Colonnade Program Course Proposal: Explorations Category

In compliance with the Colonnade Implementation Committee's request, the Department of Geography and Geology submits the following materials for the Exploration course GEOL 111, The Earth!

1. What course does the department plan to offer in Explorations? Which subcategory are you proposing for this course? (Arts and Humanities; Social and Behavioral Sciences; Natural and Physical Sciences)

The Department of Geography and Geology plans to offer the existing GEOL 111, The Earth! in the Natural and Physical Sciences subcategory within the Explorations Category.

NOTE: This GEOL 111 has an associated proposal with GEOL 113, The Earth! Laboratory.

2. How will this course meet the specific learning objectives of the appropriate subcategory. Please address **all** of the learning outcomes listed for the appropriate subcategory.

> The course objective of Geology 111:
> Everything that comprises our knowledge of energy/environment and the political, economic, societal concerns that surround them encompasses all of Geology spanning huge time frames starting 4.5 billon years ago to the unforeseeable future. This class can prepare you for a future career in the geological sciences (industry, teaching, research, and many others) and gives you the background information needed to **make educated decisions regarding our planet.**
>
> This is an introductory core course with co-requisite lab component for geology majors and minors, prospective science teachers, and students in allied sciences or other technical areas. This course provides an introduction to Earth materials, dynamic external and internal Earth processes, and the relationships between human activity and the Earth. This course fulfills three credit hours of the Science Explorations component of the WKU Colonnade, and will help students attain these general education goals and objectives.

GEOL 111 is a required introductory course for Geology Majors, but over 95% of students typically enrolled are non-majors. GEOG 111, (with associated GEOL 113 lab) is a lecture/lab science course sequence.

Learning and Content objectives for GEOG 111: The Earth!

Students who complete GEOL 111 will be able to:

- Articulate an understanding of the scientific method and knowledge of natural science and its relevance in our health, well-being, and quality of life
- Develop a capacity for critical and logical thinking
- Conceptualize and understand basic applied mathematical skills and concepts to science
- Effectively express themselves in written and/or oral form on topics of geology and inter-related science sub-disciplines (chemistry/physics/biology).
- Demonstrate the ability to think critically about natural processes and their social and economic issues through either writing or discussion
- Locate and use information on geology and the natural sciences on topics from a variety of sources, including peer-reviewed literature and popular public media electronic sources
- Demonstrate ability to quantitatively and qualitatively describe the interactions of Earth Systems and their impact on weather, past- present- and future- climate, biodiversity, chemical provenance, and landscape formation.
- Demonstrate the ability to integrate knowledge of data analysis and their significance in a coherent and meaningful manner
- Critically evaluate sources of data and understand their limitations and inherent errors

How these course objectives fulfill the Colonnade Program's four objectives for the Natural and Physical Sciences subcategory of the Explorations Category:

Colonnade Learning Objective 1: Demonstrate an understanding of the methods of science inquiry.

Throughout this course, students are repeatedly asked to develop questions and ideas that could be testable (a hypothesis). Once the idea or question is formed, they are then asked how it should be tested, what assumptions are to be made, and what sort of data should be collected. In the past, this was accomplished through short and step-wise written Blackboard assignments, but any mode of delivery would be appropriate. As a result, the student now has a workable framework for which they now understand how scientific ideas are developed, tested, measured, and interpreted.

Colonnade Learning Objective 2: Explain basic concepts and principles in one or more of the sciences.

Each lecture delivers basic concepts and principles of Earth forces and processes that are the core foundation of this course where all the connective learning takes place.

Colonnade Learning Objective 3: Apply scientific principles to interpret and make predictions in one or more of the sciences.

Each course topic begins with the framework around Colonnade Learning Objective 1. Then each subsequent in-class discussion builds upon that content into a testable hypothesis, including possible sources of errors and biased assumptions, and articulate physical, biological, or chemical processes in and on Earth. Interpretations of existing physical (e.g. geothermal convection)/chemical (e.g. material chemistry and crystallization)/biological (e.g. evolution) data are made, however, new data are not created in this course.

