

Santa Rosa Junior College

Program Resource Planning Process

Engineering and Applied Technology 2017

1.1a Mission

The mission of the Engineering and Applied Technology Department (E&AT) is to provide excellent student learning opportunities to prepare students for careers through our Career and Technical Education, CTE, programs and to prepare students for transfer in our transfer majors. We achieve this through maintaining excellent programs, hiring excellent faculty, providing state-of-the-art technology and advocating for the needs of our students.

1.1b Mission Alignment

The programs in the Engineering and Applied Technology Department mission are in alignment with the District's mission, specifically *Student Learning*, because we offer high quality instruction, using state-of-the-art technology according to current industry standards, so that our students are prepared for transfer and/or the workforce. In addition, we are advocates of *Continuous Improvement* and several of our programs have recently been reviewed, reorganized and updated to serve our students better, they are: Civil Engineering Technology; Surveying Technology; Geospatial Technology; and Electronics Technology, which is transitioning to a Mechatronics Technology program.

1.1c Description

The department consists of the following 3 transfer disciplines: Architecture (limited classes), Construction Management (under development) and Engineering; and the following 8 CTE (Career and Technical Education) disciplines: Civil Engineering Tech., Digital Media: 3-D Modeling and Animation, Electronics Tech. (soon to be Mechatronics Tech.), Geospatial Tech., Solar Photovoltaics, Surveying Tech., Water Distribution Operations, and Wastewater Treatment Operations; as well as offering several general Applied Tech/Design Graphics/CAD support courses used by several of the programs in our department, as well as other departments. Although we focus on transfer and CTE certificates, our courses are also of interest to professionals who are upgrading their skills, and to the general public

It should be noted that several of the programs are in a state of flux as industry needs have changed and programs are being revised/developed to meet current needs. For example the Electronics program is transitioning to a Mechatronics program (starting Fall 2016) and major revisions are underway in each of the Civil Engineering Tech., Surveying Tech. and Geospatial Tech. programs, as well as in the Water Distribution Operations and Wastewater Treatment Operations programs.

1.1d Hours of Office Operation and Service by Location

The E&AT Department offers classes during the day, the evening and on weekends at the Santa Rosa Campus. The Engineering and Architecture classes are offered primarily during the day. Electronics, Solar Photovoltaics and Animation classes are offered primarily in the evening. While the other disciplines (Civil Engineering Tech., Surveying Tech., Geospatial Tech. and Applied Tech./Drafting) have a mix of day and evening classes, with Applied

Tech./Drafting and Solar Photovoltaic classes also offered on Saturday. The Water programs courses, at the Petaluma campus, are offered in the evenings.

At the Santa Rosa Campus, Drafting and CAD labs in Shuhaw Hall are staffed with a full-time (currently 10 month) Microcomputer Lab Specialist I. An IT network administrator is responsible for maintaining our hardware and software needs. In addition there is an STNC Electronics Lab Assistant working in the Electronics program 20 hours per week. For Spring 2016, we also have a part-time (5 hours/week) SLIA serving the Engineering program an STNC SLIA for 10 hours per week serving the CESGT programs and the STNC Electronics Lab Assistant is also working for 5 hours a week to support the Engineering lab courses offered in the Electronics lab in Bussman. In addition the Department has an Administrative Assistant II who works 30 hours per week, primarily during the day, with some early evening hours. At the Petaluma Campus there are no dedicated staff for the Water programs.

1.2 Program/Unit Context and Environmental Scan

The programs in our department are varied and respond to economic conditions differently. Many of the courses in our department serve the construction industry (Architecture, Engineering, Civil Engineering Tech, Surveying, and GIS) which has experienced extremely hard fiscal times over the past few years. Because of this, many of these programs have experienced a reduction in student enrollment. As a result, most of these programs are undergoing major revisions, and the Architecture program has been temporarily discontinued awaiting enrollment demand. Now that the market has returned, it is expected that demand for CTE graduates will climb, and more students will seek transfer. In light of the changing economy a transfer Construction Management program is under development.

