

APR Instructional Earth and Environmental Sciences 2022-23 Latest Version

Annual program review for ENV, GEG, GEL and PHS departments combined.

APR Instructional

Annual Course Student Learning Outcome Data : Version by **Bangs, Michael** on **12/14/2023 22:12**

CSLOs	Expected/Benchmark Performance	Actual Performance (Aggregate of All Terms)
EVS101 - Environmental Science		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2020)	70.00%	93.10%
2. Communicate scientific principles and processes effectively. (Active from Summer 2020)	70.00%	93.10%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2020)	70.00%	93.10%
4. Evaluate course concepts and the role of science in local and global contexts. (Active from Summer 2020)	70.00%	93.10%
EVS107 - Water Quality Monitoring of Streams and Lakes		
1. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2021)	70.00%	0.00%
EVS110 - California Naturalist Program		
1. Use scientific observations to analyze natural objects and processes. (Active from Summer 2019)	70.00%	100.00%
2. Demonstrate and communicate awareness of the complex interconnectivity between natural elements. (Active from Summer 2019)	70.00%	100.00%
3. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
4. Evaluate environmental issues in local and global contexts. (Active from Summer 2019)	70.00%	100.00%
EVS101L - Environmental Science Lab		
1. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2020)	70.00%	100.00%
GEG101 - Physical Geography		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2019)	70.00%	100.00%
2. Communicate scientific principles and processes effectively. (Active from Summer 2019)	70.00%	100.00%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
4. Evaluate course concepts and the role of science in local and global contexts. (Active from Summer 2019)	70.00%	100.00%
GEG102 - Human Geography		
1. Evaluate social, cultural, economic, and environmental issues in local and global contexts. (Active from Summer 2019)	70.00%	100.00%
2. Demonstrate and communicate awareness of the complex interconnectivity between course concepts. (Active from Summer 2019)	70.00%	100.00%
3. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
GEG103 - World Regional Geography		

CSLOs	Expected/Benchmark Performance	Actual Performance (Aggregate of All Terms)
1. Evaluate social, cultural, economic, and environmental issues in local and global contexts. (Active from Summer 2019)	70.00%	100.00%
2. Demonstrate and communicate awareness of the complex interconnectivity between course concepts. (Active from Summer 2019)	70.00%	100.00%
3. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
GEG106 - California Geography		
1. Evaluate social, cultural, economic, and environmental issues in local and global contexts. (Active from Summer 2019)	70.00%	100.00%
2. Demonstrate and communicate awareness of the complex interconnectivity between course concepts. (Active from Summer 2019)	70.00%	100.00%
3. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
GEG107 - Water Quality Monitoring of Streams and Lakes		
1. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2021)	70.00%	0.00%
GEG108 - Water Resources		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2019)	70.00%	100.00%
2. Communicate scientific principles and processes effectively. (Active from Summer 2019)	70.00%	100.00%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
4. Evaluate course concepts and the role of science in local and global contexts. (Active from Summer 2019)	70.00%	100.00%
GEG113 - Meteorology		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2019)	70.00%	94.74%
2. Communicate scientific principles and processes effectively. (Active from Summer 2019)	70.00%	94.74%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	94.74%
4. Evaluate course concepts and the role of science in local and global contexts (Active from Summer 2019)	70.00%	94.74%
GEG134 - ArcGIS Online		
1. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2021)	70.00%	100.00%
2. Display data using appropriate tools in GIS. (Active from Summer 2021)	70.00%	100.00%
GEG134 - Introduction to Geographic Information Systems		
1. Interpret vector data and demonstrate its use in GIS. (Active from Summer 2019)	70.00%	0.00%
2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	0.00%
GEG135 - ArcGIS Desktop		
1. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2021)	70.00%	0.00%

