

UNDERGRADUATE EMBEDDED CERTIFICATE IN MICROBIAL SYSTEMS

Biology majors are eligible to complete certificates within Biology electives and free electives.

All certificates are subject to the following requirements:

- Minimum 12 credits from the list of approved courses for each certificate
- Minimum 9 credits BIOS coursework
- Minimum 9 credits of 3xxx or higher coursework
- Maximum 6 credits of Special Topics
- Maximum 3 credits Transfer Credit
- Courses may not be double-counted toward more than one certificate or minor

Students declare a certificate, select and complete at least 12 credits that correspond to the desired certificate from the list below. Complete Certificate Applications must be submitted at least two weeks prior to the end of your graduating semester. The Certificate Application will be available on the Biology Majors Portal site in Canvas.

Code	Title	Credit Hours
BIOS 3380	Microbiology	3
Select 9 hours from the following:		9
BIOS 4340	Medical Microbiology	
BIOS 4410	Microbial Ecology	
BIOS 4418	Microbial Physiology	
BIOS 4550	Origin of complex life: from cells to societies	
BIOS 4570	Immunology	
BIOS 4607	Molecular Biology of Microbes: Disease, Nature, and Biotechnology	
BIOS 4620	Aquatic Chemical Ecology	
BIOS 4744	Microbial Symbiosis & Microbiomes	
Labs (note labs are one-credit hour)		
BIOS 3381	Microbiology Lab	
Total Credit Hours		12