

**RECORD of CONCENTRATION in  
PLANT BIOLOGY**

(Eff. 9/2007 – updated 1/18/08)

Name \_\_\_\_\_ Uniqname \_\_\_\_\_

UMID \_\_\_\_\_ Exp. Date of Graduation \_\_\_\_\_

For detailed information about the Program in Biology concentrations, refer to the Program in Biology web site, the LS&A Bulletin, or a concentration advisor. Come to the Biology Office in Rm. 1111 Nat. Sci. to schedule an advising appointment.

**PREREQUISITES** *(It is not necessary to complete every prerequisite before declaring a concentration.)*

**INTRODUCTORY BIOLOGY** – *To complete the introductory series, students must take BIO 171, 172, and 173 (Track #1); or AP BIO 195 and BIO 173 (Track #2); or already have taken BIO 162 (no longer offered) (Track #3).*

	CR	TERM AND YEAR	COMPLETED
<u>Track #1</u>			
Biology 171	4	_____	_____
Biology 172	4	_____	_____
Biology 173 ( <i>lab</i> )	2	_____	_____
<u>Track #2</u>			
Biology 195 (AP)	4	_____	_____
Biology 173 ( <i>lab</i> )	2	_____	_____
<u>Track #3</u>			
Biology 162 (or AP credit for BIO 162)	5	_____	_____
<b>INTRODUCTORY PHYSICS</b> <i>(10 hours incl. 2 labs)</i>			
Physics 125 or 135 or 140 or 160, <b>and</b>	4	_____	_____
Physics Lab 127 (w/125) or 141 (w/135/140/160)	1	_____	_____
Physics 126 or 235 or 240 or 260, <b>and</b>	4	_____	_____
Physics Lab 128 (w/126) or 241 (w/235/240/260)	1	_____	_____
<b>MATHEMATICS*</b> <i>(8 hours)</i>			
Math 115 or 120 or 185	4	_____	_____
Math 116 or 121 or 186	4	_____	_____
* <i>Students with AP credit for Math 120 should enroll in Math 116. Students with AP credit for Math 120 and 121 will have fulfilled the mathematics prerequisite requirement.</i>			
<b>CHEMISTRY</b> <i>(10 hours including 2 labs)</i>			
Chemistry 210	4	_____	_____
Chemistry 211 ( <i>lab</i> )	1	_____	_____
Chemistry 215	3	_____	_____
Chemistry 216 ( <i>lab</i> )	2	_____	_____

### **CONCENTRATION PROGRAM**

Concentrators must take a minimum of 30 or 33 credit hours, depending on whether they have credit for BIO 162 (33 hours), or BIO 171, 172, and 173 (30 hours), or BIO 195 and 173 (30 hours).

### **REQUIRED GENERAL COURSES** (Select at least three of the four courses listed.)

**Note:** The fourth course not used to fulfill this requirement may be taken as an elective.

COURSE NAME & NUMBER	CR	TERM AND YEAR	LAB	COMPLETED
Biology 281, Ecology (EEB 381* at UMBS)	3	_____	_____	_____
Biology 305, Genetics	4	_____	_____	_____
Biology 310 or 311, <b>or</b> Biolchem. 415, <b>or</b> Chemistry 451 and 452	_____	_____	_____	_____
Biology 390, Evolution (Ann Arbor or UMBS)	4	_____	_____	_____

### **REQUIRED PLANT BIOLOGY COURSES**

Biology 230*, Plant Diversity	4	_____	_____	_____
Biology 255*, Plant Diversity, <b>or</b> Biology 355*, Woody Plants	_____	_____	_____	_____
MCDB 321	3	_____	_____	_____

### **ELECTIVE PLANT BIOLOGY COURSES**

- Choose at least two plant biology elective courses from the Elective Plant Biology Courses list (see pg. 3); at least one of these must be a lab course or a course with a lab component (indicated by an \*).
- Three credits of EEB/MCDB 300/400 can be included and will count for laboratory credit as well, if earned in the same term and if the research is conducted in a plant biology research lab.
- A maximum of three credits of independent research may count towards the concentration. Library “research,” introductory biology laboratories, and UROP experience do not fulfill the requirement.

COURSE NAME & NUMBER	CR	TERM AND YEAR	LAB	COMPLETED
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

### **ADDITIONAL ELECTIVE COURSES**

- Concentrators are strongly encouraged to elect at least two credits of independent research and to enroll for a summer session at the UMBS.
- Select additional Biology, EEB, or MCDB courses at the 200-level or above (except BIO 200, BIO 262, EEB 302, MCDB 302, MCDB 412) to bring the concentration total to at least 30 or 33 hours (see above).
- One cognate course, with advisor approval, may be elected.
- The fourth course not taken under “Required General Courses” above may be used here.

COURSE NAME & NUMBER	CR	TERM AND YEAR	LAB	COMPLETED
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

**TOTAL CONCENTRATION HOURS** \_\_\_\_\_

## **COURSE LISTINGS for PLANT BIOLOGY DISTRIBUTION**

*Laboratory courses, or courses that include a laboratory, are marked with an asterisk (\*)*

### **ELECTIVE PLANT BIOLOGY COURSES**

- EEB 401 Molecular Ecology (permanent course number is being applied for)
- EEB 420 Plant Evolution
- EEB 455\* Ethnobotany
- EEB 459\* Systematic Botany
- EEB 463\* Neotropical Plants
- EEB 472 Plant-Animal Interactions
- EEB 489\* Soil Ecology
- EEB 556\* Field Botany of Northern Michigan
  
- MCDB 322\* Plant Physiology Lab
- MCDB 401 Plant Biotechnology (to be developed; then it will have a permanent course number)
- MCDB 406 Molecular Genetics of Plant Development
- MCDB 413\* Plant Molecular Biology Lab
- MCDB 430 Plant Molecular Biology

Appropriate plant biology courses taken at the BioStation may also count in this category.