

Instructional Program Review

This document addresses the following SACSCOC requirements: CR 2.5, CS 3.3.1, CS 3.5, and FR 4.1.

Purpose

Amarillo College instructional programs consistently review data and strive for improvement.

The purpose of this review is to demonstrate how AC instructional areas support AC's mission by *"enriching the lives of our students and our community."*

On an annual basis the Program Review process will capture a holistic view of a department's/program's strengths, weaknesses, and improvement plans based on institutional data and assessment information.

The information collected on this form will also serve to help your division complete the information required by SACSCOC for Amarillo College's continued reaffirmation efforts.

Response Length Suggestion: Most responses should be 2-3 sentences.

If available, you may also provide a link/reference to other documentation that answers each question.

I: Identification

1. **Department or Program Title(s)** (Department Chairs List Dept.; Coordinators List Program):

Biology Department

2. **Department and/or Program(s) Purpose Statement:**

Provide academic preparation for careers and education goals and to increase awareness and relevance of Biology.

3. **Program Review Year (i.e. Most Recent Academic Year)**

2015

4. **Date of Submission:**

08-17-2015

5. **Lead Person Responsible for this Program Review:**

Name: Claudie Biggers
Title: Biology Chairman
E-mail: cjbiggers@actx.edu
Phone Number: (806)371-5080

6. **Additional Individuals (Name and Title) Responsible for Completing this Program Review:**

| | | |
|----------------|------------|----------------------------|
| BIOL 1406 | Dan Porter | Life and Physical Sciences |
| BIOL 1407 | Dan Porter | Life and Physical Sciences |
| BIOL 1408/1308 | Dan Porter | Life and Physical Sciences |

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|-------------------------------|------------------|----------------------------|
| BIOL 1409/1309 | Dan Porter | Life and Physical Sciences |
| BIOL 1411 | Brandon Moore | Life and Physical Sciences |
| BIOL 1413 | Brandon Moore | Life and Physical Sciences |
| BIOL 1414 | Dan Porter | Life and Physical Sciences |
| BIOL 1415 | Dan Porter | Life and Physical Sciences |
| BIOL 2306 | Brandon Moore | Life and Physical Sciences |
| BIOL 2316/2416 | Brandon Moore | Life and Physical Sciences |
| BIOL 2401/2301 | Susan Burgoon | Life and Physical Sciences |
| BIOL 2402/2302 | Susan Burgoon | Life and Physical Sciences |
| BIOL 2404 | Claudie Biggers | Life and Physical Sciences |
| BIOL 2420/2320 | Brandon Moore | Life and Physical Sciences |
| Biology 2401/2402 Online | Amanda Pendleton | Life and Physical Sciences |
| Biology 1408/1409 Dual Credit | Sam Schwarzlose | Life and Physical Sciences |

II: Program Enrollment and Success Data

Use baseline data that will enable you to determine the status of your program (compare the most recent data to previous year data, compare your program to any existing state standards, or consider any other relevant factors). Please use Firefox or Chrome browser to open links.

1. Based on the most recent reported data, please evaluate your program(s).

A .Overall Program Data (Complete this section if your dept. produces any certificate and/or terminal degree.)

(Place an 'X' in each text box that corresponds to your evaluation.)

| Student Data Reported/Collected | Needs Improvement | Meets Standards | Exceeds Standards | Not Applicable |
|--|-------------------|-----------------|-------------------|----------------|
| a. Employment Rates/Wages (EMSI , College Measures , CREWS , Perkins) | | | | |
| b. Completion | | | | |
| c. Licensure Pass Rates | | | | |
| d. Retention (FA-SP) and (FA-FA) | | | | |
| e. Grades A-C | | | | |
| f. Annual Enrollment | | | | |
| g. Survey, Focus Group, & Related Data | | | | |

Based on the data in Part A, respond to the following two questions:

- i. Identify one area in which your program(s) excel.

- ii. Identify one area in which your program(s) need to most focus for the next few years.

