



**SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS**

Substantive Program Modification Program

UNIVERSITY:	SDSU
CURRENT PROGRAM TITLE:	Microbiology (B.S.) [S.BS.MIC]
CIP CODE:	26.0502
UNIVERSITY DEPARTMENT:	Biology & Microbiology
UNIVERSITY DIVISION:	Natural Sciences

University Approval

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

Dennis D. Hedge

5/8/18

Vice President of Academic Affairs or
President of the University

Date

1. This modification addresses a change in:

- | | |
|---|---|
| <input type="checkbox"/> Total credits required within the discipline | <input type="checkbox"/> Total credits of supportive course work |
| <input type="checkbox"/> Total credits of elective course work | <input type="checkbox"/> Total credits required for program |
| <input type="checkbox"/> Program name | <input type="checkbox"/> Existing specialization |
| <input type="checkbox"/> CIP Code | <input checked="" type="checkbox"/> Other: Restructure of College and Department Requirements |

2. Effective date of change: 2018-2019 Academic Year

3. Program Degree Level:

Associate Bachelor's Master's Doctoral

4. Category:

Certificate Specialization Minor Major

5. If a name change is proposed, the change will occur:

- On the effective date for all students
- On the effective date for students new to the program (enrolled students will graduate from existing program)

Proposed new name: _____

6. Primary Aspects of the Modification:

Existing Curriculum

Proposed Curriculum (Highlight Changes)

Pre	Num	Title	Cr Hrs	Pre	Num	Title	Cr Hrs
System General Education Requirement			33-35	System General Education Requirement			33-35
SGR 1 Written Communication: ENGL 101 English Composition I ENGL 201 English Composition II			6	SGR 1 Written Communication: ENGL 101 English Composition I ENGL 201 English Composition II			6
SGR 2 Oral Communication: SPCM 101 Fundamentals of Speech			3	SGR 2 Oral Communication: SPCM 101 Fundamentals of Speech			3
SGR 3 Social Sciences/Diversity			6	SGR 3 Social Sciences/Diversity			6
SGR 4 Arts and Humanities/Diversity			6	SGR 4 Arts and Humanities/Diversity			6
SGR 5 Mathematics: MATH 102 (3) and MATH 120 (3) or MATH 115 (5) or MATH 121-121L (5)			4-6	SGR 5 Mathematics: MATH 102 (3) and MATH 120 (3) or MATH 115 (5) or MATH 121-121L (5)			4-6

Existing Curriculum

Proposed Curriculum (Highlight Changes)

