

# COMBINED BS/MS PROGRAM IN BIOTECHNOLOGY

The Five Year Combined 4+1 BS/MS Program in Biotechnology is open to eligible students and includes three courses (10 credits) that count toward both the undergraduate and graduate degrees. Students should apply in the fall semester of the junior year. The first three years are the same as the Biotechnology B.S. Program. Students begin a research project in the Spring semester of the fourth (senior) year. Application requirements include a minimum of 3.0 GPA, two letters of recommendation, and the GRE.

## Recommended Timeline for Completion of BS/MS Program

### Year One

Semester One		Credits
EN-101	College Writing I	3
CH-120	General Chemistry I	4
MA-180 or MA-190	Introduction to Functions (LASC QR) or Pre-calculus	3-4
LASC	LASC Elective (CON)	3
LASC	First-Year Seminar	3
<b>Credits</b>		<b>16-17</b>

### Semester Two

EN-102	College Writing II	3
CH-121	General Chemistry II	4
MA-190 or MA-200	Pre-calculus or Calculus I	4
BI-141	Intro to Cellular and Molecular Biology	4
<b>Credits</b>		<b>15</b>

### Year Two

#### Semester Three

CH-201	Organic Chemistry I (lecture)	3
CH-203	Organic Chemistry Laboratory I	2
BI-204	Microbiology	4
MA-200	Calculus I ((or LASC Elective))	4
EN-252 or EN-253 or CS-120	Technical Writing or Business Communications or Microcomputer Applications	3
<b>Credits</b>		<b>16</b>

#### Semester Four

MA-150	Statistics I	3
MA-201	Calculus II	4
LASC	LASC Elective	3
LASC	LASC Elective	3
Select one of the following:		3-5
CH-202 & CH-204	Organic Chemistry II (lecture) and Organic Chemistry Laboratory II	
LASC	LASC Elective	
<b>Credits</b>		<b>16-18</b>

### Year Three

#### Semester Five

CH-210	Chemical Analysis: an Introduction to Modern Methods	5
PY-221	General Physics I	4
LASC	LASC Elective	3

LASC	LASC Elective	3
<b>Credits</b>		<b>15</b>
<b>Semester Six</b>		
CH-410	Biochemistry I	4
PY-222	General Physics II	4
LASC	LASC Elective	3
LASC	LASC Elective	3
<b>Credits</b>		<b>14</b>
<b>Year Four</b>		
<b>Semester Seven</b>		
BI-521	Biotechnology and DNA	4
BI-440	Advanced Research Experience for Undergraduates	1-6
BI-3XX	Major Upper Level Elective	4
LASC	LASC Elective	3
LASC	LASC Elective	3
<b>Credits</b>		<b>15-20</b>
<b>Semester Eight</b>		
BI-527	Tissue Culture Techniques	3
BI-440	Advanced Research Experience for Undergraduates	3
BT-410	Biotechnology Seminar	1
BT-5XX	Major Upper Level Elective	
SELECT	Major or LASC Elective	3
<b>Credits</b>		<b>10</b>
<b>Summer I</b>		
BT-9XX	Graduate Level Elective	3
<b>Credits</b>		<b>3</b>
<b>Summer II</b>		
BI-996	Thesis Research I (or BT-9XX Graduate Level Elective)	3
<b>Credits</b>		<b>3</b>
<b>Year Five</b>		
<b>Semester One</b>		
BI-942 or BI-943	Biostatistical Analysis or Experimental Design	3
BI-9XX	Graduate Level Elective	3
<b>Select One of the Following</b>		
BI-996	Thesis Research I	3
BI-997	Thesis Research II	4
<b>Credits</b>		<b>13</b>
<b>Semester Two</b>		
BI-998	Thesis Writing	2
BI-9XX:Graduate Level Elective		3
BI-997	Thesis Research II (or BI-9XX Graduate Level Elective)	4
<b>Credits</b>		<b>9</b>
<b>Total Credits</b>		<b>145-153</b>

Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.