

**GECIG Review Report of General Education Curriculum Goal**  
**Goal Area 10: People and Environment**  
Year Reviewed: Fall 2016 – Spring 2017

Report Submission Date: May 5, 2017

**General Education Outcome Assessment: Background**

Below text on the background of general education outcome assessment was directly taken from the following webpage.

<http://www.mnsu.edu/assessment/gened/geassessment.html>

***General Education***

State agencies, governmental bodies, disciplinary accrediting groups, and national and regional accrediting groups all require information about the learning outcomes of students at Minnesota State Mankato. More importantly, faculty in departments offering general education courses need to know if students are learning what is being taught in the general education courses. Additionally, the University needs to know if the general education program (not individual faculty or individual courses) is meeting its stated objectives. Finally, as with all assessment, the over-arching purpose is to improve student learning.

***The General Education Program and Student Learning Outcomes***

The General Education program integrates a broad foundation of knowledge and skills with the study of contemporary concerns. The General Education curriculum goals are reflective of those capabilities essential for all college-educated adults facing the twenty-first century, including:

- Skills needed for effective understanding and communication of ideas through reading, listening, critical and integrative thinking, writing, speaking, and technological literacy;
- Exploration of various ways of knowing through study of the content, methods of inquiry and creative modes of a broad spectrum of disciplines;
- Our common membership in the human community, coupled with awareness that we live in a diverse world;
- The interrelatedness of human society and the natural environment and the ethical dimensions of political, social, and personal life; and
- Development of responsibility for lifelong learning.

The General Education curriculum at Minnesota State Mankato has a unique relationship with the Minnesota Transfer Curriculum in that the two are intricately tied together. The completion of goal areas at Minnesota State Mankato is accepted as completion of the same goal areas within the Minnesota Transfer Curriculum. Students transferring from Minnesota State Mankato to another Minnesota public institution of higher education will have fulfilled the Minnesota Transfer Curriculum if they have completed 40 credits of required courses in the following ten goal areas of Minnesota State Mankato's General Education curriculum: Communication, Critical Thinking, Natural Science, Mathematical/ Logical Reasoning, History and the Social and Behavioral Sciences,

Humanities and the Arts, Human Diversity, Global Perspective, Ethical and Civic Responsibility, and People and the Environment. The goal areas of Performance and Participation, First Year Experience and Information Technology are part of the General Education curriculum at Minnesota State Mankato but not goal areas in the Minnesota Transfer Curriculum.

### **Assessment Process**

The following text explaining the assessment process was directly taken from the webpage.

<https://www.mnsu.edu/assessment/gened/GEAssessIntro.html>

#### ***Assessment Process***

General education assessment is conducted through a joint effort of the General Education and Diversity Committee, departments offering general education courses, and General Education Curriculum Instructor Groups (GECIG's).

A department offering a general education course is responsible for determining the assignment(s) and/or activities within a general education course that best demonstrate the General Education Curriculum Goal being assessed. The department is responsible for using the identified assignment(s) and/or activities to assess the achievement of learning outcomes using the rubric(s) and sampling guidelines established by the General Education and Diversity Committee for the goal area being assessed.

It is recognized that a general education course is only required to address a majority of the general education outcomes established within a goal area. Therefore, it is not expected that all learning outcomes within a goal area will be assessed within each general education course, only the outcomes from the goal area that are relevant to the course.

A department may assess the General Education student learning outcomes within a General Education course at any point in time utilizing the rubric(s) and the sampling guidelines established by the General Education and Diversity Committee. However, a department is required to report assessment results (less than five years old) for each General Education course prior to the scheduled GECIG review of the General Education curriculum goal to which the course belongs.

A department offering a general education course is responsible for submitting the student learning assessment results via an online form to allow the results to be collected across all courses within a goal area. The student learning assessment results collected for all general education courses within a goal area using the rubric(s) established by the General Education and Diversity Committee is aggregated by learning outcome in preparation for General Education Curriculum goal review.

A GECIG is established for each General Education Curriculum goal being reviewed. Each GECIG will be comprised of five faculty members. The GECIGs primary function within the assessment process is to review and analyze the collected assessment results for each learning outcome for the General Education goal being reviewed. The GECIG is responsible for completing the General Education curriculum goal assessment

process (review and analyze assessment results, provide interpretation of results, and establish recommendations) and submitting a report to the General Education and Diversity Committee.

The General Education and Diversity Committee is responsible for reviewing the GECIG report and preparing a response. The General Education and Diversity Committee will submit a copy of each GECIG’s report and the Committee’s response to the General Education and Diversity Sub-Meet, the Office of the Provost, Assessment and Evaluation Sub-Meet, Council of Deans, Departments with courses within the general education curriculum, and the University community. The General Education and Diversity Sub-Meet will convene a General Education Curriculum Goal Forum to discuss the review findings and recommendations with the Departments and respective Deans offering courses within the goal areas that was assessed.

The General Education and Diversity Sub-Meet will convene a General Education Curriculum Goal Forum to discuss the assessment findings and recommendations with the Departments and respective Deans offering courses within the General Education curriculum goal reviewed. As a part of the forum, strategies to advance student learning in light of the assessment findings will be discussed.

During the General Education Curriculum Goal Forum convened by the General Education and Diversity Sub-Meet, feedback on the goal area outcomes, the shared rubric(s) used to conduct the assessment, and the established sampling guidelines will be collected. At the completion of each five-year general education assessment cycle the General Education and Diversity Committee will review the assessment process.

