

Santa Rosa Junior College

Program Resource Planning Process

Applied Technology 2014

1.1a Mission

The Applied Technology area is committed to providing current state-of-the-art instruction within our Drafting/Design and 3D Animation courses. We strive to serve transfer students, and certificate students within our department, and other technically-oriented departments at SRJC. We also provide local professionals the opportunity to upgrade their Drafting/Design and Computer Animation workplace skills.

1.1b Mission Alignment

The Applied Technology area mission is in alignment with the District's mission and goals 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 Applied Tech course offerings consist primarily of Drafting/Design classes, but also include Computer Animation courses, and department Math classes. Our CAD Drafting/Design classes are offered in two 25-station labs in Shuhaw Hall (Rms. 1751 and 1799) on the Santa Rosa campus. Manual drafting classes are offered in Shuhaw 1752. Our Computer Animation courses are also offered in Shuhaw 1751 and 1799. Applied Technology courses serve the certificate programs within our department as well as other vocational certificate programs on campus. Ap Tech 45 and 46 are UC transferable courses. Our computer animation course sequence is part of the digital media certificate and major "3D Modeling and Animation". All courses are also of interest to professionals that are upgrading their skills, and to the general public.

1.1d Hours of Office Operation and Service by Location

We offer classes during the day, the evening, and on weekends at the Santa Rosa campus. Our CAD labs in Shuhaw Hall are staffed with a full-time classified lab assistant. An IT network administrator is responsible for maintaining our hardware and software needs.

1.2 Program/Unit Context and Environmental Scan

The construction industry has fallen on extremely hard fiscal times over the past few years. Because of this, the CTE certificate programs in our department have seen a major reduction in students enrolling in these programs. Some of these certificates have been eliminated. Our drafting/design courses are now primarily serving technically-oriented transfer students and professionals looking to upgrade their CAD skills. ApTech 45, 46, and 57 are averaging close to 100% enrollment at first census, and nearing 80% enrollment at course completion. Our computer animations courses are now part of a newly-created "3D Modeling and Animation" digital media certificate and major. The official coordinator for the major and certificate has not been identified. All digital media certificates have, at this point in time, shared a common advisory committee, in lieu of individual committees. This over-arching committee consists of

administrators, faculty, and professionals from industry. A full-time Digital Media Coordinator/Instructor, within the Computer Studies department, has being hired as of Fall 2013.

2.1a Budget Needs

Yes our budget is allocated and used effectively at this time. Our budget statistics for APTECH (0911) and CADLab (0910) do compare with the district wide range. CAD offerings have become virtually "paperless". We have no travel budget of any kind. We currently are running two computer labs and a manual drafting lab on the Santa Rosa campus with no student help. Future funding for student lab assistants is essential.

2.1b Budget Requests

Rank	RS	ACTV	Object	Location	SP	M	Amount	Brief Rationale
0001	73	0910	0000	Santa Rosa	00	00	\$10,000.00	No student lab help in 2 ApTech computer labs and 1 manual drafting lab.

2.2a Current Classified Positions

Position	Hr/Wk	Mo/Yr	Job Duties
Todd Amos	40	10	Lab Assistant II

2.2b Current Management/Confidential Positions

Position	Hr/Wk	Mo/Yr	Job Duties
	0	0	

2.2c Current STNC/Student Worker Positions

Position	Hr/Wk	Mo/Yr	Job Duties
N/A	0	0	

2.2d Adequacy and Effectiveness of Staffing

Our programs rely heavily on adjunct faculty staffing. Data shows that a 2.67 FTE unit equivalent (Fall 2013) being staffed by 1.00 FTE contract full-time faculty.

2.3a Current Contract Faculty Positions

Position	Description
Gary Pasqualetti	Sole full-time Drafting/Design Instructor

2.3b Full-Time and Part-Time Ratios

Discipline	FTEF Reg	% Reg Load	FTEF Adj	% Adj Load	Description
ApTech	1.0000	0.4100	1.4100	0.0000	F/Y 2011/2012 FTE-AF : FTE-CF 2.4191 16.30% (change from 2010/11) 1.4175 170.66% (% of district total)

2.3c Faculty Within Retirement Range

Our one full-time Drafting/Design faculty, Gary Pasqualetti, is within retirement range. He will be retiring after the Fall 2015 semester.

