

East Carolina University General Education Assessment Action Plan Progress Report

GENERAL EDUCATION COMPETENCY AREA: Natural Sciences

ASSESSMENT CYCLE: 2018-19 to 2020-21

INSTRUCTIONS: The completed Progress Report should be sent to the Dean of the college and copied to Kristen Dreyfus (springerk@ecu.edu) and Yihui Li (liy17@ecu.edu). For each action planned please mark the status (Complete, In Progress, Not Started, or Not Applicable) and update the Progress, Responsible Party and Timeline.

a. Pedagogical / Curriculum

Planned Action # 1:					
Revise the curricular materials to include additional information on the nature of a scientific argument and the critical elements – claim, evidence and justification. These are the rubric items used to evaluate SLO3.					
Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Progress on Planned Action # 1					
The curricular materials have been revised to include additional information on the nature of a scientific argument and the critical elements – claim, evidence and justification. These are the rubric items used to evaluate SLO3.					

Planned Action # 2:					
Geology:					
<ul style="list-style-type: none"> • Will implement the revised curriculum in fall of 2020 which will include material directly related to SLO4. • Geology 1501 will be used to assess SLO4. • The rubric will be expanded to include at least three items related to societal impact. 					
Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Progress on Planned Action # 2					

The Department of Geology has begun the process of revising course materials and delivery in GEOL1501 to align with the Argument-Driven Inquiry mode of teaching. The new delivery mode is being implemented, with the idea that the process is iterative. Thus, revisions to the mode of teaching have already been identified and will be attended to in due course.

SLO4 will be assessed in GEOL1501 in Fall 2021.

A rubric has been developed to assess SLO4 in GEOL1501, and this rubric includes three items related to societal relevance of Geology.

Planned Action # 3:

Biology:

- Biology 1201 will be used to assess SLO4.
- The rubric will be expanded to include at least three items related to societal impact.

Action Implementation Status (Mark One)

Complete	In Progress	Not Started	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Responsible Party

Timeline

Progress on Planned Action # 3

The rubric has not yet been expanded due to disruptions from COVID-19. This expansion will happen in the current academic year.

Planned Action # 3:

Chemistry:

- Chemistry 1161 will add an assessment item related to argument construction around social scientific issues.
- The rubric will be expanded to include at least three items related to societal impact.

Action Implementation Status (Mark One)

Complete	In Progress	Not Started	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Responsible Party

Joi Walker

Timeline

Completed by
Spring 22

Progress on Planned Action # 3:

A new lab has been designed for determining the isoelectric point of an amino acid. There will be additional rubric items added.

b. Student Support Services

Planned Action # 4

All departments:

We are working with the University Writing Center to provide support for students struggling with writing the lab reports. Across the 3 disciplines the UWC saw 68 students over the course of a week. In order to meet this demand, the UWC is going to start offering 2-hours of walk-in appointments each week that'll be 15-20 min sessions.

Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A	Joi Walker	Completed F19
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Progress on Planned Action

Chemistry: Dr. Walker met with the writing center staff and reviewed the rubric and how to best help students writing their lab reports.

Geology: The faculty in the Department of Geological Sciences resolved that instructors in all courses should emphasize to students the availability of resources on campus, including the University Writing Center, that are there to help them with improving their writing communication skills.

Biology: The Biology lab instructors have emphasized that students can seek assistance from the writing center staff.

Physics: The Physics rubric for lab reports is the same as the Chemistry rubric. See above.

Planned Action # 5

All departments:

Guidelines for assisting students with lab reports are being developed for the writing center staff.

Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A	Joi Walker	Completed F19
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Progress on Planned Action #					
Chemistry: See above					
Geology: Dr. Manda from the Department of Geological Sciences has recently taken training in Universal Design of Learning and Constructive Alignment with a focus on how to develop clear, well-aligned and rigorous rubrics. The rubrics that have and will be developed for GEOL1501 will therefore provide guidance to students on how to better meet their learning objectives.					
Biology: See above.					
Physics: See above					

c. Faculty Development

Planned Action # 6					
All departments:					
The majority of the laboratory courses are taught by graduate teaching assistants (GTAs). In August, we hold training for 40+ graduate teaching assistants in biology, chemistry, geology, and physics. At this training, GTAs participate in a sample experiment, argumentation session, and evaluation of a sample lab report. They will receive additional instruction in writing the scientific argument (SLO3) as well as scoring the lab reports consistently. This process will be repeated during the semester with-in each discipline for each lab report. These interventions will facilitate consistent use of the rubric.					
Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Progress on Planned Action #					

Biology: We have held an annual training for the graduate teaching assistants as indicated above. In addition, faculty and instructional staff meet with the graduate teaching assistants weekly to review these topics.

Chemistry: Dr. Walker meets with the lab instructors. Chemistry has also, adjusted the rubric slightly to make scoring argumentation easier. I have uploaded the new rubric and highlighted the changes.

Geology: Students continue to attend training/meetings with Dr. Walker.

Physics: Dr. Sprague meets with the lab instructors weekly.

d. Other Areas

Planned Action # 7

All departments:

It is critical that the next round of data acquisition be consistent with the standard student path through the courses, which is a Fall and Spring for each two-semester sequence.

Fall 2021 BIOL 1101, CHEM 1151, PHYS 1251, GEOL 1501

Spring 2022 BIOL 1201, CHEM 1161, PHYS 1261, GEOL 1501

This is due to the fact that students in these courses are from different groups. Because of this, we expect different outcomes in each semester for the same course.

Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All departments	Completed in August 2021

Progress on Planned Action

In the assessment orientation meeting in August 2021, faculty from all four departments have agreed to collect data from the above courses in sequence in AY 2021-22.