

FACULTY NEEDS ASSESSMENT APPLICATION

Name of Person Submitting Request:	Ed Szumski	
Program or Service Area:	Refrigeration & Air Conditioning HVAC/R	
Division:	Applied Technology, Transportation, and Culinary Arts	
Date of Last Program Efficacy:	Spring 2011	
What rating was given?	Continuation	
# of FT faculty 0	# of Adjuncts 5	Faculty Load: 4.2
Position Requested:	Tenure Track Faculty Position	
Strategic Initiatives Addressed:	Access, Partnerships, Student Success, and Technological Advances	

This request is #1 on the Faculty Priorities from the Tech Division

1. Provide a rationale for your request.

We live in the desert and global warming is threatening the planet. Can you imagine your home, car, or classroom, without air conditioning? Temperatures are still close to 100 degrees at the end of September and over 100 degrees at the start of October. A full time faculty member is needed for this program and will greatly increase the safety of our students, the Environmental Protection Agency (EPA) required monitoring of the refrigerant gases that this program uses and to oversee security of the tools and equipment necessary to perform the functions of HVAC/R technicians. The California Employment Development Department (EDD) Occupational Projection of Employment for the HVAC/R workers shows an 11.3% increase in employment. Our HVAC/R program is a very strong and viable program which provides students who are authorized by the EPA to properly handle the current and future refrigerant gases and these students are ready to be employed in these highly specialized, high demand jobs. The continual change in legislated EPA requirements and the technological advancements in the newest HVAC/R equipment require a full time faculty member to repair, maintain, and modify these various systems. Our focus is also on sustainable, green technologies such as solar water heating, Leadership in Energy and Environmental Design (LEED) certification, and the California Home Energy Efficiency Rating System (CHEERS).

1. Indicate how the content of the latest Program Efficacy Report and/or most current EIS data support this request. How is the request tied to program planning? (*Reference the page number(s) where the information can be found on Program Efficacy.*)

Using the EMP for Refrigeration Air Conditioning – 2012 that you sent to me, over the past six academic years the FTEF has averaged 4.2 which is more than one full time faculty member.

	06-07	07-08	08-09	09-10	10-11	11-12
Duplicated Enrollment	276	252	310	286	258	218
FTEF	4.48	4.15	4.48	4.48	3.98	3.44
WSCH per FTEF	349	342	386	358	381	391

Our HVAC/R program has requested a replacement faculty member every year we received a request a needs assessment. Refrigeration is listed in Table 12, page 18 of the SBVC Educational Master Plan in the “**TOP 10**” certificates awarded on campus.

Our Refrigeration students have won Gold and Silver medals at the SkillsUSA competitions locally, regionally and nationally. We TRAIN JOB-READY students, who become TAX-PAYING employees. Our students can finish a certificate in only three semesters.

3. Provide updated or additional information you wish the committee to consider (*for example: regulatory information, compliance, alternative or ongoing funding sources, updated efficiency and/or student success data or planning etc.*)

There are new gases that are now being used to replace R-22, such as R-407F, a non-ozone depleting refrigerant. The Environmental Protection Agency (EPA) has ordered a phase-out of R-22 gas by the year 2020. There are also new classes of high pressure gases being introduced into the marketplace. The California Energy Commission (CEC) is considering Technician Certification for Acceptance Testing under Title 24 which our students in our REFRIG 006 class learn this type of testing techniques. Our HVAC/R program is also part of the Green Tech Consortium with Chaffey College and Mount San Antonio College. We also have partnerships with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) organization and the Institute of Heating and Air Conditioning Industries (IHACI). The HVAC/R program will submit the paperwork to receive Perkins funds for the 2013-2014 academic year and order the newer state-of-the art ventilation testing equipment.

Analysis of the shows that the student retention rate averages **94%** with 96% for the high and 91% for the low. Our student retention rate exceeds the campus-wide average by 15 percentage points. The campus-wide student retention average is only 79%. Our students are motivated to stay in our program because of our program policy of designing a course “Ed Plan” so the students know which classes can be taken and meet the prerequisites of the classes for the following semester.

The student success rate averages **85.4%** with 88% for the high and 82% for the low and far exceeds the campus average by over 25 percentage points. The campus average success rate is only 60% with a high of only 62%. I think the retention rate and the success rate are closely related. We attribute this good student success rate to our excellent adjunct staff who all work in the Heating, Ventilation, Air Conditioning/Refrigeration (HVAC/R) industry and the actual hands-on experience the students receive in the laboratory portion of the classes by working on air conditioning and refrigeration systems which represent the varied units our students will service in the industry. . We are awarding an average of 16 certificates per year and about 2 Associate Degrees per year. Our refrigeration program is one of the top 10 programs awarding certificates with a total of 87 certificates awarded over the past six years.

4. What are the consequences of not filling this position?

All of the Strategic Initiatives Addressed above will suffer without a full-time faculty member who can OWN the HVAC/R program and keep the program staff equipped with the materials needed to teach our students these advanced changing technologies in HVAC/R. Stagnation in curriculum, retention, student success, and access, and transfer will most certainly occur if this position is not filled.