



**SOUTH DAKOTA BOARD OF REGENTS**  
**ACADEMIC AFFAIRS FORMS**  
**Substantive Program Modification Form**

<b>UNIVERSITY:</b>	<b>USD</b>
<b>CURRENT PROGRAM TITLE:</b>	<b>Medical Laboratory Science, B.S.</b>
<b>CIP CODE:</b>	<b>51.1005</b>
<b>UNIVERSITY DEPARTMENT:</b>	<b>Health Sciences Dean</b>
<b>UNIVERSITY DIVISION:</b>	<b>School of Health Sciences</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.*

<i>Elizabeth M. Freeburg</i>	12/2/19
_____ 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 checked="" 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: Fall 2020**

**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 (place an "X" in the appropriate box):**

- 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:** \_\_\_\_\_

*Reminder: Name changes may require updating related articulation agreements, site approvals, etc.*

**6. Primary Aspects of the Modification (add lines or adjust cell size as needed):**

*Existing Curriculum*

*Proposed Curriculum (highlight changes)*

Pref.	Num.	Title	Cr. Hrs.	Pref.	Num.	Title	Cr. Hrs.
<b>System General Education Requirements</b>				<b>System General Education Requirements</b>			
SGR 1: Written Communication				SGR 1: Written Communication			
ENGL	101	Composition I OR	3	ENGL	101	Composition I OR	3
UHON	110	Honors English		UHON	110	Honors English	
SGR 2: Oral Communication				SGR 2: Oral Communication			
SGR 3: Social Science				SGR 3: Social Science			
BOR approved course				BOR approved course			
SGR 4: Fine Arts and Humanities				SGR 4: Fine Arts and Humanities			
Humanities Course/Fine Arts Course				Humanities Course/Fine Arts Course			
SGR 5: Quantitative Literacy				SGR 5: Quantitative Literacy			
SGR 6: Sciences				SGR 6: Sciences			
BOR approved lab science course PHGY 220/L				BOR approved lab science course PHGY 220/L			
			<b>Subtotal</b>				<b>Subtotal</b>
			<b>18(-3)</b>				<b>18(-3)</b>
<b>Institution designated general education requirements</b>				<b>Institution designated general education requirements</b>			
Advanced composition course (in addition to SGR #1)				Advanced composition course (in addition to SGR #1)			
Additional 100/200 course in another discipline from SGR #3				Additional 100/200 course in another discipline from SGR #3			
Course from Fine Arts/Humanities not selected for SGR #4				Course from Fine Arts/Humanities not selected for SGR #4			
Additional 100/200 lab science course SGR #6 PHGY 230/L				Additional 100/200 lab science course SGR #6 PHGY 230/L			
			<b>Subtotal</b>				<b>Subtotal</b>
			<b>12 (-3)</b>				<b>12 (-3)</b>
<b>General Education credits minus double count reduction:</b>				<b>General Education credits minus double count reduction:</b>			
<b>30 (-6)</b>				<b>30 (-6)</b>			
<b>*University specific requirements</b>				<b>*University specific requirements</b>			
<b>Medical Laboratory Science, B.S.</b>				<b>Medical Laboratory Science, B.S.</b>			
MLS	111	Introduction to Medical Lab Science	1	MLS	111	Introduction to Medical Lab Science	1
MLS	228	Medical Laboratory Parasitology	2	MLS	228	Medical Laboratory Parasitology	3
				MLS	228L	Medical Laboratory Parasitology Lab	0
MLS	239	Clin Quality/Data to Decisions	2	MLS	239	Clin Quality/Data to Decisions	2
MLS	325	Medical Lab Molecular Diagnostics and Genetics	3	MLS	325	Medical Lab Molecular Diagnostics and Genetics	3
MLS	331	Intro to Heme and Hemostasis	3	MLS	331	Intro to Heme and Hemostasis	3
MLS	331L	Intro to Heme and Hemostasis Lab	1	MLS	331L	Intro to Heme and Hemostasis Lab	1
MLS	332	Intro to Medical Lab Procedures	3	MLS	332	Intro to Medical Lab Procedures	4
				MLS	332L	Intro to MLS Procedures Lab	0
			<b>Subtotal</b>				<b>Subtotal</b>
			<b>15</b>				<b>17</b>
MLS 439-449 (Senior Clinical Year) Select 37-38 hours from the courses below:				MLS 439-449 (Senior Clinical Year) Select 37-38 hours from the courses below:			
MLS	439	Clinical Chemistry	9-12	MLS	439	Clinical Chemistry	9-12
MLS	442	Clinical Microbiology	8-11	MLS	442	Clinical Microbiology	8-11
MLS	444	Hematology	6-9	MLS	444	Hematology	6-9
MLS	445	Clinical Microscopy	1-3	MLS	445	Clinical Microscopy	1-3
MLS	446	Immunology (Serology)	2-4	MLS	446	Immunology (Serology)	2-4
MLS	447	Immunohematology	5-7	MLS	447	Immunohematology	5-7
MLS	448	Introduction to Laboratory Management	0-4	MLS	448	Introduction to Laboratory Management	0-4
MLS	449	Introduction to MLS Education	0-1	MLS	449	Introduction to MLS Education	0-1
			<b>Subtotal</b>				<b>Subtotal</b>
			<b>37-38</b>				<b>37-38</b>
<b>Nondepartmental Requirements</b>				<b>Nondepartmental Requirements</b>			
BIOC	310/L	Biological Chemistry/Lab	5	BIOC	310/L	Biological Chemistry/Lab	5
BIOL	151/L	General Biology I/Lab	4	BIOL	151/L	General Biology I/Lab	4
BIOL	153/L	General Biology II/Lab	4	Delete			
CHEM	112/L	General Chemistry I/Lab	4	CHEM	112/L	General Chemistry I/Lab	4
Select one of the following:				Select one of the following:			
CHEM	114/L	General Chemistry II/Lab	4	CHEM	114/L	General Chemistry II/Lab	4
CHEM	116/L	Honors Principles of Chemistry/Lab		CHEM	116/L	Honors Principles of Chemistry/Lab	

