

### SOUTH DAKOTA BOARD OF REGENTS ACADEMIC AFFAIRS FORMS

## Substantive Program Modification Form

UNIVERSITY:	SDSU
<b>CURRENT PROGRAM DEGREE:</b>	Master of Science (M.S.)
<b>CURRENT PROGRAM MAJOR/MINOR:</b>	Geography
<b>CURRENT SPECIALIZATION:</b>	<b>Geographic Information Sciences</b>
CIP CODE:	30.4401 – Major CIP
	45.0702 – Specialization CIP
<b>UNIVERSITY DEPARTMENT:</b>	Geography & Geospatial Sciences
<b>BANNER DEPARTMENT CODE:</b>	SGGS
UNIVERSITY COLLEGE:	Natural Sciences
BANNER COLLEGE CODE:	3T

#### **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		3/28/2024
	Vice President of Academic Affairs of	or	Date
	President of the University		
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1.	This modification addresses a change in:		
$\ge$	Total credits required within the discipline		Total credits of supportive course work
$\ge$	Total credits of elective course work	$\boxtimes$	Total credits required for program
	Program name	$\boxtimes$	Existing specialization
	] CIP Code	$\boxtimes$	Other: Master's Graduation Requirements
	Modification requiring Board of Regents ap	proval	
	Must have prior approval from Executive D	irector	r or designee
2.	Effective date of change: 2024-2025 Academi	c Year	r
3.	Program Degree Level:		
	Associate 🗆 Bachelor's 🗆	Master	's 🖂 Doctoral 🗌
4.	Category:		
	Certificate $\Box$ Specialization $\boxtimes$	Mir	nor 🗆 Major 🗆
5.	If a name change is proposed, the change will	l occur	r:
	$\Box$ On the effective date for all students		
	$\Box$ On the effective date for students new to the	e progr	am (enrolled students will graduate from
	existing program)		
	Proposed new name:		
6.	Is the program being modified associated wit	h a cu	rrent articulation agreement?
	Yes 🗆 No 🖂		

# a. If yes, will the articulation agreement need to be updated with the partner institution following the approve of the program change? Please explain: $N\!/\!A$