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

The **Applied Technology Department** merged with the **Engineering/Physics Department** in 2011. The department is now called "**Applied Technologies, Engineering, and Physics**". The previous "Applied Technology" department consisted of 4 full-time faculty members and approximately 20 adjunct instructors. One full-time instructor has moved on to administration. The three other full-time instructors are within retirement age. Current full-time Engineering and Physics instructors will be in-place for the foreseeable future.

Jerry Miller (formerly our Civil/Survey Instructor) is now our CTE Dean. He previously coordinated our Civil/Survey, Geospacial, Water Utilities, and Wastewater certificates and majors. These coordination duties have fallen to the Department Chair.

Gary Pasqualetti will be retiring in Fall 2015. He coordinates our Drafting/Design and Animation courses.

Ed Sikes is the Electronics and Solar Voltaics programs coordinator.

Deborah Sweitzer (60% reduced load) leads our Architecture Transfer program, and is currently working on establishing a Construction Management Transfer program.

All disciplines mentioned above fall within the Architecture/Engineering/Construction realm. Architecture/Engineering/Construction might very well be the appropriate name for our department, as we move forward. Physics might be best served by merging with Chemistry, to create a Physical Sciences Department.

Jerry Miller's position needs to be filled/replaced ASAP. The other three full-time positions will be vacant in the very near future. With the advent of a Construction Management Transfer program, and all that has been left behind with Jerry's move to administration, the college could be best served by a new "**Construction Management**" instructor. This "umbrella" position can oversee and coordinate disciplines related to the construction industry.

A second "umbrella" **Architecture** Instructor position can hopefully be filled within the next few years. This position will oversee the Architecture Transfer program, Drafting/Design offerings, the 3D Modeling and Animation certificate and major, and possibly an array of architecture-oriented programs that exist within other departments (Interior Design, Landscape Design).

With Ed Sikes retirement, Electronics and the Solar Voltaics Certificate Programs could be coordinated by the Engineering arm of the department.

Net results have four full-time faculty positions being replaced with two positions, and a more cohesive **Architecture/Engineering/Construction Department** that is truly within the CTE mainstream, and organized to adapt to future industry changes.

In addition, our department is home to the **3D Modeling and Animation** certificate program. We offer 4 full-semester Animation courses, and are currently working on a 5th course. The certificate program relies on core coursework from the Computer Studies department. Our

current lead adjunct animation instructor has taught CS courses. He has also had to refuse load from the CS department because of load constraints. We have consistently offered 86.67% load, per semester, in Animation courses. The 3D Modeling and Animation certificate is the only Digital Media certificate not headed by a full-time instructor. We have reached out to the CS department to hopefully bring forward an inter-departmental full-time **Digital Media: 3D Modeling and Animation instructor/coordinator position**.

2.3e Faculty Staffing Requests

Rank	RS	ACTV	Location	SP	M	Discipline	SLO Assessment Rationale
0001	73	0911	Santa Rosa	00	00	Construction Management/Civil	
0002	73	0911	Santa Rosa	00	00	Digital Media: 3D modeling and Animation	
0003	73	0911	Santa Rosa	00	00	Architecture	

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

We have been very fortunate to receive a CTE grant, and virtually matching funds from IT, to equip our Shuhaw CAD labs with new computer stations (Summer 2012). The “weak link” of our educational delivery system is most certainly our computer projection systems. We currently have the ability to only project a VGA signal at 1280x720 resolution. The instructional screen images displayed to the students during lecture and lab are always “dim” and present an incorrect color spectrum. A proper system would project DVI, HDMI, or Display Port signals at a resolution of 1920x1080. We have a need to be able to switch from computer projection to “Elmo”, to laptop, to best serve our students. This is being done “manually”, at this time. A 3-way switching system, with appropriate infrastructure is a necessity.

Unfortunately, we did not get a computer upgrade for the instructor's station in Shuhaw 1752 (The Manual Drafting Lab). Instructors, on a daily basis, have a need to access current CAD software and other applications for classroom presentations. The current “old” computer is incapable of running these newer applications.

Our 3D Modeling and Animation certificate program, to continue to be on the cutting-edge of this discipline, is in need of motion capture equipment and software, and a 3D scanner and printer. Equipping five stations within a single computer lab is beneficial, but equipping an entire lab is preferable.

