

Astronomy Program Review

Rubric Evaluation	Ron Painter (Same Division Faculty)	Paul Starer (Faculty At-Large)	Nadene Torres (Staff At-Large)	Ram Subramaniam (Administrator)
A. Program Information				
Program Mission Statement				
How many criteria are met for the Program Mission statement?	Addresses all 8 criteria - Meets the Standard		Addresses 4 to 7 of the criteria - Needs Some Improvement to Meet the Standard	Addresses all 8 criteria - Meets the Standard
Reader Feedback	I like how scientific reasoning and math skills are emphasized in the mission statement as well as how astronomy can serve as a gateway for further education in STEM disciplines. I'm not sure the second sentence in item 2 is necessary though. While I admire the focus on qualitative and quantitative reasoning skills in this statement, I'm also concerned that there is relatively little discussion of actual astronomy content in this mission statement.		This is my first time as a reader and I am a classified staff member, so I think I probably look at this through a lens that is more like that of a student rather than that of a tenured faculty member or Program Director. My take away from the mission statement is that Astronomy students are non-STEM majors who will take this as the last science class they will ever take unless they are inspired by these courses to pursue further science education. The primary goal of the courses are to teach students to question, fact check and develop scientific reasoning. I wanted to provide my	N/A

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			<p>personal understanding in case that was not the intention of the statement. I was surprised by the direction of the mission statement. I did not expect it to focus so much on "spin", but I may have gotten caught up in semantics. I think it was not clear and concise to me only because it did not say what I expected. The parts that stuck in the back of my head and affected my ability to clearly understand the mission were the following: The word 'values' in the first sentence. To me, values are my personal ethics and principles. I did not understand how or why astronomy would help me defend my ethics. 'the last exposure' in item 1. So final. A more positive version could be, are an opportunity for students to learn... 'face the world around us as it is, rather than as we wish it were' in item 2. The</p>	

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			<p>end of this sentence felt negative to me. I think item 2 could stand alone without this sentence.</p> <p>I loved items 3 and 4</p>	
Program Learning Outcomes				
Overall, this section:	Addresses all 5 criteria - Meets the Standard		Exceeds expectations for all 5 criteria - Excellent	Addresses all 5 criteria - Meets the Standard
Reader Feedback	<p>I like the intention behind each of the five objectives, but am a bit surprised at the order of these objectives. The astronomy content in item 5 should be ranked higher, or even first, instead of being the last objective of the list IMO. I appreciate the inclusion of collaborative learning as one of the PLOs here though - an underrated objective in my view!</p>		<p>I liked that you referred to the ILOs. Do students have access to those alongside the PLOs so they better understand the intended outcome?</p>	N/A
B. FTES - Enrollment Trends				
1. What does the FTES data trend indicate?	FTES has decreased over the time span by greater than 30% - Needs Major		FTES has decreased over the time span by greater than 30% - Needs Major	FTES has decreased over the time span by 11% to 30% - Needs Some

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	Improvement to Meet the Standard		Improvement to Meet the Standard	Improvement to Meet the Standard
FTES Narrative Explanation - <i>Discuss the factors that would help the college understand these trends and whether there are tangible reasons for no change/flat, an increase or decrease in the trend.</i>				
Overall, in this section:	The narrative exceeds expectations - the narrative could be used as an exemplar - Excellent		The narrative includes all 4 of the criteria - Meets the Standard	The narrative includes all 4 of the criteria - Meets the Standard
FTES Action Narrative (if applicable) - <i>Describe the proposed actions for stabilizing/increasing the FTES.</i>				
Overall, in this section:	The narrative includes all 5 of the criteria - Meets the Standard		The narrative exceeds expectations - the narrative could be used as an exemplar - Excellent	The narrative includes all 5 of the criteria - Meets the Standard
Reader Feedback	As the author said, the astronomy program is the "largest [general education] focused physical science course for students." Is there interest in hiring another astronomy faculty to expand the program and/or teach more sections of astronomy courses? I agree with the changes described in the first part of this section being more conducive to high-quality student		Actions demonstrated that the program understands the trend and is satisfied with the state of the department. While understanding, they are dedicated to encourage enrollment and engagement with the Astronomy department by the college and the public.	The seat counts for classes in the program were incorrectly maintained at 65. This was corrected to 50. The decline in enrollment we are seeing is only a result of that. Also, the number of sections we are now offering are proportional smaller in comparison to the enrollment.

