Santa Rosa Junior College

Program Resource Planning Process

Engineering and Applied Technology 2021

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, licensure, or transfer through our Career Education (CE) programs and to prepare students to transfer in the complete spectrum of engineering disciplines. 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.

1.1c Description

The Engineering & Applied Technology Department (E&AT) is currently offering the wide range of courses to complete certificates and associate degrees in: Digital Media: 3-D Modeling and Animation, Electronics Technology, Civil Engineering Technology, Surveying Technology, Geospacial Technology, Water & Wastewater Operations, and Interior Design.   The Engineering Transfer Program, with the help of the Math and Chemistry/Physics Departments, also offers core STEM courses required to meet the transfer needs of students with the goal of a BS degree in an engineering discipline and has a separate PRPP due to its unique position within the department and will not be discussed within the larger departmental PRPP. The department also offers Applied Technology, Architecture, and Construction Management support courses used by many of the programs in our department, as well as other departments. Courses within the Architecture and Interior Design programs also provide students with Humanities credit for general education. Although we focus on CE certificates, our courses are also of interest to professionals who are upgrading their skills, and to the general public. Many local professionals return to our courses to better their skills as we continue to make available to the public courses that

leverage our department's staff knowledge and experience in the application of advanced technology and methodology.

Ongoing revisions maintain and develop E&AT programs to meet the evolving needs of industry and transfer institutions. Civil Engineering, Surveying, Geospatial Technology (CEGST), Interior Design (INDE), and Water/Wastewater Treatment (WWTR) all completed major overhauls over the past years and all course outlines of record are current. In Fall 2019, a majority of the department is relocating to a new location in the Elliott Classroom buildngs with the addition of a new virtual reality lab for 24 students. Planned upgrades continue to 3D Animation, Mechatronics (augmenting the Electronics Program), and Architecture programs. Also currently under planning, with the assistance of local professional industry experts, are certificate programs for Solar Photovoltaics within the new Renewable Energy program (RENRG), certificates for a Heating Ventilation and Air-Conditioning/Refrigeration (HVAC/R) program; and certificates and transfer for the Construction Management (CONS) program.

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 and Animation classes are offered primarily in the evening. While CESGT, INDE, and APTECH have a mix of day and evening classes. The WWTR programs courses, offered only at the Petaluma campus, are evening classes. HVAC/R and Solar PV is planned as a program on the Petaluma Campus starting in Fall 2020 and will occupy a new, FEMA-funded facilty, along with a modular wall carpentry program in collaboration with Habitat for Humanity as part of the adult education program.

At the Santa Rosa Campus, the Department has an Administrative Assistant II who works 30 hours per week, primarily during the day, with some early evening hours. 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. For the two Electronics labs in Bussman, we have a full-time (currently 10 month) Science Lab Instructional Aide (SLIA). The department recently hired a SLIA (18 hours/week) shared with Physics to support the Engineering Materials lab and replace our reliance on overtime hours from the Physics SLIA. Last Spring, at the Petaluma Campus, there was a grant funded, part time, temporary industry liaison person assisting the Water/Wastewater Program and was of tremendous benefit for student recruitment and connections to the WWTR industry for marketing of the program and that position has been renewed for the current semester.

1.2 Program/Unit Context and Environmental Scan

The greatest barrier to meeting the needs of our students and local industry is the under-staffing of our department's full time faculty ranks. With only 4 full time faculty members, many enrollment growth opportunities in our department's disciplines go untapped as there are so few hands to help. Without a full-time faculty person responsible for the coordination and development for each of our many programs, it is difficult to have easy student access and direct SRJC-to-industry ties without overextending our adjunct faculty members' time commitment to their respective programs. Having a greater presence on campus throughout the week for each of our programs would be a tremendous boon to enrollment and program growth/development.

CE Programs:
Many of the courses in our department serve the Architectural, Engineering, and Construction (AEC) industries which suffered through the great recession of 2008 and is now surging to rebuild in the wake of the Fall 2017 and 2018 wildfires. Enrollments in our CE areas have strengthened as a result of our retooling efforts and the

economic rebound. There is a very high demand for students with trade skills and managment knowledge in the construction for placement in local construction firms.

