APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the *Guide and Format for Curriculum Proposals* published by the UCCC. Both cover sheet and proposal should be submitted to UCCC Mail Stop 9702 (281 Garner Hall), Phone: 325-9410.

College Arts & Sciences **Department:** Geosciences

Contact Person: John Rodgers **Mail Stop:** 9537 **E-mail:** jcr100@msstate.edu

Nature of Change: New Program **Date Initiated:** October 10, 2024

Current Degree (BS, MS, etc.): _____

Current Major: _____

Current Concentration(s): _____

Current Campus(es): ☐ Starkville ☐ Meridian ☑ Distance ☐ Gulf Coast*

*Gulf Coast campus for Bagley College of Engineering only

New Degree (BS, MS, etc.): Post-Baccalaureate Certificate

Effective Date:

Semester	Year
Spring**	2025

**Any new program or modification desiring a starting semester other than fall must include a justification

Proposed Major: Geography and Geology Community College Teaching (Certificate)

Proposed Concentration(s): _____

Proposed Campus(es)

☐ Starkville
☐ Meridian
☑ Distance
☐ Gulf Coast*

*Gulf Coast campus for Bagley College of Engineering o

Summary of Proposed Changes:

This program is designed for individuals seeking to meet the academic requirements to teach geography and geology at the community college level, with a focus on the cross-curricular transfer of knowledge between these fields and the understanding of how large-scale systems impact both geological and geographical phenomena.

Approved:	Date:
John Rodgers, Professor and Head — Digitally signed by John Rodgers, Professor and Head Date: 2024.08.23 09:37:55 -05'00'	08/23/2024
Department Head	
Director of Academic Quality	10/21/2024
Chair, College or School Curriculum Committee	10/22/2024
Dean of College or School	10/22/2024
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

GEOGRAPHY AND GEOLOGY COMMUNITY COLLEGE TEACHING POST-BACALLAUREATE CERTIFICATE

CATALOG DESCRIPTION AND CURRICULUM OUTLINE

NEW GRADUATE DEGREE OUTLINE FORM
Use the chart below to indicate your new degree outline. Please list required College and Major Required Courses and if appropriate Concentration Courses. Graduate programs that wish to specialize beyond the Major must have at least two concentrations. Add additional rows as needed for programs with more than two concentrations. Expand rows as needed

PROPOSED New Degree (Post-Baccalaureate Certificate)	
Program Name: **Geography and Geology Community College Teaching Certificate**	
The **Geography and Geology Community College Teaching Certificate** provides students with an interdisciplinary foundation for teaching these subjects at the community college level. This program is designed for individuals seeking to meet the academic requirements to teach geography and geology, with a focus on the cross-curricular transfer of knowledge between these fields and the understanding of how large-scale systems, such as the water cycle, impact both geological and geographical phenomena. Studying geography and geology together is crucial for educators as it provides a holistic view of Earth's systems and their interactions, offering students tools to analyze and explain processes that span both disciplines. The program covers key concepts in both geography and geology, emphasizing their interconnection through the study of natural systems, human impact, and environmental processes. While this certificate does not grant a professional credential or licensure in geology or geography, it meets the credit-hour requirements to teach these subjects at the community college level. This program is ideal for individuals looking to transition into education or integrate their background in geography or geology into community college teaching. The **Geography and Geology Community College Teaching Certificate** can be applied toward fulfilling a portion of the program requirements for a full degree, serving as a stackable credential. This certificate is compatible with at least two master's degree programs. The first is the **Master of Arts in Teaching Community College Education** (online program), and the second is the **Master of Science in Environmental Geosciences** (online program). Both degrees offer pathways for further academic and professional advancement, building upon the foundational knowledge gained through the certificate program.	
"[Click here and type new concentration description]"	
Proposed Curriculum Outline	Required Hours

Geography and Geology Community College Teaching Certificate Requirements: • GG 6543 Community Engagement in Environmental Geosciences • GR 6863 Forensic Geosciences • GG 8233 Environmental Geosciences • GR 8813 Advanced Natural Hazards and Disasters • Six credit hours of GR or GG courses at the 6000-level or higher	18
Total Hours	18

JUSTIFICATION

This certificate offers a flexible opportunity for students and facilitates the cross-curricular transfer of knowledge between geography and geology, ensuring that educators are well-prepared to meet the instructional demands of teaching both subjects in community college settings. The program is designed to provide students with the skills necessary to integrate key concepts across disciplines, supporting a more holistic and interconnected approach to Earth sciences education. The certificate program will also serve as a stackable entry and exit point for other online Masters degree programs. By introducing this certificate, we hope to attract more students and provide a pathway that supports their academic and professional development. The stackable degree approach provides faster credentialing, enabling students to enter the workforce or achieve promotions more quickly. It also encourages students hesitant to commit to a full master's program to start with the certificate, potentially leading to increased enrollment. Additionally, the flexibility to stop and start the program more readily may attract more applicants.

