

Core Curriculum Annual Assessment

Year	2022-23
Course number and Name:	SPSC 1401 Space Science
Component area:	Life and Physical Sciences
Number of sections offered:	5
Number of students enrolled:	289
Contact Person (include email & Phone#)	Amanda Allison alallison@lamar.edu

Summary of Continuous Improvement Efforts since Last Report

Provide a brief description of how assessment results have been used for core course improvement. Point to a specific example of how an assessment provided the department with data it could use for improvement and what that improvement was, if possible, also show evidence of the improvement. You may look at data from the two previous academic years to support this case.

Respond here:

New and improved face to face lab format was implemented in order to enhance student learning. These are more hands on and allow more student interaction than the previous online labs. These new labs have been revised for online courses now and the pilot course is currently up and running for the online students. The goal is to spark more curiosity and involvement in the sciences, while making learning fun and the concepts easy to grasp.

Course highlights Since Last Report

Identify and briefly discuss any changes made to the course since the last report.

Respond here:

New format of face to face labs were implemented to enhance student learning and so far it is working out well for student success. The new format began Fall 2022 and is now up for online students this summer 2023. The labs are still being revised and tweaked to accommodate all students and learning abilities. Since the new format was implemented, there is not sufficient data to evidence a higher success rate, but simple observation does lead in that direction. This course was assessed in Weave in 2022 and that is where the current data pool is derived from.

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Table 1. Assessment Results and Analysis for Current Cycle

Stage 1: PLAN			STAGE 2: DO		Stage 3: STUDY	
General Education Competencies Addressed in this Course:	Assessment Method(s) – e.g. pre/post tests, embedded questions, portfolio evaluation, rubric-scored essay; list only activities for which you are reporting assessment data	Proficiency – e.g. the proficient student will correctly answer 5 out of the 6 embedded questions on the final exam	Benchmark – e.g. 80% of students taking the final exam will correctly answer 5 of the 6 embedded questions on the final exam	Results of course assessment(s)	Analysis of results – e.g. strengths and weaknesses What does this data tell you? How will you use this data? How were data from the last cycle used to make changes during this cycle, and what were the results of those changes?	Recommendations for Course based on assessment
Communication (required)	Students will learn: (3) oral, written, and visual communication, through lab experiences that require all of these forms of communication, along with a group project. The class project is to design a space mission based on what is	Proficient students will score 60% or higher on presentation assignment(s)	An objectively scored summary that is based on a class project involving teams. The class project is to design a space mission based on what is learned in class. Teams of 4-5 will form. Each team will pick a team leader. The teams must	The overall findings show a success rate of 100%.	We find that the students not only met, but surpassed the expected 60% mark. The students employed critical thinking, creativity, and employed the resources from the material they had learned in the course for their group projects.	No Improvements or adjustments are deemed necessary at this time. Future data will be used to decide on a further plan of action.

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	<p>learned in class. Teams of 4-5 will form. Each team will pick a team leader. The teams must present their space mission case to the class, along with a team designed image of a spacecraft, and information as to how it works, backup safety systems, life support systems,etc...</p> <p>Upon presentation of the space mission case to the class, a review of the case will be evaluated by interviewing the team leader and the team as a whole using the attached rubric.</p>		<p>present their space mission case to the class, along with a team designed image of a spacecraft, and information as to how it works, backup safety systems, life support systems,etc...</p> <p>Upon presentation of the space mission case to the class, a review of the case will be evaluated by interviewing the team leader and the team as a whole using the attached rubric.</p> <p>. At the end of selected lab/group project the instructor will assess and record the performance for the class based on the average</p>		<p>They not only gave oral presentations to explain a mission to space, but also gave student-made artistic renditions of hypothetical spacecraft models, along with explanations of power systems, backup systems, life support, etc...</p>	
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			individual performances, and the attached rubric for assessing writing skills. The average performance calculated from the lab/group project will be used to assess outcome 3.			
Critical Thinking (required)	Students will learn: (1) critical thinking skills through use of the scientific method to recognize the differences between these approaches and other methods of inquiry regarding understanding the universe as revealed through space exploration,. 1 Critical Thinking: Students will apply critical thinking	Proficient students will score 65% or higher on presentation assignment(s)	An objectively scored summary pop-quiz in lecture that is based on previous exam questions. Note that questions on each lecture test that pertain to the stated outcome will be used for generating the lecture pop-quiz. The percentage of students from all the sections that score correctly on each objective question used to	The overall findings show a success rate of 80%.	We find that the students surpassed the 65% mark. They were able to retain the necessary and required skills and knowledge to be able to successfully pass the pop quiz exams.	No Improvements or adjustments are deemed necessary at this time. Future data will be used to decide on a further plan of action.