2.4c Instructional Equipment Requests

Rank	RS	ACTV	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
0001	73	0910	Santa Rosa	00	00	Projection Systems "Full setup and infrastructure"	2	\$7,500.00	\$15,000.00	Gary Pasqualetti	Shuhaw 1751, 1799	Gary Pasqualetti
0002	73	0910	Santa Rosa	00	00	Motion Capture System (Hardware and Software)	1	\$17,000.00	\$17,000.00	Gary Pasqualetti	Shuhaw 1799	Gary Pasqualetti
0003	73	0911	Santa Rosa	00	00	Instructor Computer Station for Shuhaw 1752	1	\$2,000.00	\$2,000.00	Gary Pasqualetti	Shuhaw 1752	Gary Pasqualetti
0004	73	0910	Santa Rosa	00	00	AccuRender Software Network License	1	\$1,900.00	\$1,900.00	Gary Pasqualetti	Shuhaw 1751, 1799	Gary Pasqualetti

2.4d Non-Instructional Equipment and Technology Requests

Rank	RS	ACTV	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
0001	73	0911	Santa Rosa	00	00	Lab Chairs for Shuhaw 1752 and 1799	50	\$150.00	\$7,500.00	Gary Pasqualetti	Shuhaw 1752 and 1799	Gary Pasqualetti
0001	73	0911	Santa Rosa	00	00	Portable Drafting Tables	24	\$150.00	\$3,600.00	Gary Pasqualetti	Shuhaw 1752	Gary Pasqualetti

2.4e Safety, Utility, and ADA Impacts

2.5a Minor Facilities Requests

Rank	RS	ACTV	Location	SP	M	Time Frame	Building	Room Number	Est. Cost	Description
0001	73	0910	Santa Rosa	00	00	Urgent	Shuhaw 1751	1751	\$15,000.00	The lighting and controls need to be fixed and updated in order to make the lab fully functional.

2.5b Analysis of Existing Facilities

New projection units are needed for shuhaw 1751 and 1799. Motion capture equipment is needed for our 3D modeling and Animation certificate program. Chairs in Shuhaw 1752 and 1799 are filthy, unsanitary, and function poorly. We will need to request a facilities upgrade for new lighting sources and controls in Shuhaw 1751. New, portable, drafting tables are needed for Shuhaw 1752.

3.1 Diversify Funding - Grants/Contracts

3.2 Cultural Competency

The AP TECH department adheres to all college policies and procedures with regards to employment.

3.3 Professional Development

Virtually all of our adjunct instructors and our full-time instructor work as professionals within the engineering, architecture, drafting/design, and computer animation industries.

3.4 Safety and Emergency Preparedness

BUILDING AND AREA SAFETY COORDINATORS						
Bldg #/Name	BSC Area	ASC Area	Department	Name	Responsible Area	Phone
<i>Applied Technology, Engineering & Physics - Bussman Hall</i>						
Bussman Hall #1400				To Be Decided	Bussman Hall	Employee Phone #
Bussman Hall #1400		Bussman South Offices	Bussman Service Center	Reina Martinez	Bussman Hall rm. 1471-1478	707-524-1535
Bussman Hall #1400		Bussman Classrooms	STEM Dean (Asst.)	Lynn Dolce	Bussman Hall rm. 1447 - 1454	707-527-4400
<i>Applied Technology, Engineering & Physics -</i>				Shuhaw	Hall	
Shuhaw Hall #1700		Shuhaw North Wings	Applied Technology, Engineering & Physics (ATEP)	Greg Davis	Shuhaw Hall rm. 1751 - 1799	707-527-4750

3.5 Sustainable Practices

ApTech courses have strived over the past few year's to go "paperless", as much as possible.

4.1a Course Student Learning Outcomes Assessment

Course	SLO #s	Participating Faculty	Semester Initiated or to Be Initiated	Semester Completed	Comments
APTECH 43 Computer Animation	1 2	W Atchison W Atchison	Spring 2012 Spring 2012	Spring 2012 Spring 2012	
APTECH 63 3D Anim: Model, Rig	1 2 3 4	W Atchison W Atchison W Atchison W Atchison	Spring 2014 Spring 2011 Spring 2015 Fall 2015	Spring 2014 Spring 2011	
APTECH 64 3D Anim: VFX, Char Anim, Com	1 2 3 4 5	W Atchison W Atchison W Atchison W Atchison W Atchison	Fall 2012 Fall 2013 Fall 2013 Fall 2014 Fall 2015	Fall 2012 Fall 2013 Fall 2013	
APTECH 65 Adv. 3D Animat. Wkshp.	1 2 3 4 5 6	W Atchison W Atchison W Atchison W Atchison W Atchison W Atchison	Spring 2014 Spring 2015 Spring 2013 Spring 2013 Spring 2016 Spring 2016	Spring 2014 Spring 2013 Spring 2013	
APTECH 45 Basic Drafting Skls	3	G Pasqualetti R Grandmaison	Fall 2010	Spring 2011	
APTECH 46 Intro to CAD	2	G Pasqualetti	Fall 2011	Spring 2012	
APTECH 57 Advanced AutoCAD	1	G Pasqualetti	Spring 2012	Fall 2012	
APTECH 58 Mech CAD Design					Not offered since Sum 2
APTECH 59 Arch CAD Basics	1	G Pasqualetti	Spring 2012	Spring 2013	
APTECH 82 More Adv CAD Applications					Not offered since Fall 2
APTECH 84 Comp Anim for Drafting/Design					Not offered since Spring
APTECH 87 3D Model and Render using CAD					Not offered since Fall 2
APTECH 90A Applied Mathematics					Not offered since Fall 2
APTECH 90B Quant Reason/ApTech					Not offered since Spring