As shown in Table A, General Education assessment is conducted through a joint effort by the General Education and Diversity Committee, departments offering General Education courses, and General Education Curriculum Instructor Groups (GECIGs).

Table A  
General Education Assessment Process

When	What	Who
September	GECIG Established by General Education and Diversity Committee	General Education and Diversity Committee
By October 15	Final opportunity for Departments to submit assessment results for General Education Curriculum Goal under review	Departments with General Education courses from General Education Curriculum Goal under review
October	Assessment results submitted by Departments aggregated and prepared for GECIG	Institutional Research, Planning and Assessment; University Assessment Coordinator
November-February	GECIG reviews and analyzes assessment results submitted by Departments,	GECIG

	interprets results, establishes recommendations, and submits report to the General Education and Diversity Committee	
March	General Education and Diversity Committee reviews GECIG report and prepares response	General Education and Diversity Committee
April-May	General Education Curriculum Goal Forum	Gen Ed and Diversity Committee with Departments and Deans

### **General Education Curriculum Instructor Groups (GECIG) Formation**

The goal area 10 GECIG was formed by inviting volunteers for the assessment task. In fall 2016, the General Education and Diversity Committee members asked Rama Mohapatra to Chair the GECIG for goal area 10. While forming the GECIG, preferences were given to faculty who teach general education goal area 10 courses or are from the department that has a course listed in this category. GECIG members were paid two duty days of salary for their work. The goal area 10 GECIG members are listed below.

#### ***GECIG Members***

- Ginger Schmid, Geography
- Jonathan Hicks, Recreation, Parks & Leisure Services
- Paul Prew, Sociology and Corrections
- Rama Mohapatra, Geography, Chair
- Richard Liebendorfer, Philosophy

### **General Education Goal Area 10: Description**

The following text was directly taken from the undergraduate catalog.

(Requires one course, 3 credits or more)

Goal: To increase students' understanding of today's complex environmental challenges. Students will examine the interrelatedness of human society and the natural environment. Knowledge of both bio-physical principles and psychosocial cultural systems is the foundation for integrative and critical thinking about environmental issues. Students will be able to:

- (a) explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems;
- (b) discern and analyze patterns and interrelationships of the bio-physical and psychosocial cultural systems;
- (c) critically discern and analyze individual, social, and ecological dimensions of health;
- (d) describe the basic institutional arrangements (social, legal, political, economic, health, ethical, religious) that are evolving to deal with environmental and natural resource challenges;
- (e) evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions;
- (f) propose and assess alternative solutions to environmental problems;

(g) articulate and defend the actions they would take on various environmental issues.

Course(s) which satisfy this goal area include:

Course	Credits	Title/Goal Area(s)
<b>AIS 360P</b>	3	Indigenous People & Environmental Struggles 10
<b>ANTH 102</b>	4	Ancient Peoples 5, 10
<b>ANTH 210-L</b>	4	Introduction to Archaeology 3, 10
<b>EEC 205</b>	3	Service Learning: Society and the Environment 10
<b>ENVR 101</b>	4	Perspectives in Environmental Science 8, 10
<b>GEOG 100P</b>	3	Elements of Geography 8, 10
<b>GEOG 101</b>	3	Introductory Physical Geography 3, 10
<b>GEOG 210W</b>	3	Landscapes and Places 10
<b>GEOL 100-L</b>	3-4	Our Geologic Environment 3, 10
<b>GEOL 108</b>	3	Oceans of the World 3, 10
<b>GEOL 121-L</b>	4	Physical Geology 3, 10
<b>HLTH 101</b>	3	Health and the Environment 10
<b>PHIL 226W</b>	3	Environmental Ethics 9, 10
<b>RPLS 282</b>	3	Wildlife as a Recreational Resource 10
<b>SOC 360P</b>	3	Indigenous Peoples & Environmental Struggles 10
<b>URBS 150</b>	3	Sustainable Communities 5, 10

### Assessment Rubric

The assessment rubric used for data collection and review is as follows. It is important to note that the rubric does not have all the goals included in the rubric. The following goal is missing from the rubric.

- “(g) articulate and defend the actions they would take on various environmental issues.”

