

# Course Material Submission Form

## OAN Match Definition Form

<b>Today's Date:</b>	April 28, 2008
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<b>Use this table to specify institutional data</b>	
<b>College/University:</b>	Lorain County Community College
Name and title of individual submitting on behalf of the college/university	
<b>Name:</b>	Rosemary Schestag
<b>Title:</b>	Project Manager for Provost/VP Academic and Learner Services
<b>Address:</b>	1005 Abbe Road, CC 219
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<p><b>Indicate the reason for this submission:</b></p> <p> <input checked="" type="checkbox"/> New Course Match  <input type="checkbox"/> Revised Materials - Faculty review panel requested clarification  <input type="checkbox"/> Revised Materials - Institution submitting additional information  <input type="checkbox"/> Revised Materials - Course content revised by institution, including situations of both content and credit hour change  <input type="checkbox"/> Revised Materials - Other         </p> <p><b>Describe specific revisions being made for "Revised Materials" submissions:</b>  <u>Physical Geology PSSC 155 received OSC011 approval in SP07.</u></p> <p><u>PSSC 155 has been converted to a 3 hour lecture with 2 hour lab to better align with what is done at most four-year institutions. In addition, course outcomes have been revised to be more measurable and to reflect recent changes in General Education at our institution.</u></p> <p><u>This new, 4 credit hour course PSSC 156 is submitted for TAG/OAN approval. Once approved, LCCC will withdraw PSSC 155.</u></p> <p><b>Institutional Notes to Faculty Panel (the institution is encouraged to add any additional clarifications for this submission):</b></p>  
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<p><b>Table 1 – Use this table to describe the course match for which materials are being submitted for the first time or revised.</b></p> <p>Proposed effective year and term of match (Final effective date will depend on actual approval of match by faculty panel. Effective Year and Term is the first term in which students taking the course will receive matching credit.)</p> <p>Semester institutions complete this row:</p>
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2007 Academic Year <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input checked="" type="checkbox"/> Spring	
Quarter institutions complete this row:	
20      Academic Year <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input type="checkbox"/> Winter <input type="checkbox"/> Spring	
<b>Ohio Articulation Number (OAN)</b> (Use a separate form for each OAN.):	<b>OSC011</b>
<b>Number of courses in the match:</b>	<b>1</b> (up to 10)
<b>Current status of match:</b>	<input checked="" type="checkbox"/> First time submission  <input type="checkbox"/> Approved <input type="checkbox"/> Submitted <input type="checkbox"/> Disapproved <input type="checkbox"/> Error <input type="checkbox"/> Resubmitted <input type="checkbox"/> Pending <input type="checkbox"/> Error with enrollment <input type="checkbox"/> Not submitted
<b>Course or Courses being matched to or currently matched to the OAN listed above.</b> (Course Numbers must be exactly what will appear on a student's transcript.):	<b>Course Number</b>
	1. <b>PSSC 156</b>
	2.
	3.
	4.
	5.
	6.
	7.
	8.
	9.
10.	

<b>Table 2 - Use this table to submit course materials for the first time or to revise previously submitted course materials. You must submit each course in a separate form, repeating the match definition information in Table 1 above for each form submitted.</b>					
<b>Course Number.</b> (Course Numbers must be exactly what will appear on a student's transcript.):	<b>PSSC 156</b>	<b>Course Title:</b>	<b>Physical Geology</b>		
<b>Hours (be sure that the hours for this course matches the hours in the OAN.)</b>					
<input checked="" type="checkbox"/> <b>Semester Hours</b>			<input type="checkbox"/> <b>Quarter Hours</b>		
<b>Total Credit Hours</b>	<b>4</b>	<b>Lecture Hours</b>	<b>3</b>	<b>Laboratory Hours (if applicable)</b>	<b>2</b>
<b>Course Placement in Major:</b>			<input checked="" type="checkbox"/> Major Requirement <input type="checkbox"/> Major Elective <input type="checkbox"/> Other		
<b>Pre-Requisite Course work (if applicable)</b> (Be sure this is consistent with the OAN definition): None					
<b>Catalog/Course Description:</b>					
Course designed for non-science majors. Introduction to principles of geology. Topics include internal structure of the earth, processes associated with the earth's crust, and structure of earth materials. Laboratory required. (A special fee will be assessed.) <i>Natural Science Core Course</i>					

**Texts/Outside Readings/Ancillary Materials** (Be sure that the text meets performance expectations):

*Physical Geology, by Plummer, 11<sup>th</sup> Ed., McGraw Hill*

*Lab manual – Lab Manual for Physical Geology, by Zumberge, 13<sup>th</sup> Ed., McGraw Hill*

**Course Objectives and/or Plan of Work:**

(Provide a clear indication of how the course objectives align with the matched OAN's learning outcomes. This will facilitate the faculty panel course review process.)