Although not related to the Construction Industry (except for the Solar Photovoltaics program) the Electronics program is also in this situation, as are the two water programs: Water Distribution Operations, and Wastewater Treatment Operations. On the other hand, the Engineering program is healthy and experiencing growth and the 3-D Modeling and Animation program is finding its equilibrium.

The Architecture Program is seeking articulation for a final course to allow our students to easily transfer to UC Berkeley, having articulated with Cal Ply SLO. However, the program is being temporarily discontinued at this time due to low enrollment. The local American Institute of Architects is a strong supporter of the program and provides individual mentors for the advanced students.

Degree programs and transfer majors:

There have been no changes in transfer requirements for the department's transfer disciplines (Engineering, Architecture and Construction Management). The Engineering program maintains relationships with local professional organizations. The Architecture program has established a relationship with College of Marin, to guarantee student preparation for transfer, since we only offer the first year of classes. In addition the American Institute of Architects offer mentorships to our students each year. As the Construction Management program gets underway we anticipate forging ties with the local construction industry.

CTE certificates and majors:

Many of the department's CTE programs are in fields related to construction that were heavily, negatively, impacted by the recession when construction stopped. As a result enrollment declined. As part of the effort to increase enrollment, extensive reorganization and revisions were made to several of our programs. Our CTE programs maintain industry contact through Advisory Committees, which were utilized extensively in the re-design of the following programs: Civil Engineering Tech., Surveying Tech., Geospatial Tech., Electronics Tech. to Mechatronics Tech., Water Utility Operations and Wastewater Treatment Operations. In addition Program Coordinators maintain contact with local professional organizations. Now that the employment situation has improved, the industry need for our students has increased, particularly in the Civil Engineering, Surveying and GIS fields. But because general employment opportunities abound, enrollment has remained low. Student outreach efforts are underway, particularly to high schools, and as the revised programs are established, increased enrollments are anticipated. Currently there are more requests for graduates than there are students.

The CTE programs offered in the E&AT department are technology heavy. The department is well supported in the computer arena, but providing state-of-the-art surveying, GIS, mechatronics, animation and water program equipment is expensive. In order to be effective a major investment in these programs is needed: they all need

expensive equipment to provide effective training for our students. Each of these programs has applied for CTE funding to support their equipment needs, but that is not enough. Although industry support is strong, and there are many scholarship opportunities for students, this has not translated to funding resources for programs.

2.1a Budget Needs

The department budgets (each program area has a different one) are used effectively at this time. Overall the Department has made the switch to electronic publishing for most of our student handouts – thus reducing the need to spend as much money as previously on printing costs. And all courses that provide materials for student work are now charging fees to cover the cost of printing and other materials. In the 4000's and 5000's funds are needed to repair equipment that breaks down or needs regular maintenance. Funds for Staff development would also be well used.

Most of the programs in our department do not have enough funds to secure the technology, other than computers, needed to teach students to industry standards, or to maintain the equipment we have - which is reflected in the budget requests for instructional equipment. And faculty and staff development funds are perennially short. Further, our department would benefit from an additional 2 months of contract for our Micro-computer Lab Specialist I, an additional 10 hours a week of work for our AAll, and we desperately need a Science Lab Instructional Assistant for the department, to serve all of our programs. See Staffing Requests.

2.1b Budget Requests

Rank	Location	SP	M	Amount	Brief Rationale
0001	Santa Rosa	02	01	\$3,000.00	Engineering enrollment has more than doubled without any increase in funding. We have a makerspace under construction and expansion into that facility requires funding for equipment and supplies.
0002	Santa Rosa	02	01	\$1,000.00	Interior Design Program has undergone an overhaul and is in a new facility. This year's budget is significantly in the red from basic materials purchases and the program is adding classes and student.
0003	Santa Rosa	02	01	\$1,000.00	CESGT has an extremely small budget for the amount of required equipment and software. Budget Augmentation needed.

