General Information

Core Category Discussed:	Exploring the Natural World
Current Semester:	Spring 2016
Date of Assessment Meeting(s):	May 17, 2016

Participants in Assessment Meeting

ENW Subcommittee Members: Chrystal Bruce, Jean Feerick, Michael Nichols, Other Faculty: Mark Waner, John McBratney, Peter Kivdera, Rodney Hessinger

Courses Offered in Fall 2015

None

Courses Offered in Spring 2016

CH	170	51	Forensic Chemistry	C. Bruce
EN	240	51	Detective Fiction	J. McBratney
CH	171	51	Informed Health Decisions	D. Mascotti
ER	201	53	Creativity, Innovation, and Idea Development	M. Lynn

Typical Assessment Process

Faculty members teaching a class in this category are asked to select at least one assignment that addresses each learning goal (with the possibility that one assignment may address multiple goals). As part of (or parallel to) grading those assignments, the faculty member completes the committee-approved rubric and then provides the scores as well as the original student work to the Core Committee. Each semester, the category sub-committee assesses a sample of student work from the previous semester focusing on work connected to the specific learning goal(s) listed in the core assessment schedule. **The focus for the 2016 meeting is Integration.** The assessment meeting, held at the end of the Spring semester each year, focuses on data from the previous spring semester and the most recent fall semester. (Preliminary instructor-produced data for the current semester is also examined when available.)

Deviations from the Assessment Process

Because fall 2015 was the first semester of the new integrative core, there were no integrative core classes offered in spring 2015. Because the pre-requisites for ENW courses, there were also no courses in fall 2015; therefore, this meeting will only be able to make use preliminary data from spring 2016.

Attachments Containing Assessment Data and Instructor Feedback

ENW Rubrics; ENW Feedback 2016, ENW Preliminary Data 2016

Findings

Prompt: Describe, in words, what your sub-committee has learned about student learning during this assessment cycle. What were the strengths? In what ways did students fail to meet the goals set for them?

Note: It is suggested that the distributions of the rubric results be provided in addition to average and deviation to provide a fuller picture of student learning. It is also important to note that the scales for each rubric used was different. As the rubrics are further refined in the future, attempts should be made to standardize scales across the student learning outcomes.

Analysis of the statistics and instructor comments indicated that most of the students met the expectations for the Integration student learning outcome. No trends, either positive or negative, were observed; student achievement of the learning objectives was dependent upon the individual.

With additional data in the coming semesters, more specific strengths and weaknesses will become apparent and will be reported.

Instructor's comments also indicated that they had difficulty in distinguishing the two integrated learning dimensions from each other. Perhaps this is discipline specific as it was reported that in the other core areas (such as EHE), this is easier to do.

Suggestions for Instructors

Prompt: Do any of your findings translate into helpful suggestions for all instructors teaching courses with this designation? Are there areas that need more emphasis? What would be the best mechanism for delivering this feedback? (Possible mechanisms might include an e-mail from the committee, a message delivered at a fall orientation session, a faculty development workshop.) If not obvious, please explain the connection between your findings and these suggestions.

The instructors found that it is important to craft careful, clear, prompts that will allow students to demonstrate their mastery of integration. These prompts may need to be more explicit depending upon the experience (1st year, 2nd year, etc.) of the student.

This information should be included in course development grant workshops, and a separate "helpful hints" document that could be developed to accompany course applications. A specialized workshop focusing on integration and providing models in several disciplines would also be recommended.

Evaluation of Processes

Prompt: Describe, in words, your sub-committee's evaluation of application and assessment processes. What works well? What needs improvement? (All processes should useful provide data with a reasonable amount of effort.)

We will be using the faculty survey data and any other comments contributed during the meeting.

APPLICATION AND COURSE DEVELOPMENT PROCESS

- *The overall survey of the application process was rated from middle to slightly negative.*

- *There are too many requirements, expectations, and/or outcomes for ENW integrated course pairs, leading to:*
    - *Difficulty integrating QA and Writing*
    - *Reduction in the coverage of course content areas, but there needs to be course content (i.e. disciplinary) to achieve integration*
    - *It being difficult to craft integrated courses*

  There was a general consensus at the meeting that the ENW integrated courses have too many requirements, learning outcomes, rubric items, etc. Considerable discussion about potential ways to reduce these occurred. Some can be accomplished by the ENW subcommittee but others will need to be in collaboration with the QA, writing, and core committees.

- *The application process and form are:*
    - *Intimidating and Onerous*
    - *The exact requirements are not as clear as they could be*
    - *Could have clearer instructions and the number of required tasks could be reduced*
    - *More difficult to complete for science courses since they have all requirements and additionally, QA.*

  There was general consensus at the meeting that the ENW course application was the most difficult and intimidating of all integrated course applications. This was attributed to a number of factors including the number of requirements (student learning outcomes, QA and writing components) and some found the application form somewhat redundant where signature assignments were asked to be proposed in multiple sections.

