



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

Substantive Program Modification Form

UNIVERSITY:	SDSU
CURRENT PROGRAM TITLE:	Wildlife & Fisheries Sciences (B.S.)
CIP CODE:	03.0601
UNIVERSITY DEPARTMENT:	Natural Resource Management
UNIVERSITY DIVISION:	Agriculture, Food & Environmental 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

3/25/2020

Vice President of Academic Affairs or
President of the University

Date

1. This modification addresses a change in:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Total credits required within the discipline | <input 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 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:

Existing Curriculum

Proposed Curriculum (Highlight Changes)

Pref	Num	Title	Cr Hrs	Pref	Num	Title	Cr Hrs
System General Requirements			32	System General Requirements			32
ENGL	101	Composition I (SGR #1)	3	ENGL	101	Composition I (SGR #1)	3
ENGL	201	Composition II (SGR #1)	3	ENGL	201	Composition II (SGR #1)	3
SPCM	101	Fundamentals of Speech (SGR #2)	3	SPCM	101	Fundamentals of Speech (SGR #2)	3
		Student Choice (SGR #3)	3			Student Choice (SGR #3)	3
		Student Choice (SGR #3)	3			Student Choice (SGR #3)	3
		Student Choice (SGR #4)	3			Student Choice (SGR #4)	3
		Student Choice (SGR #4)	3			Student Choice (SGR #4)	3
MATH	114	College Algebra (SGR #5)	3	MATH	114	College Algebra (SGR #5)	3
BIOL	151-151L	General Biology I & Lab (SGR #6)	4	BIOL	151-151L	General Biology I & Lab (SGR #6)	4

Existing Curriculum

Proposed Curriculum (Highlight Changes)

Pref	Num	Title	Cr Hrs	Pref	Num	Title	Cr Hrs
PHYS OR PHYS	101-101L 111-111L	Survey of Physics & Lab (4) Introduction to Physics & Lab (4)	4	PHYS OR PHYS	101-101L 111-111L	Survey of Physics & Lab (4) Introduction to Physics & Lab (4)	4
College Requirements			2	College Requirements			2
Students seeking the Bachelor of Science degree must complete the System General Education Requirements. In some majors, the student must select a "specialization." Additional requirements for both Bachelor of Science degrees follow.				Students seeking the Bachelor of Science degree must complete the System General Education Requirements. In some majors, the student must select a "specialization." Additional requirements for both Bachelor of Science degrees follow.			
<ul style="list-style-type: none"> The requirements of one of the College's majors must be met. Specific requirements are listed under each program of study. 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. 				<ul style="list-style-type: none"> The requirements of one of the College's majors must be met. Specific requirements are listed under each program of study. 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. 			
Bachelor of Science in Agriculture, Food and Environmental Sciences				Bachelor of Science in Agriculture, Food and Environmental Sciences			
Students must complete a minimum of 11 credits from the approved list of Group 1 courses in Agriculture, Food and Environmental Science. Some departments require specific courses from the list, whereas others leave the selection entirely to the student and the advisor.				Students must complete a minimum of 11 credits from the approved list of Group 1 courses in Agriculture, Food and Environmental Science. Some departments require specific courses from the list, whereas others leave the selection entirely to the student and the advisor.			
<ul style="list-style-type: none"> NRM 282-282L Natural Resource Statistics & Lab (3) (Major Requirements) NRM 311 Principles of Ecology (3) (Major Requirements) WL 220 Introduction to Wildlife and Management (3) (Major Requirements) 				<ul style="list-style-type: none"> NRM 282-282L Natural Resource Statistics & Lab (3) (Major Requirements) NRM 311 Principles of Ecology (3) (Major Requirements) WL 220 Introduction to Wildlife and Management (3) (Major Requirements) 			
Major Requirements			64-73	Major Requirements			67-73
BIOL OR BOT OR NRM	153-153L 201-201L 200-200L	General Biology II & Lab (4) General Botany I & Lab (3) Animal Diversity & Lab (3)	3-4	BIOL OR BOT OR NRM	153-153L 201-201L 200-200L	General Biology II & Lab (4) General Botany I & Lab (3) Animal Diversity & Lab (3)	3
BIOL OR BIOL	202-202L 371	Genetics and Organismal Biology & Lab (4) Genetics (3)	3-4	AS OR BIOL OR BIOL	332 202-202L 371	Livestock Breeding and Genetics (3) Genetics and Organismal Biology & Lab (4) Genetics (3)	3
CHEM AND CHEM OR CHEM AND CHEM	106-106L 108-108L 112-112L 326-326L	Chemistry Survey & Lab (4) Organic and Biochemistry & Lab (5) General Chemistry I & Lab (4) Organic Chemistry I & Lab (4)	8-9	CHEM AND CHEM OR CHEM AND CHEM	106-106L 108-108L 112-112L 326-326L	Chemistry Survey & Lab (4) Organic and Biochemistry & Lab (5) General Chemistry I & Lab (4) Organic Chemistry I & Lab (4)	8-9
CEE OR CHEM OR PS OR PS	434 328-328L 213-213L 243	Hydrology (3) Organic Chemistry II & Lab (4) Soils & Lab (3) Principles of Geology (3)	3-4	CEE OR CHEM OR PS OR PS	434 328-328L 213-213L 243	Hydrology (3) Organic Chemistry II & Lab (4) Soils & Lab (3) recommended Principles of Geology (3)	3-4
ENGL	379	Technical Communication	3	ENGL OR SPCM	379 215	Technical Communication Public Speaking	3
NRM	119	Orientation to Natural Resource Management	2	NRM	119	Orientation to Natural Resource Management	2