Colonnade Learning Objective 4: Explain how scientific principles relate to issues of personal and/or public importance

For each topic in the course, aspects are discussed with the students (and students with the instructor) that are of direct concern to their lives. For example, there is not a day goes by that a popular newspaper or magazine reports on geological processes that affect public interests or personal health. These examples are used in the classroom to relate and apply Colonnade Learning Objectives 1, 2, and 3. This course is engaging of critical political, economic, and health related concerns that are directed by local and global geologic processes.

3. Syllabus statement of learning outcomes for course. NOTE: In multi-section courses, the same statement of learning outcomes must appear on every section's syllabus.

The following items will appear in all GEOL 111 syllabi

Geology 111 (3 credit hrs.) This is an introductory core course with a lab component for geology majors and minors, prospective science teachers, and students in allied sciences or other technical areas. This course provides an introduction to Earth materials, dynamic external and internal Earth processes, and the relationships between human activity and the Earth. This course fulfills three credit hours of the Science Explorations component of the WKU Colonnade, and will help you attain these general education goals and objectives.

Everything that comprises our knowledge of energy/environment and the political, economic, societal concerns that surround them encompasses all of Geology spanning huge time frames starting 4.5 billon years ago to the unforeseeable future. This class can prepare you for a future career in the geological sciences (industry, teaching, research, and many others) and gives you the background information needed to **make educated decisions regarding our planet.**

Learning and Content Objectives for WKU Colonnade Program
This course fulfills the Colonnade Program's requirements for the Natural and Physical Sciences subcategory of the Explorations Category. As part of that program, GEOL 111 has the following learning objectives:

- An understanding of the scientific method and knowledge of natural science and its relevance in our health, well-being, and quality of life
- Develop a capacity for critical and logical thinking
- The ability to understand and apply mathematical skills and concepts to science
- Effectively express themselves in written and oral form on topics of geology and inter-related science sub-disciplines (chemistry/physics/biology).
- Demonstrate the ability to think critically about natural processes and their social and economic issues through either writing or discussion
- Locate and use information on geology and the natural sciences on topics from a variety of sources, including peer-reviewed literature and popular public media electronic sources
- Demonstrate ability to quantitatively and qualitatively describe the interactions of Earth Systems and their impact on weather, past- present- and future- climate, biodiversity, chemical provenance, and landform formation.
- Demonstrate the ability to integrate knowledge of data analysis and their significance in a coherent and meaningful manner
- Critically evaluate sources of data and understand their limitations and inherent errors
- Demonstrate ability to quantitatively and qualitatively describe the interactions of Earth Systems and their impact on weather, past- present- and future- climate, biodiversity, chemical provenance, and formation.

As a student enrolled in Geology 111, you are expected to:
- Read the assigned reading material before coming to class
- Attend all lectures, you are responsible for all content given or assigned in the course.
- If a lecture/quiz/exam/assignment is missed, only properly documented excuses will be allowed for makeup work.

4. Brief description of how the department will assess the course for these learning objectives.

The Department of Geography and Geology will assess GEOL 111 may use a series of assessment tools: pre- and post- conceptual diagnostic tests, that examine student confidence and content knowledge of concepts related to learning objectives, concept tests, peer reviews, and content specific rubrics that are given to the students. These assessment tools are widely used and proven valuable in the geological sciences (as demonstrated by NAGT workshops – seminars/data posted online at the serc.carleton.edu website), and have been implemented in the WKU Geology Program for the last eight years.

Results from the survey assessments and graded assessments will be used to evaluate whether or not student-learning objectives are being achieved. Results will also be used to improve content and application teaching in the class.

For learning outcomes 1 through 4, each of the following tools will be used:

> In class examinations will cover the learning outcomes of 1 through 4. All of these objectives are testable and can be verified from factual information.
>
> Learning outcomes 1 through 4 will be assessed from in-class and out-of-class activities that are gradable and evidence based.
>
> Learning outcomes 1 through 4 will be evaluated using a non-factual rubric that has been developed in-house. These are the pre- and post- class surveys and the results will be correlated to the factual-based assessment tools previously described.

5. How many sections of this course will your department offer each semester?

The Department of Geography and Geology will offer 3-4 sections of GEOG 111 (depending on class sizes and available space) and 6-8 section of the associated lab (GEOL 113) each semester with a goal of enrolling 200-350 students per semester.

