



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

**Substantive Program Modification Form**

<b>UNIVERSITY:</b>	SDSU
<b>CURRENT PROGRAM TITLE:</b>	<b>Biology (B.S.) - Secondary Education Specialization</b>
<b>CIP CODE:</b>	<b>26.1201 – Biology Major 13.1205 – Secondary Education Specialization</b>
<b>UNIVERSITY DEPARTMENT:</b>	<b>Biology &amp; Microbiology</b>
<b>BANNER DEPARTMENT CODE:</b>	<b>SBIM</b>
<b>UNIVERSITY DIVISION:</b>	<b>College of Natural Sciences</b>
<b>BANNER DIVISION CODE:</b>	<b>3T</b>

**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

Vice President of Academic Affairs or  
President of the University

3/25/2020

Date

**1. This modification addresses a change in:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Total credits required within the discipline | <input checked="" type="checkbox"/> Total credits of supportive course work |
| <input checked="" type="checkbox"/> Total credits of elective course work        | <input type="checkbox"/> Total credits required for program                 |
| <input type="checkbox"/> Program name  | <input checked="" type="checkbox"/> Existing specialization                 |
| <input type="checkbox"/> CIP Code  | <input type="checkbox"/> Other (explain below)                              |

**2. Effective date of change:** 2020-2021 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:**

<i>Existing Curriculum</i>				<i>Proposed Curriculum (Highlight Changes)</i>			
Pref	Num	Title	Cr Hrs	Pref	Num	Title	Cr Hrs
<b>System General Education Requirement</b>			<b>33-35</b>	<b>System General Education Requirement</b>			<b>32-34</b>
SGR 1 Written Communication: ENGL 101 English Composition I (3) ENGL 201 English Composition II (3)			6	SGR 1 Written Communication: ENGL 101 English Composition I (3) ENGL 201 English Composition II (3)			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

Existing Curriculum				Proposed Curriculum (Highlight Changes)			
Pref	Num	Title	Cr Hrs	Pref	Num	Title	Cr Hrs
SGR 5 Mathematics: MATH 102 (3) and MATH 120 (3) or MATH 115 (5) or MATH 121-121L (5)			5-6	SGR 5 Mathematics: MATH 102 (3) and MATH 120 (3) or MATH 115 (5) or MATH 121-121L (5) MATH 115 Pre-Calculus or higher			3-5
SGR 6 Natural Sciences: BIOL 151-151L General Biology I & Lab (4) BIOL 153-153L General Biology II & Lab (4)			8	SGR 6 Natural Sciences: BIOL 151-151L General Biology I & Lab (4) BIOL 153-153L General Biology II & Lab (4)			8
<b>Department Requirements</b>			--	<b>Department Requirements</b>			--
<ul style="list-style-type: none"> <li>– 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.</li> <li>– Students must complete a minimum of 33 credits from the natural sciences. Refer to departments offering the degree for specific course listings.</li> </ul>			--	<ul style="list-style-type: none"> <li>– 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.</li> <li>– Students must complete a minimum of 33 credits from the natural sciences. Refer to departments offering the degree for specific course listings.</li> </ul>			--
<b>Major Requirements</b>			<b>50-51</b>	<b>Major Requirements</b>			<b>50-51</b>
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	1	BIOL	290	Seminar	1
MICR	233-233L	Introductory Microbiology & Lab	4	MICR	233-233L	Introductory Microbiology & Lab	4
<b>Chemistry and Physics</b>			<b>16</b>	<b>Chemistry and Physics</b>			<b>16</b>
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
PHYS	101-101L	Survey of Physics and Lab	4	PHYS	101-101L	Survey of Physics and Lab	4
<b>Advanced Writing</b>			<b>3</b>	<b>Advanced Writing</b>			<b>3</b>
ENGL	379	Technical Communication – Biology & Microbiology	3	ENGL	379	Technical Communication – Biology & Microbiology	3
<b>Biology Secondary Education Specialization Requirements</b>			<b>16-17</b>	<b>Biology Secondary Education Specialization Requirements</b>			<b>16-17</b>
BOT	201-201L	General Botany and Lab	3	BOT	201-201L	General Botany and Lab	3
BIOL	221-221L	Human Anatomy and Lab	4	BIOL	221-221L	Human Anatomy and Lab	4
BIOL	373	Evolution	3	BIOL	373	Evolution	3
NRM	311	Principles of Ecology	3	NRM	311	Principles of Ecology	3
		Take at least <u>one</u> of the following: BIOL 325-325L Physiology & Lab (4) BIOL/PHIL 383 Bioethics (4) CHEM 328-328L Organic Chemistry II & Lab (4) NRM 200-200L Animal Diversity & Lab (4) PHIL/REL 454 Environmental Ethics (3) WL 302 Animal Behavior (3)	3-4			Take at least <u>one</u> of the following: BIOL 325-325L Physiology & Lab (4) BIOL/PHIL 383 Bioethics (4) CHEM 328-328L Organic Chemistry II & Lab (4) NRM 200-200L Animal Diversity & Lab (4) PHIL/REL 454 Environmental Ethics (3) WL 302 Animal Behavior (3)	3-4
<b>Teaching Specialization Requirements</b>			<b>37</b>	<b>Teaching Specialization Requirements</b>			<b>37</b>
AIS	211	South Dakota American Indian Culture and Education	3	AIS	211	South Dakota American Indian Culture and Education	3
EDFN	101	Exploraiton of Teaching and Learning	1	EDFN	101	Exploraiton of Teaching and Learning	1
				EDFN	340	Adolescent Development in Educational Contexts	3
EDFN	351	Teaching and Learning I	1	EDFN	351	Teaching and Learning I	1
EDFN	352	Teaching and Learning II	3	EDFN	352	Teaching and Learning II	3
EDFN	352L	Teaching and Learning II Lab	2	EDFN	352L	Teaching and Learning II Lab	2