2.2a Current Classified Positions

Position	Hr/Wk	Mo/Yr	Job Duties
Department AA - Dawn Urista	30.00	12.00	Support department faculty, staff, and students
Microcomputer Lab Specialist - Todd Amos	40.00	10.00	Support lab instruction in 1799 (Graphics), 1751 (CAD), and 1752 (Drafting)
SLIA (categorically funded) - hire in process	40.00	12.00	Support lab instruction in 1452 (Electronics) and 1447/48 (Makerspace)

2.2b Current Management/Confidential Positions

Position	Hr/Wk	Mo/Yr	Job Duties
Department Chair - Vince Bertsch (FT)	14.00	10.00	Provide administrative liaison to the District.
Civil, Surv, GeoSp Tech Coord - Reg Parks (FT)	2.00	10.00	Develop curriculum, Industry Liaison & Advisory Committee
Electronics Coordinator - MJ Papa (FT)	2.00	10.00	Develop curriculum, Industry Liaison & Advisory Committee
Applied Tech Coord - Robert Grandmaison (FT)	2.00	10.00	Develop curriculum, Industry Liaison & Advisory Committee
Water/Wastewater Coord - Chris Murray (AdjF)	2.00	10.00	Industry Liaison & Advisory Committee
Interior Design Coordinator - Shari Canepa (AdjF)	2.00	10.00	Industry Liaison & Advisory Committee
3D Animation Coordinator - Clay Atchison (AdjF)	0.00	10.00	Volunteer coordinator for 3D Animation and Modeling

2.2c Current STNC/Student Worker Positions

Position	Hr/Wk	Mo/Yr	Job Duties
SLIA Electronics - Danny Milspaugh (permatized)	20.00	12.00	Support electronics program in 1452 (Electronics Lab) & 1447/48 (MakerSpace)
SLIA Engineering - Danny Milspaugh	5.00	12.00	Support engineering program in 1452 (Electronics Lab) & 1447/48 (MakerSpace)
SLIA Overtime - Greg Davis (Physics FT Staff)	5.00	12.00	Support engineering program in 1767/68 (Materials lab)
SLIA CESGT - Vacant (permatized)	10.00	12.00	Support CESGT program in 1799E (Survey Locker Room)

2.2d Adequacy and Effectiveness of Staffing

Department: The existing staff is not sufficient to support the existing programs in the E&AT department or its expansion plans. We have 6 different lab facilities, over 100 different classes, with 16 certificates and majors, over 30 adjunct faculty. There are resource shortfalls in full time faculty, lab support, managerial time, and administrative assistance that lead to delays in program curricular upgrades, equipment replacement, and program expansions. Many essential tasks are farmed out to STNC staff and adjunct faculty. The District and the Department share a goal to initiate new programs including Construction Management Transfer, Mechatronics, Electrician Apprentice, and HVAC Technician. The District and the Department share goals to bring back Architecture and Solar PV and expand in areas of great demand. These laudable initiatives require increased resources in the areas of Full Time faculty, Lab Staffing, Managerial Time, and Administrative Assistance.

Full Time Faculty: See area 2.3d below.

Lab Staffing:

Science Lab instructional Assistant (SLIA): The department is enthusiastically and gratefully moving forward with the hiring of a Strong WorkForce funded Full Time SLIA to consolidate two of our STNC positions (CESGT support and Electronics support).

needs of the department are inadequately being met by an STNC position (CESGT 10 hours/week) and 5 hours of overtime for a classified employee in the Physics/Chemistry Department (for Engineering). Having adequate program support is critical to the success of our programs. At the least a full-time SLIA is needed to support the Engineering and CESGT programs. Set-up for labs, maintaining equipment and assisting in the labs are critical functions, without which the quality of instruction suffers and students are not served well. The current level of support, though better than nothing, is not adequate to address the needs of the department. Lack of continuity and job ownership inherent in the STNC position is also a negative factor. There is enough work to be done in our programs to keep a SLIA occupied 40 hours per week.