6. Please attach sample syllabus for the course.

See attached.

Please send your proposal to: robert.dietle@wku.edu

Geology 111 The Earth (3 hours)

Fall 2013 - Western Kentucky University
Instructor: Dr. Aaron Celestian (office 433 in EST, PH: 5-5977) E-mail: aaron.celestian@wku.edu
Office Hours: EST room 433 or 322 time: TBA in class and on Blackboard
Course Meeting Times/Place: MWF 11:30 am – 12:25 am (room 260 in EST)

Design and Purpose of Course

Geology 111 (3 credit hrs.) This is an introductory core course with a lab component for geology majors and minors, prospective science teachers, and students in allied sciences or other technical areas. This course provides an introduction to Earth materials, dynamic external and internal Earth processes, and the relationships between human activity and the Earth. This course fulfills three credit hours of the Science Explorations component of the WKU Colonnade, and will help you attain these general education goals and objectives.

Everything that comprises our knowledge of energy/environment and the political, economic, societal concerns that surround them encompasses all of Geology spanning huge time frames starting 4.5 billon years ago to the unforeseeable future. This class can prepare you for a future career in the geological sciences (industry, teaching, research, and many others) and gives you the background information needed to **make educated decisions regarding our planet.**

Co-requisite

Geology 113, Physical Geology Laboratory (1 credit hr.). Those students enrolled in Geology 111 should also be enrolled in Geology 113, as both count toward your general education requirement (Category D). Please see the GEOL 113 course syllabus for more information.
Text (required) – Essentials of Geology by Steven Marshak 3rd Ed. or 4th Ed. (Norton Publishing). If you already own an earlier edition, check with Dr. Celestian before buying a newer edition.
Lectures are designed to supplement and augment material covered in the text. Therefore – read assigned chapters before lecture in order to be prepared.

Learning Outcomes

This course fulfills the Category D science requirement (and GEOL 113 fulfills the Category D science lab requirement). In the future, Fall 2015 and beyond, this course fulfills the Colonnade Program's requirements for the Natural and Physical Sciences subcategory of the Explorations Category. As part of that program, GEOL 111 has the following learning objectives:

- An understanding of the scientific method and knowledge of natural science and its relevance in our health, well-being, and quality of life
- Develop a capacity for critical and logical thinking
- The ability to understand and apply mathematical skills and concepts to science
- Effectively express themselves in written and/or oral form on topics of geology and inter-related science sub-disciplines (chemistry/physics/biology).
- Demonstrate the ability to think critically about natural processes and their social and economic issues through either writing or discussion
- Locate and use information on geology and the natural sciences on topics from a variety of sources, which could include peer-reviewed literature and popular public media electronic sources
- Demonstrate ability to quantitatively and qualitatively describe the interactions of Earth Systems and their impact on weather, past- present- and future- climate, biodiversity, chemical provenance, and landform formation.

- Demonstrate the ability to integrate knowledge of data analysis and their significance in a coherent and meaningful manner
- Critically evaluate sources of data and understand their limitations and inherent errors
- Demonstrate ability to quantitatively and qualitatively describe the interactions of Earth Systems and their impact on weather, past- present- and future- climate, biodiversity, chemical provenance, and formation.

As a student enrolled in Geology 111, you are expected to:

- Read the assigned reading material before coming to class
- Attend all lectures, you are responsible for all content given or assigned in the course.
- If a lecture/quiz/exam/assignment is missed, only properly documented excuses will be allowed for makeup work.

Assessment

There will be four regular non-cumulative exams, one cumulative final exam (100 pts. each), and your final grade will be calculated on a 600-point basis (including 500 pts for four exams and 100 points from assessment items such as announced and unannounced quizzes, exercises, and other in-class or homework assignments). Each exam is equally weighted (each exam is 20% of your grade) and the other assessment items are weighted relative to the degree of work for each.

