Please respond by January 15, 2010.

To: School Deans, Program Managers, Program and Services Review Primary Writers

From: Outcomes and Assessment Committee, Accreditation, and Institutional Research
Date: December 14, 2009-12-10

Subject: Annual Outcomes and Assessment (SLO/AUO) Summary Report

The fall 2009 semester is rapidly coming to a close, which means that in less than 3 short months (March 1-3, 2010) the Accrediting Commission for Community and Junior Colleges (ACCJC) accreditation site visiting team will be on our campus. Over the past 12 months, the college has worked diligently to prepare for this very accreditation review; however, as we reach the home stretch there is still some important work that needs to be done. Over the next two months, several accreditation related reports including outcomes assessment, SLOs, AUOs, PSR, Strategic Planning will be sent to all programs at Chaffey College. These reports are needed to provide information and support related to self-study report and to help prepare materials to assist administrators, faculty and staff when they interact with the ACCJC visiting team.

One of the first reports which needs to be completed is the Annual Outcomes and Assessment Monitoring Report. This report was created by the Outcomes and Assessment Committee and is intended for both instructional and non-instructional programs. It will provide the institution with the only complete summary of where we are in our SLO/AUO quest. Please complete the report by January 15, 2010. Direct any questions to Marie Boyd at 6968, Tom Vitzelio at 8152, Giovanni Sosa at 6464 or Inge Pelzer at 6457.

Please scroll down
Program Information Sheet

Program Title: Astronomy/Planetarium
Program Code: 1911
Program Type: Instructional

Primary Writer for Annual Program Outcomes and Assessment:
First Name: Joanna
Last Name: Eisberg

Primary Monitor of Outcomes and Assessment Management Binder:
First Name: 
Last Name: 

Number of Degrees Offered by Program: 0
Number of Certificates Offered by Program: 0

Program Level AUO/SLO Report

Outcome Statements

1a. Has at least one outcome statement for the program been established? 
   Yes  No

   If you answered 'Yes' to item 1a above, then proceed to item 1b

1b. What types of outcome statements have been established (check all that apply)?
   □ AUOs  □ SLOs

2. In general, how would you describe the stage of development of your program outcome statements? See Program Outcome Statement Rubric for a complete description of each stage of development:
   http://www1.chaffey.edu/research/IR_PDF_Files/slo_resources/resources/ProgramOutcomes-Assessment-EvalRubric.pdf
   □ Awareness Level
   □ Developmental Level
   □ Proficiency Level

3. Where are your outcome statements published (check all that apply)?
   □ SLO Binder
   □ Program and Services Review
   □ Program Brochure or other printed material
   □ Not currently published
   □ Other (please specify):

Office Use Only

Please scroll down
## Program SLOs to Core Competencies Mapping Matrix

### Directions:

Column 1. Write one SLO in each row. For most programs, 3-6 SLOs are recommended.
Column 2. Write your assessment method(s).
Column 3. Using the list of Core Competencies, identify the Core Competency or Core Competencies addressed by each SLO in each row.

*Click the following link for a sample of a completed form and the list of Core Competencies: [http://www1.chaffey.edu/research/IR_PDF_Files/slo_resources/resources/SLO-CoreCompetencies-Mapping%20Matrix.pdf](http://www1.chaffey.edu/research/IR_PDF_Files/slo_resources/resources/SLO-CoreCompetencies-Mapping%20Matrix.pdf)*

<table>
<thead>
<tr>
<th>Student Learning Outcome</th>
<th>Assessment Method(s)</th>
<th>Core Competency (or Competencies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Distinguish between scientific arguments and those generated from other ways of knowing</td>
<td>Homework, Exams, Lab summaries, Written or oral reports</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>2. Communicate underlying concepts in astronomy, using examples. Topic a: The universe contains structure at a wide variety of scales: planets, stars, solar systems and galaxies</td>
<td>Homework, Exams, Lab summaries, Written or oral reports</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>3. Communicate underlying concepts in astronomy, using examples. Topic b: Structures in the universe are formed by the action of physical processes</td>
<td>Homework, Exams, Lab summaries, Written or oral reports</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>4. Demonstrate the ability to follow current events in astronomy, as reported in the lay media</td>
<td>Written or oral reports</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>5. Apply key ideas in astronomy to relevant personal and societal issues.</td>
<td>Homework, Written or oral reports</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>6. Use laboratory equipment and procedures to experience previously unfamiliar aspects of the physical world.</td>
<td>Laboratory assignments</td>
<td>1, 2, 3</td>
</tr>
</tbody>
</table>

*Please scroll down*
Program AUOs to Ends Policies Mapping Matrix

Directions:

Column 1. Write one Program AUO in each row. For most programs, 3-6 AUOs are recommended.
Column 2. Write your assessment method(s) and progress indicator(s) in each row for each AUO.
Column 3. Using the list of Ends Policies on pages 3 & 4, list the End Policy or Ends Policies addressed by the Program AUO in each row.

