2016-2017 Instructional Program Review Annual Update

ASTRONOMY

1. Discipline/Area Name: **ASTRONOMY: MSE**	For: **2016-2017**

2. Name of person leading this review: **Mark McGovern, Christos Valiotis**

3. Names of all participants in this review: **Mark McGovern, Christos Valiotis**

4. Status Quo option: Year 1: Comprehensive review ☐ Year 2: Annual update or status quo option ☐ Year 3: Annual update ☒ Year 4: Annual update or status quo option ☐	In years two and four of the review cycle, programs may determine that the program review conducted in the previous year will guide program and district planning for another year. ☐ Check here to indicate that the program review report written last year accurately reflects program planning for the current academic year. (Only programs with no updates or changes may exercise the status quo option. All others will respond to questions 6 – 13.)

Number of Full-time Faculty `1`   **Number of Part-time Faculty** `0`

Data/Outcome Analysis and Use

5. Please review the subject level data and comment on trends (more data will be available the Program Review web page):

Indicator	2012-2013	2013-2014	2014-2015	2015-2016	Recent trends?	Comment
Enrollment #	256	297	327	319	Increase	
# of Sections offered	9	11	11	11	Increase	
# of Online Sections offered	0	1	1	1	Increase	
# of Face-to-Face Sections offered	9	10	10	10	Increase	
# of Sections offered in Lancaster	9	10	10	10	Increase	
# of Sections in other locations	0	0	0	0	No Change	

# of Certificates awarded	N/A	N/A	N/A	N/A	No Change	
# of Degrees awarded	N/A	N/A	N/A	N/A	Increase	
Subject Success Rates **Traditional (Online)**					Increase	The success rate in the traditional courses has increased substantially from 2013 to 2014 and has since remained fairly constant around 81%. In contrast, the success rate of the online section is about 20% lower.
	71	83 (50)	81 (61)	83(63)		
Subject Retention Rates **Traditional (Online)**					No Change	The overall retention rate for traditional courses has largely remained constant at 92% on average. The retention rate of the online course is at 80%, much lower than the rate of the traditional courses.
	89	94(71)	92(84)	94(87)		
Full-time Load (Full-Time FTEF)	.88	.85	.85	.85	No Change	The program has one full time faculty that teaches all sections.
Part-time Load (Part-time FTEF)	.03	.0	0	.0	No Change	
PT/FT FTEF Ratio	0	.05	0	.06	No Change	

#	Indicator	Comments and Trend Analysis
7.	If applicable, report program/area data showing the quantity of services provided over the past four years (e.g. # of workshops or	N/A

	events offered, ed.plans developed, students served)			
8.	Student success and retention rates by equity groups within discipline	Review and interpret the subject data by race/ethnicity and gender. Identify achievement gaps. List actions that are planned to meet the Institutional Standard of **69.1%** for student success and to close achievement gaps:		

Race/Ethni	20012-13	Achvmnt Gap	2013-14	Achvmnt Gap	2014-15	Achvmnt Gap	2015-16	Achvmnt Gap	All Years	Achvmnt Gap
Afr-Am	44%	**37%**	79%	**7%**	61%	**23%**	69%	**13%**	64%	**20%**
Hispanic	76%	**5%**	73%	**13%**	79%	**5%**	82%	**0%**	78%	**6%**
Other	91%		78%		78%		78%		81%	
White	81%		86%		84%		82%		84%	

(Success by race or ethnicity.)

Gender	20012-13	Achvmnt Gap	2013-14	Achvmnt Gap	2014-15	Achvmnt Gap	2015-16	Achvmnt Gap	All Years	Achvmnt Gap
Female	73%	**10%**	78%	**0%**	78%	**3%**	79%	**2%**	77%	**4%**
Male	83%		78%		81%		81%		81%	

(Success by gender)

The success rate gap between Hispanics and whites has fluctuated significantly from 2012 to 2016 and it about 6% on average for all years. The overall success rate for Hispanics at 78% is well above the institutional goal of 69.1%. The achievement gap between African American and white students shows large fluctuations but this can be easily attributed to the small number of A-A students. Statistically, there is no valid trend that could be reliably reported. Nevertheless, more effort needs to be expended to increase the overall number of A-A students enrolled in the program. Although female students are succeeding at a slightly lower rate than male students, statistically the two groups are performing equally. The average success rate for both groups significantly exceeds the institutional goal of 69.1%.