				Select one of the following:					
CHEM	326/L	Organic Chemistry I/Lab	5	CHEM	326/L	Organic Chemistry I/Lab OR	4		
				CHEM	310/L	Fundamental Organic Chemistry/Lab OR	5		
				CHEM	332/L	Analytical Chemistry/Lab OR	4		
MICR	418	Fundamentals of Immunology	2	MICR	418	Fundamentals of Immunology	2		
MICR	420	Microbiology and Infectious Diseases	4	MICR	420	Microbiology and Infectious Diseases	4		
MICR	422	Microbiology and Infectious Diseases Lab	1	MICR	422	Microbiology and Infectious Diseases Lab	1		
PHGY	220/L	Human Physiology and Integrated Anatomy I [SGR #6]	4	PHGY	220/L	Human Physiology and Integrated Anatomy I [SGR #6]	4		
PHGY	230/L	Human Physiology and Integrated Anatomy II [SGR #6]	4	PHGY	230/L	Human Physiology and Integrated Anatomy II [SGR #6]	4		
			<b>Subtotal</b>	<b>40</b>				<b>Subtotal</b>	<b>36-37</b>
<b>Free Electives</b>				<b>Free Electives</b>					
Free Electives			3-4	Free Electives			5-6		
				<b>(Recommended Elective)</b>					
				BIOL 153/L : General Biology II/Lab (4 hrs)					
Cross-curricular skills:				Cross-curricular skills:					
<ul style="list-style-type: none"> <li>• inquiry and analysis</li> <li>• critical and creative thinking</li> <li>• information literacy</li> <li>• teamwork and problem solving</li> <li>• integrative learning</li> </ul>				<ul style="list-style-type: none"> <li>• inquiry and analysis</li> <li>• critical and creative thinking</li> <li>• information literacy</li> <li>• teamwork and problem solving</li> <li>• integrative learning</li> </ul>					
Total number of hours required for major			<b>92-93</b>	Total number of hours required for major			<b>90-91</b>		
Total number of hours required for degree			<b>120</b>	Total number of hours required for degree			<b>120</b>		

## 7. Explanation of the Change:

Due to increasing demands of Medical Laboratory Scientists, clinical internship programs are raising their prerequisite requirements. In order to best prepare USD MLS students to meet these increased standards, USD MLS will make the following changes:

- MLS 228 will change from 2 credits to 3 credits. MLS 228L – Medical Laboratory Parasitology lab will be added to better prepare the students to meet the accredited affiliate’s parasitology requirements in parasitology identification.
- MLS 332 will change from 3 credits to 4 credits. MLS 332L- Intro to Med Lab Procedures Lab-will be added to apply the theory behind the laboratory procedures and better prepare the students for their clinical internship and future career as an MLS.

The National Accrediting Agency for Clinical Laboratory Science (NAACLS) has modified their requirements allowing MLS programs more flexibility in the required biology and chemistry courses. Our NAACLS accredited affiliates have all agreed that our students can select either Organic Chemistry (CHEM 326/L or 310/L) or Analytical Chemistry (CHEM 332/L) to better prepare for their programs. They have also agreed that while General Biology II can be beneficial, the content is not critical to prepare the students for the MLS internships. As such, we would like to move it to a recommended elective, particularly for those who may be considering graduate programs such as pre-Medicine, pre-Physician Assistant, pre-Occupational Therapy, or pre-Physical Therapy.