Justification for January 2025 start date. Geosciences already offers these courses and we already have faculty to teach the courses. This proposal simply creates a new grouping of courses without the addition of any resources. Thus, we believe that we are ready to begin the certificate immediately.

STUDENT LEARNING OUTCOMES

Overarching Program Outcome: The Post-Baccalaureate Certificate in Geography and Geology Community College Teaching provides students with a comprehensive understanding of the interrelated systems of geography and geology, emphasizing the integration of large Earth processes such as the water cycle, plate tectonics, and climate interactions. This program is designed for individuals seeking to teach at the community college level, providing the academic foundation to address both physical and human geography as well as foundational geology concepts.

Upon completion of the certificate program, students will have developed the ability to integrate geography and geology concepts in a community college classroom setting, analyze and explain

large-scale Earth processes, and engage students in understanding the dynamic physical and human systems that shape the planet.

Specific Program Learning Outcomes (see accompanying document Program Outcome Map for details on measuring and institutional effectiveness reporting criteria):

- Program Level Outcome 1 Interdisciplinary Knowledge Integration: Students will be able to demonstrate the ability to integrate and apply concepts from both geography and geology, including the study of Earth's physical systems, human-environment interactions, and natural processes, to foster a cross-curricular understanding.
- Program Level Outcome 2, Community Engaged Learning: Students will apply field analysis practices to assess environmental sustainability in local communities, engage with community members to address environmental concerns, and develop outreach plans utilizing social media and other platforms to raise awareness and promote sustainable practices, grounded in the cultural and environmental context of the community.
- Program Level Outcome 3, Application of Geosciences: Students will develop the ability to apply forensic geoscience techniques to analyze geological and geographical evidence, enhancing their capacity to teach complex concepts such as soil analysis, sediment transport, and geospatial data interpretation in community college geography and geology courses, while demonstrating the real-world applications of geosciences in legal and investigative contexts. This outcome highlights the practical and interdisciplinary nature of forensic geosciences, tying it to instructional skills needed for teaching these subjects at the community college level.
- Program Level Outcome 4, Natural Hazards: Students will acquire the knowledge and skills to analyze natural hazards such as earthquakes, floods, volcanoes, and landslides, enabling them to effectively teach these critical concepts in geography and geology courses at the community college level, while fostering student understanding of risk assessment, mitigation strategies, and the societal impact of natural disasters. This outcome emphasizes the importance of understanding natural hazards in both academic and real-world contexts, equipping future educators with relevant teaching tools.
- Program Level Outcome 5, Large Scale Systems Analysis: Students will be able to analyze and explain the interactions of large-scale Earth systems, such as the water cycle, climate systems, and plate tectonics, and their implications for both geography and geology.

REQUIRED QUESTIONS

1. Will this program change meet local, state, regional, and national educational and cultural needs? If so, please describe. **Yes – see below:**

The proposed post-baccalaureate certificate in Geography and Geology Teaching at the Community College level is well-positioned to address significant educational and cultural needs across various scales—local, state, regional, and national.

Local Needs: In the local context, community colleges often serve as a primary access point for students seeking affordable and flexible educational pathways. This certificate program will help

equip qualified educators to meet the growing demand for instructors in geography and geology. The program also ensures that instructors are specifically trained to meet the unique pedagogical needs of community college students, many of whom come from diverse backgrounds and non-traditional educational trajectories.

State Needs: On a state level, many states are grappling with teacher shortages in STEM fields, including earth sciences like geography and geology. This program directly supports state educational goals by preparing educators who can fill these gaps and contribute to broader state efforts to improve science education in community colleges. The program aligns with state-level workforce development initiatives, which emphasize the importance of providing community college students with high-quality instruction that fosters critical thinking, environmental awareness, and geoscientific literacy, all key to a competitive workforce in many industries.