4.1b Program Student Learning Outcomes Assessment

The 3D Modeling and Animation certificate and Majors SLO's and Program Outcome Maps have been established. Assessment of SLO's will be done after the capstone course for the program is offered in Spring 2014.

4.1c Student Learning Outcomes Reporting

Type	Name	SLO Identified	SLOs on Web	Assessment Methodology Identified	Student Assessment Implemented	Assessment Results Analyzed	Change Implemented
Course	Ap Tech 45	Spring 2011	Spring 2011	Fall 2010	Fall 2010	Spring 2011	N/A
Course	Ap Tech 46	Fall 2008	Fall 2008	N/A	Fall 2011	Spring 2012	N/A
Course	Ap Tech 53	Fall 2008	Fall 2008	N/A	N/A	N/A	N/A
Course	Ap Tech 57	Fall 2008	Fall 2008	N/A	Spring 2012	Fall 2012	N/A
Course	Ap Tech 58	Fall 2008	Fall 2008	N/A	N/A	N/A	N/A
Course	Ap Tech 59	Summer 2011	Summer 2011	N/A	Spring 2012	Spring 2013	N/A
Course	Ap Tech 63	Fall 2008	Fall 2008	Spring 2011	Spring 2011	Fall 2011	N/A
Course	Ap Tech 82	Fall 2011	Fall 2011	N/A	N/A	N/A	N/A
Course	Ap Tech 87	Fall 2008	Fall 2008	N/A	N/A	N/A	N/A
Course	Ap Tech 64	Spring 2011	Spring 2011	N/A	Fall 2012	Spring 2013	N/A
Course	Ap Tech 65	Spring 2011	Spring 2011	N/A	Spring 2013	Summer 2013	N/A
Course	Ap Tech 90a	Spring 2011	Spring 2011	N/A	N/A	N/A	N/A
Course	Ap Tech 90b	N/A	N/A	N/A	N/A	N/A	N/A

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
APTECH 45	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 46	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 53	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 57	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 58	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 59	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 63	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 64	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 65	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 82	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 87	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 90a	X	X	X		X	X		X	X	X	X	X	X	X	X	X
APTECH 90b	X	X	X		X	X		X	X	X	X	X	X	X	X	X

4.2b Narrative (Optional)

We serve transfer students, certificate students within our department, and other technically-oriented departments at SRJC. We also provide local professionals the opportunity to upgrade their Drafting/Design workplace skills. Our instructors are from industry, and we use accreditation standards of evaluation in the classroom.

5.0 Performance Measures

Regular faculty evaluations. Course SLO assessments.

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

AP Tech Drafting/Design courses are offered days, evenings, Fridays and Saturdays at the Santa Rosa Campus. Animation Courses are also offered at the Santa Rosa campus. We currently offer no online courses.

5.2a Enrollment Efficiency

Overall enrollment efficiency has always been excellent. At the Santa Rosa campus we have seen steady enrollment efficiency over the past five years. FY 2012/2013 enrollment efficiency for all ApTech courses was 88%.

5.2b Average Class Size

All of the Drafting/Design and Animation courses are offered in 24 station labs. Data shows consistently more than 24 students per class as an average. Fall 2013 shows us running at 88% efficiency.

5.3 Instructional Productivity

Program productivity is averaging about 14% over the past five years. The vast majority of our offerings are limited to 24 students per class. We offer multiple sections of some Drafting/Design courses, and we have consolidated considerably. The summer sessions are averaging approximately the same productivity as the school year sessions.

