

## BIOLOGY PROGRAM - Genetics Option Checklist

Courses used to satisfy the Genetics Option may only be used for the two additional upper division science courses requirement for the Biology major. Interested students should declare the Genetics Option in their junior year when they begin taking option courses. It is strongly recommended that students interested in genetics gain research experience in an appropriate laboratory setting before graduation.

<b>Required Courses (23 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 450, BB 451 corequisite	Winter	3
	MB 310 Bacterial Molecular Genetics	MB 302 & BB 450, BB 451 corequisite	Winter	3
	MB 311 Writing and Experimental Lab	MB 310 corequisite	Winter	3
	GEN 430 Introduction to Population Genetics	BI 311 ST 351 & ST 352	Spring	3
	Z 425 Embryology and Development	3 years of biology	Spring	5
	MB 456 Plasmid Biology	(BB 350 or BB 450) and (BB 351 or BB 451) and MB 302 MB 310 corequisite	Winter	3
	<b>Total Credits</b>			<b>23</b>

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

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

## **Genetics Career and Research**

Genetics is an expanding field with many employment opportunities. Because genetic techniques can be applied to many areas in biotechnology and the life sciences in general, students interested in genetics are advised to explore many different areas and experiences in genetics as undergraduates. Students serious about a career in genetics may also want to consider doing graduate work in one of many areas of genetics to increase their employment opportunities. Further information on genetics careers can be found at <http://biology.science.oregonstate.edu/careers-biology> and the other links below.

It is also important that students considering genetics careers gain research experience. Research in genetics is occurring in many units on the OSU campus, as well as elsewhere in the country. 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 and/or companies, particularly during the summer. Additional information about research and internship opportunities can be found 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 Research, Internship, Volunteer, and Job Opportunities at <http://biology.science.oregonstate.edu/research-internships-volunteering-and-jobs>

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

## **Genetics 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.

- World of Genetics Societies <http://www.faseb.org/genetics/>
- National Human Genome Research Institute <http://www.genome.gov/>
- University of Kansas Medical Center Genetics Info <http://www.kumc.edu/gec/>
- Genetics Careers Information <http://www.faseb.org/genetics/gsa/careers/bro-menu.htm>
- Biotechnology and Genetics Job Listings Bio.com <http://www.bio.org/>
- OSU Center for Gene Research and Biotechnology <http://www.cgrb.orst.edu/>
- OHSU Department of Molecular and Medical Genetics <http://www.ohsu.edu/som-genetics/>
- OSU Graduate Genetics Department <http://agsci.oregonstate.edu/genetics/>
- Search for Genetics Experts at <http://expertise.cos.com/cgi-bin/searchexp>