Regional Needs: Regionally, the certificate program aligns with the broader needs of community colleges across multiple states that face similar challenges in maintaining a pipeline of qualified educators in geology and geography.

National Needs: On a national scale, the need for skilled educators in geography and geology aligns with broader educational trends emphasizing STEM education and geoscientific literacy. The development of this certificate program responds to national calls for programs that enhance students' abilities to engage with pressing issues such as climate change, urban planning, and environmental sustainability.

In conclusion, the proposed certificate program is a vital response to educational and cultural needs at multiple levels. It ensures a supply of well-trained, knowledgeable instructors in fields critical to understanding and addressing both local and global challenges in the 21st century.

2. Will this program change result in duplication in the System? If so, please describe.

We are not aware of another similar program in Geography and Geology Community College Teaching already in existence, thus we believe that there is no overlap.

3. Will the program change/advance student diversity within the discipline? If so, please describe. Yes, see below:

The proposed post-baccalaureate certificate in Geography and Geology Teaching at the Community College level is designed to positively impact diversity within the discipline by preparing educators who are equipped to engage with and support students from a wide range of backgrounds. Community colleges are often more diverse in terms of student populations than four-year institutions, and this program aims to create a cadre of instructors who are not only knowledgeable in their fields but also skilled in culturally responsive teaching practices.

Fostering Diversity Through Representation: By offering a certificate program that focuses on preparing instructors for community colleges, we anticipate attracting a diverse group of educators, many of whom may come from underrepresented groups in the geosciences. This will increase representation within the field, which has historically struggled to attract diverse

populations. Having educators who reflect the diversity of the student body can encourage more students from minority and underrepresented groups to engage in and pursue careers in geography and geology, thereby fostering a more inclusive academic environment.

Inclusive Pedagogy and Curriculum Design: By fostering an inclusive curriculum that connects geographical and geological concepts to real-world issues and cultural contexts, instructors will be better equipped to engage students from diverse cultural and socioeconomic backgrounds.

Creating Pathways for Non-Traditional and Underserved Students: Community colleges often serve as entry points for non-traditional students, including those who are the first in their families to attend college, working adults, and individuals from economically disadvantaged backgrounds. This certificate program addresses the need for qualified instructors who are adept at supporting these students.

Long-Term Impact on the Discipline: Over time, the program's focus on training instructors to teach effectively at community colleges, where diversity is already high, will help advance student diversity within the broader geography and geology disciplines. As more students from diverse backgrounds succeed in community college programs and transfer to four-year institutions or enter related fields, the geosciences will become more inclusive and reflective of the population at large.

In conclusion, the proposed certificate program will contribute to advancing student diversity by preparing educators to create inclusive and supportive learning environments, fostering greater representation of underrepresented groups within the field, and promoting equitable access to educational and career opportunities in geography and geology.

4. Will the program change result in an increase in the potential placement of graduates in MS, the Southeast, and the U.S.? If so, please describe.

The proposed post-baccalaureate certificate in Geography and Geology Teaching at the Community College level is designed to address a critical shortage of qualified instructors in the geosciences across Mississippi (MS), the Southeast region, and the U.S. as a whole. As the demand for educators in these fields continues to grow, particularly at community colleges, the program will create a direct pipeline of well-prepared graduates who can fill teaching positions in these areas.

Meeting Local and State Needs (MS): The demand for community college professors in the geosciences is growing nationwide, driven by increasing interest in environmental issues, climate change, and the need for skilled workers in fields such as energy, environmental consulting, and natural resource management. According to the U.S. Bureau of Labor Statistics, employment for postsecondary teachers, including those in geosciences, is expected to grow by about 12% from 2021 to 2031, faster than the average for all occupations. Community colleges, which serve as key entry points for students pursuing careers in these fields, are experiencing a particular need

for qualified instructors who can teach foundational courses in geology, meteorology, oceanography, and environmental science.

In Mississippi, the demand for geoscience professors at community colleges is especially pertinent given the state's unique geological features, such as the Mississippi River Delta, coastal regions, and rich natural resources. Industries like oil, gas, agriculture, and environmental management are crucial to the state's economy, increasing the need for education in the geosciences. Additionally, many rural and underserved areas in Mississippi rely on community colleges for affordable education, making it important to have qualified geoscience professors who can inspire and equip students for local job markets. As Mississippi continues to address environmental challenges like flooding and coastal erosion, the need for educators who can prepare the next generation of professionals in these areas is critical.

