

EDUCATIONAL MASTER PLAN 2012-2017

Career and Technical Education Division

Working Draft
4-15-2013



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Career and Technical Education Division

The Career and Technical Education Division will provide you with the highest quality technical education leading to careers in high demand sectors of industry. The programs include hands-on state of the art technology and a dynamic, ever changing work environment.

Degrees & Certificates Offered:

Associate Degree:

There are no Associate Degrees offered in the Career and Technical Education Division.

Associate of Applied Science Degrees:

- Administration of Justice
- Agriculture Technology Management
- Applied Pre-Engineering
- Automotive Technology
- Diesel Technician
- Electrical Instrumentation Technician
- Fire Science
- Gunsmithing
- Industrial Plant Technician
- Paramedicine
- Professional Pilot - Airplane
- Professional Pilot - Helicopter
- Residential Building Technology
- Viticulture and Enology

Certificates

- Animal Care and Management
- Auto Body Paint and Collision Technology
- Automotive Master Technician
- Automotive Technician
- Computer Numerical Controlled (CNC) Machining
- Criminal Justice and Security
- Diesel Technician
- Digital Filmmaking - Advanced
- Digital Filmmaking - Documentary
- Digital Filmmaking - Narrative
- Electrical Instrumentation Technician
- Electronics Technology
- Emergency Medical Technician
- Equine Practitioner
- Fire Science Driver/Operator
- Firefighter I & II Academy
- Gunsmithing - Advanced
- Gunsmithing
- Horticulture Science
- Industrial Plant Technician
- Justice Studies
- Law Enforcement and Corrections
- Paramedicine
- Police Certification
- Residential Building Advanced Skills
- Residential Building Skills
- Residential Building Technology
- Viticulture
- Welding

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Executive Summary

Career and Technical Education Division

There are a considerable number of programs in the Career and Technical Education division all with various degrees of challenges. The mining cohort consists of three program areas including Diesel Technology, Industrial Plant Technology, and Electrical all bound by contracts with Freeport McMoRan and ASARCO Mines. Each mine submits a number of people they want trained every year. Numbers swing wildly as they look to replace their losses and have varied from as low as 2 students to as high as 15 in each area. It is difficult to know from year to year if classes have enough enrollments leading to many having to run with lower numbers than we would like. Since we are contractually bound, we must offer the sections so we now open them to the public as well. Freeport is the largest taxpayer in the county so it is important to maintain a good relationship with them. In addition, 100% of the students in the cohorts have been hired – often by other companies. Of the three, Diesel and Electrical thrive while IPT languishes under the “we don’t know what that is” umbrella. We are considering a degree name change to “Industrial Mechanic”. Regardless, these programs truly lead to high wage, high demand jobs and the recommendation is to keep them and the partnerships all of which have huge political ramifications for YC.

CNC Machining and Gunsmithing are both poised for additional growth. America’s fascination with guns has led to huge numbers of individuals wanting to learn both the manufacturing and the repair side of the industry. Gunsmithing has very strong enrollments while the CNC certificate is new and just beginning to rise. CNC has led students into a wide cadre of manufacturing jobs throughout the county and the program should grow as more manufacturers tie into the program. Both programs have exceptionally well equipped areas to work in.

Aviation is continuing to grow and enrollments appear low in upper level classes. However, that is quickly offset by the market based pricing of the program. What has hampered the programs is the VA 85/15 rule that states that only 85% of the students in a program can be military. This makes it difficult for private citizens to go through the Aviation program. The cost for private citizens to go through the program is between \$85,000 - \$200,000 in order to be fully trained; post 911 vets have all expenses covered. Contractually, YC only pays for the ground school and mechanics instruction which makes the flight partners, Guidance Aviation and Northaire, responsible for covering salaries of the flight courses. In the end, the program is highly profitable and will continue to grow with the redesign of the program to add unmanned aircraft and an operations component to the degree that includes Air Traffic Control and Dispatcher areas of emphasis.

Automotive continues to grow with direct ties to the Mountain Institute JTED. Both YC and the JTED share the responsibility of equipping the programs and as a result, the programs have quickly emerged as first rate. There are a few enrollment problems with upper end courses, and student having many jumping off points within the degree or certificate if they pass ASE testing. The core base is getting larger so ultimately we should see netter enrollment in upper level classes.

Welding runs in an open lab setting and is very cost effective in that the instructor is flat loaded to teach everything leading to a lower cost FTE. However, JTED growth has strained the program’s resources to

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some extent as we have had to hire two more adjuncts to cover it while the price of materials to operate the program has consistently gone up. Enrollments are everywhere in this program but most students want ARC, MIG, or Pipe certification and they gravitate to those sections in large numbers. Blueprint reading could use a boost as most don't complete the degree once they test for ASW certification. Our opinion is that all students need the blueprint class. We may have to make it a co-req with ARC 140. Paramedicine and EMT/EMS are stable programs with very good enrollments. A new private, non-accredited company called "Wizard" is penetrating the Yavapai market offering a condensed version of the Paramedicine certification. This has caused YC to look at the program and pair it down to 13 months to stay within accreditation standards. All fire agencies are required to have a paramedic on shift prompting the competition. The program is looking to see if any components can be done online but it is challenging because of the "hands on" testing for licensure.