*Click the following link for a sample of a completed form and the list of the Ends Policies:

<table>
<thead>
<tr>
<th>Administrative Unit Outcomes</th>
<th>Assessment Method(s) and/or Progress Indicator(s)</th>
<th>Ends Policy or Ends Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please scroll down
Criteria for Assessment and Benchmarks

4. Has at least one benchmark or criteria for success been established? ☑ Yes ☐ No

5. In general, how would you describe the stage of development of your program benchmarks or criteria for success? See Program Outcome Statement Rubric for a complete description of each stage of development:
http://www1.chaffey.edu/research/IR_PDF_Files/slo_resources/resources/ProgramOutcomes-Assessment-EvalRubric.pdf

☐ Awareness Level
☐ Developmental Level
☒ Proficiency Level

6. Where are your benchmarks or criteria for success published (check all that apply)?

☒ SLO Binder
☐ Program and Services Review
☐ Program Brochure or other printed material
☐ Curricunet
☐ Not currently published
☐ Other (please specify):

Summary of Evidence

7. During the course of the 2008-2009 or 2009-2010 academic years, who has summarized the assessment evidence you have collected (check all that apply)?

☒ An individual program faculty member
☐ An individual program staff member
☐ A committee of program faculty
☐ Institutional Research
☐ Other (please specify):

8. During the course of the 2008-2009 or 2009-2010 academic years, who has discussed the summarized assessment evidence (check all that apply)?

☐ A committee of program faculty
☐ The program faculty as a whole
☐ A school, college, or divisional committee
☐ An advisory board
☐ Program faculty have discussed findings with Institutional Research
☒ Other (please specify): Our one faculty member and discipline faculty at other institutions

Please scroll down
9. How often did the discussions take place during either the 2008-09 or 2009-10 academic years?

- More than once a semester
- Once per semester
- Once during the last year
- We did not discuss the results during either the 2008-2009 or 2009-2010 academic year
- Other (please specify):

10. During the course of the 2008-2009 and 2009-2010 academic years, to whom have you reported your findings (check all that apply)?

- Program faculty
- Institutional Research
- Vice President
- Dean
- Outcomes and Assessment Committee
- Students
- Accreditation agency
- Other (please specify): Discipline faculty at other institutions

**Use of Results for Planning**

11a. During the course of the 2008-2009 and 2009-2010 academic years, how have you used the findings to improve student learning or services for students (check all that apply)?

- Course level changes (e.g., syllabus, content, pedagogy)
- Changes to curriculum (e.g., sequencing, add, or delete course)
- Staffing Changes
- Changes to program outcomes
- Changes to assessment tools
- Changes to student advising
- Changes to faculty mentoring process
- Determine resource allocation
- Changes to operational hours
- Other (please specify):

**Please scroll down**
11b. Briefly describe the details of each change you have indicated

Course level changes: Hybrid and campus sections were modified to foster and require more student-to-student discussion online as well as in the classroom.
Changes to the assessment tools used: Rubric was made more specific.
Results: Even on tightened Rubric, scores have improved.

Conclusion

12a. As a result of the 2009 PSR SLO feedback process, all programs were given the same list of recommended future actions. Have you responded to the recommendations made by the Outcomes and Assessment Committee (OAC)?

☒ Yes ☐ No

If you answered 'Yes' to item 12a, proceed to item 12b. If you responded 'No' proceed to 12c.

12b. Describe how you have responded to the specific recommendations offered by the OAC:

Astronomy has closed the loop on 1 General Education course-level SLO, which tucks right under a program-level SLO. Astronomy has not pursued assessment for other SLOs, because we have only one full-time faculty member, and this is as fast as we can work.

12c. Describe why you have not responded to OAC recommendations and establish a timeframe for this process to be competed:

13. In general, how would you describe the stage of development of your program's overall implementation of outcomes assessment? See Program Outcome Statement Rubric for a complete description of each stage of development:
http://www1.chaffey.edu/research/IR_PDF_Files/slo_resources/resources/ProgramOutcomes-Assessment-EvalRubric.pdf

☒ Awareness Level
☐ Developmental Level
☒ Proficiency Level

Please scroll down
14. Are there any specific areas that your program needs assistance with or are there any specific questions that you have about the outcomes and assessment process?

15. In conclusion, is there anything else you would like to share regarding your program's outcomes assessment?

Thank you for completing the Program Outcomes and Assessment Monitoring Report. Please click "Submit" to complete your submission.