B. Course-Specific Data (Complete this section to evaluate the courses that fall under your dept./program.)
(Place an 'X' in each text box that corresponds to your evaluation.)

| Student Data Reported/Collected | Needs Improvement | Meets Standards | Exceeds Standards |
|--|-------------------|-----------------|-------------------|
| a. Grades A-C (IDS - Race/Ethnicity) | | X | |
| b. Grades A-C (IDS - Age) | X | | |
| c. Grades A-C (IDS - Gender) | | X | |
| d. Grades A-C (IDS - First Generation) | X | | |
| e. Grades A-C (IDS - Pell) | | X | |
| f. Grades A-C (IDS - Full/Part-Time) | X | | |
| g. Course-level Enrollment (IDS) | X | | |
| h. Survey, Focus Group, & Related Data | | X | |

Based on the data in Part B, respond to the following two questions:

- i. Identify two courses that are doing well.

Life Science 1,2

- ii. Identify two courses in which your dept./program(s) needs to most focus for the next few years.

Anatomy and Physiology 1,2/Biology 1,2

III: Institutional Initiatives

PART A – No Excuses:

Each department/program is expected to support student success initiatives.

List 1 or more ways your program(s) most focus on any of the No Excuses goals/initiatives and how you have helped AC fulfill its No Excuses goal.

The entire department has implemented mandatory tutoring for students scoring below 70% on a major exam.

PART B – Strategic Planning:

Each department/program is expected to support AC's Strategic Planning initiatives.

1. Identify at least one strategy or task from the Strategic Plan your area(s) currently addresses/evaluates.

1.3.1.1. After receiving and discussing assessment analysis of common course sections, all faculty will revise course sections for consistency in student learning outcomes regardless of delivery method or faculty status across the curriculum.

1.4.1 Instructional leadership will ensure students completing any course will meet student learning outcomes.

1.4.1.1 After academic leadership ensures all general

education core curricula courses include the student learning outcomes required by Texas Higher Education Coordinating Board (THECB), students as an aggregate group will fulfill these outcomes.

2.1 Explore expansion of services and offerings

2. (If applicable) What additional item(s) should AC's Strategic Plan address?

Provide mentors and financial training to help students overcome poverty and lack of family support factors that are creating a learning barrier.

PART C– General Education Objectives

SACSCOC requires that the College prove attainment of general education competencies by all students. AC has adopted the below objectives for our core curriculum assessment, but you may add additional objectives you teach. Additionally, AC expects that learning objectives are present and are being evaluated in all courses.

1. Provide a listing of which courses in your department/program(s) teach these general education objectives. For assistance in identifying educational objectives in non-core courses, refer to the [ACGM/WECM](#).

(List individual course prefix, state “all courses”, state “N/A” for an objective, etc.):

| Objective | Course(s) | | |
|--------------------------|----------------|-----------------|------------------------|
| Communication Skills | | See attachment | |
| | BIOL 1406 | Dan Porter | Life and Physical Scie |
| | BIOL 1407 | Dan Porter | Life and Physical Scie |
| | BIOL 1408/1308 | Dan Porter | Life and Physical Scie |
| | BIOL 1409/1309 | Dan Porter | Life and Physical Scie |
| | BIOL 1411 | Brandon Moore | Life and Physical Scie |
| | BIOL 1413 | Brandon Moore | Life and Physical Scie |
| | BIOL 1414 | Dan Porter | Life and Physical Scie |
| | BIOL 1415 | Dan Porter | Life and Physical Scie |
| | BIOL 2306 | Brandon Moore | Life and Physical Scie |
| | BIOL 2316/2416 | Brandon Moore | Life and Physical Scie |
| | BIOL 2401/2301 | Susan Burgoon | Life and Physical Scie |
| | BIOL 2402/2302 | Susan Burgoon | Life and Physical Scie |
| | BIOL 2404 | Claudie Biggers | Life and Physical Scie |
| | BIOL 2420/2320 | Brandon Moore | Life and Physical Scie |
| Critical Thinking Skills | | See attachment | |
| | BIOL 1406 | Dan Porter | Life and Physical Scie |