1. Understand characteristics of the earth systems
  - *Describe formation and location of earth materials.*
  - *Predict the effect of dynamic processes on the earth's surface.*
  - *Describe the formation of the internal structure of the earth.*
2. Recognize properties and classifications of earth's materials
  - *Manipulate rocks and minerals to identify type.*
3. Describe surficial process including weathering, erosion and landform evolution
  - *Predict the effect of dynamic processes on the earth's surface.*
4. Recognize hydrologic systems and features
  - *Predict the effect of dynamic processes on the earth's surface.*
5. Describe concepts of plate tectonics
  - *Explain how plate tectonic theory accounts for numerous geological phenomena.*
6. Identify earth's internal processes including igneous activity, metamorphism and rock deformation
  - *Describe formation and location of earth materials.*
  - *Predict the effect of dynamic processes on the earth's surface.*
  - *Recognize various geologic structures on maps.*
7. Understand evolution of significant geologic concepts
  - *Describe the formation of the internal structure of the earth.*
8. Recognize glacial processes
  - *Predict the effect of dynamic processes on the earth's surface.*
9. Describe/recognize applications and impacts of earth sciences to society
  - *Appreciate the impact of human activity on the physical environment.*
10. Apply methodologies of scientific inquiry
  - *Predict the effect of dynamic processes on the earth's surface.*
11. Interpret topographic and geologic maps
  - *Recognize key land forms on topographic maps.*
  - *Recognize various geologic structures on maps.*

**Description of Assessment and/or Evaluation of Student Learning** (The assessment plan needs to be appropriate for the expected rigor of the course) :

<b>COURSE OUTCOMES &amp; ASSESSMENT:</b>	<b>(Tools, Methods, and Expected Results)</b>
<b>Outcomes</b>	<b>Assessment Method(s)</b> <i>*Most courses will address all three domains. In the instance when only two domains are addressed, include a justification in the Division cover letter.</i>
<b>1. Cognitive/Knowledge</b> <i>Describe formation and location of earth materials.</i>	<i>Item analysis of test questions with expected student performance level of 70% or higher.</i>
<b>2. Cognitive/Knowledge</b> <i>Predict the effect of dynamic processes on the earth's surface.</i>	<i>Item analysis of test questions with expected student performance level of 70% or higher. Rubric analysis of case study exercises with expected student performance level of 70% or higher.</i>
<b>3. Cognitive/Knowledge</b> <i>Describe the formation of the internal structure of the earth.</i>	<i>Item analysis of test questions with expected student performance level of 70% or higher.</i>
<b>4. Cognitive/Knowledge</b> <i>Explain how plate tectonic theory accounts for numerous geological phenomenon.</i>	<i>Item analysis of test questions with expected student performance level of 70% or higher.</i>
<b>5. Cognitive/Knowledge</b> <i>Sequence a series of geological events.</i>	<i>Item analysis of test questions with expected student performance level of 70% or higher.</i>
<b>6. Cognitive/Knowledge</b> <i>Recognize key land forms on topographic maps.</i>	<i>Item analysis of test questions with expected student performance level of 70% or higher. Rubric analysis of laboratory exercises and homework exercises with expected student performance level of 70% or higher.</i>
<b>7. Cognitive/Knowledge</b> <i>Recognize various geologic structures on maps.</i>	<i>Item analysis of test questions with expected student performance level of 70% or higher. Rubric analysis of laboratory exercises and homework exercises with expected student performance level of 70% or higher.</i>
<b>8. Psychomotor/Skills</b> <i>Manipulate rocks and minerals to identify type.</i>	<i>Item analysis of practical exam questions with expected student performance level of 70% or higher.</i>
<b>9. Affective/Disposition</b> <i>Appreciate the impact of human activity on the physical environment.</i>	<i>Item analysis of test questions with expected student performance level of 70% or higher.</i>

**Master Syllabi and Working Syllabi (if both are used):**

**PSSC 156 Physical Geology  
Proposed Syllabus**

INSTRUCTOR	OFFICE	EMAIL & CLASS WEB PAGE:
Dr. Sue Clement	Office: PS 210 Times by appointment	sclement@lorainccc.edu or <a href="http://angel.lorainccc.edu">http://angel.lorainccc.edu</a>

**COURSE OBJECTIVES:** *This course is designed to explore the principles of geology with emphasis on the Earth's internal structure and the processes that create and modify the surface. To accomplish this task, we will use class discussion, demonstration and other classroom activities. Outside of the classroom, your success in this course depends on your willingness to participate in your own learning. Reading quizzes and other homework assignments are designed to help you assess your progress in the course. Finally, a case study project will provide you with an in-depth look of one of these important subsystems.*