Impact on the Southeast Region: The Southeast region of the U.S. faces similar challenges, with many community colleges struggling to find qualified instructors for geography and geology courses. The growing interest in environmental studies, natural resource management, and sustainability across the region has further increased the demand for educators who can teach these subjects. Graduates of the proposed certificate program will be uniquely positioned to fill this demand, particularly because of their specialized training in both subject matter and community college pedagogy. This will enhance their employability across the Southeast, where community colleges are increasingly seen as key institutions in regional workforce development.

National Impact: On a national scale, the need for qualified geography and geology instructors is projected to rise as community colleges continue to expand their STEM curricula. The U.S. Bureau of Labor Statistics has indicated steady growth in demand for postsecondary instructors in the sciences, including earth sciences. Graduates of this program will be well-prepared to meet the national demand for qualified educators, positioning them for job opportunities not only in community colleges but also in related sectors that require expertise in geography and geology. Additionally, as more community colleges integrate online learning into their offerings, graduates of the program may also find teaching opportunities that allow them to reach students beyond their immediate geographic area.

Expanding Opportunities Beyond Teaching: In addition to teaching roles, graduates may find opportunities in other sectors that require a combination of geoscientific knowledge and educational expertise. For example, public agencies, environmental organizations, and private industry all value educators who can communicate complex geographical and geological concepts to diverse audiences. The program's emphasis on both subject matter expertise and instructional skills will make graduates more versatile and marketable in a variety of roles beyond traditional classroom settings.

In conclusion, the program will enhance graduates' placement potential not only in Mississippi but also across the Southeast and the U.S. by addressing a critical need for well-prepared educators in geography and geology, thereby contributing to a more robust and diverse workforce in the geosciences.

5. Will the program change result in an increase in the potential salary of graduates in MS, the Southeast, and the U.S? If so, please describe.

The proposed post-baccalaureate certificate in Geography and Geology Teaching at the Community College level is expected to enhance the earning potential of graduates by equipping them with specialized skills and credentials that are highly sought after in education and related fields. This certificate will position graduates to pursue career paths that offer competitive salaries, especially as demand for qualified instructors in STEM fields continues to rise.

Salary Increase Potential in Mississippi (MS): In Mississippi, the program will directly contribute to an increase in graduates' salary potential, particularly for those seeking teaching positions at community colleges. Educators with advanced credentials, such as a post-baccalaureate certificate, are more competitive in the job market and may command higher salaries compared to peers without such specialized training. Community colleges in Mississippi are often in need of qualified instructors in geography and geology, and the credential will make graduates eligible for positions that offer higher pay rates, particularly in the STEM disciplines where specialized knowledge is valued. Instructors in community colleges can typically earn additional income through opportunities such as online teaching or curriculum development.

Salary Increase Potential in the Southeast: In the broader Southeast region, similar trends are evident. As community colleges increasingly expand their STEM offerings to align with workforce needs, there is a growing demand for instructors with expertise in geography and geology. The credential will provide graduates with a competitive edge, making them more eligible for positions that offer higher salaries. In many southeastern states, community colleges and technical institutions are recognizing the need to pay more competitive salaries to attract and retain skilled educators in specialized fields. Graduates of this program will be well-positioned to negotiate higher salaries due to the value their advanced qualifications bring to these institutions.

National Salary Increase Potential: On a national scale, the U.S. Bureau of Labor Statistics reports that postsecondary educators in STEM fields, including the geosciences, tend to have higher median salaries than those in other fields. This certificate will give graduates a specialized credential that not only qualifies them for community college teaching positions but also enhances their potential for salary growth through adjunct or full-time opportunities at four-year institutions, online teaching, and positions in related industries. Furthermore, geographic mobility will provide graduates the flexibility to pursue higher-paying positions outside their immediate region, expanding their overall earning potential.

Additional Salary Opportunities Beyond Teaching: In addition to teaching roles, graduates may find opportunities in other sectors that value a combination of geographic and geologic expertise and educational skills. Graduates with this certification may pursue roles in public sector agencies, environmental organizations, or private industry, where their specialized knowledge can lead to higher-paying opportunities. For example, graduates may be sought after as consultants, researchers, or public educators in fields related to environmental management, urban planning, and natural resources, where salaries can be significantly higher than those of typical educators.