The CE programs offered in the E&AT department are technology heavy. Recent expansion in grant opportunities such as Strong Workforce and Prop 39 have effectively augmented the funding from the District and Perkins to providing state-of-the-art equipment for our students such as our modernization of our large format plotting/scanning system as well as our virtual reality Lab to be used by students in the upcoming year. As part of that SWF grant, a regional outreach and collaboration has occured between College of Marin's maker space movement as well as Sonoma State University.

Our CE programs maintain industry contact through Advisory Committees and interactions with local professional organizations. Program coordinators continue student outreach efforts at career days, SRJC outreach efforst such as Day Under the oaks, and high school events.

An issue of great concern for us is that many software companies, who develop relevant hardware and software technologies that are relied on in many programs such as the Civil Engineering/Surveying program, have shifted from providing free software licenses to educational faciliites to a model of charging for use of those licenses. This will create a new financial challenge for us with vendors like Topcon, of which a great deal of our hardware program components in the CEGST is built upon.

2.1a Budget Needs

The Engineering and Applied Technology Department's disctrict budgets are very thin considering the number of technology heavy disciplines we serve. Our budget $ per student is very low compared to the rest of STEM. Unlike other department's in STEM who leverage their department budgets to upgrade equipment, pay student helpers, and implement curriculum changes, we are forced to rely on grant requests to meet the extensive technology training expectations of local industry. Grant applications and management generates significate workload issues for faculty, staff, and management. The department has mostly made the switch to electronic publishing for most of our student handouts and the utilization of Canvas for supplying materials to students – thus reducing printing expenditures. All courses that provide materials for student work are now charging fees to cover the cost of printing and other materials.

Our most critical budget needs are in Interior Design, CESGT, and Water/Wastewater Treatment. These three programs missed the boat in the last century when many program budgets were augmented to meet expansions and new curriculum needs. Each of these programs have discretionary funds well under $2000.

- Interior Design folded into our department with a very small budget. Last year, they spent their supplies budget very deeply into the red. The program has retooled and is expanding into a first year technology focus. Their materials library is very outdated and will need serious attention over the next 4 years as we prepare to move into the new building.

- Civil/Surv/Geosp Tech has always had a very small budget that does not match the needs of the technology intensive program. This is becoming increasingly more impactful as vendors move to a paid subscription model for use of their software in lieu of offering free licenses to educational facilities.

- The Water/Wastewater Program has no budget. The program has been retooled and is looking to expand with a new hand-on lab component that will require budget support.

Please note, our department has staff development needs greater than almost any other department. Faculty and staff must stay current with a very wide range of evolving technologies. Also, because most of the faculty

members have no discipline colleagues, we rely on travel to maintain the connections with colleagues who teach their classes and the industries they support. Athough this idea is not popular in administrative circles, our students and programs would really benefit from funds to support staff development and travel.

2.1b Budget Requests

Rank	Location	SP	M	Amount	Brief Rationale
0001	Petaluma	02	01	$2,500.00	Water and Wastewater Program has no budget but has been overhauled and is expading into hand-on lab and demonstration equipment. The program needs a budget. Most urgent need is for instructor training materials for WWTR 123 & 124.
0001	ALL	00	01	$0.00	
0001	Santa Rosa	02	01	$2,500.00	Electronics/Mechatronics has faced an increase in the cost of supplies and software licenses that we have to purchase for labs and student lab kits .
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	$1,500.00	CESGT has an extremely small budget for the amount of required equipment and software. Budget Augmentation needed.
0004	Santa Rosa	02	01	$3,000.00	Engineering enrollment has more than doubled without any increase in funding. With the hiring of the SLIA and the completion of the maker-space, we need the budget piece to implement the project classes.

