

Description of “Special Geologic Topic”

Information			
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Module Leader's Acad. Title		Lecturer	
Scientific Committee Approval Date		Version Number	1.0

Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	Setting goals for teaching a Special Geology Topic involves a structured approach that emphasizes both student engagement and effective teaching strategies. Here's how I would approach this process: Understanding the Context 1. Identify Course Objectives: - Begin by defining what I want students to achieve by the end of the course. This involves articulating specific skills and knowledge they should possess, such as understanding geological processes or being able to analyze geological data. 2. Align with Institutional Goals: - Ensure the course objectives align with broader departmental and institutional educational goals. This might include promoting critical thinking, scientific literacy, and practical application of geological concepts in real-world scenarios. Goal Setting Framework 3. Establish Broad and Specific Goals: -Broad Goals: - Enhance student learning through improved teaching methods. - Foster a dynamic and interactive classroom environment. - Specific Goals: - Increase student participation in discussions and hands-on activities.

	- Develop assessments that reflect higher-order thinking skills, such as analysis and synthesis of geological information. 4. Use SMART Criteria: - Goals should be Specific, Measurable, Achievable, Relevant, and Time-bound. For instance, a goal could be to improve student exam scores by 15% over the semester through revised assessment methods. Implementation Strategies 5. Incorporate Active Learning Techniques: - Design activities that allow students to engage directly with geological concepts, such as fieldwork or interactive simulations. This hands-on approach helps solidify their understanding and makes geology more relatable. 6. Foster a Collaborative Learning Environment: - Encourage peer-to-peer learning through group projects or discussions where students can share insights and challenge each other's understanding of geological topics. Evaluation and Reflection 7. Continuous Assessment: - Implement formative assessments throughout the semester to gauge student understanding and adjust teaching strategies as needed. This could include quizzes, reflective journals, or peer evaluations. 8. Reflect on Teaching Practices: - At the end of the course, reflect on what worked well and what didn't in terms of achieving the set goals. Gather feedback from students to inform future iterations of the course.
Module Learning Outcomes	In a university setting, establishing Module Learning Outcomes for a Special Geology Topic is essential for guiding students' learning and ensuring they acquire the necessary skills and knowledge. Here's how these outcomes can be structured: Module Learning Outcomes 1. Knowledge Acquisition - Understand Geological Principles: Students will explain key geological concepts, including the structure and composition of Earth, and fundamental processes such as plate tectonics, erosion, and sedimentation. - Identify Geological Materials: Students will identify and classify various geological materials such as minerals, rocks, and fossils, understanding their properties and significance within geological contexts. 2. Practical Skills Development

	- Field Data Collection: Students will demonstrate proficiency in using geological field instruments (e.g., GPS, Brunton Transits) to collect data accurately and safely. - Data Interpretation: Students will interpret geological maps, stratigraphic columns, and cross-sections to visualize geological relationships in space and time. 3. Analytical Thinking - Apply Scientific Methods: Students will apply scientific reasoning to geological problems by making observations, developing interpretations, and distinguishing between observations and conclusions. - Critical Evaluation of Information: Students will evaluate various sources of geological information critically, understanding their strengths and limitations to inform their research and arguments. 4. Communication Skills - Effective Communication: Students will formulate clear written and oral presentations that convey geological concepts effectively, utilizing maps, graphs, and diagrams where appropriate. - interdisciplinary Connections: Students will articulate the relationships between geology and societal issues, recognizing how geological knowledge impacts environmental policy and public understanding. 5. Research Competence - Conduct Independent Research: Students will design and conduct research projects that involve gathering field or laboratory data, analyzing results, and coherently presenting findings. - Integration of Knowledge: Students will synthesize information from various geological disciplines (e.g., chemistry, biology) to develop a comprehensive understanding of complex geological systems.
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Special Geologic Topic Syllabus	
Week 1	Why is Land use management important?
Week 2	Transport System
Week 3	Integrated land use initiative.
Week 4	Sustainable
Week 5	Aerial photography in geology
Week 6	Geological Mapping

Week 7	Landform Analysis
Week 8	Land Cover Change Detection
Week 9	Use of remote sensing in the Geomorphology
Week 10	Use of remote sensing in the assessment of geomorphological deformation of drainage patterns
Week 11	Remote sensing of environment
Week 12	Remote sensing of desertification
Week 13	Project Proposal Development
Week 14	Project Presentations
Week 15	Pre-final exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Siddan Anbazhagan and Subramanian Yang.(2018). Geoinformatics in Applied Geomorphology.	no
Recommended Texts	Campbell, James B. & Randolph H. Wynne. (2011). Introduction to Remote Sensing. The Guilford Press. New York & London. 5 th Edition.	No
Websites	https://www.youtube.com/channel/UCOOUW1LA5B93j5V0oNVYN6Q	