Fire Science, Administration of Justice, and the NARTA Police Academy all remain stable with a slight pull back in the number of fire academies (3 to 2). The program was reviewed and deficiencies were found in the inability to graduate firefighters beyond the academy with the AAS degree. The program moved all of the courses beyond the academy to online sparking a jump in enrollment. Firefighters who work shifts now have the ability to finish the degree in time slots that work for them. We anticipate larger numbers of degree completers. The NARTA academy is beginning to grow again with the average class size being 24. NARTA experienced drops in enrollments during the economic downturn as a result of partner police agencies budgets being cut.

AJS has shifted into an online or hybrid format and saw tremendous growth in 2011-12 and for fall of 2013. It would appear that students opting into justice studies and other areas overwhelmingly prefer online delivery. This methodology is a good fit as the entire program is lecture based. Additionally, AJS has taken on the challenge of being a "Major" instead of an AAS. The Director plans on working on that issue through the fall of 2013. Apparently universities think that the AA major in AJS is better for transfer. Agribusiness has solid numbers and was boosted with the VIT and ENO students taking core AG classes towards degree completion. Most courses are capped at 15 due to facility limitations, and that number seems to be about right in terms of what the market will bear out each semester. Completers are a problem and the thought process is that we need to embrace more of the cohort, lock step concept that aviation and mining have. Equine has suddenly taken a down turn and the program was shifted from a degree to a certificate. It is unclear now what has happened. However, the closure of the racetrack impacted the program to some extent as well as some course run on the non-credit side. We are just beginning to look at that program as it had a four year climb.

The RBT program continues to wane in light of the economic recession and the loss of thousands of construction jobs in the area. The instructor has done his best to create enrollment but it has come from the County who has to retrain their workers to adapt to the new building codes. The instructor has multiple degrees and has been able to teach in a couple of other areas. Frankly, the program is in trouble and decisions will need to be made. At present the program is on hold. We do not know when the economy will turn around enough to bring large scale numbers of workers back to the area. It will be a difficult decision to let it go as we know it will come back and when it does, it will be much harder to start the program all over again. However, we will do what is in the best interest for the college and students.

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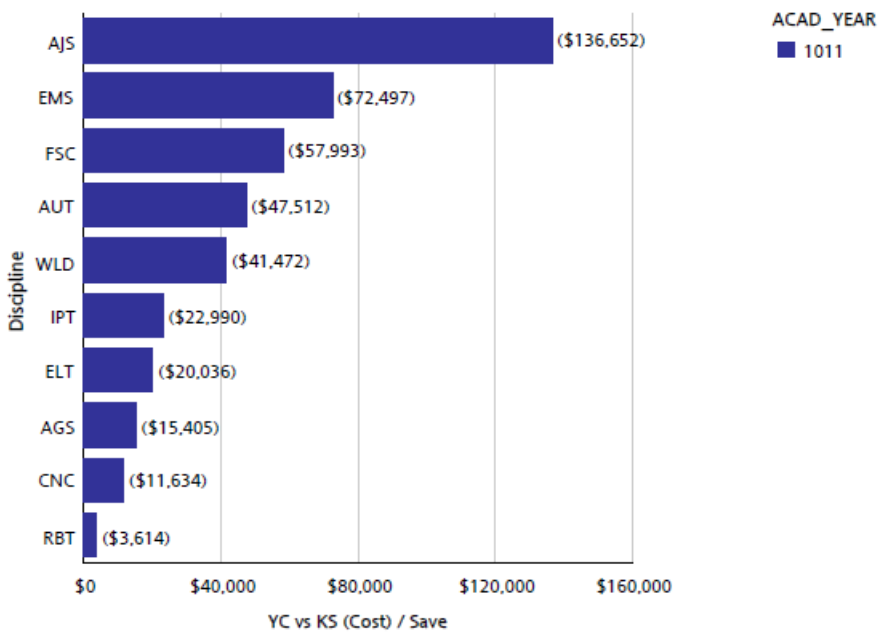
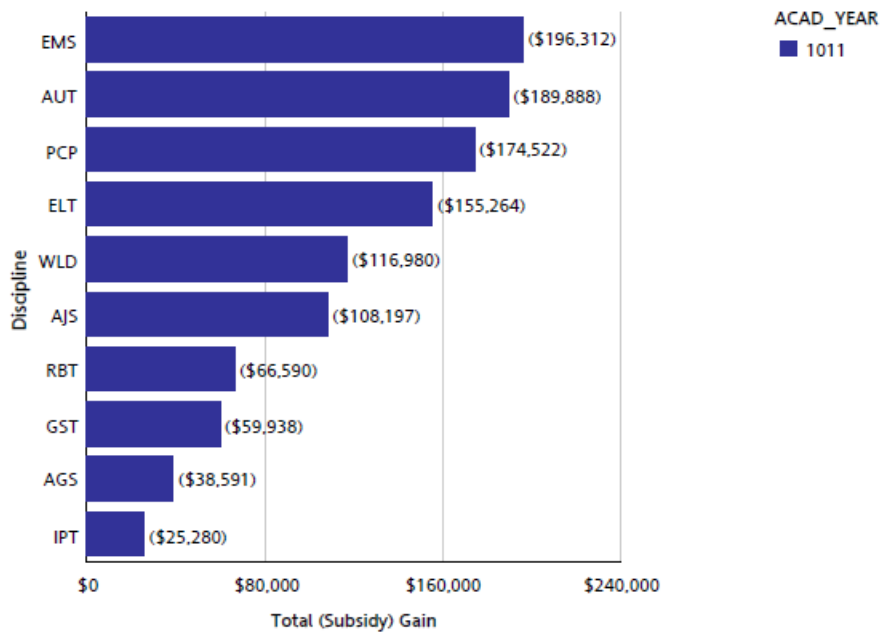
TECH Instructional Cost Dashboard