Pref.         Num.         Title         Cr. Hrs.         Perel.         Num.         Title         Cr. Hrs.           GEOG         710         Evolution of Geographic Though 3         GEOG         710         Evolution of Geographic Though 3         3           GEOG         740         Seminar (Geospatial Science)         1         GEOG         790         Seminar (Geospatial Science)         9         1         9	Existing Curriculum				Proposed Curriculum (highlight changes)			
GEOG         710         Evolution of Geographic Thought         3           GEOG         714         Research and Writing         3           GEOG         790         Seminar (Geospatial Science)         1         GEOG         714         Research and Writing         3           GEOG         790         Seminar (Geospatial Science)         1         GEOG         790         Seminar (Geospatial Science)         1           GEOG         711         Programming for Geospatial Data         3         GEOG         571         Programming for Geospatial Data         3           GEOG         573         GIS: Data Creation and Integration         1         GEOG         574         GIS: Data Creation and Integration         1           GEOG         574         GIS: Vector & Raster Modeling         2         GEOG         574         GIS: Vector & Raster Modeling         2           GEOG         574         GIS: Vector & Raster Modeling         1         GEOG         574         GIS: Vector & Raster Modeling         2           GEOG         575         GIS Applications Lab         1         GEOG         576         Web GIS         2           GEOG         571         Spatial Databases Lab         1         GEOG         571	Pref.	Num.	Title	Cr. Hrs.	Pref.	Num.	Title	Cr. Hrs.
GEOG         714         Research and Writing         3         GEOG         714         Research and Writing         3           GEOG         790         Seminar (Geospatial Science)         1         GEOG         700         Seminar (Geospatial Science)         1           GEOG         571         Programming for Geospatial Data Analysis         9         6         Select 3 of the following:         9           GEOG         571         Programming for Geospatial Data Analysis         3         GEOG         571         Programming for Geospatial Data Analysis         3           GEOG         573         GIS: Data Creation and Integration Lab         2         GEOG         573         GIS: Nata Creation and Integration Lab         1         GEOG         573         GIS Applications         2         GEOG         574         GIS: Vector & Raster Modeling         2         2           GEOG         575         GIS Applications Lab         1         GEOG         576         Web GIS         2         2         GEOG         576         Web GIS         2         2         GEOG         576         Web GIS         2         2         GEOG         571         Spatial Databases         2         2         2         2         2         2	GEOG	710	Evolution of Geographic Thought	3	GEOG	710	Evolution of Geographic Thought	3
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Image: select 3 of the following:         9         Image: select 3 of the following:         9           GEOG         571         Programming for Geospatial Data Analysis         3         GEOG         573         GIS: Data Creation and Integration         2         GEOG         573         GIS: Data Creation and Integration         2         GEOG         573         GIS: Data Creation and Integration         1         GEOG         573         GIS: Data Creation and Integration         1         GEOG         574         GIS: Vector & Raster Modeling         2         GEOG         574         GIS: Vector & Raster Modeling Lab         1         GEOG         574         GIS: Vector & Raster Modeling Lab         1         GEOG         574         GIS: Vector & Raster Modeling Lab         1         GEOG         574         GIS: Vector & Raster Modeling Lab         1         GEOG         575         GIS Applications Lab         1         GEOG         576         Web GIS         2         GEOG         576         Web GIS         2         GEOG         577         Spatial Databases         2         GEOG         577         Spatial Databases         2         GEOG         571         GIS Applications Lab         1         GEOG         571         GIS Applications         1         GEOG         571         Media Lab	GEOG	790	Seminar (Geospatial Science)	1	GEOG	790	Seminar (Geospatial Science)	1
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GEOG       585L       Advanced Satellite Remote Sensing Lab       1       GEOG       585L       Advanced Satellite Remote Sensing Lab       1         GEOG       741       Quantitative Remote Sensing for Terrestrial Monitoring       3       GEOG       741       Quantitative Remote Sensing for Terrestrial Monitoring       3         GEOG       743       Geospatial Analysis       3       GEOG       750       Agricultural Remote Sensing       3         GEOG       760       Advanced Methods in Geospatial Modelling: Topical Credits       3       GEOG       760       Advanced Methods in Geospatial Modelling: Topical Credits       3       GEOG       784       Machine Learning for Remote Sensing and Geographic Information Systems       3       GEOG       786       Geographic Information Systems       3         GEOG       786       Geographic Information Systems       3       GEOG       786       Geographic Information Systems       3         GEOG       788       Research <i>Design Paper</i> Image: Select one of the following options:       Select one of the following options:       Select one of the following options:       Image: Select one of the following options:       Image: Select one of the following options:       Select one of th	GEOG	585	Advanced Satellite Remote Sensing	2	GEOG	585	Advanced Satellite Remote Sensing	2
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#### **Master's Graduation Requirements**

Current:

#### **Option A - Thesis**

- Thesis Proposal
- Thesis and Oral Defense
- **Option B Research/Design Paper**
- Research Project Proposal
- Research Project and Oral Defense

#### **Option C - Coursework Only**

• Oral Defense of Course Work

#### Proposed:

#### **Thesis**

- Thesis Proposal
- Thesis and Oral Defense

#### <mark>Non-Thesis</mark>

• Research Project/Portfolio and Oral Defense

#### 8. Explanation of the Change:

The SDSU Graduate School has revised SDSU Policy 2:17 Credit Requirements for Graduate Credential Programs. The Graduate School adjusted the language to no longer refer to master's programs using Option A (Thesis Option), B (Research/Design Paper Option), C (Coursework Only), and D (Coursework Only – Professional Program) but to move forward with Thesis and Non-Thesis options that will require a minimum of 30 credits. The Department of Geography and Geospatial Sciences has requested to change the non-thesis option from 32 credits (Option B) and 36 credits (Option C) to 33 credits.

GEOG 750 Agricultural Remote Sensing (3 cr.) was added to the list of technical electives. GEOG 750 is a thematic course that is designed specifically for the applications of cutting-edge remote sensing technologies, platforms, and sensors in a variety of agriculture areas. This will help students gain the knowledge and skills for implementing various remote sensing technologies in different agriculture related areas.