Microcomputer Lab Specialist I: The Microcomputer Lab Specialist I for the E&AT computer labs is a ten (10) month position and does not have summer hours to assist when ALL ANNUAL significant major software and hardware upgrades are implemented. The summer months are a very critical time for the E&AT computer labs and network; arguably the most important three months of the school year when considering the logistics of operations of hardware and software updates. Although technology software manufacturers release updates throughout the year, they can only be implemented during the summer months when room use can be juggled. This FT position needs to be a 12 month position.

Department Administrative Assistant II: A position that serves 9 programs spanning day and evening offerings requires a full time presence during the work week. The department AA remains a 30 hour/week position with NO student assistant. Current classified and management employees are periodically being utilized beyond their capacity and routine tasks and routine deadlines are being missed as a result. Programs suffer and faculty become frustrated beyond what is bureaucratically tolerable. This position needs to be increased from 30 to 40 hours/week. Student Assistant support should be re-explored in a progressive fashion starting with a half time position. The department is tired of settling for what manages to barely get done in 30 hours; please consider what more could be done in that additional 10 hours.

Electronics Lab Assistant: Currently the Lab Assistant needs of the department are being served by a 25 hour per week STNC position for the Electronics (20 hours/week) and Engineering (5 hours/week) programs. The needs in the Electronics program have been consistent for the past 30 years and will be increasing as the transition is made to Mechatronics and the Maker Space is established. It is time to hire a full-time Lab Assistant or Science Lab Instructional Assistant to serve the Electronics program.

Student Lab Assistants: The computer labs, and eventually the Maker Space in Bussman, would be well served by student lab assistants to supplement the one classified staff we have.

2.2e Classified, STNC, Management Staffing Requests

Rank	Location	SP	M	Current Title	Proposed Title	Type
0001	Santa Rosa	01	01	Engineering Lab Support 5 hrs/wk overtime	Engineering Lab Support 5 hrs/wk overtime	Classified
0001	Santa Rosa	01	01	None (No Existing Position)	Engineering (& Physics) Lab Support 20 hrs/wk	Classified
0002	Santa Rosa	01	01		Office Assistant, Bussman Service Center, 20 hr/wk	Classified
0003	Santa Rosa	01	01	Microcomputer Lab Specialist 1	Make 12 month	Classified
0004	Santa Rosa	01	01	Department Chair Release Time	Increase from 40% to 60%	Management
0005	Santa Rosa	01	01	Faculty Coordinator - APTECH	Increase from 5% to 10%	Management
0005	Santa Rosa	01	01	Faculty Coordinator - CESGT	Increase from 5% to 10%	Management
0005	Santa Rosa	01	01	Faculty Coordinator - ELEC/MECHA	Increase from 5% to 10%	Management
0006	Santa Rosa	01	01		Faculty Coordinator - CONS 10%	Management
0007	Santa Rosa	01	01	Admin Assistant II, 75%	Increase from 75% to 100%	Classified
0008	Santa Rosa	01	01	E&AT Science Lab Instructional Aide	Make district funded when grant runs out	Classified

2.3a Current Contract Faculty Positions

Position	Description
Engineering	1.0 FTE
Architecture	1.0 FTE (1st year tenure)
CESGT	1.0 FTE (2nd year tenure)
Electronics	1.0 FTE (1st year tenure)

2.3b Full-Time and Part-Time Ratios

Discipline	FTEF Reg	% Reg Load	FTEF Adj	% Adj Load	Description
Engr & Aptech Combined - Spring 2017	3.6800	36.8100	6.3300	63.1900	Terrible ratio impacts department's ability to function.
Engineering Transfer ENGR - Spring 2017	0.6500	38.9900	1.0200	61.0100	Unsustainable ratio, program suffers from lack of FT attention.
Architecture ARCH - Spring 2017	0.4000	100.0000	0.0000	0.0000	Program has terrific growth potential and excellent FT faculty support.
Applied Technology - Spring 2017	0.6100	30.0000	1.4200	70.0000	No FT anchor faculty. Support from Architecture faculty member.
Interior Design - Spring 2017	0.0000	0.0000	0.8800	100.0000	No FT anchor faculty. Some support from Architecture faculty member.
Electronics ELEC - Spring 2017	0.8700	74.9000	0.2900	25.1000	Program is undergoing revitalization effort.
Geographic Info Sys GIS - Spring 2017	0.6200	52.7600	0.5500	47.2400	Program is undergoing revitalization effort.
Surveying SURV - Spring 2017	0.5400	61.3100	0.3400	38.6900	Program is undergoing revitalization effort.
Civil Engr Tech CEST - Spring 2017	0.0000	0.0000	0.7600	100.0000	No FT faculty support.
Construction Management CONS - Spring 2017	0.0000	0.0000	0.2000	100.0000	No FT faculty support.
Water & Wastewater WTR & WWTR - Spring 2017	0.0000	0.0000	0.8700	100.0000	No FT faculty support.