## General Education Goal Area 10 – People and the Environment

Rubric					
	Does not meet criteria for Beginning 0	Beginning 1	Developing 2	Proficient 3	Advanced 4
Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems	-	Identify a basic structure and function of a natural ecosystem and a human adaptive strategy within that system	Explain a basic structure and function of a natural ecosystem and a human adaptive strategy within that system	Explain the basic structures and functions of various natural ecosystems and human adaptive strategies within each of those systems	
Discern and analyze patterns and interrelationships of the biophysical and psycho-social cultural systems	-	Identify patterns and interrelationships within a biophysical or a psycho-social cultural system	Identify patterns and interrelationships within a biophysical and a psycho-social cultural system	Analyze patterns and interrelationships of biophysical or psycho-social cultural systems	Analyze patterns and interrelationships of biophysical and psycho-social cultural systems
Critically discern and analyze individual, social, and ecological dimensions of health	-	Identify individual, social and ecological dimensions of health	Analyze individual, social and ecological dimensions of health		
Describe the basic institutional arrangements (social, legal, political, economic, health, ethical, religious) that are evolving to deal with environmental and natural resource challenges	-	Identify a basic institutional arrangement that is evolving to deal with environmental and natural resource challenges and involves two of the following factors: social, legal, political, economic, health, ethical and religious	Describe a basic institutional arrangement that is evolving to deal with environmental and natural resource challenges and involves two of the following factors: social, legal, political, economic, health, ethical and religious	Describe basic institutional arrangements that are evolving to deal with environmental and natural resource challenges and involving three of the following factors: social, legal, political, economic, health, ethical and religious	Describe basic institutional arrangements that are evolving to deal with environmental and natural resource challenges and involving four or more of the following factors: social, legal, political, economic, health, ethical and religious
Evaluate critically environmental and natural resource issues in light of understanding about interrelationships, ecosystems, and institutions	-	Identify an environmental and natural resource issue utilizing understandings about interrelationships, ecosystems, and institutions	Evaluate an environmental and natural resource issue utilizing understandings about interrelationships, ecosystems, and institutions	Evaluate more than one environmental and natural resource issue utilizing understandings about interrelationships, ecosystems, and institutions	
Propose and assess alternative solutions to environmental problems, and then articulate and defend actions they would take on various environmental issues	-	Propose an alternative solution to an environmental problem	Propose and assess an alternative solution to an environmental problem	Propose and assess an alternative solution to an environmental problem, and articulate and defend actions which would be taken in support of the solution	

### Data Collection

Based on the above rubric the data was collected for the courses offered during academic year 2015 – 2016 (fall 2015 and spring 2016). As participation in the assessment process is voluntary not all courses offered participated in the assessment process. Therefore data is not available for all the courses offered during this time. The information was collected by institutional research and later submitted to the GECIG for review. The raw data was provided in a MS Excel sheet. The submitted assignments, syllabi and assessment reports were also made available to the GECIG members.

### Analysis and Results

#### *Courses Offered/Assessed*

Overall, departments responded favorably to requests for assessment. ANTH, GEOG and URBS departments did not provide assessment data; their potential efforts to do so would add richness to future data sets (see Table 1).

In total, courses satisfying General Education Goal Area 10 requirements are offered at an acceptable level, with over 3600 students enrolled in SY15-16 at average of 1808 students enrolled during each semester.

Noteworthy however, is the proliferation of students enrolled in HLTH 101, GEOG 100, and GEOG 101.

- A total of 1,074 students enrolled in HLTH 101 during SY15-16; this represents 29.7% of total enrollment in GA10 courses
- A total of 636 students enrolled in GEOG100 during SY15-16; this represents 17.6% of total enrollment in GA10 courses
- A total of 796 students enrolled in GEOG101 during SY15-16; this represents 22.0% of total enrollment in GA10 courses
- In total, 2,506 students satisfied their GA10 requirements in HLTH 101, GEOG100, or GEOG101, representing 69.3% of total GA10 course enrollment

Table 1  
Courses Offered/Assessed (Fall 2015 – Spring 16)

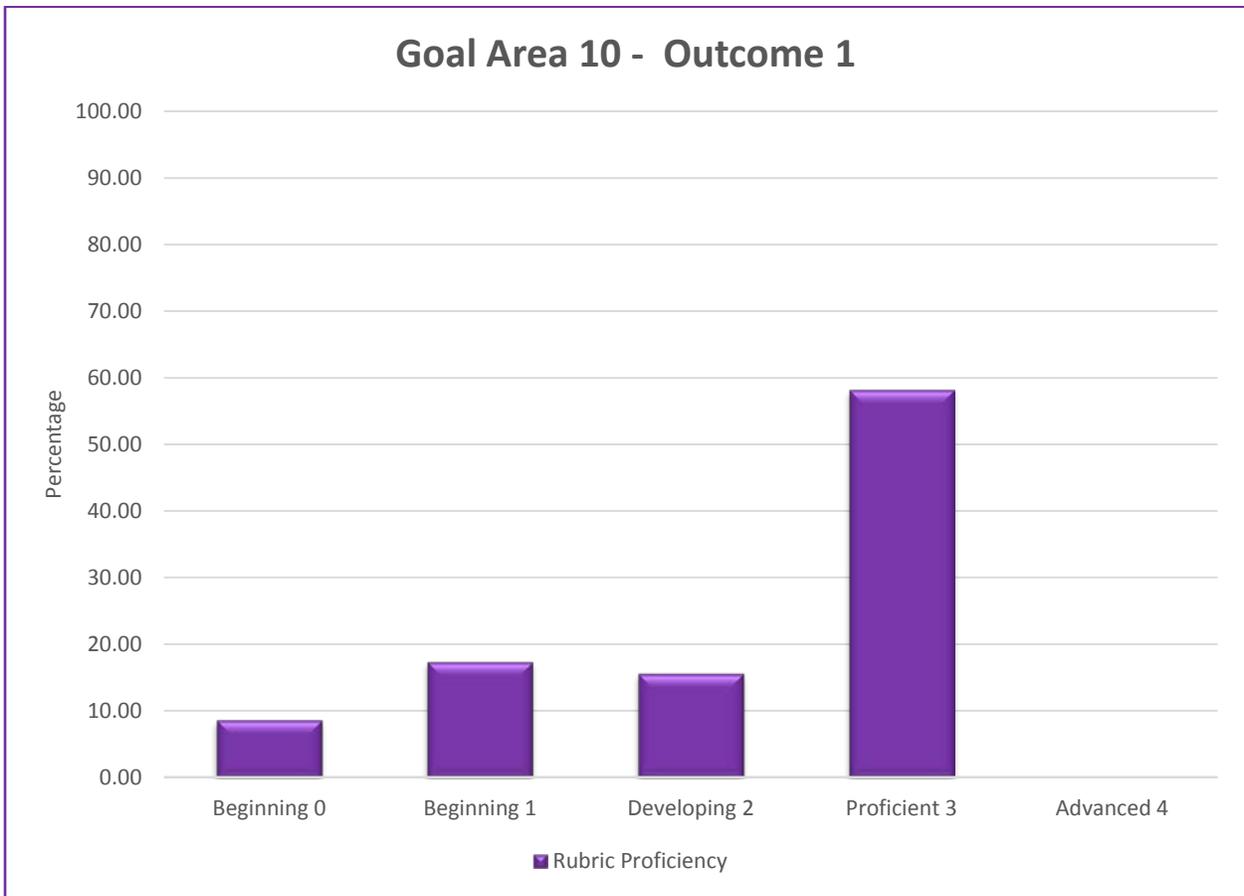
<b>Courses offered 2015 - 2016</b>	<b>Fall 2015 Enrollment</b>	<b>Spring 2016 Enrollment</b>	<b>Evaluated? (Y/N)</b>
<b>AIS 360P</b>	6	Not offered	Y
<b>ANTH 102</b>	40, 48	64	N
<b>ANTH 210L</b>	20, 18, 22, 21	22, 22, 20, 20	N
<b>EEC 205</b>	Not offered	Not offered	N/A
<b>ENVR 101</b>	76	51	Y
<b>GEOG 100P</b>	156, 140, 39	90, 99, 112	N
<b>GEOG 101</b>	136, 229, 69	112, 250	N
<b>GEOG 210W</b>	11	Not offered	N
<b>GEOL 100L</b>	28, 28, 28, 28	8, 24, 24	Y
<b>GEOL 108</b>	180	150	Unknown
<b>GEOL 121L</b>	24, 24	24, 15, 17	Y
<b>HLTH 101</b>	47, 48, 48, 108, 100, 47, 48, 37, 48, 48, 10	40, 40, 47, 48, 106, 48, 109, 45, 2	Y
<b>PHIL 226W</b>	Not offered	Not offered	N/A
<b>RPLS 282</b>	44	33, 30	Y
<b>SOC 360P</b>	16	Not offered	Y
<b>URBS 150</b>	65, 30	65, 30	N
<b>TOTAL</b>	1848	1767	3615