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| | BIOL 1407 | Dan Porter | Life and Physical Sciences |
| | BIOL 1408/1308 | Dan Porter | Life and Physical Sciences |
| | BIOL 1409/1309 | Dan Porter | Life and Physical Sciences |
| | BIOL 1411 | Brandon Moore | Life and Physical Sciences |
| | BIOL 1413 | Brandon Moore | Life and Physical Sciences |
| | BIOL 1414 | Dan Porter | Life and Physical Sciences |
| | BIOL 1415 | Dan Porter | Life and Physical Sciences |
| | BIOL 2306 | Brandon Moore | Life and Physical Sciences |
| | BIOL 2316/2416 | Brandon Moore | Life and Physical Sciences |
| | BIOL 2401/2301 | Susan Burgoon | Life and Physical Sciences |
| | BIOL 2402/2302 | Susan Burgoon | Life and Physical Sciences |
| | BIOL 2404 | Claudie Biggers | Life and Physical Sciences |
| | BIOL 2420/2320 | Brandon Moore | Life and Physical Sciences |
| Empirical & Quantitative Skills | | See attachment | |
| | BIOL 1406 | Dan Porter | Life and Physical Sciences |
| | BIOL 1407 | Dan Porter | Life and Physical Sciences |
| | BIOL 1408/1308 | Dan Porter | Life and Physical Sciences |
| | BIOL 1409/1309 | Dan Porter | Life and Physical Sciences |
| | BIOL 1411 | Brandon Moore | Life and Physical Sciences |
| | BIOL 1413 | Brandon Moore | Life and Physical Sciences |
| | BIOL 1414 | Dan Porter | Life and Physical Sciences |
| | BIOL 1415 | Dan Porter | Life and Physical Sciences |
| | BIOL 2306 | Brandon Moore | Life and Physical Sciences |
| | BIOL 2316/2416 | Brandon Moore | Life and Physical Sciences |
| | BIOL 2401/2301 | Susan Burgoon | Life and Physical Sciences |
| | BIOL 2402/2302 | Susan Burgoon | Life and Physical Sciences |
| Teamwork | BIOL 2404 | Claudie Biggers | Life and Physical Sciences |
| | BIOL 2420/2320 | Brandon Moore | Life and Physical Sciences |
| | | See attachment | |
| | BIOL 1406 | Dan Porter | Life and Physical Sciences |
| | BIOL 1407 | Dan Porter | Life and Physical Sciences |
| | BIOL 1408/1308 | Dan Porter | Life and Physical Sciences |
| | BIOL 1409/1309 | Dan Porter | Life and Physical Sciences |
| | BIOL 1411 | Brandon Moore | Life and Physical Sciences |
| | BIOL 1413 | Brandon Moore | Life and Physical Sciences |
| | BIOL 1414 | Dan Porter | Life and Physical Sciences |
| | BIOL 1415 | Dan Porter | Life and Physical Sciences |
| | BIOL 2306 | Brandon Moore | Life and Physical Sciences |
| | BIOL 2316/2416 | Brandon Moore | Life and Physical Sciences |
| | BIOL 2401/2301 | Susan Burgoon | Life and Physical Sciences |

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|---|----------------|-----------------|----------------------------|
| | BIOL 2402/2302 | Susan Burgoon | Life and Physical Sciences |
| | BIOL 2404 | Claudie Biggers | Life and Physical Sciences |
| | BIOL 2420/2320 | Brandon Moore | Life and Physical Sciences |
| Personal Responsi bility | | See attachment | |
| | BIOL 1406 | Dan Porter | Life and Physical Scie |
| | BIOL 1407 | Dan Porter | Life and Physical Scie |
| | BIOL 1408/1308 | Dan Porter | Life and Physical Scie |
| | BIOL 1409/1309 | Dan Porter | Life and Physical Scie |
| | BIOL 1411 | Brandon Moore | Life and Physical Scie |
| | BIOL 1413 | Brandon Moore | Life and Physical Scie |
| | BIOL 1414 | Dan Porter | Life and Physical Scie |
| | BIOL 1415 | Dan Porter | Life and Physical Scie |
| | BIOL 2306 | Brandon Moore | Life and Physical Scie |
| | BIOL 2316/2416 | Brandon Moore | Life and Physical Scie |
| | BIOL 2401/2301 | Susan Burgoon | Life and Physical Scie |
| | BIOL 2402/2302 | Susan Burgoon | Life and Physical Scie |
| | BIOL 2404 | Claudie Biggers | Life and Physical Scie |
| | BIOL 2420/2320 | Brandon Moore | Life and Physical Scie |
| Social Responsi bility | | See attachment | |
| | BIOL 1406 | Dan Porter | Life and Physical Scie |
| | BIOL 1407 | Dan Porter | Life and Physical Scie |
| | BIOL 1408/1308 | Dan Porter | Life and Physical Scie |
| | BIOL 1409/1309 | Dan Porter | Life and Physical Scie |
| | BIOL 1411 | Brandon Moore | Life and Physical Scie |
| | BIOL 1413 | Brandon Moore | Life and Physical Scie |
| | BIOL 1414 | Dan Porter | Life and Physical Scie |
| | BIOL 1415 | Dan Porter | Life and Physical Scie |
| | BIOL 2306 | Brandon Moore | Life and Physical Scie |
| | BIOL 2316/2416 | Brandon Moore | Life and Physical Scie |
| | BIOL 2401/2301 | Susan Burgoon | Life and Physical Scie |
| | BIOL 2402/2302 | Susan Burgoon | Life and Physical Scie |
| | BIOL 2404 | Claudie Biggers | Life and Physical Scie |
| | BIOL 2420/2320 | Brandon Moore | Life and Physical Scie |
| Note: May Insert other Objective(s) | | See attachment | |
| | BIOL 1406 | Dan Porter | Life and Physical Scie |
| | BIOL 1407 | Dan Porter | Life and Physical Scie |
| | BIOL 1408/1308 | Dan Porter | Life and Physical Scie |
| | BIOL 1409/1309 | Dan Porter | Life and Physical Scie |
| | BIOL 1411 | Brandon Moore | Life and Physical Scie |
| | BIOL 1413 | Brandon Moore | Life and Physical Scie |