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	<p>learning experiences - 65- student lectures is insane! It seems that the demand from 2016-17 (700 students, 25 sections) is similar to that of last year (300 students, 13 sections), which seems to indicate that the limiting factor for enrollment is the number of sections offered. I feel the astronomy program has lost a lot of students that would otherwise benefit from its courses. I'm not sure why the narrative isn't suggesting additional staffing for its programs as a long-term goal.</p>			

C. Sections - Enrollment Trends

Section Narrative Explanation (If Applicable) - Explain why the number of sections is flat, increased or decreased.

<p>Overall, in this section:</p>	<p>The narrative includes all 4 of the criteria - Meets the Standard</p>	<p>The narrative exceeds expectations – the narrative could be used as an exemplar – Excellent</p>	<p>The narrative includes all 4 of the criteria - Meets the Standard</p>
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Section Narrative Explanation (If Applicable) - Explain why the number of sections increased while FTES decreased.				
Overall, in this section:	The narrative is not included		The narrative is not included	The narrative includes all 3 of the criteria - Meets the Standard
Reader Feedback	No additional comments other than what I have written above.		N/A	N/A
D. Productivity - Enrollment Trends				
1. What does the data indicate about the productivity trend?	The program productivity has decreased by more than 5% - Needs Major Improvement to Meet the Standard		The program productivity has decreased by more than 5% - Needs Major Improvement to Meet the Standard	The program productivity is flat - Meets the Standard
Productivity Narrative Explanation (If Applicable) - Explain why the productivity is flat, increased or decreased.				
Overall, in this section:	The narrative exceeds expectations – the narrative could be used as an exemplar – Excellent		The narrative exceeds expectations – the narrative could be used as an exemplar - Excellent	The narrative includes all 3 of the criteria - Meets the Standard
Productivity Action Narrative (If Applicable) - Describe the proposed actions for stabilizing/increasing the productivity number.				
Overall, in this section:	The narrative is not included		The narrative is not included	The narrative includes all 5 of the criteria - Meets the Standard
Reader Feedback	This section has an excellent, well-thought-out narrative regarding productivity trends that		The narrative completely explained the decrease in productivity. They actually make it seem like there	Even though the productivity has decreased, it is still at 550 which is way above the

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	give context of program productivity compared against that of other comparable programs within and outside of the division. The explanations for productivity declines year after year are very reasonable and adequately justified IMO.		needs to be another trend describing term - The program productivity has decreased by more than 5% - But the Program Meets a Revised Standard	college target. So, no improvement is necessary here.

E. Enrollment by Student Demographics

a. Enrollment by Gender

Enrollment by Gender Narrative Explanation - *Explain why the enrollment rates is flat, increased or decrease for male, female, or non-binary.*

Overall, in this section:	The narrative exceeds expectations – the narrative could be used as an exemplar - Excellent		The narrative exceeds expectations – the narrative could be used as an exemplar – Excellent	The narrative includes all 3 of the criteria - Meets the Standard
2. Does your program differ in the percentage of males to females, in this most recent year, compared to the College?	The difference between the genders/sex is less than or equal 10% - Excellent		The difference between the genders/sex is less than or equal 10% - Excellent	The difference between the genders/sex is less than or equal 10% - Excellent

(College 2020-21 = 52%Female, 46% Male)

Enrollment by Gender Action Narrative (If Applicable) - *What is the source of gender disparity and what proposed/planned actions is the program taking to achieve parity?*

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Overall, in this section:	The narrative is not included		The narrative includes all 5 of the criteria - Meets the Standard	The narrative includes all 5 of the criteria - Meets the Standard
3. What does the data trend indicate about enrollment (headcount) by gender of declared majors in the program?	The Gender gap by declared major is between 0% and 10% - Excellent			
Reader Feedback	There is no option for "not applicable" since there is no degree or certificate available for the astronomy program		Is it possible or would it be prudent to create an Astronomy certificate?	N/A
b. Enrollment by Ethnicity				
Does your program differ in enrollment distribution among ethnic groups, in this most recent year, compared to the College enrollment by ethnic group?	The enrollment mirrors the college's ethnic distribution or the program has explained why the distribution is appropriate - Meets the Standard		The enrollment mirrors the college's ethnic distribution or the program has explained why the distribution is appropriate - Meets the Standard	The enrollment mirrors the college's ethnic distribution or the program has explained why the distribution is appropriate - Meets the Standard
(College 2020-21 = 5% African American, 28% Asian, 5% Filipinx, 28% Latinx, 1% Native American, 1% Pacific Islander, 29% White, 4%Decline to State)				