2.2a Current Classified Positions

Position	Hr/Wk	Mo/Yr	Job Duties
E&AT Department AA - Dawn Urista	30.00	12.00	Supports department faculty, staff, and students
Microcomputer Lab Specialist - Todd Amos	40.00	10.00	Supports lab instruction in 1799 (Graphics), 1751 (CAD), and 1752 (Drafting)
Mechatronics SLIA - Danny Millspaugh	40.00	12.00	Supports lab instruction in 1452 (Electronics) and 1447/48 (Mechatronics)
E&Ph SLIA - Kirsten Alexander	18.00	10.00	Supports lab instruction in 1767/68 (Materials) and 1782 (Physics)

2.2b Current Management/Confidential Positions

Position	Hr/Wk	Mo/Yr	Job Duties
Department Chair - Robert Grandmaison (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 - Vacant (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

2.2d Adequacy and Effectiveness of Staffing

Department: The existing staff is not sufficient to support the existing programs in the Engineering & Applied Technology Department. We have 6 different lab facilities, over 100 different classes, with 16 certificates and majors, and 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. 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 has enthusiasticly and gratefully moved forward with the hiring of a shared Engineering & Physics 18 hrs/wk SLIA to replace the STNC physics position and the overtime SLIA supporting the materials lab.

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 at this most critical time. The summer months are arguably the most important three months of the school year for the E&AT computer labs as this is when all the yearly software and hardware upgrades are implemented. Although technology software manufacturers release

updates <u>throughout the year</u>, they can only be implemented during the summer months when room use can be juggled. (And yes, we still need to offer classes in those labs over the summer - currently without lab support). This FT position needs to be a 12 month position in particular with the additional work that will be needed this year as we move our computer labs to the new Kunde Hall building. An additional two months of funding for postion would be welcomed as we make the difficult transition into our new facility.

Department Office Student Assistant and Department Administrative Assistant II: The Engineering & Applied Technology office runs on a 30 hour/week AA with no student assistant. The office must serve 13 programs spanning day and evening offerings at multiple locations.   A student assistant support would enable the office to stay open for a larger part of the school day. Also, the current classified staff and faculty cannot keep up with the large array of tasks and deadlines for this large and complicated department. Programs suffer and all of us have become increasingly frustrated.   This office needs a full time AA presence to interface with our colleges beurocracy; we need an AA increase from 30 to 40 hours/week.

Faculty Coordination: Each program needs greater coordination time. In addition to industry liaison and running advisory committees, the faculty coordinators must write grants, purchase and test and repair equipment, coordinate job placement, manage scholarship programs, advise and mentor students, serve as club advisors... A department like Math or Chemistry has 7 to 20 full time faculty to share this workload. Each of our disciplines has greater expectations in ALL of these areas and it ALL must by done by one person in each discipline.

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

Department Chair Time: The current department chair formula fails to capture the extra challenges associated with managing so many disciplines, so much curriculum, and so many adjunct faculty. In particular, due to the lack of tenured members within the department, it has been necessary to split the release outside our department to allow for faculty evaluations to be performed by tenured faculty.

2.2e Classified, STNC, Management Staffing Requests

Rank	Location	SP	M	Current Title	Proposed Title	Type
0001	Santa Rosa	02	01	Microcomputer Lab Specialist 1	Make 12 month position, summer courses & retrofit	Classified
0001	Santa Rosa	02	01	Science Lab Instructional Assistant (45%)	FILL VACANCY	Classified
0002	Santa Rosa	02	01		Office Assistant, Bussman Service Center, 20 hr/wk	Classified
0003	Santa Rosa	02	01		Faculty Coordinator - CONS 5%, new program!	Management
0004	Santa Rosa	02	01	Admin Assistant II, 75%	Increase from 75% to 100%	Classified
0005	Santa Rosa	02	01	Faculty Coordinator - APTECH	Increase from 5% to 10%	Management
0005	Santa Rosa	02	01	Faculty Coordinator - CESGT	Increase from 5% to 10%	Management
0005	Santa Rosa	02	01	Faculty Coordinator - ELEC/MECHA	Increase from 5% to 10%	Management
0006	Santa Rosa	02	01		Student Lab Assistants	Student
0007	Santa Rosa	02	01	Department Chair Release Time	Increase from 40% to 60%	Management

2.3a Current Contract Faculty Positions

Position	Description
Engineering - Vince Bertsch	1.0 FTE
Architecture/Drafting/Engineering - R. Grandmaison	1.0 FTE
CESGT - Reg Parks	1.0 FTE
Electronics - MJ Papa	1.0 FTE

