Skyline COLLEGE
ACHIEVE

Annual Administrative Leadership/Unit Review and Service Outcomes Assessment

Administrative Unit: __**Science, Math, Technology**____Prepared by:_**Raymond Hernandez, Dean**__Date: _**9/16/2013**__

Contact David Ulate for data, research and assessment assistance. Please submit your completed forms to Ulated@smccd.edu in addition to forwarding them to your supervisor. Please submit only your Worksheets. Do not alter the forms, or eliminate pages. If a page does not apply simply mark N/A.

The Administrative/Leadership and Unit Review and Service Outcomes Assessment
The Administrative/Leadership and Unit Program Review and Service Outcomes Assessment *should be developed with input from the staff within the unit. It is meant to provide a broad understanding of the unit, current trends related to the unit's mission, and how the unit serves to meet the overall mission or goals of Skyline College and the San Mateo County Community College District.*

2. **What are the Service Area Outcomes for your unit?**
    a. *Students served will have access to a breadth and quality of lower division education to effectively complete certificates and associates degrees (including associate degrees for transfer), and to enable transfer to baccalaureate institutions*
    b. *Students served will receive quality career and technical education and training in cooperation with business, industry, labor, and public service agencies to become employable in their industry of choice*
    c. *Students served will receive support in developmental skills to support their success as they progress through their academic goals*
    d. *Students will experience a variety of services and division sponsored events related to science, math, and technology that will enhance and support their academic goals*

3. **What is the mission of your unit? How does this mission serve the overall College and District Mission?**
4. *Skyline College's Science, Math, and Technology division serves a diverse community of learners and provides student-centered education leading to transfer to baccalaureate institutions and career employment. The division provides students with multi-disciplinary courses of study in science, math, and allied health and technology career programs. Students develop critical thinking, communicate in written and oral form, develop computer and information literacy, and engage in citizenship.*

5. **List the functions of your unit**.

Function	**Done in Collaboration with** (leave blank if this function is not in collaboration with another unit)	**Note if this is:** development and enhancement of our communities, a leadership role, an advocacy role, resource development, planning or services
Support student success in all division programs		
Promote faculty and staff development of all division employees		
Provide support and resource allocation for all programs in division		
Coordinate the schedule of activities and classes for all division programs and services		
Ensure quality of programs through and effective outcomes assessment measures and analysis		
Support curriculum and program development		
Ensure all regulations and accreditation standards are met		

6. **Please provide an update on previous year goals and initiatives. What were the major goals and accomplishments?**

College Goal	Strategy	Unit	Objective	Measurement Criteria	Outcome/Status (ongoing, completed)
1	1.1	SMT	Accelerate pathway through math sequence	Implementation of stats path course (Math 190)	ongoing
1 6	1.1, 1.2, 1.3 6.1, 6.2, 6.3	SMT	Create certificates/degrees and institutionalize ESTM program	Completion of curriculum and degrees. Department identification	completed
1 6	1.1, 1.2, 1.3 6.1, 6.2, 6.3	SMT	Revision of Medical Assisting, Medical Transcription, and Medical Billing and Coding programs	Completion of new certificates and degrees	ongoing
1 6	1.1, 1.2, 1.3 6.1, 6.2, 6.3	SMT	Revise CST curriculum to meet industry standards	Completion of new curriculum and revision of certificate	complete
1 6	1.1, 1.2, 1.3 6.1, 6.2, 6.3	SMT	Development of Career Advancement Academies in Allied Health	CAA program developed and implemented. Coordination of Allied Health programs through pathway	ongoing
1	1.1 1.2	SMT	Develop Geology Associate Degree for Transfer	Completion of AS-T	completed
1 2 4	1.2 2.1 4.1	SMT	All division programs to complete SLO cycle	100% of programs have completed SLO cycle at course and program level	completed and ongoing
5	5.1	SMT	Hire division staff to support programs in SMT (BIOL/CHEM Lab Technician, PSC)	Hires complete	completed
1 5	1.2 5.1	SMT	Hire faculty in key programs identified through the FTEF	Hires complete	completed

			allocation process (BIOL, ESTM, MATH, PHYS)		
1 5	**1.2 5.1**	**SMT**	**Hire Academic Supervisor to oversee and provide leadership for Allied Health programs**	**Hire complete**	**completed**