| | | | |
|--|----------------|-----------------|----------------------------|
| | BIOL 1414 | Dan Porter | Life and Physical Sciences |
| | BIOL 1415 | Dan Porter | Life and Physical Sciences |
| | BIOL 2306 | Brandon Moore | Life and Physical Sciences |
| | BIOL 2316/2416 | Brandon Moore | Life and Physical Sciences |
| | BIOL 2401/2301 | Susan Burgoon | Life and Physical Sciences |
| | BIOL 2402/2302 | Susan Burgoon | Life and Physical Sciences |
| | BIOL 2404 | Claudie Biggers | Life and Physical Sciences |
| | BIOL 2420/2320 | Brandon Moore | Life and Physical Sciences |

2. Briefly explain how your department/program(s) have recently (i.e. past year) identified and ensured that these general education objectives are taught throughout each course section.

Course redesign was completed in Anatomy and Physiology1 and 2, Biology 1 and 2, and Integrated Biology. The process addressed weak areas and aligned all instructional practices for consistency.

3. What method(s) are your faculty using to assess the required objectives in your courses?

(List individual course prefix, state "all courses", state "N/A" for each method, etc.):

| Method | Course(s) |
|---|---|
| Capstone Project/Exam | |
| Embedded Questions | Biol 2420 |
| Licensure Exam | |
| Portfolios | |
| Projects/Essays | |
| Testing (i.e. course-based testing; finals) | Biol 2401, Biol 2402, Biol 1406, Biol 1407, Biol 1408 |
| Group discussion assignment | Online Biol 2401, Biol 2402 |

4. Briefly address any improvements made in your department/program(s) based on your data findings.

Biology faculty are actively seeking new methods of content delivery that will make the student responsible for their own learning through more engagement and problem solving opportunities that stimulates critical thinking. Flipped classrooms, problem based learning, service learning, community based learning, field research, capstone course projects, collaborative assignments and projects, undergraduate research, and internships in our lab preparatory area.

5. In which course(s) have you implemented critical reading and thinking strategies? What strategies did you use? How would you evaluate your success in implementing these strategies? Are there strategies you discovered that you would like to share with your colleagues? Do you feel that your department/program could benefit from more professional development in this area?

The faculty that completed the redesign in BIOL 1406, 1407, 1408, 1409 implemented reading quizzes before class, and during classes. They were able to monitor the students understanding before and after lecture. On average, students performed well on the online

quizzes prior to class but failed similar quizzes during the class period. Yes. I do feel that faculty would benefit from more professional development in this area.

PART D: Core Curriculum Assessment – Program Outcomes

Complete this Section ONLY for Programs Directly Responsible for Core Curriculum Courses

The Texas Higher Education Coordinating Board (THECB) has identified 3-4 core objectives (competencies) that each core curriculum course is required to teach and assess.

You may either collect data and information from all core curriculum courses in your program/department or you may attach a separate document for each course/area in your department/program that answers the questions below.

