WRIGHT COLLEGE
PROGRAM/DISCIPLINE ASSESSMENT FORM

Program/Discipline: Physical Science (Department) **Instructional Manager:** Kevin Li

Semester/Year: Fall/2011 **Assessment Coordinator:** Dr. Tracy Mitchell **Department Chair:** Dr. Walter Pravica
Email: tmitchell@ccc.edu

Plan Title: Using Exit Test Examinations to Gauge the Achievement of Student Learning Outcomes for Physical Science 101/111.

Part A: Initial Plan: due to your assessment coordinator for review before the Aug 26 Assessment Committee meeting
Part B: Midsemester Update: due to your assessment coordinator for review before the Oct 21 Assessment Committee meeting
Part C: Further Updates: due date will be determined

The current submission is which of the following:

x Initial Plan date: 08/2011

□ Mid-year update date: _____ **□ Final Report date: _____**

College Mission: Wright College is a learning–centered, multi-campus institution of higher education offering students of diverse backgrounds, talents, and abilities a quality education leading to baccalaureate transfer, career advancement, and/or personal development.

Program/Discipline Mission: The mission of the Department of Physical Sciences is to provide our students with solid foundations in Chemistry, Physics, and Physical Sciences so that articulation of classes and material content will allow for a seamless transition into their chosen fields of interest. Our charge is to encourage students to view physical phenomena critically and develop insights which will help them discover and understand the principles that govern events in nature. All are encouraged to develop their curiosity, enhance their intellectual skills, progressively mature, and recognize the growing role of science in society.

A. Initial Assessment Plan

Area of Focus:

Your department efforts are to improve learning in what topic/area?

Critical thinking.

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Evidence: What past results have led your department to conclude that this is an area needing attention?	Wright College's 2010 CAAP Scores indicated lower achievement in the areas of reading and critical thinking.
Course(s) of Interest: What courses will be involved in your plan?	Physical Science 101/111
Intended Program Student Learning Outcomes (SLOs) List each relevant SLO that this project pertains to.	DEPARTMENTAL SLO: Students who complete (physical) science courses at Wright College will be able to: 1) Reason methodically to evaluate and solve qualitative and quantitative problems using appropriate scientific models and/or mathematical manipulations. COURSE SLO's: At the conclusion of the term, the students will be able to: 1. Describe the main properties of a mineral. 2. Distinguish between a rock and a mineral. Also identify the physical properties of minerals. 3. Describe the Rock cycle, including the terms: metamorphism, crystallization, lithification. 4. Name a few of the main metamorphic, igneous, and sedimentary rocks. 5. Describe the Hydrologic cycle, including the terms: running water, transpiration, runoff. 6. Describe the three stages of a river or stream. 7. Define the three types of stream load. 8. Recognize the effect of running water on soil and valleys. 9. Define the terms associated with streams, like delta, gradient, meander. 10. Distinguish the difference between erosion and weathering. 11. Describe the main three types of glaciers. 12. Describe glacial erosion and landforms due to glacial erosion. 13. Recognize the consequences of the Ice age.

14. Name, compare and describe the two theories about continental motion: Continental drift and plate tectonics.
15. Describe the properties of the three types of plate boundaries: Divergent, convergent, transform.
16. Name a geographical place with a divergent, convergent, and transform boundary.
17. Distinguish between focus and epicenter of an earthquake.
18. Describe the properties of the types of seismic waves: P-Wave, S-Wave, and surface wave.
19. Recognize the difference between the Richter scale and the Mercalli scale.
20. Distinguish the difference between seismograph and seismogram.
21. Name and describe the main three types of volcanoes: Cinder, composite, and shield.
22. Distinguish the difference between lava and magma.
23. Recognize the relation among plate tectonics, earthquakes and volcanoes.
24. Distinguish the difference between absolute and relative dating.
25. Name and describe relative dating key principles: Principle of cross cutting, Law of superposition, principle of original horizontality.
26. Distinguish the difference between weather and climate.
27. Describe the main components of the atmosphere.
28. Name all the physical phase changes for matter
29. Describe the main type of clouds.
30. Recognize the effects of air pressure on winds.
31. Describe the properties of atmospherics and local winds.
32. Distinguish the difference between the principles of ancient and modern astronomy.
33. Name and explain the main motions of the earth.
34. Distinguish the difference between a solar and lunar eclipse.
35. Describe the different phases of the moon.
36. Contrast the terms: meteor, meteoroid, meteorite, asteroid, comet.
37. Compare methods of measuring astronomical distance including light year, par-sec, apparent magnitude, and absolute magnitude.
38. Describe the Big bang theory and the concept of an expanding universe.

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Involved Faculty: List the instructor(s) participating in the assessment process for each outcome listed above.	Physical Science. Course Coordinator: Manuel Zanabria Physical Science 101 Instructors: Oleh Hanowsky, Warren Wolfe, Maria Valentino, Benito Kalaw.
Assessment/Intervention Process Address the following questions: **What** approach will be used? **Why** was this process selected? **How** will student learning be measured? **When** will data collection be completed? **Who** will analyze the results?	**What**: The exit test for Physical Science 101/111 is a multiple choice exam that covers all the material studied during the semester. It is taken by all sections with an estimated of 300 students. This test is a pass/fail exam with 30 question and as it is now a student need 16 out of 30 question to pass the exit test **Why:** All the exit test questions are linked to the student learning outcomes. **How**: The overall exam result will analyzed by sections first with the number of student that pass and fail. The results of the exam will be taken in consideration if 30 questions it is enough to cover all the SLO. **When**: The exit exam is given during the 16th week of the semester. The data will be analyzed typically within the next two-three weeks and is submitted as a report to the department Assessment Coordinator. **Who**: Dr. Manuel Zanabria, Physical Science 101/111 Course Coordinator

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B. Midyear Update – due Oct 21	
Completely describe all actions that have occurred since this past August with respect to your department's Assessment Plan. **Attach any relative documents (rubrics, surveys, other assessment tools).**	
Are there any obstacles to the implementation of the plan that the Assessment Committee should know about or can assist with?	

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Part C – due TBD

Summary of Results and Analysis of Data Collected

What were the results of the assessment process?

What was learned from the results?

Action Plan Based on Results and Analysis

Based on what was learned, what additional steps will be taken to improve student learning?

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