CSLOs	Expected/Benchmark Performance	Actual Performance (Aggregate of All Terms)
2. Display data using appropriate tools in GIS. (Active from Summer 2021)	70.00%	0.00%
GEG135 - Intermediate Geographic Information Systems		
1. Interpret raster data and demonstrate its use in GIS. (Active from Summer 2019)	70.00%	100.00%
2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
GEL101 - Geology of California		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2019)	70.00%	100.00%
2. Communicate scientific principles and processes effectively. (Active from Summer 2019)	70.00%	100.00%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
4. Evaluate course concepts and the role of science in local and global contexts. (Active from Summer 2019)	70.00%	100.00%
GEL102 - Physical Geology		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2019)	70.00%	100.00%
2. Communicate scientific principles and processes effectively. (Active from Summer 2019)	70.00%	100.00%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
4. Evaluate course concepts and the role of science in local and global contexts (Active from Summer 2019)	70.00%	100.00%
GEL103 - History of the Earth and its Life		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2019)	70.00%	84.62%
2. Communicate scientific principles and processes effectively. (Active from Summer 2019)	70.00%	84.62%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	84.62%
4. Evaluate course concepts and the role of science in local and global contexts. (Active from Summer 2019)	70.00%	84.62%
GEL110 - Geology of National Parks and Monuments		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2019)	70.00%	100.00%
2. Communicate scientific principles and processes effectively. (Active from Summer 2019)	70.00%	100.00%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	100.00%
4. Evaluate course concepts and the role of science in local and global contexts. (Active from Summer 2019)	70.00%	100.00%
GEL114 - Introduction to Earth Sciences		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2019)	70.00%	86.05%
2. Communicate scientific principles and processes effectively. (Active from Summer 2019)	70.00%	88.37%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	88.37%
4. Evaluate course concepts and the role of science in local and global contexts. (Active from Summer 2019)	70.00%	86.05%
GEL110L - Geology of National Parks and Monuments Lab		

CSLOs	Expected/Benchmark Performance	Actual Performance (Aggregate of All Terms)
1. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2020)	70.00%	100.00%
PHS102 - Survey of Concepts in Chemistry and Physics		
1. Correctly analyze natural phenomena using the concepts of physics and chemistry. (Active from Fall 2015)	70.00%	80.00%
2. Investigate physical phenomena using appropriate equipment and methods, make valid comparisons with theoretical predictions, and communicate those results. (Active from Fall 2015)	70.00%	80.00%
PHS111 - Astronomy		
1. Describe the scale of the solar system and units used to measure distance between stars and distance between galaxies. (Active from Fall 2015)	70.00%	100.00%
2. Compare and contrast the physical nature of various planets. (Active from Fall 2015)	70.00%	100.00%
3. Describe the process involved in star formation. (Active from Fall 2015)	70.00%	100.00%
4. Identify various types of stars and diagram their organization in the main sequence. (Active from Fall 2015)	70.00%	100.00%
PHS117 - Oceanography		
1. Analyze landforms and natural processes based on scientific observations. (Active from Summer 2019)	70.00%	96.88%
2. Communicate scientific principles and processes effectively. (Active from Summer 2019)	70.00%	93.75%
3. Apply scientific principles and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019)	70.00%	93.75%
4. Evaluate course concepts and the role of science in local and global contexts. (Active from Summer 2019)	70.00%	96.88%

APR Questions Tableau : Version by Williams, Sarah on 02/05/2024 18:09

Using the Data Provided (<https://10az.online.tableau.com/#!/site/ltcc/views/ProgramReview/LTCCProgramReviewSummary?:iid=1>) please provide the number of students (headcount) that are served by the discipline.

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Using the Data Provided (<https://10az.online.tableau.com/#!/site/ltcc/views/ProgramReview/Demographics?:iid=1>), identify the populations served by the discipline. Are there any inconsistencies? Does the Population served reflect the population of the college? If not, why, and how can the discipline serve a population more reflective of our community?

Based on collegewide demographic data, the Earth and Environmental Sciences program (EVS, GEG, GEL, PHS) serves populations of students that are representative of college averages in every category (race, ethnicity, gender, age, etc.) in every year (2018-2023).