1. Do you certify that your courses annually assess and collect data on the core objectives as required by the THECB?

| | |
|------------|-----------|
| Yes | No |
| X | |

2. Do you certify that each course section is equitable in their assessment of the collection of data and assessment required by the THECB?

| | |
|------------|-----------|
| Yes | No |
| X | |

3. Do you certify that the work assessed has an equal chance (i.e. you did not “cherry pick” the best student work) for assessment?

| | |
|------------|-----------|
| Yes | No |
| X | |

4. Briefly describe the internal and external data you used to form your assessment benchmarks. Note: The THECB requires external data (e.g. [CCSSE](#)) be used to create your benchmarks.

Our benchmarks were influenced by several sources including: Active and collaborative learning, student effort, academic challenge, student-faculty interaction, and support for learners. Our outcomes are aligned with the Academic Course Guide Manual. We used grade distributions from previous courses, projective modeling and results from Community College Survey of Student Engagement.

5. The “[Call for Course Proposals for Inclusion](#)” contains a description of each assignment/activity, direct assessment method, etc. for each of your department’s/program’s courses in the core curriculum.

For each course approved for core curriculum inclusion, provide the following information:

- a) Provide a link to or copy of your data results and/or a summation of your results for each required competency for each core curriculum course in your program.

Each faculty has been asked to review their results and provide a summation of their results. See attached.

- b) Did you meet your benchmark/target in each course? If not, do you need to adjust your benchmark or adjust the instruction to meet the benchmark?

No the benchmark was not met across the board. We implemented new benchmarks across the board in each section of biology. The communication of the implementation process needs to be improved. In addition, improvement is needed in execution of the assignment.

- c) Provide information on your data collection strategy (e.g. each faculty member collected data, sampling of student work collected across sections used, etc.):

Following the definitions of the THECB, faculty submitted all samples of completed student work for the predetermined assignment at the end of the semester.

- d) Please explain how your results were evaluated (e.g. a team evaluated the data, data was collected from every student in the course via Blackboard, etc.):

At the 08/18/15 Biology department meeting, faculty will be asked to review and discuss their graded submission and reflect on the results of the assignment and submit a summation of their analysis.

- e) How do you ensure your results are not biased and are reliable (i.e. inter-rater reliability)?

A random sampling of the faculty submissions will be submitted by the department chair.

- f) Please list the facts you feel contributed to your results (Analysis):

Improvement is needed for the entire process. Directives from the Biology chair need to be more clear and concise. The assignments need to be implemented and tracked for better data results. Faculty needs to improve submission participation. Faculty need to discuss and consider revising and updating the assignment used. There may be more benefit to having a department consistent assignment instead of a course specific assignment.

- g) How have you or will you improve student learning in each course based on the most recent assessment results?

Student learning will be improved with concise instructions and set expectations. Once the assignments are revised and improved; faculty and students will be able to implement and perform better.

6. For each core curriculum course and each core objective, please include a copy of the assessment instrument and five randomly selected, evaluated assessment samples with this form. Some examples of things you may include with your submission are as follows:
- **Embedded Questions** – Copy of possible question bank and copy of five student work samples that include questions from the question bank
 - **Juried Assessment** – List of members on juried panel and copy of five panel evaluations. If student performance, picture or work, etc. is available, include that with your submission as well.
 - **Pre-Post Test** – Copy of pre-test/post-test questions and five samples of student work from pre-test and five samples of same students' work from post test
 - **Rubric** – Copy of rubric and copy of five student work samples
 - **Other Types of Assessment** – Use the above bullets as a reference point for what you may wish to provide. Please contact the Director of Institutional Effectiveness with specific questions.

Also, if it is not clear, please identify on your student work the portions of the student work that address the required THECB objective/s.

PART E: Curriculum Assessment - Program Outcomes:

This Section is ONLY Required for Programs Not Directly Responsible for Core Curriculum Courses

SACSCOC requires each program to provide quality student, customer, and/or client services. Each program not directly responsible for core curriculum courses must still annually identify at least one direct outcome within their program, provide results, analysis, and improvement plans related to that outcome.

1. For this review year, what were each program's most important goal(s) (i.e. broad goals you wanted to accomplish)?

2. For this review year, what is/were each program's most important measurable outcome(s) that helped you achieve your goals (referenced above)? Provide examples of 1-3 outcome statements. (An outcome provides observable, objective evidence that your student's or client's knowledge, skill, ability, attitude, or behavior has changed as a result of your efforts.)

3. Identify your results and analyze your data.

4. What key change(s) has your department/programs made in the past year or do you plan to make based on your assessment of any outcome?