*Summary Statistics*

Assessment Outcome 1: Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.

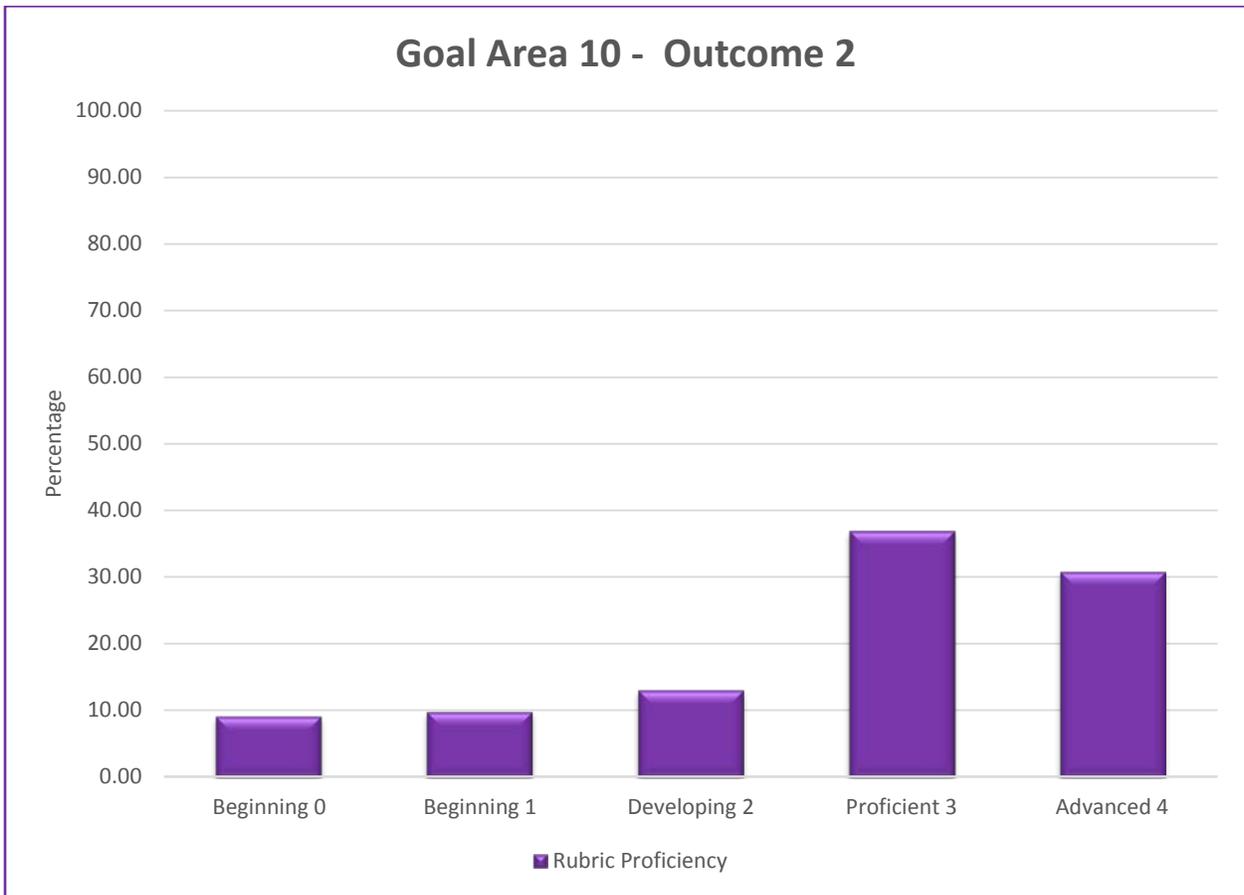
Proficiency		Raw Data (n)	Percentage
Beginning 0	Sample does not meet criteria for beginning.	30	8.72
Beginning 1	Identify a basic structure and function of a natural ecosystem and a human adaptive strategy within that system.	60	17.44
Developing 2	Explain a basic structure and function of a natural ecosystem and a human adaptive strategy within that system.	54	15.70
Proficient 3	Explain the basic structures and functions of various natural ecosystems and human adaptive strategies within each of those systems.	200	58.14
Advanced 4	Not Available	0	0.00
Total No of Students Assessed (N)		344	100.00