Using student success data (<https://10az.online.tableau.com/#!/site/ltcc/views/ProgramReview/SuccessRatesOverall?:iid=1>), identify any trends in successful completion of courses.

Are there particular courses (<https://10az.online.tableau.com/#!/site/ltcc/views/ProgramReview/SuccessRatesbyCourse?:iid=1>) students are struggling in?

Are there any demographics that are less likely to complete certain courses in the discipline?

What steps need to be taken to support students and the department in meeting its equity obligations?

In general, the success rate for students taking online classes is less than the success rates observed in other modalities.

No, there are not particular courses students are struggling in.

I'm not sure of what my departmental equity obligation is. Every student is given the specific tools they need to succeed.

Are there any courses lacking Title V Updates?

If so, how many and why?

(Please check your courses in eLumen for the most recent list of courses that require updates.)

No.

Describe the approach to scheduling in terms of offering a balance of Face to Face (F2F) and Online opportunities for students.

Scheduling is done in a way to ensure a balance of f2f and online coursing, day and night courses, MW and TTh courses, and 4-unit science classes and 5-unit science+lab classes every quarter.

Are there any insights specific to this discipline regarding scheduling modality in terms of success rates, student retention, or course cancellations?

The retention and success rates in online courses is lower, but that is not surprising.

Are the full-time faculty teaching the courses with the most face to face students? Why/why not?

Yes, and the full-time faculty member in this department also teaches quite a lot of overenrolled online classes too. Superstar!

Are staffing levels adequate to fulfill the purpose of the program?

Staffing levels are adequate to fulfill the needs of the program.

What professional development opportunities have faculty in this discipline taken advantage of? Are there any unmet professional development needs?

As technology changes, GIS faculty may need to keep current with industry standards.

Where applicable, outline and explain any budget shortfalls for this discipline.

The current supply budget seems adequate, but costs are rising. Lodging and transportation to field sites is getting more expensive every year.

If additional financial resources are needed, please describe how they will increase student success, retention, or completion.

An appropriately sized school vehicle that all departments can have access to will help reduce the number of vehicles on fieldtrips, and improve efficiency, safety, and the overall impact on the environment. It will also help facilitate greater student participation on field trips by reducing the number of logistical complications associated with these types of science courses. The college used to have a school van. The decision to get rid of it and purchase a Rave 4 was one of the worst decisions the college has ever made. Even a minivan could have helped transport administrators (and their luggage) to conferences more effectively. Educational programs need to have access to a more versatile college vehicle... then it can be used as a tool to support student learning. Perhaps there is an opportunity to purchase an all-wheel drive Suburban, minivan, or other large capacity vehicle that does not require a commercial license to operate. The Rav should be retired. A college vehicle should be used for student-related activities instead of solely being used for administrative purposes.

Using the SLO Data above, are there any SLOs for any particular courses that students are not successfully understanding? How do you plan to address this?

Currently the SLOs appear to be correctly aligned to instruction and students appear to be performing at the expected level.

What are the major strengths of your department?

Program courses and degrees are properly aligned with major transfer institutions...and we have some rock-solid faculty.

In what ways could your department improve to better meet the needs of the College and support student success?

We need a better website management system and a job postings platform that students can access regularly.

What are the biggest challenges your department may face in making these improvements?

The department has little ability to change the college's web platform or how our faculty interface with the LTCC website. Proper training may help. Please work with the Work Experience and Internship Coordinator to develop a job posting system that employers and students can access.

Identify any other questions, comments, suggestions, or concerns you may have.

No Value

Dean Review : Version by **Williams, Sarah** on **03/15/2024 21:49**

in question #6 you wrote, "The retention and success rates in online courses is lower, but that is not surprising." Can you please tell us more why this might be? Why is it not surprising?

Dr. Scott Valentine explained success rates are lower in online classes due to accountability issues. Students are less accountable for their time and commitment to a class.

Sarah Williams