Exams will vary from multiple choice and short essay to short problem solving and graphical display (basic sketching) formats. In class or take-home quizzes/work will be a measure of your commitment to learning on a daily basis in the class. Students who do well on quizzes/work will certainly prove themselves as the best performers on hourly exams. Online practice tests are available at: http://www.wwnorton.com/college/geo/earth4 choose a chapter at the top of the page – answer the questions – and submit it to be graded. These tests may be taken at any time and results may be e-mailed to Dr. Celestian for review.

The grading scale is as follows:
(> 90%) = A (89% - 80%) = B (79% - 70%) = C (69% - 60%) = D (< 60%) = F
Note: There is no possibility of "extra credit".

Additional Information

Attendance and Participation Policy:

Attendance is expected and participation strongly encouraged. Students are responsible for all material covered in class, whether or not they are in attendance. I expect students to be on time, and to stay for the entire class period. Students will be permitted to make up examinations missed because of illness, mandatory religious obligations, or other unavoidable circumstances or University activities. I expect notice, and an acceptable written document regarding such absences is required.

Student Behavior:

Students are expected to assist in maintaining a classroom environment that is conducive to learning. In order to assure that all students have the opportunity to gain from time spent in class, unless otherwise approved by the instructor; students are prohibited from engaging in any other form of distraction. Inappropriate behavior in the classroom shall result, minimally, in a request to leave class. All incidents of inappropriate behavior will be reported to the department and/or the Dean of Ogden College.

Schedule Change Policy

The Dept. of Geography and Geology strictly adheres to University policies regarding schedule changes. It is the responsibility of the student to meet all deadlines for drop/add etc. Only in exceptional cases will a deadline be waived (you would be required to fill out an appeal form). The form requires a written

description of the extenuating circumstances involved and the attachment of appropriate documentation. Poor academic performance, general malaise, or undocumented general stress factors are not considered as legitimate circumstances.

Make-Up Policy

In the rare event that an examination is missed, make-up exams will be scheduled only for those students presenting a valid, written excuse for their absence during the scheduled test period. It is your responsibility to contact your instructor before the exam to make other arrangements. There will be no make-up quizzes or exercises without proper documentation.

Miscellany

There is no food or drink permitted in the classroom. EST is a smoke-free building. **Cell phones and other electronic distractions should be turned off in the classroom!** I expect students to respect both the material and their colleagues. This means pay attention and do not disrupt those around you or prevent them from being able to concentrate.

Plagiarism and Cheating

To represent ideas or interpretations taken from another source as one's own is plagiarism. Plagiarism is a serious offense. The academic work of a student must be their own. Students must give the author(s) credit for any source material used. To lift content directly from a source without giving credit is a flagrant act. To present a borrowed passage after having changed a few words, even if the source is cited, is also plagiarism.

Any form of cheating is strictly prohibited.

Disposition of Offenses - Students who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the course work in which the act is detected or a failing grade in the course without possibility of withdrawal.

Student Disability Services

In compliance with university policy, students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services in DUC A-200 of the Student Success Center in Downing University Center. The phone number is 745 5004. Please do not request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.

The Learning Center (TLC)

Should you require academic assistance with your WKU courses, The Learning Center (located in the Downing University Center, A330) provides free supplemental education programs for all currently enrolled WKU students. TLC @ DUC offers certified, one-on-one tutoring in over 200 subjects and eight academic skill areas by appointment or walk in. Online tutoring is offered to distance learners. TLC is also a quiet study area (with side rooms designated for peer-to-peer tutoring) and offers a thirty-two machine Dell computer lab to complete academic coursework. Additionally, TLC has three satellite locations. Each satellite location is a quiet study center and is equipped with a small computer lab. These satellite locations are located in Douglas Keen Hall, McCormack Hall, and Pearce Ford Tower. Please call TLC @ DUC at (270) 745-6254 for more information or to schedule a tutoring appointment. www.wku.edu/tlc

Preliminary Schedule of Lectures: *These are subject to change and I will notify you of any changes in this schedule via lecture and class email/blackboard (WKU accounts only).*