Students demonstrating at least beginning proficiency.	314	91.28
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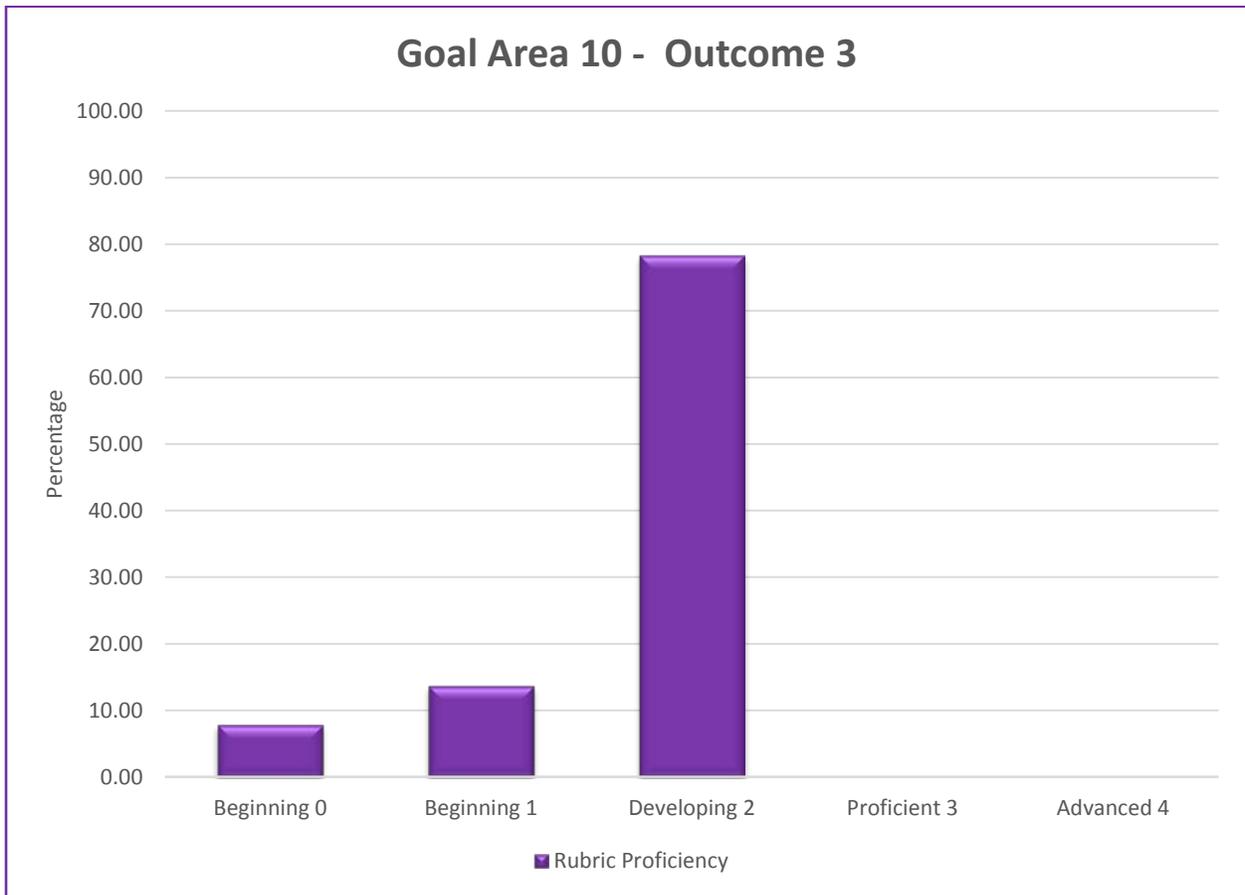
Assessment Outcome 2: Discern and analyze patterns and interrelationships of the biophysical and psycho-social cultural systems.			
Proficiency		Raw Data (n)	Percentage
Beginning 0	Sample does not meet criteria for beginning.	68	9.23
Beginning 1	Identify patterns and interrelationships within a biophysical or a psycho-social cultural system.	73	9.91
Developing 2	Identify patterns and interrelationships within a biophysical and a psycho-social cultural system.	97	13.16
Proficient 3	Analyze patterns and interrelationships of biophysical or psycho-social cultural systems.	272	36.91
Advanced 4	Analyze patterns and interrelationships of biophysical and psycho-social cultural systems.	227	30.80
Total No of Students Assessed (N)		737	100.00