2.3b Full-Time and Part-Time Ratios

Discipline	FTEF Reg	% Reg Load	FTEF Adj	% Adj Load	Description
- Engr & Aptech Combined - Fall 2018	3.6700	38.3000	5.7000	61.7000	Terrible PT/FT ratio impacts department's ability to function in areas of curriculum, hiring, and evaluations. Many new program opportunities are delayed and on hold because of this issue.
Applied Technology - Fall 2018	0.7700	40.2700	1.1400	59.7300	No FT anchor faculty member. Gary Pasqualetti retired and wasn't replaced. Curriculum is overdue for adjustments. 3D Animation (within Ap Tech) is 100% adjunct faculty taught and coordinated.
Architecture ARCH - Fall 2018	0.3700	64.9700	0.2000	35.0300	Program has terrific growth potential and a full time faculty discipline expert. Expansion is hampered by department's PT/FT ratio.
Civil Engr Tech CEST - Fall 2018	0.0000	0.0000	0.5900	100.0000	No FT faculty discipline expertise. Discipline overlaps with Engineering which would really benefit from more full time support, especially in the area of Civil Engineering.
Construction Management CONS - Fall 2018	0.0000	0.0000	0.2000	100.0000	No FT faculty discipline expertise. Restoration of a complete Construction Management Program has been proposed. There is inadequate full time faculty in the department to make that happen.
Electronics ELEC - Fall 2018	0.9600	66.8700	0.4800	33.1300	Expanding into Mechatronics. Has FT discipline expert.
Engineering Transfer ENGR - Fall 2018	0.9500	47.4000	1.0600	52.6000	Engineering is the #2 transfer program in STEM and has plateaued since the retirement of the shared Engr/Phys FT faculty position. PT/FT ratio is worst of all STEM transfer programs. Growth on hold.
Geographic Info Sys GIS - Fall 2018	0.2800	100.0000	0.0000	0.0000	Program has FT discipline expert.
Interior Design - Fall 2018	0.0000	0.0000	1.4300	100.0000	No FT anchor faculty. Program is retooled and has grown substantially.
Surveying SURV - Fall 2018	0.3400	100.0000	0.0000	0.0000	Program has full time discipline expert.
Water & Wastewater WTR & WWTR - Fall 2018	0.0000	0.0000	0.8800	100.0000	No FT faculty support. Current program ajunct coordinator is retiring from position in

2.3c Faculty Within Retirement Range

All 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

All three of these faculty position are critical to sustain our department's functioning and meet the demands of our students and local industry:

- Interior Design: This is a growth, anchor position. The Interior Design Program was added to our department two years ago (with 100% adjunct faculty). We've retooled the program into stacking certificates and it is already growing in enrollment and load (now above 1.4 FTEF). We have submitted new classes to the curriculum process for next year and are looking to begin offering the first year courses every semester. This anchor position is critical both to sustain this expansion and support the department as a whole.

- Applied Technology: This is a replacement position. Applied Technology houses the 3D Animation program which is currently 100% adjunct faculty. Applied Technology is the department's largest load and enrollment category with 60% of its classes taught by adjunct. This poor PT/FT ratio will get worse with the resuffling of the department's chair/coordinator release time and the curriculum expansions already submitted in the areas of visual effects and virtual reality. Our department's architect cannot fill the shoes of two full time faculty members and needs to focus attention witin his discipline to meet the expansion opportunities in that area.

- Civil Engineering & Civil Technology: This is a replacement and growth position to serve as a discipline anchor. The CTE programs of Civil Engineering Technology (CEST), Water/Wastewater (WTR, WWTR), and Construction Management (CONS) are all taught 100% by adjunct faculty. These CTE programs and the Engineering Transfer Program (ENGR) lack a FT faculty member with discipline expertise in Civil Engineering.   The ENGR program enrollment remains very strong with ~250 engineering students on campus. The ENGR program lost FT faculty support with the retiring of the shared Engineering/Physics faculty member and the split from Physics.   Engineering currently has over 50% of it's classes taught by adjunct faculty. The Water & Wastewater programs have been retooled and are preparing for the addition of lab curriculum and facilities. Construction Management has tremendous student interest and restoration of the CONS program has been delayed because of insufficient full time faculty in the department.

Recruitment:
We have great difficulty recruiting adjunct faculty in most of our disciplines. We conduct adjunct faculty recruitment every semester, yet only get a handful of applicants and only average a pair of qualified applicants that can be added to the pool, frequently not in the areas of critical need. About once a year, we are forced to do an emergency hire to staff classes at the last minute.