7. **What are the key internal and/or external factors that have occurred in the last year that affect your area?**
    a. District wide sector convenings in healthcare and biotechnology
    b. Transfer of TCOM and CALT to Business and Medical Office Assisting, Medical Transcription, and Medical Billing and Coding to SMT
    c. Continuation of grant funding for Career Advancement Academies
    d. Movement of ESTM program from grant funding and support to general offerings
    e. Scheduling capacity has been achieved for science lab facilities

8. **What are the upcoming leadership and operational goals and initiatives that will connect to the college goals for your unit?** (Before writing your goals and objectives be sure to review other Program Review documents related to your unit to discern if there are service needs.

College Goal	Strategy	Unit	Objective	Measurement Criteria	Resources Needed
1 6	**1.1, 1.2, 1.3 6.1, 6.2, 6.3**	**SMT**	**Revise curriculum, certificates, and degrees for Biotechnology program**	**Certificates, Degree Advisory board response**	**Faculty coordinator Equipment inventory Facilities**
1 4	**1.1, 1.2 4.2**	**SMT**	**Explore possibilities for added laboratory space for science courses**	**Options for addressing need**	**To be identified**
1 5	**1.1, 1.2, 1.3 5.1**	**SMT**	**Increased online/hybrid course presence for SMT**	**# and variety of courses offered online/hybrid**	**Professional development Development stipend for faculty**
1 6	**1.1, 1.2, 1.3 6.1, 6.2, 6.3**	**SMT**	**Discussion and plan development of Allied Health simulation lab**	**Developed plan for simulation lab**	
1 4	**1.1, 1.2 4.1**	**SMT**	**Increase tutor support for natural science students**	**Increase number of tutors dedicated to**	**Collaboration between science faculty and**

				science course support	**learning center**
1 6	**1.1, 1.2, 1.3 6.1, 6.2, 6.3**	**SMT**	**Increase marketing and outreach for lower enrolled/revised CTE programs**	**Increased visibility and enrollment in CTE programs**	**Budget for materials development, printing, and advertisement. Collaboration with marketing department**
1	**1.1, 1.2, 1.3**	**SMT**	**Development of a first level Engineering certificate pathway**	**First level Engineering certificate**	**Faculty collaboration**
1 2 4 5	**1.1, 1.2 2.1 4.1 5.1**	**SMT**	**Identify and incorporate strategies to improve remedial math success and retention rates**	**Improved success and retention in remedial math sequence**	**Increased time for discipline faculty to collaborate Professional development opportunities**

9. **Provide the official Organizational Chart of your unit and an ideal chart that includes all levels of services and positions.** *Please provide a brief narrative descriptions by numbering the chart and including a numbered list with clarifications on a subsequent page. If you wish make this an appendix item.*

Current staffing categories for SMT:

Administration:		
Dean	Raymond Hernandez	1.0
Academic Supervisor – Allied Health, Respiratory Therapy	Ijaz Ahmed	1.0
Classified Staff:		
Administrative Assistant	Pat Tyler	1.0
Program Services Coordinator	Alana Utsumi	1.0
Lab Tech (Biology)	Kylin Johnson	1.0
Lab Tech (Chemistry)	Mousa Ghanma	1.0
Lab Tech (Biol/Chem)	Gary Cheang	1.0
Hourly Staff: Short Term		
(6) EMC Instr Aide I	Lab practice and testing – assisting lab faculty (accred requirement)	Short term hours vary throughout year
(4) EMC Instr Aide II	Lab practice and testing – assisting lab faculty (accred requirement)	
(1) RPTH Instr Aide II	Lab assistant - lab faculty	
(1) SURG Instr Aide II	Lab assistant - lab faculty	
Student workers:		
(3) Biology - Federal Work Study	Assist with lab stockroom and lab preparation	Hours vary

(1) Biology – General Fund 1 TA (3) Chemistry – Federal Work Study	Assist with lab preparation Assist with lab stockroom and lab preparation	
FT - Faculty Reassigned Time: Biotech Coordination ESTM Program Coordinator Math Department Coordination MESA Coordination SURG Coordination SAN Coordination	 Coordination of Biotech program restructuring Coordination of ESTM program Coordination of Math meetings and discipline focused work Coordination of MESA program (portion grant funded) Coordination-various programmatic/ accreditation responsibilities Coordination of SAN activities	 0.4 0.4 0.14 0.2 0.2 0.2
PT – Faculty Reassigned Time: EMC Coordination	 Coordination-various programmatic/accreditation responsibilities	 0.2