Existing Curriculum

Proposed Curriculum (Highlight Changes)

Pref	Num	Title	Cr Hrs	Pref	Num	Title	Cr Hrs
NRM	230	Natural Resource Management Techniques	3	NRM	230	Natural Resource Management Techniques	3
				NRM	276	Scientific Communications	1
NRM	282-282L	Natural Resource Statistics & Lab	3	NRM	282-282L	Natural Resource Statistics & Lab	3
NRM/ BIOL	311	Principles of Ecology	3	NRM/ BIOL	311	Principles of Ecology	3
WL	220	Introduction to Wildlife	3	WL	220	Introduction to Wildlife	3
WL	411	Principles of Wildlife Management	3	WL	411	Principles of Wildlife Management	3
WL	412	Principles of Fisheries Management	3	WL	412	Principles of Fisheries Management	3
<i>Botany Requirement- Select <u>one</u> of the following:</i> BOT 301-301L Plant Systematics (3) BOT 405-405L Grasses & Grasslike Plants & Lab (3) BOT 415-415L Aquatic Plants & Lab (3) BOT 419-419L Plant Ecology & Lab (3) RANG 210-210L Range Plant Identification & Lab (2) RANG 400 Judging Teams S01 (1)			1-3	<i>Botany Requirement- Select <u>one</u> of the following:</i> BOT 301-301L Plant Systematics (3) BOT 303-303L Forest Ecology (3) BOT 405-405L Grasses & Grasslike Plants & Lab (3) BOT 415-415L Aquatic Plants & Lab (3) BOT 419-419L Plant Ecology & Lab (3) RANG 210-210L Range Plant Identification & Lab (2) RANG 400 Judging Teams S01 (1)			3
Take <u>three</u> of the following: WL 355-355L Mammalogy & Lab (3) WL 363-363L Ornithology & Lab (4) WL 367-367L Ichthyology & Lab (3) WL 418-418L Ecology of Aquatic Invertebrates (3) WL 434-434L Herpetology & Lab (3,0)			8-11	Take <u>three</u> of the following: WL 355-355L Mammalogy & Lab (3) WL 363-363L Ornithology & Lab (4) WL 367-367L Ichthyology & Lab (3) WL 418-418L Ecology of Aquatic Invertebrates (3) WL 434-434L Herpetology & Lab (3,0)			8-11
Take <u>three</u> of the following: BIOL 373 Evolution (3) EES 425-425L Disturbance & Restoration Ecology & Lab (3) EES 430-430L Biological Invasions & Lab (3) NRM 450-450L Freshwater Monitoring & Assessment & Lab (3) NRM 464 Ecosystem Ecology (3) NRM 466-466L Environmental Toxicology and Contaminants & Lab (3) NRM 482-482L NRM Biometry (3) RANG 321 Wildland Ecosystems (3) RANG 374-374L Habitat Conservation and Management & Lab (3) WL 415-415L Upland Game Ecology & Management (3) WL 417-417L Large Mammal Ecology & Management & Lab (3) WL 419-419L Waterfowl Ecology & Management & Lab (3) WL 421 Grassland Fire Ecology (3) WL 429-429L Ecology of Fishes & Habitat & Lab (3) WL 431-431L Advanced Fisheries Management & Lab (3)			9	Take <u>three</u> of the following: BIOL 373 Evolution (3) EES 425-425L Disturbance & Restoration Ecology & Lab (3) EES 430-430L Biological Invasions & Lab (3) NRM 350 Conservation and Management of Endangered and NonGame Wildlife (3) NRM 450-450L Freshwater Monitoring & Assessment & Lab (3) NRM 464 Ecosystem Ecology (3) NRM 466-466L Environmental Toxicology and Contaminants & Lab (3) NRM 482-482L NRM Biometry (3) RANG 321 Wildland Ecosystems (3) RANG 374-374L Habitat Conservation and Management & Lab (4) WL 415-415L Upland Game Ecology & Management (3) WL 417-417L Large Mammal Ecology & Management & Lab (3) WL 419-419L Waterfowl Ecology & Management & Lab (3) WL 421 Grassland Fire Ecology (3) WL 429-429L Ecology of Fishes & Habitat & Lab (3) WL 431-431L Advanced Fisheries Management & Lab (3)			9-10
<i>Human Dimensions Requirement - Complete <u>two</u> classes, <u>one required</u> & <u>one elective</u>, from the following courses:</i> <u>Required:</u> WL 430 Human Dimensions in Natural Resource Management (3) <u>Electives:</u> NRM 300 Laws & Public Policies in Natural Resource Management (3) WL 420 Wildlife Law & Enforcement (3)			6	<i>Human Dimensions Requirement - Complete <u>two</u> classes, <u>one required</u> & <u>one elective</u>, from the following courses:</i> <u>Required:</u> WL 430 Human Dimensions in Natural Resource Management (3) <u>Electives:</u> NRM 300 Laws & Public Policies in Natural Resource Management (3) WL 420 Wildlife Law & Enforcement (3)			6
Electives			13-22	Electives			13-19

