



FERRIS STATE UNIVERSITY

Biotechnology B.S. Degree

MOTT COMMUNITY COLLEGE

Articulation Agreement

THIS PROGRAM IS DESIGNED AS A B.S. DEGREE OPTION FOR STUDENTS WHO HAVE COMPLETED OR ARE COMPLETING AN ASSOCIATE IN SCIENCE DEGREE

Application Deadlines:

1. Transfer students must be admitted 21 days prior to the first day of the semester they plan to attend.

Admission Requirements:

1. Transfer students must have at least 12 credits **at the time of application** with a minimum 2.0 overall GPA including an English and mathematics course or they will be considered first year students and must meet freshman admission criteria.

General Education Requirements:

1. Upon completion of the General Education courses outlined below, students will have completed MACRAO
2. Students must have the MACRAO Stamp on their college transcript in order to qualify for having met MACRAO
3. Students having completed MACRAO will be required to complete one of the 300-Level Advanced English courses listed below
4. Students not completing MACRAO must complete the Ferris General Education requirements with a 2.0 cumulative GPA
5. To view the Ferris General Education requirements, go to: <http://www.ferris.edu/HTMLS/academics/gened/gened.html>

Graduation Requirements:

1. 2.0 cumulative GPA in all courses. No grade lower than C- in science and math courses allowed for graduation.
2. 30 minimum FSU semester hours must be completed to fulfill Ferris residency requirements.
3. A total of 40 credit hours at 300-Level or higher
3. A total of 121 credit hours are required for graduation for this major.

GENERAL EDUCATION REQUIREMENTS with MACRAO

FERRIS Courses	Course Title	MOTT CC Courses	Credit Hours Required	Grade
ENGL 150	English 1	ENGL 101	3	
ENGL 250	English 2	ENGL 102	3	
Advanced ENGL 300-Level	Advanced Composition (ENGL 321 or ENGL 323 or ENGL 325)		3 (at Ferris)	
Lab Science	Met through Major			
MATH 115	Met through Major			
Gen-Ed Elective	Cultural Enrichment/MACRAO Humanities		3-4	
Gen-Ed Elective	Cultural Enrichment/MACRAO Humanities		3-4	
Gen-Ed Elective	Cultural Enrichment/MACRAO Humanities		3-0	
Gen-Ed Elective	Social Awareness/MACRAO Social Science		3-4	
Gen-Ed Elective	Social Awareness/MACRAO Social Science		3-4	
Gen-Ed Elective	Social Awareness/MACRAO Social Science		3-0	

BIOTECHNOLOGY MAJOR REQUIREMENTS

MOTT COMMUNITY COLLEGE ARTICULATION

FERRIS REQUIRED COURSES		COURSE TITLE <i>Ferris prerequisites shown in brackets ()</i>	MOTT CC	FSU Sem. Hrs.	GRADE	GRADE PTS.
MAJOR – 91 credit minimum No grade lower than a C- allowed for graduation						
BIOL	121	General Biology 1 <i>(CHEM 114 or 121 concurrent)</i>	BIOL 125 and BIOL 126			
BIOL	122	General Biology 2 <i>(BIOL 121 & CHEM 114 or 121)</i>	BIOL 111			
BIOL Or BIOL BIOL	205 321 322	Human Anatomy/Physiology <i>(CHEM 114)</i> or Human Physiology & Anatomy 1 <i>(BIOL 122 & CHEM 122)</i> Human Physiology & Anatomy 2 <i>(BIOL 321)</i>	BIOL 151 and BIOL 152			
BIOL	375	Principles of Genetics <i>(BIOL 122 and a BIO/CHEM course)</i>	BIOL 227			
BIOL	386	Microbiology & Immunology <i>(BIOL 205/322 & a BIO/CHEM course)</i>				
BIOL	388	Advanced Immunology Laboratory <i>(BIOL 386)</i>				
BIOL	470	Molecular Genetics <i>(CHEM 364 and BIOL 375)</i>				
BIOL	471	Biotech 2: Recombinant DNA Lab <i>(BIOL 470)</i>				
BIOL	472	Proteins <i>(BIOL 122 and CHEM 364)</i>				
BIOL	473	Biotech 3: Proteins Laboratory <i>(CHEM 364 & BIOL 472)</i>				
BIOL	474	Advanced Cell & Molecular Biology <i>(CHEM 364 & BIOL 375)</i>				
BIOL	475	Bioinformatics <i>(BIOL 375)</i>				
CHEM	121	General Chemistry 1 <i>(MATH 115 and prior CHEM)</i>	CHEM 131			
CHEM	122	General Chemistry 2 <i>(CHEM 121)</i>	CHEM 132			
CHEM	231	Quantitative Analysis <i>(CHEM 122)</i>	CHEM 222 and CHEM 224			
CHEM	321	Organic Chemistry 1 <i>(CHEM 122)</i>	CHEM 237			
CHEM	322	Organic Chemistry 2 <i>(CHEM 321)</i>	CHEM 238			
CHEM	332	Biochemistry Lab 1 <i>(CHEM 322, corequisite = CHEM 364)</i>				
CHEM	333	Biochemistry Lab 2 <i>(CHEM 332)</i>				
CHEM	364	Biochemistry <i>(PHCH 320 is acceptable)</i> <i>(CHEM 322)</i>				
CHEM	474	Advanced Biochemistry <i>(CHEM 364)</i>				
MATH	130	Advanced Algebra & Analytical Trigonometry <i>(MATH 120 or placement)</i>	MATH 161 and MATH 163			
MATH	251	Statistics for the Life Sciences <i>(MATH 130)</i>				
PHYS	211	Introductory Physics 1 <i>(MATH 120)</i>	PHYS 281			
Choose One:						
BIOL	491	Biotechnology Internship <i>(instructor consent)</i>				
BIOL	497	Independent Studies in Biology <i>(instructor consent)</i>				
CHEM	497	Independent Studies in Chemistry <i>(instructor consent)</i>				
TOTAL CREDIT HOURS: 121						

For questions about your transfer to Ferris in the Biotechnology BS degree, contact:

PROGRAM COORDINATOR

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