2.3c Faculty Within Retirement Range

Three of our 4 full time faculty are of retirement age. None have indicated a desire to retire next year.

2.3d Analysis of Faculty Staffing Needs and Rationale to Support Requests

We need one faculty position immediately:

- Civil Engineering: This is a replacement and growth position. The engineering program has grown in the past few years and we have experienced the sad necessity of having to close classes and leave students unserved in a timely manner, and with the loss of the 0.5 position, a new faculty member is needed. There is more than enough load in the engineering program for another faculty member in this program. There will still be a need for adjunct faculty in the program.

We will need an additional faculty member in the near future:

- Architecture/Construction Management: This is a replacement position for a retiring full-time faculty member (anticipated May 2016). Once the final course in Architecture is articulated with UC Berkeley (anticipated 2015-16) and the proposed transfer Construction Management program is launched (Fall 2016), there will be ample load for a full-time faculty member as well as several adjunct faculty.

Recruitment:

- Traditionally we have had difficulty recruiting adjunct faculty in most of our disciplines. For example there were only 4 water program adjunct candidates and 3 architecture candidates to interview the last time we interviewed. All programs have interviewed for adjunct faculty hiring in the past year.

Other:

In the past six years we have had 3.5 retirements, with 1 more approved for May 2016 = 4.5 FTE. During that time we have had 3 replacement hires – 1 effective Fall 2015, and 2 effective Fall 2016. This brings the total to 4 FTE, net down 1.5 FTE from six years ago. We still have programs fully staffed and coordinated by adjunct faculty. And, it is difficult to do the "business" of the college (curriculum updates for 108 courses, evaluations of 10-20 adjuncts per year, etc...) with so few full-time faculty members.

2.3e Faculty Staffing Requests

Rank	Location	SP	M	Discipline	SLO Assessment Rationale
0001	Santa Rosa	02	01	Civil Engineering & Engineering Tech	Required to support transfer Engineering Program, with focus in Civil engineering; provide additional guidance to related CTE areas.
0002	Santa Rosa	02	01	Mechanical Engineering & Engineering Tech	Required to support Applied Technology so architect can focus on Architecture, Construction management, and Interior Design.

2.4b Rationale for Instructional and Non-Instructional Equipment, Technology, and Software

Each program has different equipment, technology and software needs necessitated by their unique disciplines, or facilities they inhabit. Many of our needs have a technology component as the E&AT Department has 4 computer labs and 1 manual drafting lab. Currently all E&AT programs (as well as programs in other departments) share our labs.

This year our needs reflect the major changes underway in the Electronics/Mechatronics Program as well as the Civil Engineering Tech, Surveying and GIS programs as they begin to upgrade to industry standards. In the past programs in our department have received CTE funding for equipment, and we will be applying for that again.

NOTE: The equipment requests are listed by priority within the department, several of these needs are **major and equally important** as our programs retool for success.