10. **Staffing Profile (Please indicate the number in terms of FTE. (i.e. a full time staff =1 FTE / and a half time staff =.5 fte)**

Position	Staffing Levels for Each of the Previous four years as of July 1					Anticipated total staff needed as of July 1				
	2010	2011	2012	2013		2014	2015	2016	2017	2018
Administration	1.0	1.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0
Classified Staff FT	5.0	5.0	5.0	6.0		5.0	5.0	5.0	5.0	5.0
Classified Staff PT	-	-	-	-		-	-	-	-	-
Confidential Staff FT	-	-	-	-		-	-	-	-	-
Hourly Staff	10	10	11	11		11	11	11	11	11
Student Workers	11	11	11	12		18	18	18	18	18
Faculty FTE Full time	23	23	22	25		27	29	30	31	32
Faculty FTE Part time	26.7	26.7	27.7	24.7		22.9	21.1	20.3	19.5	18.7
Faculty Reassigned FTE Full time	2.14	2.14	2.14	2.34		2.5	2.7	2.7	2.7	2.7
Faculty Reassigned FTE Part time	0.3	0.3	0.3	0.2		.2	0	0	0	0
Total Full Time Equivalent Staff	58.1	58.1	58.1	60.2		59.6	59.8	60.0	60.2	60.4

11. **Outcomes Assessments**

Outcomes Assessed	Outcomes data and interpretation	Conclusions Reached	Action steps	Program review conclusions
1. Quality CTE and Training Programs	**Respiratory Therapy, Surgical Technology, and EMT Annual External Accreditation submissions – Threshold data.**	**All programs reached threshold goals. Respiratory Therapy holds high certification and employment rates. Surgical Technology graduates hold high certification and employment rates. Students in Sterile Processing program not adequately prepared for clinical experience**	**Sterile Processing Program added lab course (192 hours) to better students for clinical experience.**	
2. Variety of services and division sponsored events related to science, math, and technology that will enhance and support their academic goals	**# and breadth of division sponsored events in SMT.**	**Expanding your Horizons, Science Symposium, SMT Scholarship, MESA center, SACNAS student attendance, Science in Lecture Series, Respiratory Therapy – Surgical Technology job fairs, Sustainability Action Network meetings, Earth Day. Habitat X sponsored conference, Clubs - Phi Theta Kappa, American**	**Continue to provide division support for events and services to enhance and support student academic goals**	

		Medical Student Association, SACNAS, Skyline Environmental Go Green, Respiratory Therapy, Skyline Science and Research.		

What were the Service Area Outcomes (**SAO**s) you assessed last year?	How did you assess progress? Please list the **methods** you used in the assessment.	**When:** In what timeframe was the assessment completed?	What was the target or benchmark you hoped to achieve or did achieve in the assessment?	Have you used the results from the assessment to make improvements? Please describe these improvements here.
NA				

Update from previous year's assessments (2012-2013).

NA				

Department/Unit:	**Science, Math, Technology**	**Date: September 16, 2013**	
Assessment Facilitator:	**Raymond Hernandez, Dean**	**Ext. 4354**	**Email: hernandezr@smccd.edu**
Unit Mission Statement:	Skyline College's Science, Math, and Technology division serves a diverse community of learners and provides student-centered education leading to transfer to baccalaureate institutions and career employment. The division provides students with multi-disciplinary courses of study in science, math, and allied health and technology career programs. Students develop critical thinking, communicate in written and oral form, develop computer and information literacy, and engage in citizenship.		