Students demonstrating at least beginning proficiency.	669	90.77
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Assessment Outcome 3: Critically discern and analyze individual, social, and ecological dimensions of health.			
Proficiency		Raw Data (n)	Percentage
Beginning 0	Sample does not meet criteria for beginning.	45	7.94
Beginning 1	Identify individual, social and ecological dimensions of health.	78	13.76
Developing 2	Analyze individual, social and ecological dimensions of health.	444	78.31
Proficient 3	Not Available	0	0.00
Advanced 4	Not Available	0	0.00
Total No of Students Assessed (N)		567	100.00

Students demonstrating at least beginning proficiency.	522	92.06
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Assessment Outcome 4: Describe the basic institutional arrangements (social, legal, political, economic, health, ethical, religious) that are evolving to deal with environmental and natural resource challenges.			
Proficiency		Raw Data (n)	Percentage
Beginning 0	Sample does not meet criteria for beginning.	39	14.34
Beginning 1	Identify a basic institutional arrangement that is evolving to deal with environmental and natural resource challenges and involves two of the following factors: social, legal, political, economic, health, ethical and religious.	63	23.16
Developing 2	Describe a basic institutional arrangement that is evolving to deal with environmental and natural resource challenges and involves two of the following factors: social, legal, political, economic, health, ethical and religious.	31	11.40
Proficient 3	Describe basic institutional arrangements that are evolving to deal with environmental and natural resource challenges and involving three of the following factors: social, legal, political, economic, health, ethical and religious.	38	13.97
Advanced 4	Describe basic institutional arrangements that are evolving to deal with environmental and natural resource challenges and involving four or more of the following factors: social, legal, political, economic, health, ethical and religious.	101	37.13
Total No of Students Assessed (N)		272	100.00

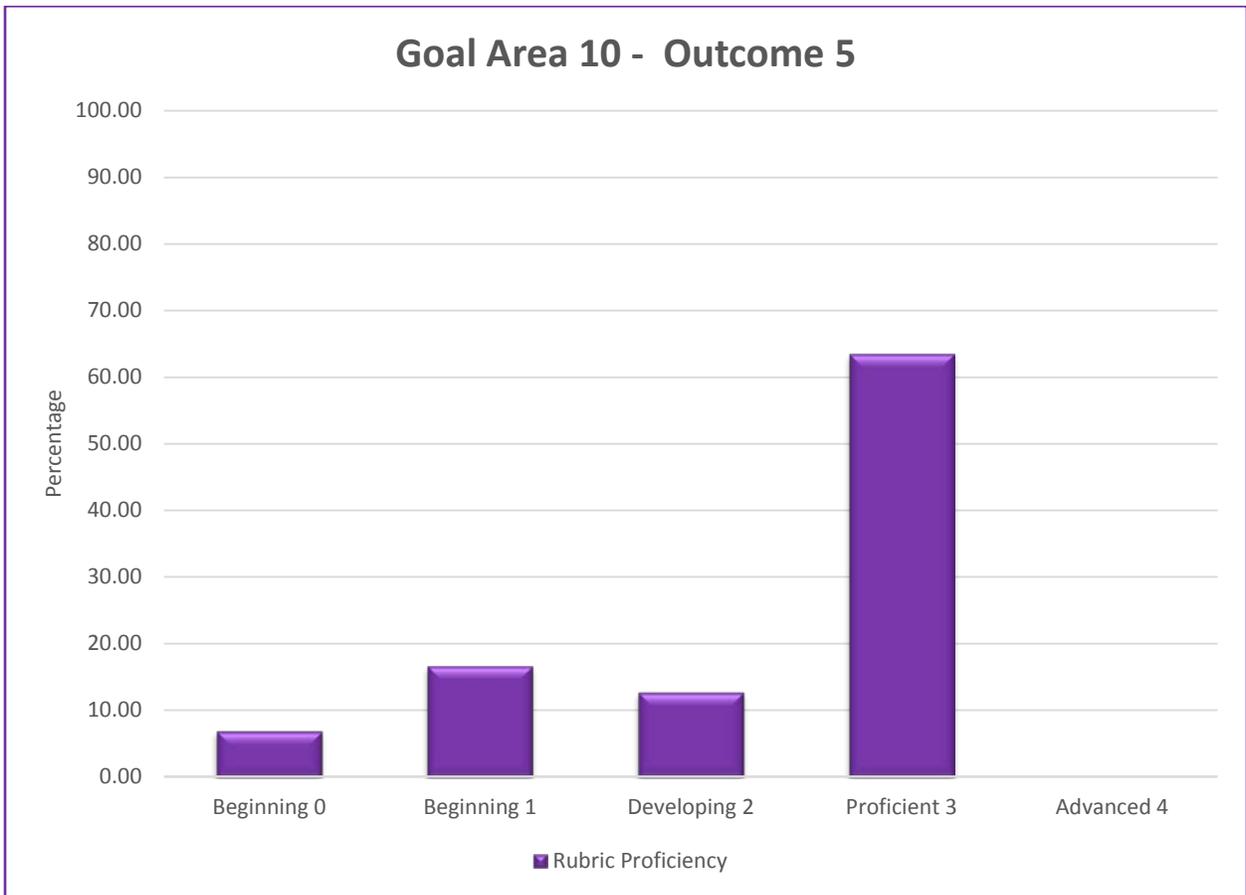
Students demonstrating at least beginning proficiency.	233	85.66
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Assessment Outcome 5: Evaluate critically environmental and natural resource issues in light of understanding about interrelationships, ecosystems, and institutions.