Classes Begin August 26, 2013

Week	Subject	Chapter
1	Introduction	1
	The Earth's Structure – Quiz 1	1
	The Earth's Structure	1
2	**NO CLASS – Labor Day**	2
	Plate Tectonics	2
	Plate Tectonics – Quiz 2	2
3	Minerals	3
	Minerals	3
	Igneous Rocks – Quiz #3	4
4	Igneous Rocks	4
	EXAM #1	
	Volcanoes and Igneous Activities	5
5	Igneous Processes – Quiz 4	5
	Weathering and Soils	6
	Weathering and Soils	6
6	Sedimentary Rocks and Depositional Environments - Quiz 5	7
	Sedimentary Rocks and Depositional Environments	7
	NO CLASS – Fall Break	8
7	Metamorphic Rocks – Quiz 6	8
	Metamorphic Rocks	8
	EXAM #2	
8	Geologic Time and Stratigraphy	9
	Geologic Time and Stratigraphy	9
	Crustal Deformation	10
9	Crustal Deformation – Quiz 7	10
	Earthquakes	11
	Earthquakes	11
10	Mass Wasting: Natural and Unnatural Disasters	15
	Mass Wasting: Natural and Unnatural Disasters	15
	Surface Water	16
11	Surface Water – Quiz 8	16
	EXAM #3	
	Groundwater and Caves	17
12	Groundwater and Caves	17
	Glaciers	18
	Glaciers – Quiz 9	18
13	Deserts and Winds	19
	Thanksgiving break	19
14	Deserts and Winds	19
	Shorelines and Coastal Processes	19
	EXAM #4	
15	Shorelines and Coastal Processes – Quiz 10	20
	Climate Change	21
	Climate Change	21
16	**TBA**	Cumulative

Colonnade Program Course Proposal: Explorations Category

In compliance with the Colonnade Implementation Committee's request, the Department of Geography and Geology submits the following materials for the Exploration course GEOL 113, The Earth! Laboratory.

1. What course does the department plan to offer in Explorations? Which subcategory are you proposing for this course? (Arts and Humanities; Social and Behavioral Sciences; Natural and Physical Sciences)

The Department of Geography and Geology plans to offer the existing GEOL 113 laboratory course in the Natural and Physical Sciences subcategory within the Explorations Category.

NOTE: This GEOL 113 has an associated proposal for GEOL 111, The Earth!

2. How will this course meet the specific learning objectives of the appropriate subcategory. Please address **all** of the learning outcomes listed for the appropriate subcategory.

> The course objective of Geology 113:
> Everything that comprises our knowledge of energy/environment and the political, economic, societal concerns that surround them encompasses all of Geology spanning huge time frames starting 4.5 billon years ago to the unforeseeable future. This class can prepare you for a future career in the geological sciences (industry, teaching, research, and many others) and gives you the background information needed to **make educated decisions regarding our planet.**
>
> Course activities are intended to help you develop your academic skills in these four general education areas plus provide content knowledge of Earth materials, dynamic external and internal Earth processes, and the relationships between human activity and the Earth. This laboratory represents the critical "hands-on" portion necessary for bridging the gap between concept (textbook) and the real world.

GEOL 113 is a required introductory course for Geology Majors, but over 95% of students that are typically enrolled are non-majors. GEOG 113, (will associated GEOL 111) is a lecture/lab science course sequence.

Learning and Content objectives for GEOG 113: The Earth! Laboratory

Students who complete GEOL 113 will be able to:

- Articulate an understanding of the scientific method and knowledge of natural science and its relevance in our health, well-being, and quality of life
- Develop a capacity for critical and logical thinking
- Conceptualize and understand basic applied mathematical skills and concepts to science
- Effectively express themselves in written and oral form on topics of geology and inter-related science sub-disciplines (chemistry/physics/biology).
- Demonstrate the ability to think critically about natural processes and their social and economic issues through either writing or discussion
- Demonstrate ability to quantitatively and qualitatively describe the interactions of Earth Systems and their impact on weather, past- present- and future- climate, biodiversity, chemical provenance, and landscape formation.
- Demonstrate the ability to integrate knowledge of data analysis and their significance in a coherent and meaningful manner
- Critically evaluate sources of data and understand their limitations and inherent errors

How these course objectives fulfill the Colonnade Program's four objectives for the Natural and Physical Sciences subcategory of the Explorations Category:

Colonnade Learning Objective 1: Demonstrate an understanding of the methods of science inquiry.