2.4c Instructional Equipment and Software Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
0001	Santa Rosa	02	01	(PURCHASED) Rhino NURBS Modeler	2	\$975.00	\$1,950.00	Robert Grandmaison	1751 & 1799	Robert Grandmaison
0002	Santa Rosa	02	01	VRay Renderer for Revit, Max, Rhino, Sketchup	1	\$4,675.00	\$4,675.00	Robert Grandmaison	1751 & 1799	Robert Grandmaison
0003	Santa Rosa	02	01	(PURCHASED) EV3 Robotics Kits	10	\$430.00	\$430.00	Vince Bertsch	1448	Vince Bertsch
0004	Santa Rosa	02	01	Materials testing machine, Pasco ME 8236	1	\$2,700.00	\$2,700.00	Vince Bertsch	1767	Vince Bertsch
0005	Santa Rosa	02	01	Topcon Data Collector/Controller & Receiver/Rover	1	\$7,985.00	\$7,985.00	Reg Parks	1799E	Reg Parks
0006	Santa Rosa	02	01	Lab chairs	22	\$350.00	\$4,200.00	MJ Papa	1452	MJ Papa
0007	Santa Rosa	02	01	(PURCHASED) Light Meter	1	\$400.00	\$400.00	Shari Canepa	1763	Vince Bertsch
0008	Santa Rosa	02	01	Vive Tracker Units	6	\$100.00	\$600.00	Robert Grandmaison	1751	Robert Grandmaison
0009	Santa Rosa	02	01	Vacuum Form Press	1	\$2,144.00	\$2,144.00	Robert Grandmaison	1448	Robert Grandmaison
0010	Santa Rosa	02	01	Vacuum Pump for Vacuum Form Press	1	\$320.00	\$320.00	Robert Grandmaison	1448	Robert Grandmaison
0011	Santa Rosa	02	01	Lamination Press for presentation boards	1	\$2,868.00	\$2,868.00	Robert Grandmaison	1448	Robert Grandmaison
0012	Santa Rosa	02	01	(PURCH)DJI Mavic Drone Pro Bundle + LMB Hard Casde	1	\$1,511.00	\$1,511.00	Reg Parks	1799E	Reg Parks
0013	Santa Rosa	02	01	Topcon robotic Total Station DS201	2	\$17,497.00	\$34,994.00	Reg Parks	1799E	Reg Parks
0014	Santa Rosa	02	01	SLA Resin 3D Printer	1	\$5,400.00	\$5,400.00	Robert Grandmaison	1448	Robert Grandmaison
0015	Santa Rosa	02	01	Topcon robotic Total Station DS201	6	\$15,025.00	\$90,150.00	Reg Parks	1799E	Reg Parks
0016	Santa Rosa	02	01	Topcon Data Collector/Controller & Receiver/Rover	5	\$7,985.00	\$39,925.00	Reg Parks	1799E	Reg Parks
0017	Santa Rosa	02	01	VR/CAD Workstations with VR Capable GPU Cards	50	\$3,200.00	\$160,000.00	Robert Grandmaison	1751 & 1799	Robert Grandmaison
0018	Santa Rosa	02	01	VR Headsets	50	\$800.00	\$40,000.00	Robert Grandmaison	1751 & 1799	Robert Grandmaison
0019	Santa Rosa	02	01	Headphones, adjustable replacement straps	50	\$100.00	\$5,000.00	Robert Grandmaison	1751 & 1799	Robert Grandmaison
0020	Santa Rosa	02	01	Face Guards, Washable	50	\$29.00	\$1,450.00	Robert Grandmaison	1751 & 1799	Robert Grandmaison
0021	Santa Rosa	02	01	Topcon 3D Laser Scanner w/software	1	\$58,346.00	\$58,346.00	Reg Parks	1799E	Reg Parks
0022	Santa Rosa	02	01	Topcon Land Survey GPS/GNSS Receiver & Rover	4	\$16,140.00	\$64,560.00	Reg Parks	1799E	Reg Parks
0023	Santa Rosa	02	01	Topcon Digital Levels and Rods	8	\$1,661.00	\$13,288.00	Reg Parks	1799E	Reg Parks
0024	Santa Rosa	02	01	Topcon GPS Base Station & Software	1	\$27,500.00	\$27,500.00	Reg Parks	1799E	Reg Parks
0025	Santa Rosa	02	01	Facial capture/motion capture software/hardware	1	\$12,000.00	\$12,000.00	Robert Grandmaison	1751	Robert Grandmaison

