



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

**Substantive Program Modification Form**

<b>UNIVERSITY:</b>	SDSU
<b>CURRENT PROGRAM TITLE:</b>	<b>Geospatial Science and Engineering (PhD) - Geography Specialization</b>
<b>CIP CODE:</b>	<b>03.0104 – Major CIP 45.0701 - Geography Specialization CIP</b>
<b>UNIVERSITY DEPARTMENT:</b>	<b>Grad Study Geography &amp; Geospatial Sciences</b>
<b>BANNER DEPARTMENT CODE:</b>	<b>SGGO</b>
<b>UNIVERSITY DIVISION:</b>	<b>Graduate School</b>
<b>BANNER DIVISION CODE:</b>	<b>3G</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

5/3/2021

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 checked="" type="checkbox"/> Existing specialization                  |
| <input type="checkbox"/> CIP Code  | <input checked="" type="checkbox"/> Other: Additional Admission Requirements |

**2. Effective date of change:** 2021-2022 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.
		<b>60 Credit Plan</b>				<b>60 Credit Plan</b>	
GEOG	710	Evolution of Geographic Thought	3	GEOG OR GSE	710 740	Evolution of Geographic Thought (3 cr) Introduction to Geospatial Science and Engineering (3 cr)	3
GSE	740	Introduction to Geospatial Science and Engineering	3	GSE	740	Introduction to Geospatial Science and Engineering	3

*Existing Curriculum*

*Proposed Curriculum (highlight changes)*

Pref.	Num.	Title	Cr. Hrs.	Pref.	Num.	Title	Cr. Hrs.
GSE	790	Seminar in Geospatial Science and Engineering (1 cr.)	3	GSE/ GEOG	790	Seminar (Geospatial Science) and Engineering (1 cr.)	3
GSE	898	Dissertation Coursework	36	GSE	898	Dissertation Coursework	36
		Specialization Coursework	6			Specialization Coursework	6
		Supporting Electives (Students should consult their advisors to identify courses suitable for their area of interest.)	9			Supporting Electives (Students should consult their advisors to identify courses suitable for their area of interest.)	12
<b>90 Credit Plan</b>				<b>90 Credit Plan</b>			
GEOG	710	Evolution of Geographic Thought	3	GEOG OR GSE	710 740	Evolution of Geographic Thought (3 cr) Introduction to Geospatial Science and Engineering (3 cr)	3
GSE	740	Introduction to Geospatial Science and Engineering	3	GSE	740	Introduction to Geospatial Science and Engineering	3
GSE	790	Seminar (Geospatial Science and Engineering (1 cr.))	3	GSE OR GEOG	790	Seminar (Geospatial Science) and Engineering (1 cr.)	3
GSE	898	Dissertation Coursework	36	GSE	898	Dissertation Coursework	36
		Specialization Coursework	6			Specialization Coursework	6
		Supporting Electives (Students should consult their advisors to identify courses suitable for their area of interest.)	39			Supporting Electives (Students should consult their advisors to identify courses suitable for their area of interest.)	42
Total number of hours required for degree			60-90	Total number of hours required for degree			60-90

**Additional Admission Requirements**

*Current:*

Admission to the GSE program is competitive and limited by the availability of personnel, facilities, and funding necessary to provide quality graduate education. GSE is an interdisciplinary program with participating faculty members from several departments. The scope of the geospatial sciences is broad, and individual faculty members will only advise students within their particular area of specialization. Financial support for students is provided by individual faculty members through their research grants or other funding sources. Students can also bring their own funding, which could be obtained through a fellowship program or through the support of their employer. For these reasons, the application process is highly competitive, and meeting the minimum standards does not guarantee admission. In particular, the critical criterion for admission into the PhD program is that a GSE faculty member must agree to serve as the student's advisor.

Before applying to the program, prospective students are strongly encouraged to contact individual faculty to identify prospective advisors, discuss their research interests and educational goals, and determine if graduate research assistantships are available. Prospective students may also contact Dr. Xiaoyang Zhang, the program coordinator, for additional information.

All applications must meet the admission criteria of the Graduate School before being accepted into the GSE program, and formal offers of graduate assistantships will not be made until students have been officially accepted by the Graduate School.

GRE: Required  
TOEFL: Score of 525 paper-based, 71 Internet-based  
IELTS: 6.0

Two letters of recommendation from persons acquainted with the academic ability and professional

competency of the applicant should be sent directly to the GSE graduate coordinator.

Applicants must provide a written describing their research interests and academic goals in pursuing a Ph.D. and identifying one or more faculty members as potential advisors. The letter of intent should be submitted with the other application materials.

*Proposed:*

Admission to the GSE program is competitive and limited by the availability of personnel, facilities, and funding necessary to provide quality graduate education. GSE is an interdisciplinary program with participating faculty members from several departments. The scope of the geospatial sciences is broad, and individual faculty members will only advise students within their particular area of specialization. Financial support for students is provided by individual faculty members through their research grants or other funding sources. Students can also bring their own funding, which could be obtained through a fellowship program or through the support of their employer. For these reasons, the application process is highly competitive, and meeting the minimum standards does not guarantee admission. In particular, the critical criterion for admission into the PhD program is that a GSE faculty member must agree to serve as the student's advisor.

Before applying to the program, prospective students are strongly encouraged to contact individual faculty to identify prospective advisors, discuss their research interests and educational goals, and determine if graduate research assistantships are available. Prospective students may also contact Dr. Xiaoyang Zhang, the program coordinator, for additional information.

All applications must meet the admission criteria of the Graduate School before being accepted into the GSE program, and formal offers of graduate assistantships will not be made until students have been officially accepted by the Graduate School.

GRE: Required

TOEFL: 71 Internet-based

IELTS: 6.0

Duolingo: 100

Two letters of recommendation from persons acquainted with the academic ability and professional competency of the applicant should be sent directly to the GSE graduate coordinator.

Applicants must provide a written describing their research interests and academic goals in pursuing a Ph.D. and identifying one or more faculty members as potential advisors. The letter of intent should be submitted with the other application materials.

## **7. Explanation of the Change:**

The changes aid in the alignment of the MS and PhD programs in our department.