



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

**Revised Course Request: Common Course  
(Substantive Modifications)**

<u>SDSU</u> <b>Institution</b>	<u>Greg Heiberger</u> <b>Form Initiator</b>	<u>Greg Heiberger</u> <b>Dean's Approval Signature</b>	<u>3/22/2021</u> <b>Date</b>
<u>SDSU</u> <b>Institution</b>	<u>Natural Sciences / Biology &amp; Microbiology</u> <b>Division/Department</b>	<u>Dennis D. Hedge</u> <b>Institutional Approval Signature</b>	<u>5/3/2021</u> <b>Date</b>
<u>NSU</u> <b>Institution</b>	<u>Academic Affairs</u> <b>Division/Department</b>	<u>Erin Fouberg</u> <b>Institutional Approval Signature</b>	<u>3/30/2021</u> <b>Date</b>

Indicate universities that currently offer the common course:

BHSU    DSU    NSU    SDSMT    SDSU    USD

**Section 1. Existing Course Title and Description**

Prefix & No.	Course Title	Credits
BIOL 204	Genetics and Cellular Biology	3
BIOL 204L	Genetics and Cellular Lab	1

**BIOL 204 Course Description**

Second course in a two-semester sequence designed to teach students current concepts in genetics, cellular and molecular biology. This course will prepare students in the biological sciences for advanced courses in their emphasis areas. Topics covered in this course include: DNA and chromosomal structure; mobile genetic elements; transcription; RNA processing; translation; enzymes and metabolism; membrane structure and function; respiration and photosynthesis; the endomembrane system and trafficking; cytoskeleton; cell signaling; genetic engineering and biotechnology. One semester of Organic Chemistry is highly recommended.

**BIOL 204L Course Description**

This is the second course in a 2-semester laboratory sequence designed to teach students current techniques in genetics, cellular and molecular biology as well as providing hands-on reinforcement of concepts taught in Bio 203. This course will introduce students to basic techniques fundamental to advanced courses in their emphasis areas. Concepts covered will include: use of laboratory equipment; basic tissue culture techniques; DNA and RNA isolation; electrophoresis of nucleic acids and proteins; physical mapping using restriction enzymes and PCR probes; DNA and protein sequence analysis; using genome databases; and karyotype analysis.

**Section 2. Modification(s) Requested**

**2.1. This modification will include:**

**BIOL 204**

**Course Title change from** Genetics and Cellular Biology **to** Introduction to Cell Biology

**Course Content/Description change (write proposed new content/description below)**

Second course in a 2-semester sequence designed to teach students current concepts in cellular biology. This course will prepare students in the biological sciences for advanced courses in their emphasis areas. Topics covered in this course include: protein structure and function; membrane structure and function; energy generation in mitochondria and chloroplasts; the endomembrane

system and trafficking; cytoskeleton; cell signaling. This course is designed to be taken in conjunction with BIOL 204L, Introduction to Cell Biology Lab.

### **BIOL 204L**

**Course Title change from** Genetics and Cellular Lab **to** Introduction to Cell Biology Lab

**Course Content/Description change (write proposed new content/description below)**

This is the second course in a 2-semester sequence designed to teach students current laboratory techniques in cellular biology. This course will introduce students to basic techniques fundamental to advanced courses in their emphasis areas. This course must be taken in conjunction with BIOL 204, Introduction to Cell Biology.

**Effective term of the change:** Fall 2021

#### **2.2. Add justification for all changes noted above:**

These proposed changes update the curriculum to current peer institution program curriculum and better prepares students for upper division coursework to align the curriculum across the sophomore majors sequence. Additionally, this change creates continuity within the scientific terminology in the course title, course description, and learning outcomes.

#### **Section 3. Other Course Information**

**Will this course equate (i.e., be considered the same course for degree completion) with any other unique or common courses in the common course database (Course Inventory Report)?**  Yes  No

#### **Section 4. Department and Course Codes (Completed by University Academic Affairs)**

	<b>Current</b>		<b>New</b>
<input type="checkbox"/> <b>Change in University Department Code</b>	NBIO, SBIM	to	No Change
<input type="checkbox"/> <b>Change in CIP Code</b>	26.0499	to	No Change

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#### **NSU Approval:**

From: Fouberg, Erin H (NSU)  
Date: Tuesday, March 30, 2021 at 3:37 PM  
To: Ramsay, Jodie, Heiberger, Greg, Lapka, Judy  
Cc: Kaushik, Radhey  
Subject: RE: Name change and course description change of BIOL 204/204L

I have no concerns if Dr. Ramsay has no concerns.

Thanks,  
Erin

From: Ramsay, Jodie  
Date: Tuesday, March 30, 2021 at 3:28 PM  
To: Heiberger, Greg, Lapka, Judy  
Cc: Kaushik, Radhey, Fouberg, Erin H (NSU)  
Subject: RE: Name change and course description change of BIOL 204/204L

Hello. I had sent my response to our Associate Provost, but she may not have had a chance to forward it on yet. This is a course we do not currently have on our rotation due to faculty workloads, but we may offer it in the future. That said, I have read through the suggested changes and have no objections.

Thank you. Jodie Ramsay