**REQUIRED TEXTS:** *Physical Geology, by Plummer, 11<sup>th</sup> Ed., McGraw Hill*  
*Lab manual – Lab Manual for Physical Geology, by Zumberge, 13<sup>th</sup> Ed., McGraw Hill*

GRADING SUMMARY		
GRADE TYPE	DESCRIPTION	FINAL GRADE
Exams	Multiple choice & short essay	25 %
Required Final Exam	Same format	15 %
Case Study Project	Group Project: Summary	15 %
Laboratory	Lab exercises and write-ups	25%
Other	Quizzes, in-class activities, discussion, and homework	20 %

Grading scale: A:  $\geq 90\%$ ; B: 89-80%; C: 79-70%; D: 69-60%; F:  $< 60\%$

**ATTENDANCE POLICY:** You will quickly see there is a direct correlation between your attendance and a successful outcome in this class. Thus your attendance is mandatory and will be documented throughout the semester. As incentive, I reserve the right to reduce your final grade or to assign an "F" for any student with excessive undocumented absences.

**MAKEUP EXAM POLICY:** The lowest midterm exam will be dropped therefore; there will be no make up exams. Exceptions can only be made for documented medical excuses. You must notify me when medically possible; otherwise the missed exam will count as your lowest exam grade. Make up work will NOT be provided for in class work but for homework an automatic point deduction will be taken.

**ACADEMIC HONESTY:** Any activity deemed as cheating or plagiarism will result in a grade of "F" on the assignment as stated in the LCCC Student Handbook.

**SPECIAL NEEDS:** In accordance with College policy, if you have a documented disability and require accommodations to obtain equal access in this course, please contact the instructor at the beginning of the semester or when given an assignment for which an accommodation is required. Students with

disabilities must verify their eligibility through the Office of Special Needs.

### LECTURE SCHEDULE

WEEK	LECTURE TOPIC	LAB TOPIC	TEXTBOOK CHAPTER
1	Introduction to Physical Geology Intro to Plate Tectonics	Measurement	CH 1
2	Rock-forming Minerals	Plate Tectonics	CH 2
3	Magma & Igneous Rock Intrusive Activity	Properties of Minerals	CH 3
4	<b>Case Study #1</b> Exam 1	Mineral Identification	
5	Volcanoes Extrusive Igneous Rock	Magma Igneous Rock	CH 4
6	Weathering Sedimentary Rock	Volcanic Hazards	CH 5 & CH 6
7	Metamorphism <b>Case Study #2</b>	Sedimentary Rock	CH 7
8	<b>Exam 2</b> Deformation & Geologic Structures	Geologic Structures	CH 15
9	Earthquakes Geologic Time: Relative Dating	Metamorphic Rock	CH 16 & CH 8
10	Geologic Time: Numerical Dating Streams	Age Dating	CH 8 & CH 10
11	Flooding <b>Case Study #3</b>	Intro to Topographical Maps	CH 10
12	<b>Exam 3</b> Groundwater	Stream Processes	CH 11
13	Karst Topography Mass Wasting: Landslides	Groundwater Movement	CH 11 & CH 9
14	Shorelines <b>Case Study #4</b>	Glacial Land Formations	CH 14
15	Glaciers & Ice Ages of the Past Class Wrap Up	Coastal Land Formations	CH 12
16	<b>FINAL EXAM</b>		

**ADDITIONAL DOCUMENTATION:**

**COURSE DESCRIPTION WITH STUDENT OUTCOMES**  
**LORAIN COUNTY COMMUNITY COLLEGE**

**DIVISION:** Science and Mathematics

**COURSE TITLE:** Physical Geology

**COURSE NUMBER:** PSSC 156

		Contact Hours/Week			Weight		ILU's			
LECTURE/ RECITATION	=	3	x	LECTURE/ RECITATION	(1.0)	=	3			
LAB	=	2	x	LAB	(0.85)	=	1.7			
CLINICAL	=	0	x	CLINICAL	(1.0)	=	0			
*	=			*		=				
*	=			*		=				
<b>TOTAL CONTACT HOURS:</b>	=	5		<b>TOTAL COURSE ILU's</b>		=	4.7	<b>CREDIT HOURS:</b>	=	4

\* Please refer to the "Quality Point Checklist for New and Revised Courses" and/or Pages 500.01 through 500.05 of the Ohio Board of Regents Operating Manual for Two-Year Campus Programs for Instructional Arrangements that are not identified as Lecture/Recitation, Lab or Clinical. (<http://www.regents.state.oh.us/progs/2vrmanual.pdf>)