<i>Existing Curriculum</i>				<i>Proposed Curriculum (Highlight Changes)</i>			
Pref	Num	Title	Cr Hrs	Pref	Num	Title	Cr Hrs
EDFN	453	Teaching and Learning III	5	EDFN	453	Teaching and Learning III	3
EDFN	453L	Teaching and Learning III Lab	2	EDFN	453L	Teaching and Learning III Lab	4
EDFN	454	Teaching and Learning IV	11	EDFN	454	Teaching and Learning IV	11
EDFN	475	Human Relations	3	EDFN	475	Human Relations	3
SEED	450	Reading and Content Literacy	2	SEED	450	Reading and Content Literacy	2
SEED	456	Capstone/Action Research Credits	1	SEED	456	Capstone/Action Research Credits	1
		Content Methods (Varies by Content Area SEED 413 7-12 Science Methods	3			Content Methods (Varies by Content Area SEED 413 7-12 Science Methods	3
<b>Electives</b>			<b>0</b>	<b>Electives</b>			<b>0-1</b>
<b>Summary of Credits Biology (B.S.) - Secondary Education Specialization</b>							
<b>System General Education Requirement</b>			<b>33-35</b>	<b>System General Education Requirement</b>			<b>32-34</b>
<b>Department Requirements</b>			<b>--</b>	<b>Department Requirements</b>			<b>--</b>
<b>Major Requirements</b>			<b>50-51</b>	<b>Major Requirements</b>			<b>50-51</b>
<b>Teaching Specialization Requirements</b>			<b>37</b>	<b>Teaching Specialization Requirements</b>			<b>37</b>
<b>Electives</b>			<b>0</b>	<b>Electives</b>			<b>0-1</b>
Total number of hours required for specialization			87-88	Total number of hours required for specialization			87-88
Total number of hours required for degree			120	Total number of hours required for degree			120

## 7. Explanation of the Changes:

The Department of Biology & Microbiology has identified the following changes to the Biology – Secondary Education Specialization:

- Removed the requirement students must complete MATH 115 or MATH 121 for SGR #5. Changes to the SDSU MATH course sequence, as well as varying requirements of healthcare programs necessitated the change for SGR#5.
- Replaced EDFN 475 Human Relations (3 cr.) with EDFN 340 Adolescent Development in Educational Contexts (3 cr.). There have been changes in the SD DOE certification rules that impact the teacher education curriculum. The requirement for Human Relations has been replaced with an Adolescent Development requirement because of secondary certification moving down to 5th grade and elementary certification through 8th grade; there is no longer a middle grades certification. Currently the TLL faculty added adolescent development concepts to the existing human relations course but that is not the best way to deliver the content.
- For ease of student transfers to teaching majors, course scheduling, and workload distribution, the Department of Teaching, Learning and Leadership is moving away from the large 7 block for EDFN 453-453L to have EDFN 453 be a 3 credit course and with a 4 credit lab.