2.4d Non-Instructional Equipment, Software, and Technology Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
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2.5a Minor Facilities Requests

Rank	Location	SP	M	Time Frame	Building	Room Number	Est. Cost	Description
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2.5b Analysis of Existing Facilities

The primary engineering lecture room (1783) is in desperate need of an upgrade to the 40+ year old chairs. Each semester, chairs break and are a danger to the students. Some have been removed and not replaced. The small & sloped "steno pad" size desks are totally inadequate for the engineering students who must use notebooks, textbooks and calculators all at the same time. Collaborative learning is an important element in all our classes and this is greatly hampered by the small fixed desks. The existing stepped floor and the fixed desks need to be removed and replaced with tables and chairs on a flat surface.

By building a partition (with doors) in 1799, the "back" portion of the room can be separated in order to create a stage for animation motion capture work.

The proposed door to 1799 would facilitate use of that space for meeting with students and accommodating staff meetings when classes are in session. It might also provide a space for adjunct faculty to meet with students. We have about 45 adjunct faculty any given semester, and next year there will only be 1 space for them to use.

3.1 Develop Financial Resources

3.2 Serve our Diverse Communities

3.3 Cultivate a Healthy Organization

3.4 Safety and Emergency Preparedness

3.5 Establish a Culture of Sustainability

– 4.1a Course Student Learning Outcomes Assessment

– 4.1b Program Student Learning Outcomes Assessment

– 4.1c Student Learning Outcomes Reporting

Type	Name	Student Assessment Implemented	Assessment Results Analyzed	Change Implemented
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4.2a Key Courses or Services that address Institutional Outcomes

Course/Service	1a	1b	1c	2a	2b	2c	2d	3a	3b	4a	4b	5	6a	6b	6c	7
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4.2b Narrative (Optional)

– 5.0 Performance Measures

– 5.1 Effective Class Schedule: Course Offerings, Times, Locations, and Delivery Modes (annual)

– 5.2a Enrollment Efficiency

–

5.2b Average Class Size

–
5.3 Instructional Productivity

–
5.4 Curriculum Currency

–
5.5 Successful Program Completion

–
5.6 Student Success

–
5.7 Student Access

–
5.8 Curriculum Offered Within Reasonable Time Frame

–
5.9a Curriculum Responsiveness

–
5.9b Alignment with High Schools (Tech-Prep ONLY)

–
5.10 Alignment with Transfer Institutions (Transfer Majors ONLY)

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5.11a Labor Market Demand (Occupational Programs ONLY)

5.11b Academic Standards

6.1 Progress and Accomplishments Since Last Program/Unit Review

Rank	Location	SP	M	Goal	Objective	Time Frame	Progress to Date
0001	ALL	02	01	Increase staff support	SLIA hire, Engr support hire, increase AA support, increase chair/coordinator support, Industry support person	ASAP	FT SLIA hired, STNC freeze impacts engineering offerings, WWW hiring grant supported industry person this summer, other support lacks funding
0002	ALL	02	01	Increase FT faculty	Improve on our FT/PT ratio, currently 36% FT course load	ASAP	Requires administrative prioritization
0003	ALL	02	01	Consolidate and update certificates and majors	Cert/Major inactivations (5), overhauls (7), minor modifications (11)	Ongoing	Cert/Major inactivations (5), overhauls (7), minor modifications (11)
0004	ALL	02	01	Catch up on faculty evaluations using non-department peers	complete 3 tenure evaluations, complete due/overdue adjunct evals	Ongoing	All 3 tenure evals completed, 7/9 due/overdue evals completed in Fall, 8/8 due/overdue evals completed in Spring
0005	ALL	02	01	Attack COR backlog: 125 courses, 33 due/overdue	Inactivate un-offered courses, submit overdue COR's, submit at least half of due COR's, submit COR's for updated programs.	Ongoing	Fall 2016: 27 Inactivations, 14 COR submissions. Spring 2017: 3 Inactivations, 13 COR submissions
0006	ALL	02	01	Maximize effectiveness of existing facilities	Incorporate INDE, Makerspace conversion, Virtual Reality Pilot, new home for SolarPV	2016-17	INDE located, Makerspace fab underway, VR pilot location set up
0007	ALL	02	01	Utilize grant money	Continue Prop 39, apply for Strong Workforce and Keysight grants	Ongoing	Prop 39 expanded & spent, Strong Workforce and Keysight awarded and underway for 17-18
0008	ALL	02	01	Complete adjunct hire processes	Hire for needed adjunct faculty, complete APTECH hire cycle, complete ENGR adjunct hire process	Yearly	All three hire cycles completed.
0009	ALL	02	01	Restart SLO assessments after a 2 year break	Target the Spring courses that have never had an SLO assessment. Adjunct faculty to get paid and have FT faculty complete at least 1 each.	Ongoing	5 SLO assessments completed in the Spring.