In the lab, students intensively make observations, tests, hypotheses, and interpretations. This is in the form of mineral and rock identification and geological analysis in 4-dimensions.

Colonnade Learning Objective 2: Explain basic concepts and principles in one or more of the sciences.

Each lab is developed to deliver very specific concepts of Earth processes and their governing principle forces and mechanisms.

Colonnade Learning Objective 3: Apply scientific principles to interpret and make predictions in one or more of the sciences.

This is very similar to Colonnade Learning Objective 1. In geology 113, students are not asked to simply understand the methods of scientific inquiry, but they are required to apply them.

Colonnade Learning Objective 4: Explain how scientific principles relate to issues of personal and/or public importance

Half-way through the semester, students are required to perform surface and subsurface evaluation of geologic and geo-spatial datasets. This includes, but not limited to, structure of coastlines before and after hurricanes, prediction of the location and type of fossil fuels in the Earth, and investigating the affects of water tables changes in a region (desert, karst, etc.) and how they influence political boundaries, city planning, public health, and others. The course is dynamic and very engaging of central issues to local and global processes.

3. Syllabus statement of learning outcomes for course. NOTE: In multi-section courses, the same statement of learning outcomes must appear on every section's syllabus.

The following items will appear in all GEOL 113 syllabi

Geology 113 (1 credit hr.) This is an introductory core lab course for geology majors and minors, prospective science teachers, and students in allied sciences or other technical areas. This course provides an introduction to Earth materials, dynamic external and internal Earth processes, and the relationships between human activity and the Earth. This course fulfills one credit hour of the Science Explorations Lab component of the WKU Colonnade, and will help you attain these general education goals and objectives.

Everything that comprises our knowledge of energy/environment and the political, economic, societal concerns that surround them encompasses all of Geology spanning huge time frames starting 4.5 billon years ago to the unforeseeable future. This class can prepare you for a future career in the geological sciences (industry, teaching, research, and many others) and gives you the background information needed to **make educated decisions regarding our planet.**

Learning and Content Objectives for WKU Colonnade Program
This course fulfills the Colonnade Program's requirements for the Natural and Physical Sciences subcategory of the Explorations Category. As part of that program, GEOL 113 has the following learning objectives:

- An understanding of the scientific method and knowledge of natural science and its relevance in our health, well-being, and quality of life
- Develop a capacity for critical and logical thinking
- The ability to understand and apply mathematical skills and concepts to science
- Effectively express themselves in written and oral form on topics of geology and inter-related science sub-disciplines (chemistry/physics/biology).
- Demonstrate the ability to think critically about natural processes and their social and economic issues through either writing or discussion

- Locate and use information on geology and the natural sciences on topics from a variety of sources, including peer-reviewed literature and popular public media electronic sources
- Demonstrate ability to quantitatively and qualitatively describe the interactions of Earth Systems and their impact on weather, past- present- and future- climate, biodiversity, chemical provenance, and landform formation.
- Demonstrate the ability to integrate knowledge of data analysis and their significance in a coherent and meaningful manner
- Critically evaluate sources of data and understand their limitations and inherent errors

As a student enrolled in Geology 113, you are expected to:

- Read the assigned reading material before coming to class
- Attend all labs, you are responsible for all content given or assigned in the course.
- If a lab/quiz/exam/assignment is missed, only properly documented excuses will be allowed for makeup work.

4. Brief description of how the department will assess the course for these learning objectives.

The Department of Geography and Geology will assess GEOL 113 may use a series of assessment tools: pre- and post- conceptual diagnostic tests, that examine student confidence and content knowledge of concepts related to learning objectives, concept tests, peer reviews, and content specific rubrics that are given to the students. These assessment tools are widely used and proven valuable in the geological sciences (as demonstrated by NAGT workshops – seminars/data posted online at the serc.carleton.edu website), and have been implemented in the WKU Geology Program for the last eight years.

Results from the survey assessments and graded assessments will be used to evaluate whether or not student-learning objectives are being achieved. Results will also be used to improve content and application teaching in the class.