- *The course development process and grant:*
    - *Require more work for a more complicated process but yet provide less funding that course development grants in the past*
    - *Not enough professional development has been offered, particularly early in the development process. Suggested workshops include those on integration, models of integration, rubric writing for the core and subcommittees, etc. Perhaps these could be in the form of commercial pedagogical websites (i.e. Magna) that could be viewed asynchronously.*

- *Other issues:*
    - *The definition of QA is narrowly conceived and needs to be broadened.*
    - *Student learning outcomes are interpreted narrowly by the subcommittee*

STUDENT LEARNING GOALS

- *The comments regarding student learning goals and their assessment include:*
    - *There are too many student learning goals*
    - *There are too many rubric items and they are sometimes inconsistent - example - QA doesn't require mastery at the top level while the others do require mastery and extension at the top level. Expectations for some rubrics are for course skills and for others mastery before graduation (those derived from the AAC&U rubrics).*

SUGGESTIONS FOR IMPROVING THE ASSESSMENT PROCESS

- *The following were suggested for improving the assessment process. They will be categorized by those that can be accomplished by the subcommittee, the Core Committee, and by Changing the Core Document by a Vote of the Faculty.*

	Can Be Accomplished By		
Suggestion	ENW Subcommittee	Core Committee	Vote of Faculty
Reduce Number of Student Learning Outcomes		X	X
Develop new ENW Rubrics that Reduce the Number of Dimensions and Make Their Evaluation More Consistent	X	X	
Change "Emphasis" in QA from 1 Credit Hour per Integrated Class Pair	X (In Collaboration with the QA Subcommitteee)	X	
Change the perception that QA is "statistics-based" and propose non-statistics based course materials and activities that accomplish QA Student Learning Outcomes	X (In Collaboration with the QA Subcommitteee)		
Develop at Least One Rubric Dimension Require Students to Use Science content or scientific skill to Achieve an Outcome (i.e integration or problem solving)	X	X	

Instructors Should Only Periodically Assess Core Student Outcomes - then only a subset should be assessed		X	
Change "unrealistic expectations" (perhaps about the amount of requirements)	X	X	

In the meeting, we spent considerable time discussing the current ENW rubrics. We are in agreement that the dimensions need to be consolidated and simplified. A number of inconsistencies in the current rubrics were identified, including that the writing rubrics, particularly the dimension of source integration, require a research paper. Several instructors indicated that this may not appropriate for students at this level and in many ENW science courses, it is difficult to include a research paper in a comprehensive signature assignment that also assesses integration and QA student learning outcomes. Related to this, it may be appropriate that many science courses not have an argumentative or research-based writing assignment; perhaps changing the writing rubrics or create an additional rubric for science courses that would be more discipline specific. For example, many courses many incorporate student writing in the form of lab reports were students will use data to make argument.

Recommendations for Internal Changes

Prompt: This section pertains to changes that can be made by the sub-committee and the assessment office. What changes, if any, do you need to make to your application or assessment processes or to other aspects of the core designation? If not obvious, please explain the connection between your findings/evaluation and these recommendations.

- *Application, Course Requirements and Course Development Processes*
  - *Develop revisions to ENW application forms to make them less intimidating - onerous, to provide clear instructions and requirements for the application criteria, and that reduce the number of required tasks for course approval*
  - *Provide more example ENW applications and examples of signature assignments for faculty to use in development of courses*
  - *Broaden the interpretation of student learning outcomes when evaluating course applications*
  - *Work with the QA subcommittee on the definition of QA "emphasis", and to broaden the types of course materials/activities that can be used to satisfy QA student learning outcomes.*
  - *Create a check-list of requirements that include points of emphasis to accompany course applications*
  - *Provide additional support to applicants in developing courses and filling out the forms*
  - *Identify additional professional development opportunities, particularly in the early stages of course development, that would be of use to faculty developing ENW courses. Suggestions include development of signature assignments, integration, and models of integration.*

Recommendations for the Core Committee

Prompt: This section pertains to changes that will require action by the entire core committee (and potentially the faculty). What changes, if any, do you need to make to application or assessment processes or to other aspects of the core designation, including learning goals, rubrics, and curricular requirements and/or structures. If not obvious, please explain the connection between your findings/evaluation and these recommendations.

- *Application, Course Requirements and Course Development Processes*
  - *Recommend revisions to ENW application forms to make them less intimidating - onerous, to provide clear instructions and requirements for the application criteria and that reduce the number of required tasks for course approval*
  - *Recommend (jointly with QA committee) a new definition of QA "emphasis" (less than ⅓ of a course, or one that is outcome-based) and the types of course materials/activities that can be used to satisfy QA student learning outcomes.*
  - *Recommend that a systematic process be developed and implemented to aid interested faculty in finding partners to develop ENW integrated course pairs*

    - *Recommend identified development of additional professional development opportunities, particularly in the early stages of course development, that would be of use to faculty developing ENW courses*
    - *Recommend increased funding for course development grants to reflect the complexity of developing integrated core courses*
    - *Recommend that the Core Committee and Administration consider creating writing liason positions for each department to help faculty with the development of writing portions of integrated courses.*

- *Assessment Process*
    - *Recommend studying the ENW student learning outcomes to determine whether they could be consolidated and simplified.*
    - *Recommend consolidated and simplified rubrics be approved for ENW courses after they have been developed.*
    - *Recommend the Core Committee and Office of Assessment develop a revised assessment plan which reduces the number of ENW student learning outcomes assessed each year*
- *Misc.*
    - *There should be a variety of ENW courses at all levels - some for non-science majors and some for junior/senior level STEM students.*