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Enrollment by Ethnicity Narrative Explanation (If Applicable) - <i>Explain changes identified over the past five years for each ethnic group (address each ethnic group by bullet point).</i>				
Overall, in this section:	The narrative includes 2 of the criteria - Needs Some Improvement to Meet the Standard		The narrative includes all 3 of the criteria - Meets the Standard	The narrative includes all 3 of the criteria - Meets the Standard
Enrollment by Ethnicity Action Narrative (If Applicable) - <i>Describe the proposed actions for addressing disparities in enrollment by ethnic group within the program.</i>				
Overall, in this section:	The narrative is not included		The narrative is not included	The narrative includes all 5 of the criteria - Meets the Standard
Reader Feedback	I agree with the author's assessment that certain populations who already major in STEM disciplines choose not to take an astronomy course since they meet their science GE requirement in other ways. I also like how the author used numbers from outside data sources to support this interpretation.		N/A	N/A
F. Student Course Success				
a. Student Course Success				

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1. What does the data trend indicate about overall course success?	Course success has improved over the time span – Excellent		Course success has improved over the time span - Excellent	Course success has improved over the time span - Excellent
Student Course Success Narrative Explanation - <i>If the data trend shows an increase, decrease, or no change in students' course success percentage, explain what programmatic factors led to such a trend.</i>				
Overall, in this section:	The narrative exceeds expectations – the narrative could be used as an exemplar - Excellent		The narrative exceeds expectations – the narrative could be used as an exemplar - Excellent	The narrative includes all 3 of the criteria - Meets the Standard
Student Course Success Action Narrative (If Applicable) - <i>Describe the proposed actions for stabilizing/increasing the student's course success percentages.</i>				
Overall, in this section:	The narrative includes all 5 of the criteria - Meets the Standard		The narrative exceeds expectations - the narrative could be used as an exemplar – Excellent	The narrative includes all 5 of the criteria - Meets the Standard
Reader Feedback	I like the graph used to demonstrate the correlation between course attendance and course success rates. I can see why the proposed actions emphasize encouragement and interventions to address attendance, since the program's pedagogical practices rely heavily on students being present in class and able to		Program is addressing factors that affect students unrelated to the class as well as promoting engagement and active learning.	N/A

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	<p>participate in the course activities. Neither narrative addresses other factors that could affect student success such as access to course materials or assessment strategies used to measure student success though. I would have liked to see discussion about this.</p>			
b. Student Course Success by Student Groups				
<p>3. Is there a course success gap between African-American, Latinx, Filipinx student groups and Asian, Native American, Pacific Islander, White, Decline to State student groups?</p>	<p>The gap between the two groups has decreased over the time span - Meets the Standard</p>		<p>The gap between the two groups has not changed over the time span - Needs Some Improvement to Meet the Standard</p>	<p>The gap between the two groups has decreased over the time span - Meets the Standard</p>
<p>Course Success by Student Groups Narrative Explanation - <i>Explain why the course success gap is flat, increased or decreased.</i></p>				
<p>Overall, in this section:</p>	<p>The narrative includes 2 of the criteria - Needs Some Improvement to Meet the Standard</p>		<p>The narrative exceeds expectations – the narrative could be used as an exemplar - Excellent</p>	<p>The narrative includes all 3 of the criteria - Meets the Standard</p>
<p>Course Success by Student Groups Action Narrative (If Applicable) - <i>What actions are program faculty and staff engaged in to decrease the course success gap between African-American, Latinx, and Filipinx student groups and Asian, Native American, Pacific Islander, White, and Decline to State student groups?</i></p>				

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Overall, in this section:	The narrative includes 4 of the criteria - Needs Some Improvement to Meet the Standard		The narrative exceeds expectations - the narrative could be used as an exemplar - Excellent	The narrative includes all 5 of the criteria - Meets the Standard
Reader Feedback	As in the previous section, the narrative seems to assume that an increase in course attendance will result in improvement of course success rates. I think increased outreach by the instructor is a notable action that could help with this regard, but am not convinced that course attendance is the only factor that affects course success. I also like the suggestion of highlighting "contributions by under-represented minorities" in an effort to engage more students in the discipline.		The program's commitment to engaging students and increasing success is evident in this and all of your action statements.	Excellent analysis.

