

Instructions: The first column below matches key words in TracDat where you will enter the requested information. The second column fully describes the information that the IPBT is requesting. It also represents the information you would see if you pressed the help button (a question mark) by each box in TracDat. You will be able to copy and paste or type in your information into the TracDat boxes. **SAVE OFTEN WHILE ENTERING INFO!!!!** ALWAYS keep a soft copy of your work in your files to ensure that your work is not lost. You will save program review as a pdf through the print option of your browser. This is the document you will send to your Dean and it is the document that will be posted on the De Anza website. If you have questions, please refer to your workshop handout (<http://www.deanza.edu/slo/tracdat.html>) or contact: papemary@fhda.edu.

Section I: Overall program description (including CTE)

Section II: Overall student enrollment and success

Section III: Equity

Section IV: Assessment Cycle

Section V: Resource requests

In TracDat. Limit narrative to 100 words; bullet points encouraged

	Information Requested	Explanation of Information Requested. ? TracDat Help button will reveal the same cues (sorry no hyperlinks)
	Program Description	
	Department Name:	Astronomy
	Program Mission Statement:	The Astronomy Department's Program Learning Outcomes are that the student will be able to 1) appraise the benefits to society of astronomical research, 2) evaluate the impact on Earth's characteristics of the evolution of the solar system, stars, and stellar systems, and 3) evaluate astronomical news items or theories about astronomy based upon the scientific method. These outcomes contribute to the College's student core competencies in communication & expression, information literacy, and critical thinking.
I.A.1	What is the Primary Focus of Your Program?	Transfer
I.A.2	Choose a Secondary Focus of Your Program.	Personal Enrichment
I.B.1	# Certificates of Achievement Awarded	

I.B.2	# Certificates of Achievement-Advanced Awarded:	
I.B.3	# ADTs (Associates Degrees for Transfer) Awarded	
I.B.4	# AA and/or AS Degrees Awarded:	
I.B.5.	Strategies to Increase Awards	
I.C.1	CTE Programs: Review of Perkins Core Indicator and SWP Outcomes Metrics	
I.C.2	CTE Programs: Labor Market Demand and Industry Trends :	
I.D.1	Academic Services and Learning Resources: # Faculty Served	
I.D.2	Academic Services and Learning Resources: # Students Served	
I.D.3	Academic Services and Learning Resources: # Staff Served	
I.E.1	Full Time Faculty (FTEF)	During the last three years (2015-16 through 2017-18), FTEF has gone from 4.7 to 3.8. Most of this came in the form of the retirement of a full-time faculty member in June 2016. Another full-time faculty member will retire in June 2019. At that point, there will be one full-time faculty member in the department, who also has an FSA in Geology.
I.E.2	# Student Employees	None
I.E.3	Full-time to Part-time ratio % of Full-time Faculty Compared to % Part-time Faculty Teaching	During the last five years (13-14 through 17-18), the FT% / PT% ratio has been in the range of 3.1 to 3.3, except for 16-17, when it was 1.3. This was due to the retirement of a full-time faculty member at the end of Spring 2016.

		The major change to the Astronomy department at the time of this APRU is the imminent retirement of another full-time faculty member at the end of Spring 2019. This will probably have further impacts on FT/PT ratios.
I.E.4	# Staff Employees	Although the Astronomy department has no staff employee specifically assigned to it, the PSME Division's Computer Laboratory Administrator, Ching Bays, has been very helpful in maintaining the laptops that are used by students in the Astronomy and Geology laboratory classes.
I.E.5	Changes in Employees/Resources	The main changes affecting the Astronomy department are the retirement of a full-time faculty member at the end of Spring 2016, and the retirement of another full-time faculty member at the end of Spring 2019. Following these retirements, there will be only one full-time faculty member in the department, and their load will be split between their Astronomy FSA and their Geology FSA.
	Enrollment	
II.A	Enrollment Trends	Following the retirement of one-third of the full-time faculty at the end of 2015-16, the Astronomy department has seen a concomitant decrease in WSCH, of about 28%. The department has begun teaching online classes in Fall 2018, which have filled during their first two quarters (F18 and W19).
II.B	Overall Success Rate	Our overall success rate for the past three years has remained steady at 80% (81%, 79%, and 82%).
II.C	Changes Imposed by Internal/External Regulations	
	Equity	
III.A.1.	Growth and Decline of Targeted Student Populations: 2017-18 Enrollment	During the last three years (15-16 through 17-18), the percentage of Astronomy students from the targeted populations has remained steady at 37% - 38%, with a high of 40% in 2016-17. This is very close to the College average during this time, of 36%-37%.
III.A.2	Targeted Student Populations: Growth and Decline	Enrollment of students from the targeted groups over the last five years is essentially the same as for the last three years, to within 1%-2%.
III.B.1.	Closing the Student Equity Gap: Success Rates	Success rates for different student groups in 2017-18: African-American: 53%, Latinx: 73%, Filipinx: 77%, Pacific Islander: 77%, Asian: 88%, White: 89%.
III.B.2	Closing the Student Equity Gap: Withdrawal Rates	Withdrawal rates for different student groups in 2017-18: African-American: 21%, Latinx: 11%, Filipinx: 6%, Pacific Islander: 15%, Asian: 4%, White: 4%.
III.B.3	Closing the Student Equity Gap: 2017-18 Gap	Assuming the success gap refers to the difference between a given group's percent success rate and that of the non-targeted groups, the success gaps are as follows:

		<p>2013-14: 12%, 17%, 4%, 15%, -1%, 4%</p> <p>2014-15: 15%, 20%, 9%, 11%, -1%, 5%</p> <p>2015-16: 14%, 13%, 8%, 22%, -1%, 4%</p> <p>2016-17: 23%, 19%, 7%, 7%, 0%, 1%</p> <p>2017-18: 35%, 15%, 11%, 11%, 0%, 1%</p>
III.C	Action Plan for Targeted Group(s)	<p>The Astronomy department has traditionally provided large lecture classes for non-science majors seeking to fulfill CSUGE, IGETC, and De Anza G.E. science requirements. Strategies for improving success rates of targeted groups, as indeed for all students, will need to address this reality. Probably the best avenue to explore will be the modern methods of in-class formative assessments, also known as 'lecture-tutorials', 'think-pair share', and 'clicker questions'. Only one faculty member thus far has had exposure to these methods at all, and they have encountered challenges such as: 1) Technical difficulties with implementing in-class formative assessments in large lecture classes, and 2) Recently, their time has been devoted to creating and teaching the first online Astronomy course.</p> <p>Specific Suggestion / Plan: Instead of trying to acquire and maintain physical "clickers", the College could experiment with an institutional subscription to a smartphone-based, in-class polling system like PollEverywhere.com.</p> <p>As it happens, two days before the draft of this Program Review was due to the Division Dean for review, the Center for Astronomy and Physics Education Research released a free book for instructors who are using the same Open Educational Resource textbook that the Astronomy department has adopted. This instructor's guide comes with complete banks of "clicker questions" designed to go along with the textbook.</p>
III.D	Departmental Equity Planning and Progress	Professional development and technical support, aimed towards implementing modern methods of formative assessment in the lecture classroom, will probably be the most useful help that the department's full-time instructor can receive.
III.E. Yes/No Box	Assistance Needed to close Equity Gap	See narrative in III.D, above.
II.F. Drop down box with goals	Integrated Plan goals: current student equity data and action plan	
	Assessment Cycle	
IV.A	PLOAC Summary	100%

		With the retirement of the long-time Astronomy department coordinator, the remaining full-time instructor will review the PLO assessment plans and develop a comprehensive PLO assessment plan that they will be able to implement for the foreseeable future.
IV.B	SLOAC Summary	137% After consultation with the College's SLO Coordinator during Winter 2019, the new Astronomy department coordinator has assessed one SLO per course, and plans to assess all of the SLOs in each course by the end of Spring 2019.
	Resource Requests	
V.A	Budget Trends	
V.B	Funding Impact on Enrollment Trends	
V.C1	Faculty Position(s) Needed	One new full-time instructor is requested: Replace due to Vacancy
V.C.2	Justification for Faculty Position(s):	
V.D.1	Staff Position(s) Needed	
V.D.2	Justification for Staff Position(s):	
V.E.1	Equipment Requests	No Equipment Requested. The equipment that was requested during the last APRU was purchased, except for one part of a telescope mount that did not show up. The new coordinator will attempt to track this down during Spring 2019. The Astronomy department's most pressing equipment-related need is storage space. The coordinator's faculty office is currently being used as an ad-hoc storeroom. Additional storage space somewhere in the District would be useful; one way to address this would be new built-in storage racks or cabinets in S14, the Geology / Astronomy prep/storage room.
V.E.2	Equipment Title, Description, and Quantity	
V.E.3	Equipment Justification	
V.F.1	Facility Request	Storage space for existing telescopes and desktop spectrosopes. New built-in storage racks or cabinets in room S-14 would be very useful.
V.F.2	Facility Justification	
V.G.	Equity Planning and Support	
V.H.1	Other Needed Resources	Replacement toner cartridges for the Astronomy / Geology laser printer in room S-14. This printer is used to print materials used in Astronomy and Geology classes, such as those used in the Astronomy 15 labs held next door in room S-15. Use of this printer saves on Xeroxing costs. This is an HP Color LaserJet CP5525.
V.H.2	Other Needed Resources Justification	
V.J.	"B" Budget Augmentation	
V.K.1	Staff Development Needs	
V.K.2	Staff Development Needs Justification	
VI.	Closing the Loop	How do you plan to reassess the outcomes after receiving each of the additional resources requested above? N.B. For the Comprehensive Program Review the question becomes "What were the assessments showing the results of receiving the requested resources over the last five years?"
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	Extension 8664
Last Updated:	Give date of latest update (Set next box to YES when done and ready for Dean review).