SUPPORT:
A letter of support from the Department of Geosciences Curriculum Committee is attached to this proposal.

PROPOSED 4-LETTER ABBREVIATIONS
GGCC

EFFECTIVE DATE:

January 1, 2025

CIP NUMBER:
40.0401

Geography and Geology Teaching Community College Post-Baccalaureate Certificate

Program Level Outcomes and Course Assessment Map

Overarching Program Outcome: Geography and Geology Teaching Community College Post-Baccalaureate Certificate provides students with a comprehensive understanding of the interrelated systems of geography and geology, emphasizing the integration of large Earth processes such as the water cycle, plate tectonics, and climate interactions. This program is designed for individuals seeking to teach at the community college level, providing the academic foundation to address both physical and human geography as well as foundational geology concepts.

Upon completion of the certificate program, students will have developed the ability to integrate geography and geology concepts in a community college classroom setting, analyze and explain large-scale Earth processes, and engage students in understanding the dynamic physical and human systems that shape the planet.

Program Level Outcome 1 Interdisciplinary Knowledge Integration: Students will be able to demonstrate the ability to integrate and apply concepts from both geography and geology, including the study of Earth's physical systems, human-environment interactions, and natural processes, to foster a cross-curricular understanding.

1) **GG 8233 Environmental Geosciences**:– 75% of students will score 80% or higher on the final research paper that integrates geographic and Earth science processes towards explaining a human-caused environmental disaster.

Program Level Outcome 2, Community Engaged Learning: Students will apply field analysis practices to assess environmental sustainability in local communities, engage with community members to address environmental concerns, and develop outreach plans utilizing social media and other platforms to raise awareness and promote sustainable practices, grounded in the cultural and environmental context of the community.

1) **GR 6543 Community Engaged Learning in Environmental Geosciences -** At least 75% of students will achieve a score of 80% or higher on the final research project, which applies geoscience knowledge to address and solve real-world problems related to community projects.

Program Level Outcome 3, Application of Geosciences: Students will develop the ability to apply forensic geoscience techniques to analyze geological and geographical evidence, enhancing their capacity to teach complex concepts such as soil analysis, sediment transport, and geospatial data interpretation in community college geography and geology courses, while demonstrating the real-world applications of geosciences in legal and investigative contexts. This outcome highlights the practical and interdisciplinary nature of forensic geosciences, tying it to instructional skills needed for teaching these subjects at the community college level.

1) **GR 6863 Forensic Geosciences:** At least 75% of students will achieve a score of 80% or higher on the final research paper, which evaluates a forensic geoscience case study, with a focus on applying geoscience methods to solve problems.
Program Level Outcome 4, Natural Hazards: Students will acquire the knowledge and skills to analyze natural hazards such as earthquakes, floods, volcanoes, and landslides, enabling them to effectively teach these critical concepts in geography and geology courses at the community college level, while fostering student understanding of risk assessment, mitigation strategies, and the societal impact of natural disasters. This outcome emphasizes the importance of understanding natural hazards in both academic and real-world contexts, equipping future educators with relevant teaching tools.
1) **GR 8813 Advanced Natural Hazards** – 75% of students will score at least 80% on the final exam that covers strategies for hazards risk assessment, mitigation, and resilience.
Program Level Outcome 5, Large Scale Systems Analysis: Students will be able to analyze and explain the interactions of large-scale Earth systems, such as the water cycle, climate systems, and plate tectonics, and their implications for both geography and geology.
1) Students will score 75% or higher on the final exam on the two geosciences elective courses that they complete for the certificate.

Justification:

There are two primary reasons for proposing this online certificate. First, it aims to provide a flexible opportunity for students to gain a general background in geography and geology at the post-baccalaureate level. This background can enhance their employment opportunities and potentially increase their earning potential, especially as it relates to securing a teaching position at a community college. Second, the certificate program will serve as a stackable entry and exit point for the online Maters degrees. By introducing this certificate, we hope to attract more students and provide a pathway that supports their academic and professional development. The stackable degree approach provides faster credentialing encourages students hesitant to commit to a full master's program to start with the certificate, potentially leading to increased enrollment. Additionally, the flexibility to stop and start the program more readily may attract more applicants.