9.	Career Technical Education (CTE)	Comment on the occupational projections for employment in your discipline for the next two years and how the projections affect your planning:

programs: Review the labor market data on the California Employment Development Department website for jobs related to your discipline.	N/A

10. Cite examples of using action plans (for SLOs, PLOs, OOs, ILOs) as the basis for resource requests and how the allocation of those resources or other changes resulted in improved outcomes over the past four years.

SLO/PLO/OO/ILO	Action Plan	Current Status	Impact of Action
ASTR 101L SLOs	2014-2015	**Ongoing**	**Improved student success in areas involving the use of telescopes.**
ASTR 101 SLOs	2014-2015	**Completed**	**Added the use of more 3D visualization software to homework and lecture which has improved student success in evaluating complex celestial modeling of the sky.**
ASTR 101 SLOs	2014-2015	**Ongoing**	**Addition of a planetarium projector in the Virtual Science Lab has been implemented to assist modeling celestial mechanics.**

11. Review the goals identified in your most recent comprehensive self-study report and any subsequent annual reports. Briefly discuss your progress in achieving those goals.

Goals/Objectives	Current Status	Impact of Action (describe any relevant measures/data used to evaluate the impact)
Acquire planetarium system	Completed	**Accomplished in 2016.**
Briefly discuss your progress in achieving those goals: **Fall 2016 saw the installation of the planetarium in the Virtual Science Lab. Impact should be seen in subsequent semesters.**		

Please describe how resources provided in support of previous program review contributed to program improvements:

12. Based on data analysis, outcomes, program indicators, assessment and summaries, list discipline/area goals and objectives to advancing district Strategic Goals, improving outcome findings and/or increasing the completion rate of courses, certificates, degrees and transfer requirements in 2018-2019. Discipline/area goals must be guided by **district Strategic Goals** in the Educational Master Plan (EMP), p.90. They **must be supported by an outcome or other reason (e.g., health and safety, data analysis, national or professional standards, a requirement or guideline from legislation or an outside agency).**

Goal #	Discipline/area goal and objectives	Relationship to Strategic Goals* in Educational Master Plan (EMP) and/or Outcomes	Action plan(s) or steps needed to achieve the goal**	Resources needed (Y/N)?
1	ASTR – Further training for planetarium software	*2. Increase efficient and effective use of all resources: Technology, Facilities, Human Resources, Business Services	Study further online training courses and on-site training course at E&S headquarters in Salt Lake City.	Yes
2	ASTR Lab – Update aging equipment	*2. Increase efficient and effective use of all resources: Technology, Facilities, Human Resources, Business Services	Maintain the quality of equipment used in the astronomy lab.	Yes
3	ASTR – Obtain additionally shows for the planetarium	*2. Increase efficient and effective use of all resources: Technology, Facilities, Human Resources, Business Services	Expand the repertoire of shows that can be used for the planetarium	Yes

Action plan verbs: **expand, reduce, maintain, eliminate, outsource, reorganize, re-engineer, study further, etc.

13. Identify significant resource needs that should be addressed currently or in near term. For each request type identify which **discipline/program goal(s) from #12 guide this need**.

Indicate which Goal(s) guide this need	Type of Request (Personnel[1], Technology[2], Physical[3], Professional development[4], Other[5])	New or Repeat Request?	Briefly describe your request here	Amount, $	One-time or Recurring Cost, $?	Contact's name
1	Professional Development	New	Training for the planetarium projector	$5000	One-time	Mark McGovern
2	Physical	New	Obtain replacements for aging equipment	$2000	One-time	Mark

						McGovern
3	Technology	New	Purchase 3 new shows for planetarium	$18000	One-time	Mark McGovern