre(Co)requisites <sup>1</sup>	Term <sup>2</sup>	Credits
	BB 332 Molecular Medicine	One year BI	Winter	3
	BOT 332 Laboratory Techniques in Plant Biology	BOT 331 or BI 314	Spring (alternate years)	3
	HORT 441 Plant Tissue Culture	BI 311 & BOT 331 <u>or</u> CSS/HORT 430	Winter	4
	MB 311 Writing and Experimental Lab * Writing Intensive Course (WIC)	MB 310 corequisite	Winter	3
	MB 416 Immunology	MB 310 & BB 451	Spring	3
	MB 417 Immunology Laboratory		Spring	2
	MB 430 Pathogenic Microbiology	MB 302	Fall	3
	MB 434 Virology	MB 310; MB 430 <u>or</u> BB 450 & 451	Winter	3
	MB 435 Pathogenic Microbes Laboratory	MB 434 <u>or</u> MB 430 corequisite	Winter	2
	MB 456 Plasmid Biology	MB 310	Winter	3
	MB 479 Food Biotechnology	BB 450 MB 302	Winter	3
	<b>Total Credits</b>			<b>21-22</b>

<sup>1</sup> Check current catalog for additional prerequisites

<sup>2</sup> Check Schedule of Classes for current course offerings

## **Biotechnology Careers and Research**

The growing area of biotechnology is a broad group of technologies used in many different disciplines in the life sciences and biomedical fields. Therefore, students interested in biotechnology are advised to sample a wide variety of experiences as undergraduates. Biotechnology opportunities are rapidly increasing in Oregon and in many areas of the West, but many of them are still to be found in San Diego, San Francisco, and Seattle. Students seeking biotechnology jobs might consider that relocation and graduate education are not essential for employment, but will likely increase opportunities. Further information on biotechnology careers can be found under the links below and at <http://biology.science.oregonstate.edu/careers-biology>

It is very important that students considering biotechnology careers have research experience, and biotechnology research is being conducted in many units at OSU. The best way to get involved in research is to approach a faculty member or company you would like to work with. Faculty research interests can be found on most department websites. Students should also look on the internet for opportunities to do research at other schools or companies, particularly during the summer. Additional information about research and internship opportunities can be found by looking at the websites below:

- OSU Research Opportunities <http://biology.science.oregonstate.edu/undergraduate-research>
- See the Biomedical / Molecular Biology / Biotechnology / Genetics section of the Local and National Internship, Research, Volunteer, and Job Opportunities at <http://biology.science.oregonstate.edu/research-internships-volunteering-and-jobs>

The Biotechnology Option requires students to complete a regular Biology Degree and 21 additional credits of course work in biotechnology. Consequently, students completing the option have a solid foundation for a career in biotechnology, as well as many other areas of biology.

## **Biotechnology Information**

The following list contains excellent resources for jobs, careers, and scientists in the field of genetics. Students are strongly encouraged to use this list early in their education as a starting point for researching their interest in genetics.

- Bio.com Biotechnology and Genetics Job Listings <http://www.bio.org/>
- About Biotech Careers in Biotechnology <http://www.accessexcellence.org/AB/CC/>
- Biofind Careers in Biotechnology <http://www.biofind.com/>
- Science Careers Jobs and Careers <http://recruit.sciencemag.org/>
- Medzilla - Biomedical and Biotechnology Careers and Jobs <http://medzilla.com/>
- Biolink list of Oregon Biotech Companies <http://www.bio-link.org/centersOR.htm>
- OSU Center for Gene Research and Biotechnology <http://www.cgrb.orst.edu/>
- Search for Biotechnology Experts at <http://expertise.cos.com/cgi-bin/searchexp>