Explanation for January 2025 Start: This proposed certificate does not require any additional resources, and therefore, we believe that we are in a good position to start offering the certificate immediately. The necessary faculty are already in place, and the courses are currently offered. The proposal merely provides a new organizational framework, demanding minimal time and effort. The primary changes for the department would involve approval, acceptance, tracking, and institutional effectiveness reporting. All of this can be accomplished with a January 2025 start date.

MISSISSIPPI STATE
UNIVERSITY

Department of Geosciences
108 Hilburn Hall
355 Lee Blvd.
P.O. Box 5448
Mississippi State, MS 39762
Phone (662) 325-3915
FAX (662) 325-9423

October 9, 2024

College of Arts and Sciences and the University Courses and Curriculum Committees

Mississippi State University

RE: Department of Geosciences: Post-Baccalaureate Certificate – Earth Sciences for Teachings

Dear Curriculum Committee,

The Department of Geosciences Curriculum Committee has reviewed and supports the proposed creation of a post-baccalaureate certificate program with a content focus on "Earth Sciences" related courses from the Geosciences (Geography/Geology). The creation of this program will:

- provide a flexible option for post-baccalaureate students to gain a general background in geosciences at the graduate level, allowing them to be certified to teach geography or geology related subjects at a community college / undergraduate course level;
- serve as a stackable entry and exit point for the online Environmental Geosciences MS degree

We fully support the creation of the post-baccalaureate certificate program. If you have any questions or need additional information, please do not hesitate to contact us.

Respectfully,

Andrew Mercer Digitally signed by Andrew Mercer Date: 2024.10.09 17:12:57 -05'00'

Andrew Mercer (Committee Member)

Brian Williams Digitally signed by Brian Williams Date: 2024.10.10 10:46:14 -04'00'

Brian Williams (Committee Member)

Boniface O Fosu Digitally signed by Boniface O Fosu Date: 2024.10.10 09:18:04 -05'00'

Boniface Fosu (Committee Member)

Varun Paul Digitally signed by Varun Paul Date: 2024.10.10 18:24:45 -05'00'

Varun Paul (Committee Member)

Sarah Lalk, PhD Digitally signed by Sarah Lalk, PhD Date: 2024.10.11 07:44:04 -05'00'

Sarah Lalk (Committee Chair)

CC: Dr. John C. Rodgers, Department Head of Geosciences

MISSISSIPPI STATE UNIVERSITY

MSU - MERIDIAN
Division of Education
College Park Campus
1000 Hwy 19 North
Meridian, MS 39307
P. 601.484.0170
F. 601.484.0280
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October 9, 2024

To Whom It May Concern:

We have reviewed the Certificate in Geography and Geology Community College Teaching and approve of the proposal. This Certificate program will serve as another excellent avenue to increase the number of available community college teachers in this field.

Sincerely,

Mark Fincher

Mark Fincher (Oct 9, 2024 17:54 CDT)

Mark Fincher, Professor
Coordinator, Community College Education

Kim Hall

Kim Hall (Oct 9, 2024 15:09 CDT)

Kimberly Hall, Professor
Head, Division of Education
Associate Dean, College of Education

Letter of Support Certificate Geography and Geology

Final Audit Report 2024-10-09

Created:	2024-10-09
By:	Kim Hall (krj4@msstate.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAA6RFJiMPQuIlqtaUNRak8Dh9JYaGAaq1i

"Letter of Support Certificate Geography and Geology" History

Document created by Kim Hall (krj4@msstate.edu)
2024-10-09 - 6:25:47 PM GMT

Document emailed to mfincher@meridian.msstate.edu for signature
2024-10-09 - 6:26:46 PM GMT

Document emailed to Kim Hall (krj4@msstate.edu) for signature
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Document e-signed by Kim Hall (krj4@msstate.edu)
Signature Date: 2024-10-09 - 8:09:02 PM GMT - Time Source: server

Email viewed by mfincher@meridian.msstate.edu
2024-10-09 - 10:54:20 PM GMT

Signer mfincher@meridian.msstate.edu entered name at signing as Mark Fincher
2024-10-09 - 10:54:51 PM GMT

Document e-signed by Mark Fincher (mfincher@meridian.msstate.edu)
Signature Date: 2024-10-09 - 10:54:53 PM GMT - Time Source: server

Agreement completed.
2024-10-09 - 10:54:53 PM GMT

INTENT TO OFFER, MODIFY, OR DELETE A CERTIFICATE PROGRAM

Institutional Request Form – Appendix 16
(Submit in PDF format with signatures.)