Other:
In the past seven years, the department has had 4.5 retirements with only 3 replacement hires. This was in addition to the loss of a position a decade ago and the addition of the Interior Design Program and it's 100% adjunct faculty.   Five of our programs are 100% staffed and coordinated by adjunct faculty and an unacceptable 62% of our classes taught by adjunct faculty. Important business of the college (curriculum updates for 105+

courses, evaluations of 10-20 adjuncts per year, SLO assessments, adjunct recuitment and mentoring, etc...) are in abayance because there are so few full-time faculty members.

Four full-time faculty cannot maintain/upgrade 13 programs, 105+ different courses, and hire/mentor/evaluate 30+ adjunct faculty members. We need more full time faculty, specifically in Interior Design, Applied Technology, and Engineering.

2.3e Faculty Staffing Requests

Rank	Location	SP	M	Discipline	SLO Assessment Rationale
0001	Santa Rosa	02	01	Interior Design	Critical to support the growth of the retooled Interior Design Program. Currently 100% adjunct faculty teaching and coordinating. Currently 1.4 FTEF with new courses planned for next year.
0002	Santa Rosa	02	01	Applied Technology	Critical to support CAD and animation offerings. 3D Animation currently 100% adjunct faculty teaching and coordinating. Ap Tech's 60% PT value will grow significantly as Architeture and Construction Management grows and also as department release time gets shifted for next year.
0003	Santa Rosa	02	01	Civil Engineering & Civil Engineering Tech	Critical to bring in FT civil engineering discipline expertise into the department for both the CTE programs (Civil Tech, Cons Management, Water/Wastewater) and the Engineering Transfer Program (replacing Younes Ataiiyan's retirement from 50% engineering). CEST, CONS, WTR, WWTR are all 100% adjunct faculty, while Engineering's PT value will be 53%, still the highest in STEM transfer disciplines.

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 and the facilities they inhabit. Many of our needs have a technology component as the E&AT Department has 2 CAD computer labs (soon to be 3), another computer lab/makerspace, a materials lab, an electronics lab, and a manual drafting lab.

- **TOPCON Surveying equipment:** Part of the ongoing process to build to 8 sets of surveying equipment. Has also been requested through CTE Grants. Additionally software to run Topcon equipment recently went from a "free for academic use" model to a paid subscription model with an annual subscription cost of $20,000.

2.4c Instructional Equipment Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
0001	Santa Rosa	02	01	Intel Falcon 8+ Survey Drone Kit	1	$14,918.00	$14,918.00	Reg Parks	Kunde 151	Reg Parks
0001	Santa Rosa	02	01	Schoenstadt Metal Detectors/Pipe Locator	6	$900.00	$5,400.00	Reg Parks	Kunde 151	Reg Parks
0004	Santa Rosa	02	01	Topcon HiPER VR GPS/GNSS Base & Rover Receiver Kit	8	$20,191.16	$161,529.28	Reg Parks	Kunde 151	Reg Parks
0005	Santa Rosa	02	01	Topcon Robotic Total Station GT501 & Data Collecto	1	$20,400.00	$20,400.00	Reg Parks	Kunde 151	Reg Parks
0006	Santa Rosa	02	01	PLC Terminal Blocks	1	$2,500.00	$2,500.00	MJ Papa	1447	MJ Papa
0007	Santa Rosa	02	01	Topcon Network Rover Kits & Data Collectors	4	$10,500.00	$42,000.00	Reg Parks	Kunde 151	Reg Parks
0008	Santa Rosa	02	01	3 phase motors for conveyors	8	$120.00	$960.00	MJ Papa	1447	MJ Papa
0009	Santa Rosa	02	01	Hand Tool Stock Replacements	1	$2,000.00	$2,000.00	MJ Papa	1447 and 1452	MJ Papa
0010	Santa Rosa	02	01	DJI Mavic Drone Pro Bundle Battery Replacements	6	$100.00	$600.00	Reg Parks	Kunde 151	Reg Parks
0011	Santa Rosa	02	01	Laser Cutter	1	$22,288.00	$22,288.00	Robert Grandmaison	Kunde 151	Robert Grandmaison
0012	Santa Rosa	02	01	Topcon Digital Levels and Rods	8	$1,661.00	$13,288.00	Reg Parks	Kunde 151	Reg Parks