Current year's assessment plan (2013-2014)

Anticipated Service Area Outcomes (SAO): What are you trying to do, or what SAO are you planning to assess? NO MORE THAN 2	Assessment Methods: What assessment methods do you plan to use?	Timeframe: When Will Assessment Be Conducted and Reviewed?	Targets/Benchmarks: What is the minimum result, target, or value that represents success at achieving this outcome?	Use of Results: How do you anticipate using the results from the assessment?
1. Support college in increasing completion of	**Certificate, AA/AS/ADT degree, transfer data**	**Quarterly**	**5% increase in issued certificates, AA/AS/ADT degree,**	**Identify what strategies have help improve attainment of certificates, degrees,**

certificates, AA/AS and ADT degrees, and transfer	**Survey discipline faculty / counselors to identify ways in which SMT office can support goal**	**Fall 2013**	**transfer compared to 12/13 academic year.**	**transfer.**
2. Students will receive quality career and technical education and training in cooperation with business, industry, labor, and public service agencies to become employable in their industry of choice **Focus on Medical Assisting and Biotechnology**	**Advisory Board assessment** **Course development based on industry needs**	**Fall 2013/Spring 2014**	**Development of appropriate certificates and degrees for Medical Assisting and Biotechnology**	**New program will be launched and course offering scheduled beginning Fall 2014.**

ALUR--Resources Needed

Unit Name: Science, Math, Technology

12. **Staff Needs**

NEW OR REPLACEMENT STAFF (Faculty or Classified)

List Staff Positions Needed for Academic Year_13-14 Place titles on list in order (rank) or importance.	**Indicate (N) = New or (R) = Replacement**	**Annual TCP***
1. Medical Assisting Instructor Reason: The program has recently transferred to SMT and is undergoing complete revision. The program will include a new suite of classes, internship rotations, and an ongoing advisory board. A full time faculty member will be required to meet programmatic needs.	**(N)**	
2. Earth Sciences Instructor Reason: The previous Earth Sciences instructor retired at the end of Spring 2013 and has left the department without a full time presence. With the recent development of an Associate Degree for Transfer (ADT), this position need is a high priority.	**(R)**	
3. HSCI Instructor Reason: The department is without a full time instructor. HSCI has proposed expanding offerings, an associate degree and ADT connecting to 4 year degrees in health education and public health.		
4. Biology Instructor Reason: Over the past 5 years, 17 sections of BIOL 250 have been offered and over 660 students annually have been taught fully by adjunct faculty. Biology has identified a need for full time faculty both in comprehensive program review and their annual plan	**(N)**	
5. Math Instructor Mathematics department has received approval for two full time positions last year, one of these was a retirement replacement. Even at eleven full time faculty in 2013/2014 , the ratio of full time Faculty to FTEF is only 63.4%. In Spring 2013, of the 68 sections which were offered, full time Faculty taught 39 while 29 sections were taught by adjunct faculty. There is still a significant need for full time faculty in the department not only to teach sections but also to participate in ever increasing learning Communities and collaborate across disciplines and the college. The Math department touches Most every student who comes to Skyline.	**(N)**	

** TCP = "Total Cost of Position" for one year is the cost of an average salary plus benefits for an individual. New positions (not replacement positions) also require space and equipment. Please be sure to add related office space, equipment and other needs for new positions to the appropriate form and mention the link to the position.*

13. **Additional Equipment Needs (excluding technology)**

List Equipment or Equipment Repair Needed for Academic Year 13-14 Please provide a brief list of the needs of your unit on your campus below. Place items on list in order (rank) or importance.	Equipment: • (I)-instructional • (n) non-instructional	Annual TCO**		
		Cost per item	# Requested	Total Cost of Request
1. Data Studio Software for computer simulations Reason: Computer simulations during physics/astronomy lab exercises	**(I)**	**$1000**	**15**	**$15,000**
3. Gas Chromatographer Reason: Chemistry equipment for students to conduct hands on experiments	**(I)**	**$30,000**	**1**	**$30,000**
4. Licor Portable Synthesis System **Refrigerated Microfuge** **Gynsys Spectrophotometers** **Dissecting Microscopes** **Storage cabinets** Reason: Majors and Field Biology need	**(I)** **(I)** **(I)** **(I)** **(N)**	**$40,000** **$9,000** **$2600** **$400** **$350**	**1** **1** **2** **14** **2**	**$40,000** **$9,000** **$5,200** **$5,600** **$700**
5. Solar Panels Reason: Upgrades to sustain ESTM-Solar program	**(I)**	**$4000**	**2**	**$8000**
6. Ventilator – Respiratory Therapy **Simulation mannequin** Reason: Update technology for student use in lab	**(I)** **(I)**	**$40,000** **$60,000**	**2** **2**	**$80,000** **$120,000**
7. EKG Machine EMT program is developing EKG course and need 12 lead EKG machine	**(I)**	**$6,000**	**1**	**$6,000**
8. Nuclear Magnetic Resonance Spectroscopy Reason: Chemistry equipment for students to conduct hands on experiments	**(I)**	**$100,000**	**1**	**$100,000**