For learning outcomes 1 through 4, each of the following tools will be used:

> In class examinations and quizzes will cover the learning outcomes of 1 through 4. All of these objectives are testable using written exams as an assessment tool, and answers can be verified from factual information.
>
> Learning outcomes 1 through 4 will be assessed from in-class and out-of-class activities that are gradable and evidence based. These are derived from laboratory work and assignments.
>
> Learning outcomes 1 through 4 will be evaluated using a non-factual rubric that has been developed in-house. These are the pre- and post- class surveys and the results will be correlated to the factual-based assessment tools previously described for each student.

5. How many sections of this course will your department offer each semester?

The Department of Geography and Geology will offer 6-8 section of GEOL 113 each semester with a goal of enrolling 100-200 students per semester.

6. Please attach sample syllabus for the course.

See attached.

Please send your proposal to: robert.dietle@wku.edu

Geology 113 The Earth (1 hours)

Fall 2013 - Western Kentucky University
Instructor: Dr. Andrew Wulff (contact information TBA) E-mail: andrew.wulff@wku.edu
Office Hours: EST room TBA time: TBA
Course Meeting Times/Place: TBA

Design and Purpose of Course

Geology 113 (1 credit hrs.) This is an introductory core lab course for geology majors and minors, prospective science teachers, and students in allied sciences or other technical areas. This course provides an introduction to Earth materials, dynamic external and internal Earth processes, and the relationships between human activity and the Earth. This course fulfills one credit hour of the Science Explorations component of the WKU Colonnade, and will help you attain these general education goals and objectives.

Everything that comprises our knowledge of energy/environment and the political, economic, societal concerns that surround them encompasses all of Geology spanning huge time frames starting 4.5 billon years ago to the unforeseeable future. This class can prepare you for a future career in the geological sciences (industry, teaching, research, and many others) and gives you the background information needed to **make educated decisions regarding our planet.**

Course activities are intended to help you develop your academic skills in these four general education areas plus provide content knowledge of Earth materials, dynamic external and internal Earth processes, and the relationships between human activity and the Earth. This laboratory represents the critical "hands-on" portion necessary for bridging the gap between concept (textbook) and the real world.

Co-requisite

Geology 111, Physical Geology Lecture (3 credit hr.). Those students enrolled in Geology 113 must also be enrolled in Geology 111, and cannot drop one without the other. Please see the GEOL 111 course syllabus for more information.
Text (required) – Laboratory Manual for Introductory Geology 2rd Ed. 2012 (Norton Publishing). If you already own an earlier edition, check with Dr. Celestian before buying a newer edition.
Labs are designed to supplement and augment material covered in the lecture. Therefore – read assigned chapters in the lab and lecture prior to class in order to be prepared.

Learning and Content Objectives

This course fulfills the Colonnade Program's requirements for the Natural and Physical Sciences Lab subcategory of the Explorations Category. As part of that program, GEOL 113 has the following learning objectives:

- An understanding of the scientific method and knowledge of natural science and its relevance in our health, well-being, and quality of life
- Develop a capacity for critical and logical thinking
- The ability to understand and apply mathematical skills and concepts to science
- Effectively express themselves in written and oral form on topics of geology and inter-related science sub-disciplines (chemistry/physics/biology).
- Demonstrate the ability to think critically about natural processes and their social and economic issues through either writing or discussion
- Demonstrate ability to quantitatively and qualitatively describe the interactions of Earth Systems and their impact on weather, past- present- and future- climate, biodiversity, chemical provenance, and landform formation.

- Demonstrate the ability to integrate knowledge of data analysis and their significance in a coherent and meaningful manner
- Critically evaluate sources of data and understand their limitations and inherent errors
- Demonstrate ability to quantitatively and qualitatively describe the interactions of Earth Systems and their impact on weather, past- present- and future- climate, biodiversity, chemical provenance, and landscape formation.

As a student enrolled in Geology 113, you are expected to:

- Read the assigned reading material before coming to class
- Attend all labs, you are responsible for all content given or assigned in the course.
- If a lab/quiz/exam/assignment is missed, only properly documented excuses will be allowed for makeup work.

Assessment

There will be three quizzes (worth 20% each), plus graded homework, labwork, and projects that will constitute the remaining 40% of your lab grade.