or MATH 123 (4)				or MATH 123 (4)			
SGR 6 Natural Sciences:		8		SGR 6 Natural Sciences:		8	
BIOL 151-151L General Biology I & Lab (4)				BIOL 151-151L General Biology I & Lab (4)			
BIOL 153-153L General Biology II & Lab (4)				BIOL 153-153L General Biology II & Lab (4)			
ABS College Requirements – BS in Biological Sciences				Department Requirements			
<ul style="list-style-type: none"> 25 semester credits must be upper division (300 and above), with the exception that MATH 125 and 225, Calculus II and III, may be counted as five credits toward the total. Students who wish to complete a Bachelor of Science in Biological Sciences must complete a minimum of 33 credits from the natural sciences. Refer to departments offering the degree for specific course listings. 				<ul style="list-style-type: none"> 25 semester credits must be upper division (300 and above), with the exception that MATH 125 and 225, Calculus II and III, may be counted as five credits toward the total. Students must complete a minimum of 33 credits from the natural sciences. Refer to departments offering the degree for specific course listings. 			
Major Requirements				Major Requirements			
74-81				74-81			
Biology & Microbiology				Biology & Microbiology			
30				30			
BIOL	119	First Year Seminar	2	BIOL	119	First Year Seminar	2
BIOL	202-202L	Genetics and Organismal Biology & Lab	4	BIOL	202-202L	Genetics and Organismal Biology & Lab	4
BIOL	204-204L	Genetics and Cellular Biology & Lab	4	BIOL	204-204L	Genetics and Cellular Biology & Lab	4
BIOL 290 Seminar or MICR 290 Seminar			1	BIOL 290 Seminar or MICR 290 Seminar			1
BIOL	383	Bioethics	4	BIOL	383	Bioethics	4
MICR	233-233L	Introductory Microbiology & Lab	4	MICR	233-233L	Introductory Microbiology & Lab	4
MICR	332	Microbial Physiology	2	MICR	332	Microbial Physiology	2
MICR	332L	Microbial Physiology Lab	2	MICR	332L	Microbial Physiology Lab	2
MICR	439	Medical and Veterinary Immunology	3	MICR	439	Medical and Veterinary Immunology	3
MICR	436	Molecular and Microbial Genetics	4	MICR	436	Molecular and Microbial Genetics	4
Applied and Environmental Microbiology				Applied and Environmental Microbiology			
6-8				6-8			
Select at least <u>two</u> courses from the following:				Select at least <u>two</u> courses from the following:			
MICR	310-310L	Environmental Microbiology & Lab	4	MICR	310-310L	Environmental Microbiology & Lab	4
MICR	311-311L	Food Microbiology & Lab	4	MICR	311-311L	Food Microbiology & Lab	4
MICR	414-414L	Anaerobic Microbiology & Lab	3	MICR	414-414L	Anaerobic Microbiology & Lab	3
MICR	421-421L	Soil Microbiology & Lab	3	MICR	421-421L	Soil Microbiology & Lab	3
MICR	450	Applied Microbiology & Biotechnology	3	MICR	450	Applied Microbiology & Biotechnology	3
Infectious Disease (at least 2 courses)				Infectious Disease (at least 2 courses)			
6				6			
Select at least <u>two</u> courses from the following:				Select at least <u>two</u> courses from the following:			
BIOL	467-467L	Parasitology & Lab	3	BIOL	467-467L	Parasitology & Lab	3
MICR	424	Medical & Veterinary Virology	3	MICR	424	Medical & Veterinary Virology	3
MICR	433	Medical Microbiology	3	MICR	433	Medical Microbiology	3
MICR	440L	Infectious Disease Lab	3	MICR	440L	Infectious Disease Lab	3
Chemistry				Chemistry			
20				20			
CHEM	112 -112L	General Chemistry I & Lab	4	CHEM	112 -112L	General Chemistry I & Lab	4
CHEM	114 -142L	General Chemistry II & Lab	4	CHEM	114 -142L	General Chemistry II & Lab	4
CHEM	326 -326L	Organic Chemistry I & Lab	4	CHEM	326 -326L	Organic Chemistry I & Lab	4
CHEM	328 -328L	Organic Chemistry II & Lab	4	CHEM	328 -328L	Organic Chemistry II & Lab	4
CHEM	464	Biochemistry I	3	CHEM	464	Biochemistry I	3
CHEM	466	Laboratory Methods – Biochemistry	1	CHEM	466	Laboratory Methods – Biochemistry	1
Physics				Physics			
4-8				4-8			

Existing Curriculum

Proposed Curriculum (Highlight Changes)

PHYS 111-111L Introduction to Physics I & Lab (4) and PHYS 113-113L Introduction to Physics II & Lab (4) or PHYS 101-101L Survey of Physics & Lab (4)			4-8	PHYS 111-111L Introduction to Physics I & Lab (4) and PHYS 113-113L Introduction to Physics II & Lab (4) or PHYS 101-101L Survey of Physics & Lab (4)			4-8
Mathematics			3-4	Mathematics			3-4
MATH 125 Calculus II (4) or STAT 281 Introduction to Statistics (3)			3-4	MATH 125 Calculus II (4) or STAT 281 Introduction to Statistics (3)			3-4
Capstone and Advanced Writing			5	Capstone and Advanced Writing			5
MICR	490	Seminar	2	MICR	490	Seminar	2
ENGL	379	Technical Communication (Section: Biology & Microbiology)	3	ENGL	379	Technical Communication (Section: Biology & Microbiology)	3
Electives			5-14	Electives			5-14
Summary of Credits Microbiology (B.S.)							
System General Education Requirement			33-35	System General Education Requirement			33-35
ABS College Requirements – BS in Biological Sciences			--	Department Requirements			--
Major Requirements			74-81	Major Requirements			74-81
Electives			4-13	Electives			4-13
Total number of hours required for major			74-81	Total number of hours required for major			74-81
Total number of hours required for degree			120	Total number of hours required for degree			120

7. Explanation of the Change:

The Department of Biology & Microbiology will move from the College of Agriculture & Biological Sciences to the College of Natural Sciences effective July 1, 2018. The College of Agriculture & Biological Sciences – Bachelor of Science in Biological Science requirements have been realigned as department requirements within the program.