**IS THERE A SEPARATELY SCHEDULED LAB:** Yes  
**IS THERE A SEPARATELY SCHEDULED CLINICAL:** No

**SPECIAL FACILITIES:** Fully stocked physical geology lab.

**START YEAR/SEMESTER:** Fall 2009

**PREREQUISITE:** None  
 (Please indicate course/s that must be taken before this course.)

**COREQUISITE:** None  
 (Please indicate course/s that must be taken with this course.)

**CONCURRENT:** None  
 (Please indicate course/s that must be taken before or with this course.)

**CATALOG DESCRIPTION:**

Course designed for non-science majors. Introduction to principles of geology. Topics include internal structure of the earth, processes associated with the earth's crust, and structure of earth materials. Laboratory required. (A special fee will be assessed.) *Natural Science Core Course*

**REQUIRED TEXTBOOK(S)/MATERIAL(S):**

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**TOPICAL OUTLINE: (COMMON CORE TOPICS)**

- *Scientific method*
- *Internal earth structure*
- *Geologic time*
- *Minerals*
- *Rocks*
- *Plate Tectonics*
- *Earthquakes*
- *Structural Geology*
- *Volcanism*
- *Erosion*
- *Weathering*
- *Mass Wasting*
- *Ground Water Systems*
- *River and Stream Flooding*
- *Glaciation*
- *Coasts*
- *Map Reading: Geological and Topographical*

<b>COURSE OUTCOMES &amp; ASSESSMENT:</b>	<b>(Tools, Methods, and Expected Results)</b>
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## GENERAL EDUCATION REQUIREMENT: OUTCOMES AND ASSESSMENT

### Core course outcomes:

- C1: English: Demonstrate logical organization, coherent thinking, and precision in writing.
- C2: Mathematics: Utilize college mathematics to solve problems.
- C3: Natural Science: Apply scientific concepts and methods of inquiry.
- C4: Social Science: Apply concepts, principles and methods of inquiry in the social sciences.
- C5: Humanities: Examine the nature of human expression and/or artistic creativity.

### Infused outcomes:

- In1: Critical Thinking: Employ critical thinking skills in addressing issues and problems.
- In2: Communication: Demonstrate competence in verbal and nonverbal communication.
- In3: Diversity: Analyze the role of diversity in the development of the individual, the community, and the global society.
- In4: Ethics: Apply personal, professional, social and civic values.
- In5: Health: Identify behaviors that promote health of the individual.

General Education Outcomes	Corresponding Course Outcomes
C3: Natural Science: Apply scientific concepts and methods of inquiry. <i>Natural Science core course</i>	#1-9
In1: Critical Thinking: Employ critical thinking skills in addressing issues and problems.	#2, 4, 5, and 9

### SUGGESTED INSTRUCTIONAL METHOD(S) AND TECHNIQUE(S):

*Lecture, Posters and illustrations from other books, Field Trips, Lab, Slides, Displays - including samples of minerals, rocks, books, professional journals.*

**GRADING PROCEDURES:**

<i>Case studies</i>	<i>15%</i>
<i>Quizzes, homework, in-class exercises, group work</i>	<i>20%</i>
<i>Laboratory</i>	<i>25%</i>
<i>Exams</i>	<i>25%</i>
<i>Cumulative Final</i>	<i>15%</i>

**TRANSFER MODULE REQUIREMENT CHANGES:**

- None
- Add to English Composition area of Transfer Module
- Add to Arts/Humanities area of Transfer Module
- Add to Social and Behavioral Sciences area of Transfer Module
- Add to Mathematics area of Transfer Module
- Add to Natural and Physical Sciences area of Transfer Module

**MISCELLANEOUS**

- OSC011 Add to Transfer Assurance Guide (TAG)/Ohio Articulation Number (OAN)
- Add "G" for International Course (at least 30% of content is outside U.S.)
- Course/Cluster Program Review Underway

**OTHER RESOURCES INCLUDING EQUIPMENT AND SOFTWARE:**

*Complete set of minerals, glass, streak plates, magnets, binocular microscope, acid, igneous rocks, sedimentary rocks, metamorphic rocks, classroom computer and posters.*

- Library/Learning Resource Review
- IS&S/ITMS Resource Review (Complete form if special technology is needed.)
- Facilities Planning Resource Review (Complete form if special facilities are needed.)

Replaces PSSC 155  
Date: February 2008

**OBR Use**

<b>Approved-Effective Date</b>	
<b>Pending (i.e. Additional Information Requested)</b>	
<b>Disapproved</b>	
<b>Today's Date</b>	