2.4d Non-Instructional Equipment and Technology Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact

2.4f Instructional/Non-Instructional Software Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
0001	Santa Rosa	02	01	Roboguide 26-Seat Workstation Software	44	$100.00	$4,400.00	MJ Papa	1447	MJ Papa
0002	Santa Rosa	02	01	Topcon 30-Seat Network Workstation Software	1	$4,689.18	$4,689.18	Reg Parks	Kunde 151	Reg Parks
0003	Santa Rosa	02	01	Topcon 24-Seat Field Software	1	$1,917.17	$1,917.17	Reg Parks	Kunde 151	Reg Parks
0004	Santa Rosa	02	01	SketchUp Pro - 30 floating network seats	30	$15.00	$450.00	Robert Grandmaison	Kunde 152	Robert Grandmaison
0005	Santa Rosa	02	01	Rhino3D Modeler - 30 seat network license	1	$975.00	$975.00	Robert Grandmaison	Kunde 152	Robert Grandmaison
0006	Santa Rosa	02	01	V-Ray Renderer for Revit & 3D Studio Max - 30 Seat	30	$108.00	$3,240.00	Robert Grandmaison	Kunde 152	Robert Grandmaison

2.5a Minor Facilities Requests

Rank	Location	SP	M	Time Frame	Building	Room Number	Est. Cost	Description

2.5b Analysis of Existing Facilities

The primary facility for the department (Shuhaw) is scheduled for demolition.

3.1 Develop Financial Resources

Most programs continue on a decreasingly limited budgets. As such, many of the CTE programs have put forward grants avaialable to CTE programs with advisory committees, noteably the California Strong Workforce program. Successful grants have awarded in recent SWF program years, including:
$96,000 for VR capable computers and VR headsets to be installed in a new VR lab in Kunde Hall once complete
$60,000 for a plotter modernization program that now provides deep, rich color output for wide format to be used by students for presentation materials

It is very important that our programs, based so much on technology, remain current and relevant to the local industries we serve. So ecent grants have been submitted for consideration this Strong Workforce Program cycle to continue our modernization and adoption of current technology for student success, including:
$25,000 for Construction Management: 4 Microsoft HoloLens 2 units and Trimble Hard Hat kits
$15,500 for Applied Technology (3D Modeling and Animation): motion capture hardware and software

$46,177.57 for Civil Engineering: Topcon MAGNET Field and MAGNET Office Software
$77,799.12 for Civil Engineering: 4 Topcon GT505 Robotic Total Station Kits
$60,354.93 for Civil Engineering/Architecture: Topcon GLS 2000M HD Laser Scanner and software
$ for the Electronics program to utlize

Additional funding from a $11,000,000 grant from FEMA are in the final stages of consideration to build a new facilty on the Petaluma campus to house the proposed programs under development:
Solar Photovoltaic Installation, Design and Sales in the Renewable Energy program (RENRG)
Heating, Ventilation and Air-Conditioning/Refrigeration in a prposed HVAC/R program
Funding for equipment, trainer equipment has been provided by Prop39 funding.

3.2 Serve our Diverse Communities

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3.3 Cultivate a Healthy Organization

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3.4 Safety and Emergency Preparedness

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3.5 Establish a Culture of Sustainability

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4.1a Course Student Learning Outcomes Assessment

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4.1b Program Student Learning Outcomes Assessment

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4.1c Student Learning Outcomes Reporting

Type	Name	Student Assessment Implemented	Assessment Results Analyzed	Change Implemented

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

4.2b Narrative (Optional)

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5.0 Performance Measures

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

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5.2a Enrollment Efficiency

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5.2b Average Class Size

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5.3 Instructional Productivity

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5.4 Curriculum Currency

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5.5 Successful Program Completion

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5.6 Student Success

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5.7 Student Access

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5.8 Curriculum Offered Within Reasonable Time Frame

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5.9a Curriculum Responsiveness

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

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5.10 Alignment with Transfer Institutions (Transfer Majors ONLY)

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5.11a Labor Market Demand (Occupational Programs ONLY)