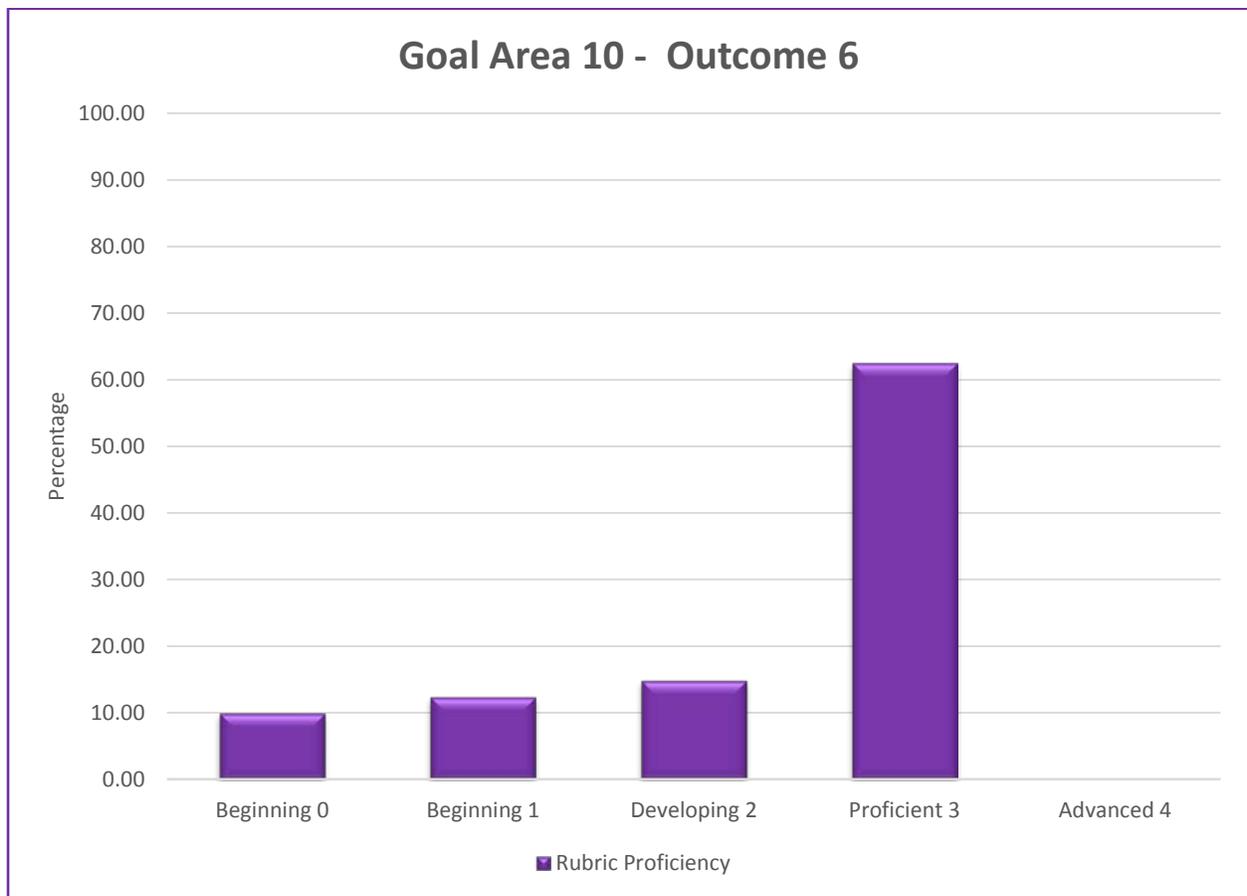
Proficiency		Raw Data (n)	Percentage
Beginning 0	Sample does not meet criteria for beginning.	23	7.01
Beginning 1	Identify an environmental and natural resource issue utilizing understandings about interrelationships, ecosystems, and institutions.	55	16.77
Developing 2	Evaluate an environmental and natural resource issue utilizing understandings about interrelationships, ecosystems, and institutions.	42	12.80
Proficient 3	Evaluate more than one environmental and natural resource issue utilizing understandings about interrelationships, ecosystems, and institutions	208	63.41
Advanced 4		0	0.00
Total No of Students Assessed (N)		328	100.00

Students demonstrating at least beginning proficiency.	305	92.99
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Assessment Outcome 6: Propose and assess alternative solutions to environmental problems, and then articulate and defend actions they would take on various environmental issues.			
Proficiency		Raw Data (n)	Percentage
Beginning 0	Sample does not meet criteria for beginning.	49	10.04
Beginning 1	Propose an alternative solution to an environmental problem.	61	12.50
Developing 2	Propose and assess an alternative solution to an environmental problem.	73	14.96
Proficient 3	Propose and assess an alternative solution to an environmental problem, and articulate and defend actions which would be taken in support of the solution.	305	62.50
Advanced 4	Not Available	0	0.00
Total No of Students Assessed (N)		488	100.00

Students demonstrating at least beginning proficiency.	439	89.96
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## Discussion

### *Discussion of Qualitative Results*

In the qualitative materials submitted to the committee, faculty demonstrate a wide range of people and environmental interactions. Some courses focus more closely on the ecosystem functions, and others on the dimensions of health. Several courses also focused on environmental

degradation and societal attempts to address the problems. The submitted materials demonstrate varied approaches to meeting Goal Area 10 criteria. Evaluative material ranged from multiple choice, short answer, take home exams, essay papers, and field experience. The qualitative materials tend to support the findings of the quantitative analysis of the rubrics.