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	appropriately to identify, analyze and resolve complex issues.		assess a given outcome will be averaged to determine the score for that outcome. These questions will be determined near the end of the semester since they will be extracted from previous exams.			
Select One: x ___ Empirical & Quantitative Skills ___ Teamwork ___ Social responsibility ___ Personal Responsibility	Students will learn: (2) empirical and quantitative skills through use of known physical laws, the equations describing the laws, scientific notation and units of measurement. Quantitative Thinking: Students will demonstrate mastery of quantitative reasoning and algorithms used to address	Proficient students will score 65% or higher on presentation assignment(s)	Using the pop quiz as a measure we expect a target of 65% or better for the exam. An objectively scored summary pop-quiz in lecture that is based on previous exam questions. Note that questions on each lecture test that pertain to the stated outcome will be used for generating the lecture pop-quiz. The percentage of	The overall findings show a success rate of 80%.	We find that the students surpassed the 65% mark. They were able to retain the necessary and required skills and knowledge to be able to successfully pass the pop quiz exams.	No Improvements or adjustments are deemed necessary at this time. Future data will be used to decide on a further plan of action.

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	applied problems.		students from all the sections that score correctly on each objective question used to assess a given outcome will be averaged to determine the score for that outcome. These questions will be determined near the end of the semester since they will be extracted from previous exams.			
Select One: <input type="checkbox"/> Empirical & Quantitative Skills <input checked="" type="checkbox"/> Teamwork <input type="checkbox"/> Social responsibility <input type="checkbox"/> Personal Responsibility	Students will learn: (4) teamwork through laboratory experiences that require team formation and teamwork. Students also participate in class discussions in order to engage as a team.	Proficient students will score 60% or higher on presentation assignment(s). we expect that 60% of the teams will be "good" or better.	An objectively scored summary that is based on previous laboratory performance as teams. Six out of the present 10 laboratories require team formation. At the end of each of these laboratories the instructor will establish from	The overall findings show a success rate of 95%.	We find that students not only met but surpassed the expected target of 60% with a score of 95%.	No Improvements or adjustments are deemed necessary at this time. Future data will be used to decide on a further plan of action.

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			the average of the performance of each team, and the average performance of the lab section, using the attached rubric for teamwork skills. The lab sections will be averaged to determine the performance.			
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Table 2. Continuous Improvement Results Since Last Report

STAGE 4: ACT		
Actions/Goals based on data results <i>*copy last cycles actions/goals and report on progress toward continuous improvement on those here</i>	Status <i>C=Complete</i> <i>P=Progressing</i> <i>N=No action taken</i>	Discussion of status <i>If C, describe efforts that led to accomplishment of actions/goals</i> <i>If P, provide update on progress made toward accomplishing actions/goals and what tasks remain</i> <i>If N, discuss why action toward accomplishing actions/goals has been delayed and what work will be initiated toward accomplishment.</i>
Communication	p	Waiting on new data due to implementation of new lab format
Critical Thinking	P	Waiting on new data due to implementation of new lab format
Empirical and Quantitative	P	Waiting on new data due to implementation of new lab format
Teamwork	P	Waiting on new data due to implementation of new lab format