The grading scale is as follows:
(> 90%) = A (89% - 80%) = B (79% - 70%) = C (69% - 60%) = D (< 60%) = F
Note: There is no possibility of "extra credit".

Additional Information

Attendance and Participation Policy:

Attendance is expected and participation strongly encouraged. Students are responsible for all material covered in class, whether or not they are in attendance. I expect students to be on time, and to stay for the entire class period. Students will be permitted to make up examinations missed because of illness, mandatory religious obligations, or other unavoidable circumstances or University activities. I expect notice, and an acceptable written document regarding such absences is required.

Student Behavior:

Students are expected to assist in maintaining a classroom environment that is conducive to learning. In order to assure that all students have the opportunity to gain from time spent in class, unless otherwise approved by the instructor; students are prohibited from engaging in any other form of distraction. Inappropriate behavior in the classroom shall result, minimally, in a request to leave class. All incidents of inappropriate behavior will be reported to the department and/or the Dean of Ogden College.

Schedule Change Policy

The Dept. of Geography and Geology strictly adheres to University policies regarding schedule changes. It is the responsibility of the student to meet all deadlines for drop/add etc. Only in exceptional cases will a deadline be waived (you would be required to fill out an appeal form). The form requires a written description of the extenuating circumstances involved and the attachment of appropriate documentation. Poor academic performance, general malaise, or undocumented general stress factors are not considered as legitimate circumstances.

Make-Up Policy

In the rare event that an assessment is missed, make-up assessments will be scheduled only for those students presenting a valid, written excuse for their absence during the scheduled test period. It is your responsibility to contact your instructor before the exam to make other arrangements. There will be no make-up quizzes or exercises without proper documentation.

Miscellany

There is no food or drink permitted in the classroom. EST is a smoke-free building. **Cell phones and other electronic distractions should be turned off in the classroom!** I expect students to respect both the material and their colleagues. This means pay attention and do not disrupt those around you or prevent them from being able to concentrate.

Plagiarism and Cheating

To represent ideas or interpretations taken from another source as one's own is plagiarism. Plagiarism is a serious offense. The academic work of a student must be their own. Students must give the author(s) credit for any source material used. To lift content directly from a source without giving credit is a flagrant act. To present a borrowed passage after having changed a few words, even if the source is cited, is also plagiarism.

Any form of cheating is strictly prohibited.

Disposition of Offenses - Students who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the course work in which the act is detected or a failing grade in the course without possibility of withdrawal.

Student Disability Services

In compliance with university policy, students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services in DUC A-200 of the Student Success Center in Downing University Center. The phone number is 745 5004. Please do not request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.

The Learning Center (TLC)

Should you require academic assistance with your WKU courses, The Learning Center (located in the Downing University Center, A330) provides free supplemental education programs for all currently enrolled WKU students. TLC @ DUC offers certified, one-on-one tutoring in over 200 subjects and eight academic skill areas by appointment or walk in. Online tutoring is offered to distance learners. TLC is also a quiet study area (with side rooms designated for peer-to-peer tutoring) and offers a thirty-two machine Dell computer lab to complete academic coursework. Additionally, TLC has three satellite locations. Each satellite location is a quiet study center and is equipped with a small computer lab. These satellite locations are located in Douglas Keen Hall, McCormack Hall, and Pearce Ford Tower. Please call TLC @ DUC at (270) 745-6254 for more information or to schedule a tutoring appointment. www.wku.edu/tlc

Preliminary Schedule of Labs: *These are subject to change and I will notify you of any changes in this schedule via lecture and class email/blackboard (WKU accounts only). Lab assignments and homework are due at the beginning of the following lab meeting.*

Week	Subject
1	Classification; Materials, Measurements
2	Minerals - ID
3	Minerals ID
4	Igneous Rocks and **Mineral ID Quiz**
5	Sedimentary Rocks
6	Metamorphic Rocks
7	Spring Break
8	Geologic Time and **Rock Quiz**
9	Geologic Time; Fossils; Stratigraphy
10	Geologic Structures
11	Topographic Maps and Streams
12	Streams/Groundwater
13	Geologic Maps
14	Geologic Maps
15	**Map Quiz**