The diversity of departments offering People and the Environment courses speaks to the success of the general education curriculum on this campus. Within these various departments, faculty are able to design their teaching and learning tools to best fit their field, which gives the students true insight into the nature of that discipline. Even though the total number of departments responding to this year’s assessment was relatively small, the methods employed covered a wide and very resourceful range of pedagogy. The following table (Table 2) summarizes these pedagogic approaches. Please note that the Bloom’s Taxonomy in this table is not applied to specific rubric levels as Bloom’s verbs apply across multiple levels, and that application varies with individual faculty.

Table 2

Table summarizing pedagogical approaches for People and the Environment.

<b>Assignment Type</b>	<b>Form of Student Response</b>	<b>Bloom’s Taxonomy Applied</b>
Exams	Multiple Choice Essay	Analyze Compare Contrast Describe Discuss Explain Identify List
Lab-based Exercises	Multiple Choice Essay Mathematical Quantification	Analyze Assess Describe Identify Interpret
Readings	Essay	Assess Identify Interpret
Videos/Documentaries	Essay	Describe Discuss
Group Projects	Essay PowerPoint presentation	Analyze Describe Examine Explain List
Field-Based Experiences	Essay Photo Documentation	Discuss Document Identify

In reviewing the supporting documents submitted for these courses, it became very apparent that faculty differ in their interpretation of the rubric levels. For example, one multiple choice exam question was evaluated for Outcome 1 at Rubric Level 1, while another interpretation of the question was that it also could have served for evaluating that outcome at Rubric Level 3. This type of interpretation is absolutely up to the individual faculty, but strongly suggests that we should be teaching to the goal area itself, not necessarily to the individual outcomes. Our teaching and pedagogy can accommodate the rubric, but the rubric should not force our pedagogy. Please see additional comments in our Assessment and Reporting Process section of our Recommendations section.

### **Summary**

Based on the data collected from the assessment, we can make a number of general conclusions. Overall, very few students (typically 10% or less) assessed did not meet the criteria at the very lowest level. Generally, the greatest percentage of students assessed were meeting the criteria at the highest level of proficiency. Given the range of course disciplines and the tendency to examine the higher levels of proficiency, the results of the assessment tend to suggest students are successfully engaging the learning objectives of Goal Area 10.

In evaluating the assessment data, it became clear that the various criteria are not comparable. In addition to the different definitions of levels of proficiency, the total number of levels of proficiency also varied (e.g. 3, 4, or 5). Because the criteria used different definitions for the various levels of proficiency, it is not possible to compare criteria to determine whether some criteria are better achieved than others.

Also, meeting a criterion at a higher level of proficiency does not necessarily indicate meeting the criterion at a lower level of proficiency. For example, a student may be able to *explain* a specific ecological process well, but may be lacking in the ability to *identify* a wide range of ecological processes. As a result, we presented data that seem to indicate that a low percentage of students met the criteria at a lower level of proficiency. We do not feel this reflects poorly on the achievement of the Goal Area 10 objectives, but merely indicates that the faculty tend to focus on higher levels of proficiency.

### **Recommendations**

#### ***Pedagogical Recommendations***

One suggestion for faculty developing course materials is to establish more clear ties to the criteria. The best examples of qualitative materials included direct reference to the criteria being evaluated. While stating goal area criteria may not be practical in multiple choice exams, the criteria may be included in essay exams or other qualitative assignments. By including the criteria, faculty keep the criteria in mind when developing course materials, and will find assessment easier in the future.

#### ***Assessment and Reporting Process Recommendations***

Due to the nature of the rubric, comparison between different criteria is not possible. Because criteria vary in terms of the number of levels and their content, it is not possible to identify the

level of proficiency of one criteria in relation to the others. A future task for this Goal Area category, and possibly others, is to develop consistent levels of proficiency. An example of system may consist of the following levels: 0 - Does not meet the criterion, 1 – meets the criterion minimally, 2 – meets the criterion satisfactorily, 3 exceeds expectations for criterion. By including consistent proficiency levels, faculty will find submitting assessment data more straightforward. Instead of needing to identify the criteria and its specific proficiency (e.g. identify, analyze, describe, or explain) faculty will be tasked with providing a general assessment of proficiency in each criterion. In the specific criterion, suggested levels of proficiency could be offered in the description. For example, the criterion, “Describe the basic institutional arrangements (social, legal, political, economic, health, ethical, religious) ...” could suggest inclusion of one of the institutional arrangements is level 1, 2 = level 2, etc. Simplifying the rubric, regardless of the specific format, may facilitate greater faculty participation in submitting assessment materials.

**Report Submitted By**

Ginger Schmid, Jonathan Hicks, Paul Prew, Rama Mohapatra, Ph.D, Richard Liebendorfer

Date : May 5, 2017