Institution:	Mississippi State University
Date of anticipated implementation:	January 2025
Notification of intent to:	☒Offer a certificate ☐Modify an existing certificate ☐Delete a certificate
Certificate title as it will appear on Academic Program Inventory:	Geography and Geology Teaching Community College Post-Baccalaureate Certificate
Six-digit CIP code (and four-digit IHL sequence code if this is a modification or deletion):	40.0401
Total credit hours:	18
Unit head:	John Rodgers
Phone:	662-325-1393
Email:	jcr100@msstate.edu

OFFERING or MODIFYING a certificate - *Complete this section if the intent is to offer or modify a certificate.*

Vocational certificate:	☐Yes	☐No
Credit-bearing program:	☒Yes	☐No
Title IV financial aid eligible:	☒Yes	☐No

Which of the following best describes this certificate program?

- ☐ **Pre-Baccalaureate (Less than 1 Year)** - Undergraduate program with duration of less than one academic year; designed for completion in less than 30 credit hours
- ☐ **Pre-Baccalaureate (At Least 1 Year)** - Undergraduate program with duration of at least 1 year; designed for completion in at least 30 hours; does not meet requirements for associate or bachelor's degrees
- ☒ **Post-Baccalaureate** - Program designed beyond the baccalaureate degree but does not meet the requirements for a master's degree
- ☐ **Post-Master's** - Program designed beyond the master's degree but does not meet the requirements for a doctoral degree
- ☐ **Other** - Other certificate program not meeting one of the four criteria above

Program summary:

The Geography and Geology Community College Teaching Certificate provides students with an interdisciplinary foundation for teaching these subjects at the community college level. This program is designed for individuals seeking to meet the academic requirements to teach geography and geology, with a focus on the cross-curricular transfer of knowledge between these fields and the understanding of how large-scale systems, such as the water cycle, impact both geological and geographical phenomena.

Studying geography and geology together is crucial for educators as it provides a holistic view of Earth's systems and their interactions, offering students tools to analyze and explain processes that span both disciplines. The program covers key concepts in both geography and geology, emphasizing their interconnection through the study of natural systems, human impact, and environmental processes.

While this certificate does not grant a professional credential or licensure in geology or geography, it meets the credit-hour requirements to teach these subjects at the community college level. This program is ideal for individuals looking to transition into education or integrate their background in geography or geology into community college teaching.

The Geography and Geology Community College Teaching Certificate can be applied toward fulfilling a portion of the program requirements for a full degree, serving as a stackable credential. This certificate is compatible with at least

two master's degree programs. The first is the Master of Arts in Teaching Community College Education (online program), and the second is the Master of Science in Environmental Geosciences (online program). Both degrees offer pathways for further academic and professional advancement, building upon the foundational knowledge gained through the certificate program.

The program consists of six, three-credit hour courses for 18 total credit hours. Specially, the courses include:

- GG 6543 Community Engagement in Environmental Geosciences
- GR 6863 Forensic Geosciences
- GG 8233 Environmental Geosciences
- GR 8823 Advanced Natural Hazards
- Six credit hours of GR or GG courses at the 6000-level or higher

Justification:

There are two primary reasons for proposing this online certificate. First, it aims to provide a flexible opportunity for students to gain a general background in geography and geology at the post-baccalaureate level. This background can enhance their employment opportunities and potentially increase their earning potential, especially as it relates to securing a teaching position at a community college. Second, the certificate program will serve as a stackable entry and exit point for the online Maters degrees. By introducing this certificate, we hope to attract more students and provide a pathway that supports their academic and professional development. The stackable degree approach provides faster credentialing encourages students hesitant to commit to a full master's program to start with the certificate, potentially leading to increased enrollment. Additionally, the flexibility to stop and start the program more readily may attract more applicants.

Explanation for January 2025 Start: This proposed certificate does not require any additional resources, and therefore, we believe that we are in a good position to start offering the certificate immediately. The necessary faculty are already in place, and the courses are currently offered. The proposal merely provides a new organizational framework, demanding minimal time and effort. The primary changes for the department would involve approval, acceptance, tracking, and institutional effectiveness reporting. All of this can be accomplished with a January 2025 start date.

Chief Academic Officer Signature – Date

Institutional Executive Officer Signature – Date