** Instructional Equipment is defined as equipment purchased for instructional activities involving presentation and/or hands-on experience to enhance student learning and skills development (i.e. desk for student or faculty use). Non-Instructional Equipment is defined as tangible district property of a more or less permanent nature that cannot be easily lost, stolen or destroyed; but which replaces, modernizes, or expands an existing non-instructional program. Furniture and computer software, which is an integral and necessary component for the use of other specific instructional equipment, may be included (i.e. desk for office staff) ** TCO = "Total Cost of Ownership" for one year is the cost of an average cost for one year. If equipment needs are linked to a position please be sure to mention that linkage.*

14. **Technology (Computers and equipment attached to them)++ Needs <u>Not</u> Covered by Current Budget:**

NOTE: Technology; excludes software, network infrastructure, furniture, and consumables (toner, cartridges, etc)

Priority	EQUIPMENT REQUESTED	New (N) or Replacement (R)?	Program: New (N) or Continuing (C) ?	Location	Is there existing Infrastructure?	Has it been repaired frequently?	Cost per item	Number Requested	Annual TCO* Total Cost of Request
1. Physics/Astronomy 15 laptop computers Justification replace current outdated inventory	Physics 15 laptop computers		(C)	7305		Outdated hardware system	$1000	15	$15,000
2. Justification									

- *TCO = "Total Cost of Ownership" for one year is the cost of an average cost for one year. If equipment needs are linked to a position please be sure to mention that linkage.* ***++Technology is (1) equipment that attaches to a computer, or (2) a computer is needed to drive the equipment****.*

15. Facilities Needs Not Covered by Current Building or Remodeling Projects*

List Facility Needs for Academic Year_13-14 **(Remodels, Renovations or added new facilities)** Place items on list in order (rank) or importance.	**Annual TCO***
	Total Cost of Request
1. Acquisition of center classrooms on 3rd floor, building 7. Remodel to one lab and one classroom space Reason **Need increased classroom/lab space for growing physics/earth sciences programs.**	**TBD**
2. Additional building for science/allied health classrooms / laboratories Reason: Current space is used to capacity (specifically lab space). Ramp up of Biotechnology, Medical Assisting, Geology ADT, anticipated additional programs (Pharmacy Technology, Anesthesia Technician).	**TBD**
3. Adjunct Office Space Reason: space is needed to schedule private sessions when adjunct faculty need to conference confidentially with students.	

16. Professional or Organizational Development Needs Not Covered by Current Budget

List Professional Development Needs. Reasons might include in response to assessment findings or the need to update skills to comply with state, federal, professional organization requirements or the need to update skills/competencies. Please be as specific and as brief as possible. Some items may not have a direct cost, but reflect the need to spend current staff time differently. Place items on list in order (rank) or importance.	**Annual TCO***		
	Cost per item	Number Requested	Total Cost of Request

1. Reason:			
2. Reason:			

17. **OTHER NEEDS not covered by current budget**

List Other Needs that you are certain do not fit elsewhere. Please be as specific and as brief as possible. Not all needs will have a cost, but may require a reallocation of current staff time. Place items on list in order (rank) or importance.	**Annual TCO***		
	Cost per item	Number Requested	Total Cost of Request
1. Reason:			
2. Reason:			

18. **Long Term Planning Needs (2 – 5 years from now)**

If your unit anticipates a significant* additional needs for personnel, equipment or facilities will occur two to five years from now please list those here*	Fiscal Year Needed	Number Requested	Total Cost of Request
1. Engineering Certificate Program Reason:	**14-15**		
2. Pharmacy Technician Program Reason:	**15-16**		
3. Anesthesia Technician Program	**15-16**		

**Significant needs are generally those with annual costs over $20,000. They may be the result, for example, of institutionalizing a grant, anticipated growth, or major equipment coming to the end of its life.*