5.4 Curriculum Currency

All CAD curriculum is update on an annual basis to reflect the current software releases. Gary Pasqualetti is responsible for this endeavor. All Animation curriculum is updated annually by adjunct faculty. All CAD and Computer Animation course outlines are current, and include SLO's.

5.5 Successful Program Completion

The Applied Technology courses are core-curriculum courses that serve various certificate programs. Ap Tech 45 & 46 are UC transferable courses that are of interest to science/engineering-based transfer students. These courses are also of interest to professionals upgrading their skills and to the general public. Offering classes days, evenings and weekends allow us to serve all of these groups.

Spring 2013 garnered our first graduating class from the 3D Modeling and Animation certificate program (16 students).

5.6 Student Success

Our department's student retention rates have been consistent over the past five years. Spring 2013 retention rate was at 89.4%, and Fall 2013 showed 87.5%. Successful course completion rates have consistently been very close to retention rates. These statistics are comparable to the district's overall rates. Our overall GPA of 3.26 for Spring 2013, and 3.20 for Fall 2013 are comparable to district averages.

5.7 Student Access

Our courses serve students from diverse ethnic backgrounds at rates equal to participation rates in the district as a whole. Student gender distribution is also comparable to district averages. Our classes have seen an increase of our hispanic population from 10.9% (2010/11) to 20.9% (2013/14).

5.8 Curriculum Offered Within Reasonable Time Frame

Core-curriculum classes are offered as multiple sections each semester.

5.9a Curriculum Responsiveness

The Department responds to changing student, community, and employer needs by continually updating software and curriculum. Faculty are from industry and are current in their knowledge and skills.

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

Our drafting/design and animation courses are aligned with high school preparation through a tech prep agreement.

5.10 Alignment with Transfer Institutions (Transfer Majors ONLY)

ApTech 45 and 46 are UC transferable courses that are core curriculum for technically-oriented transfer students. Our 3D Modeling and Animation program is aligned and articulated with four-year institutions.

5.11a Labor Market Demand (Occupational Programs ONLY)

Our predominant CAD software offering, AutoCAD, is primarily utilized within the Architecture/Engineering/Construction industries. The current economic climate has resulted in a significant drop-off of job opportunities within these industries over the past five years.

5.11b Academic Standards

Drafting/design and animation instructors regularly meet and engage in dialogue about academic standards. Multiple section courses are aligned regarding curriculum and grading.

6.1 Progress and Accomplishments Since Last Program/Unit Review

Rank	Location	SP	M	Goal	Objective	Time Frame	Progress to Date
0001	Santa Rosa	00	00	3D Modeling and Animation certificate and major SLO assessment.	Compliance and review of programs.	2013-14	Review will occur May 2014
0002	Santa Rosa	00	00	Create 3D CAD models that depict residential wood frame construction techniques for ApTech 59.	Enhance instruction.	2013-14	Completed
0003	Santa Rosa	00	00	Create/update classroom visualization exercises utilizing 3D CAD models for ApTech 45.	Improved instruction.	2013-14	Completed

6.2a Program/Unit Conclusions

Location	Focus Areas & Questions
Santa Rosa	Approved coursework is in place. Unfortunately the current fiscal situation sees us not being able to offer classes. ApTech Drafting/Design courses have a long history of flourishing as "stand alone" classes. This scenario is currently frowned upon. The department sees courses within "certificate" programs that continue to be offered with low enrollment. Our Architecture and Construction Management programs could benefit from including existing Applied Tech Drafting/Design courses/curriculum. Reliance on "board" drafting in these areas will continue to yield poor enrollment and results.

6.2b PRPP Editor Feedback - Optional

Stephen Lewis has been supportive of all our efforts.

6.3a Annual Unit Plan

Rank	Location	SP	M	Goal	Objective	Time Frame	Resources Required
0001	Santa Rosa	00	00	3D Modeling and Animation certificate and major SLO assessment.	Compliance and review of programs.	2014-15	n/a
0002	Santa Rosa	00	00	Update CAD curriculum in all offered ApTech courses to reflect the most current software release.	Currency of offerings	2014-15	n/a
0003	Santa Rosa	00	00	Additional 3D CAD models that depict residential wood frame construction techniques for ApTech 59.	Enhance instruction.	2014-15	n/a
0004	Santa Rosa	00	00	Additional classroom visualization exercises utilizing 3D CAD models for ApTech 45.	Improved instruction.	2014-15	n/a