6.2a Program/Unit Conclusions

Location	Program/Unit Conclusions
ALL	The Engineering and Applied Technology Department remains critically understaffed in FT faculty and permanent support staff. This limits the college's ability to meet its obligations to the students and the local business community in the engineering and technology sector.

6.2b PRPP Editor Feedback - Optional

Please note the following areas for improvement:

1. A more thorough explanation of IELM requests should be provided in future years.

6.3a Annual Unit Plan

Rank	Location	SP	M	Goal	Objective	Time Frame	Resources Required
0001	ALL	02	01	Increase staff support to meet the student & program needs.	Engineering Lab Support, Increase AA time, Increase chair/coordinator time, expand WWW industry support person to cover entire department.	Spring 2018	Funding for increased staff support
0002	ALL	02	01	Increase the number of full time faculty to meet student and program needs.	Improve on our FT/PT ratio, currently 36% FT course load	Spring 2018 recruitment	Funding
0003	ALL	02	01	Advisory committee success	Reformulate INDE, make quorum twice (WWW, INDE, CESGT, ELEC)	2017-18	
0004	ALL	02	01	Update and roll-out of selected certificates & majors	WWW skills, Elec Tech Fun, 3D Anima Fun, Mecha	2017-18	AA/Chair/Coordinator time, increased staff support.
0005	ALL	02	01	Complete faculty evaluations using non-department peers.	Find out-of-department peers (replace 1 on tenure team). 3 Tenure and ~11 adjunct evals for Fall, ~6 more adjunct evals for Spring.	2017-18	Funding and contract MOU for out of department evaluation peers.
0006	ALL	02	01	Make further progress on the curriculum backlog on the department's ~100 courses.	Submit overdue COR's (~9), submit COR's for program modifications (~11), submit at least half of due COR's (~19).	2017-18	Pay adjunct faculty & increased AA/Chair/Coordinator time to support this large additional workload.
0007	ALL	02	01	Implement facilities plans	Roll out MakerSpace, faculty involvement in new building planning.	2017-18	Pay for the department building liaison.
0008	ALL	02	01	Utilize grant and foundation money	Tap into Prop 39, Strong Workforce, Keysight, Foundation accounts	2017-18	
0009	ALL	02	01	Complete adjunct hire processes	Engr hire process, Ap Tech hire process	Spring 2018	
0010	ALL	02	01	Restart SLO assessments after a 2 year break	2 each X 4 FT faculty over Summer, 8 in Fall, 8 in Spring	Ongoing	Funding for adjunct participation (when solo teaching)
0011	ALL	02	01	Program recruitment and outreach	Website upgrades, program displays, program brochures, inhouse presentations, community outreach activities.	2017-18	CTE & Grant funding
0012	ALL	02	01	Build auxiliary student programs	Streamline scholarship programs, maintain MESA link, grow student clubs (TEC, Robotics, SWE, other)	Ongoing	
0013	ALL	02	01	Development of reinstatable and new certificates & majors	Solar PV, Con Man, ARCH, CAD, Electrician, HVAC, Energy, Cable Installer, Signal Tech...	As resources allow	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.