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5.11b Academic Standards

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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 to meet the student & program needs.	Engineering Lab Support (on the way), increase lab assistant to 12 months, add AA support person (student), new program coordination time, Increase AA time, Increase chair/coordinator time, expand WWW industry support person to cover entire department.	Fall 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 2019 recruitment	Funding and approval of new FT facutly hire.
0003	ALL	02	01	Update and roll-out of selected certificates & majors	3D Anima Fun, Mecha, Cons Man	2018-19	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0004	ALL	02	01	Complete facutly evaluations using non-department peers.	Find out-of-department peers for 3 Tenure and ~6 overdue adjunct evals plus ~4 due in Fall, and more adjunct evals for Spring.	2018-19	Funding and contract MOU for out of department evaluation peers. Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0005	ALL	02	01	Make further progress on the curriculum backlog on the department's ~100 courses.	Submit due and overdue COR's (~16 this year), submit COR's necessary for program modifications. Address ApTech 45 issue.	2018-19	Funding to pay adjunct faculty. Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0006	ALL	02	01	Implement facilities plans	Faculty involvement in new building % swing space planning.	2018-19	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0007	ALL	02	01	Utilize grant and foundation money	Tap into Prop 39, Strong Workforce, Keysight, Foundation accounts	2018-19	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0008	ALL	02	01	Continue adjunct hire processes	Conduct Engr/ApTech adjunct hire process each semester	Ongoing	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.

Rank	Location	SP	M	Goal	Objective	Time Frame	Progress to Date
0009	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). Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0010	ALL	02	01	Program recruitment and outreach	Leverage CTE dean's PR efforts, website upgrades, program displays, program brochures, inhouse presentations, community outreach activities.	2018-19	CTE & Grant funding. Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0011	ALL	02	01	Build auxiliary student programs	Streamline scholarship programs, maintain MESA link, grow student clubs (TEC, Robotics, SWE, other)	Ongoing	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0012	ALL	02	01	Development of reinstateable and new certificates & majors	Solar PV, Cons Man, ARCH, CAD, Electrician, HVAC, Signal Tech...	As resources allow	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.

6.2b PRPP Editor Feedback - Optional

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 (on the way), increase lab assistant to 12 months, add AA support person (student), new program coordination time, Increase AA time, Increase chair/coordinator time, expand WWW industry support person to cover entire department.	Fall 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 2019 recruitment	Funding and approval of new FT facutly hire.
0003	ALL	02	01	Update and roll-out of selected certificates & majors	3D Anima Fun, Mecha, Cons Man	2018-19	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0004	ALL	02	01	Complete facutly evaluations using non-department peers.	Find out-of-department peers for 3 Tenure and ~6 overdue adjunct evals plus ~4 due in Fall, and more adjunct evals for Spring.	2018-19	Funding and contract MOU for out of department evaluation peers. Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0005	ALL	02	01	Make further progress on the curriculum backlog on the department's ~100 courses.	Submit due and overdue COR's (~16 this year), submit COR's necessary for program modifications. Address ApTech 45 issue.	2018-19	Funding to pay adjunct faculty. Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0006	ALL	02	01	Implement facilities plans	Faculty involvement in new building % swing space planning.	2018-19	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0007	ALL	02	01	Utilize grant and foundation money	Tap into Prop 39, Strong Workforce, Keysight, Foundation accounts	2018-19	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0008	ALL	02	01	Continue adjunct hire processes	Conduct Engr/ApTech adjunct hire process each semester	Ongoing	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.

Rank	Location	SP	M	Goal	Objective	Time Frame	Resources Required
0009	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). Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0010	ALL	02	01	Program recruitment and outreach	Leverage CTE dean's PR efforts, website upgrades, program displays, program brochures, inhouse presentations, community outreach activities.	2018-19	CTE & Grant funding. Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0011	ALL	02	01	Build auxiliary student programs	Streamline scholarship programs, maintain MESA link, grow student clubs (TEC, Robotics, SWE, other)	Ongoing	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.
0012	ALL	02	01	Development of reinstateable and new certificates & majors	Solar PV, Cons Man, ARCH, CAD, Electrician, HVAC, Signal Tech...	As resources allow	Limited by need for more full time faculty, increased AA/Chair/Coordinator time, increased staff support.