Existing Curriculum

Proposed Curriculum (Highlight Changes)

Pref	Num	Title	Cr Hrs	Pref	Num	Title	Cr Hrs
Summary of Credits for Wildlife and Fisheries Sciences (B.S.)							
System General Requirements			32	System General Requirements			32
College Requirements			2	College Requirements			2
Major Requirements			64-73	Major Requirements			67-73
Electives			13-22	Electives			13-19
Total number of hours required for major			70-81	Total number of hours required for major			67-73
Total number of hours required for degree			120	Total number of hours required for degree			120

7. Explanation of the Change:

The requested changes include:

Students will be required to complete General Botany I and Lab BOT 201-201L) instead of general biology (BIOL 153-153L) or animal diversity (NRM 200-200L) which has not been taught in several years.

Students will also be required to complete either BIOL 371 Genetics or AS 332 Livestock Breeding and Genetics instead of BIOL 202-202L.

Required physical science courses will focus on soils (PS 213-213 recommended) but will allow either organic chemistry (CHEM 328-328L) or geography (PS 243). Hydrology (CEE 434) will be deleted from the list of course possibility as few students take the course.

Forest ecology (BOT 303-303L) will be added as one of the botany electives. RANG 210 and RANG 400 will be removed because they do not meet certification requirements.

RANG 374 will increase from 3 to 4 credits.

NRM 276 Scientific Communications (1 cr.) was added to the major requirements. This course will emphasize best practices in communicating science in written reports and oral presentations to prepare students for upper level natural resource management courses.

In addition, a new course NRM 350 Conservation and Management of Endangered and Nongame Wildlife (3 cr.) was added as an elective.