INSTRUCTIONAL PROGRAMS: After submitting this form, please follow the link below to complete the Course Outcomes and Assessment Monitoring Report

http://irsurvey.chaffey.edu/16887/16887.asp
Course Outcomes and Assessment Monitoring Report
Fall 2009

Program Information Sheet

Program Title: Astronomy/Planetarium
Program Code: 1911
Program Type: Instructional

Course Level SLO Report

Course Level SLO Development Narrative

1. How would you describe the stage of development of your program’s overall implementation of Course Level SLOs? See Course Outcome Statement Rubric for a complete description of each stage of development:
   http://www1.chaffey.edu/research/IR_PDF_Files/slo_resources/resources/CourseOutcomes-Assessment-EvalRubric.pdf

   - Awareness Level
   - Developmental Level
   - Proficiency Level

2. Provide a brief description of Course Level SLO development in your program with reference to short and long range planning and the 5 phases of the assessment cycle:
   http://www1.chaffey.edu/research/IR_PDF_Files/slo_resources/resources/0809-SLO-Diagram-Article.pdf

   We have translated our program level SLOs into course level SLOs and have closed the loop on one General Education course-level SLO. We are planning to go on to another.

Please scroll down
### Curriculum Mapping Matrix

Use the *Curriculum Mapping Matrix* to link your identified courses to established program SLOs and a corresponding levels of implementation.

#### Sample: Completed Curriculum Mapping Matrix in Biology

<table>
<thead>
<tr>
<th>Course</th>
<th>SLO 1</th>
<th>SLO 2</th>
<th>SLO 3</th>
<th>SLO 4</th>
<th>SLO 5</th>
<th>SLO 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>History 1</td>
<td>Students in history courses will be able to distinguish between primary and secondary sources</td>
<td>I</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History 2</td>
<td>P</td>
<td>P M</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History 3</td>
<td>P</td>
<td>M</td>
<td>I P</td>
<td>M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History 4</td>
<td>P</td>
<td>P M</td>
<td>M</td>
<td>I P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History 5</td>
<td>P</td>
<td>P M</td>
<td>M</td>
<td>P M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History 6</td>
<td>P</td>
<td>P</td>
<td>I</td>
<td></td>
<td>P M</td>
<td></td>
</tr>
<tr>
<td>History 7</td>
<td>I P</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History 8</td>
<td>I P</td>
<td>I</td>
<td>P M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History 9</td>
<td>M</td>
<td>P</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History 10</td>
<td>M</td>
<td>M</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I: Program student learning outcome is **INTRODUCED** in the course.
P: This program student learning outcome is **PRACTICED** in this course.
M: This program student learning outcome is **MASTERED** in the course.

*Please scroll down*
<table>
<thead>
<tr>
<th>Course</th>
<th>SLO 1</th>
<th>SLO 2</th>
<th>SLO 3</th>
<th>SLO 4</th>
<th>SLO 5</th>
<th>SLO 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astronomy 25</td>
<td>I.P</td>
<td>I.P</td>
<td>I.P</td>
<td>P.M</td>
<td>I.P</td>
<td></td>
</tr>
<tr>
<td>Astronomy 26</td>
<td>I.P</td>
<td>I.P</td>
<td>I.P</td>
<td>P.M</td>
<td>I.P</td>
<td></td>
</tr>
<tr>
<td>Astronomy 35</td>
<td>I.P</td>
<td>I.P</td>
<td>I.P</td>
<td>P.M</td>
<td>I.P</td>
<td></td>
</tr>
<tr>
<td>Astronomy 36</td>
<td>I.P</td>
<td>I.P</td>
<td>I.P</td>
<td>P.M</td>
<td>I.P</td>
<td></td>
</tr>
</tbody>
</table>

I: program student learning outcome is INTRODUCED in the course.
P: This program student learning outcome is PRACTICED in this course.
M: This program student learning outcome is MASTERED in the course

Office Use Only

Please scroll down
## General Education Course Level SLOs

Use the General Education Course Level SLO Checklist to describe your progress on each of the course level SLOs you identified above (i.e., Curriculum Mapping Matrix)

### Sample: Completed GE Course Level SLO Checklist

<table>
<thead>
<tr>
<th>Course</th>
<th>Outcome Statements</th>
<th>Means of Assessment</th>
<th>Criteria for Success/Benchmark</th>
<th>Summary of Evidence</th>
<th>Use of Results for Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>BIOL-10</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>BIOL-20</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>BIOL-22</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL-23</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL-30</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL-50</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL-52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL-55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL-63</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

*Please scroll down*
# General Education Course Level SLO Checklist

<table>
<thead>
<tr>
<th>Course</th>
<th>Outcome Statements</th>
<th>Means of Assessment</th>
<th>Criteria for Success/Benchmark</th>
<th>Summary of Evidence</th>
<th>Use of Results for Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astronomy 25</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Astronomy 26</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Astronomy 35</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Astronomy 36</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

*Please scroll down*
## Non-GE Course Pattern Course Level SLO Checklist

<table>
<thead>
<tr>
<th>Course</th>
<th>Outcome Statements</th>
<th>Means of Assessment</th>
<th>Criteria for Success/Benchmark</th>
<th>Summary of Evidence</th>
<th>Use of Results for Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

*Please scroll down*
3. In conclusion, is there anything else you would like to share regarding your program's outcomes assessment?

A quote from Astronomy's Discussion of SLO data Spring 08-Fall 09:
"Closing the Loop: Taken together, scores suggest that SLO-motivated changes in pedagogy have increased student learning since Spring 2008!"

Thank You!