G. Student Course Success by Demographics

a. Student Course Success by Gender

What does the data indicate about course success?

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Female	Course success has improved over the time span – Excellent		Course success has improved over the time span - Excellent	Course success has improved over the time span - Excellent
Male	Course success has improved over the time span – Excellent		Course success has improved over the time span - Excellent	Course success has improved over the time span - Excellent
Non-binary	Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard		Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard	
Course Success by Gender Narrative Explanation - <i>If the data trend shows an increase, decrease, or no change/flat in the male, female, or non-binary student course success percentages, explain why the percentage is flat, increased or decreased.</i>				
Overall, in this section:	The narrative includes all 3 of the criteria - Meets the Standard		The narrative includes all 3 of the criteria - Meets the Standard	The narrative includes all 3 of the criteria - Meets the Standard
Course Success by Gender Action Narrative (If Applicable) - <i>Describe proposed actions to stabilize/increase the course success rates for either male, female, or non-binary.</i>				
Overall, in this section:	The narrative is not included		The narrative is not included	The narrative includes all 5 of the criteria - Meets the Standard
Reader Feedback	I agree with the author's assertion that a rising tide lifts all boats.		N/A	N/A

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b. Student Course Success by Ethnicity				
What does the data trend indicate about program student course success by ethnicity?				
African Americans	Course success has improved over the time span - Excellent		Course success has improved over the time span - Excellent	Course success has improved over the time span - Excellent
Asian	Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard		Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard	Course success has improved over the time span – Excellent
Filipinx	Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard		Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard	Course success has improved over the time span – Excellent
Latinx	Course success has improved over the time span - Excellent		Course success has improved over the time span - Excellent	Course success has improved over the time span – Excellent
Native American	Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard		Course success has decreased over the time span by more than 4 percentage points - Needs Major Improvement to Meet the Standard	Course success has improved over the time span – Excellent

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Pacific Islander	Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard		Course success has improved over the time span – Excellent	Course success has improved over the time span – Excellent
White	Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard		Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard	Course success has improved over the time span – Excellent
Decline to State	Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard		Course success has been flat or decreased over the time span by no more than 2 percentage point - Meets the Standard	
Student Course Success by Ethnicity Narrative Explanation (If Applicable) - <i>If the data trend shows a decrease in any of the student ethnic groups' course success rates, explain why the percentage decreased for each (address each ethnic group by bullet point).</i>				
Overall, in this section:	The narrative includes 2 of the criteria - Needs Some Improvement to Meet the Standard		The narrative includes all 3 of the criteria - Meets the Standard	The narrative exceeds expectations – the narrative could be used as an exemplar – Excellent
Student Course Success by Ethnicity Narrative Explanation (If Applicable) - <i>Describe the reasons for the gap in course success.</i>				
Overall, in this section:	The narrative includes fewer than 2 of the criteria - Needs Major Improvement to Meet the Standard		The narrative exceeds expectations – the narrative could be used as an exemplar - Excellent	The narrative exceeds expectations – the narrative could be used as an exemplar - Excellent

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Student Course Success by Ethnicity Action Narrative (if Applicable) - <i>Describe the proposed actions for stabilizing/improving the course success by ethnicity.</i>				
Overall, in this section:	The narrative includes 4 of the criteria - Needs Some Improvement to Meet the Standard		The narrative exceeds expectations – the narrative could be used as an exemplar - Excellent	The narrative exceeds expectations – the narrative could be used as an exemplar - Excellent
Reader Feedback	<p>Neither narrative addresses the actual data provided which indicates that there is a student success rate gap between Latinx students (~75-80%) and Asian/White students (~85-90%). While it is true that the success rates for these three populations has overall increased over the past five years, a student success rate gap still exists.</p> <p>It seems that the author is indicating that continuing to encourage course attendance and continuing to engage students with existing pedagogical practices will eventually close this gap. However, this is not very convincing since the gap has remained more or less</p>		Program understands the trends in its Success by Ethnicity. The data set is too low to accurately demonstrate the success this program is seeing.	Extraordinary work in improving course success overall and for individual groups of students. The analysis of course success data is impressive. The write has presented a thoughtful and clear analysis. There are several action items which could be transferable to other programs on campus.

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	unchanged from the 2017-18 academic year to the 2020-21 academic year (four academic years).			