TECH

1011

Discipline Description	YC Cost / SCH	Natl Cost / SCH	(Cost) / Save	YC Sem SCH / Faculty	Natl SCH / Faculty	YC Class Size	Seat Fill Rate	YC % PT	Natl % PT	(Subsidy) Gain / SCH	Total (Subsidy) Gain	Total Other Instructional Labor
Administration of Justice	\$182	\$64	(\$136,652)	186	276	13.5	61%	68%	42%	(\$94)	(\$108,197)	\$96,475
Agricultural Science	\$146	\$134	(\$15,405)	168	180	14.5	81%	29%	33%	(\$31)	(\$38,591)	\$3,489
Agriculture Equine	\$53	\$134	\$41,023	137	180	14.2	81%	100%	33%	\$63	\$32,173	\$1,605
Automotive	\$155	\$138	(\$47,512)	221	209	13.1	74%	46%	12%	(\$70)	(\$189,888)	\$31,601
Aviation	\$27			515		12.4	56%	66%		\$182	\$252,890	\$5,484
Biology	\$97	\$71	(\$1,550)	176	330	15.0	100%	0%	44%	(\$2)	(\$91)	\$405
Computer Numerical Control	\$250	\$177	(\$11,634)	143	123	12.0	91%	64%	21%	(\$119)	(\$18,950)	\$2,840
Electronics Technology	\$224	\$167	(\$20,036)	126	174	8.7	72%	0%	23%	(\$442)	(\$155,264)	\$5,305
Emergency Medical Services	\$150	\$126	(\$72,497)	219	194	17.8	83%	63%	40%	(\$66)	(\$196,312)	\$193,549
Fire Science	\$106	\$83	(\$57,993)	331	203	22.0	86%	100%	85%	(\$8)	(\$19,788)	\$191,568
Gunsmithing	\$144	\$177	\$34,518	115	123	21.2	78%	22%	21%	(\$58)	(\$59,938)	\$18,578
Industrial Plant Technology	\$700	\$153	(\$22,990)	44	190	3.5	35%	14%	13%	(\$602)	(\$25,280)	\$643
Manufacturing Engineering Tech	\$221	\$202	(\$1,204)	211		15.0	67%	0%		(\$121)	(\$7,475)	\$1,108
Motorcycle Technology	\$84	\$138	\$2,288	154	209	16.0	100%	100%	12%	(\$20)	(\$823)	\$750
Police Certification Program	\$61			354		27.5	79%	100%		(\$91)	(\$174,522)	\$61,834
Residential Bldg Technology	\$217	\$210	(\$3,614)	138	151	10.8	58%	64%	12%	(\$120)	(\$66,590)	\$3,602
Viticulture	\$32	\$134	\$24,859	352	180	21.1	90%	100%	33%	\$88	\$21,411	\$501
Welding	\$197	\$153	(\$41,472)	111	183	18.2	63%	5%	18%	(\$125)	(\$116,980)	\$30,768

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Carl Perkins 1P1 Technical Skill Attainment Program Year 2010-2011

The following documentation shows Career and Technical Education performance by measuring students who passed technical skills or end of program assessments that are aligned with industry-recognized standards during the 2010-2011 reporting year. The report includes only those who took the industry assessment and from that cohort, those who passed. The state adjusted level of performance goal for 2010-11 was 68%, Yavapai College actual level of performance was 97%.

POSTSECONDARY CAREER AND TECHNICAL EDUCATION 1P1: Technical Skill Attainment ARIZONA PROGRAM YEAR 2010-11							
Instructions:			College/District: Yavapai College				
1 Gender and Ethnicity counts are UNDUPLICATED			Contact Name: _____				
2 Special Populations counts are DUPLICATED			Contact Title: _____				
3 Each cell must contain a numeric value			Contact Telephone: _____				
			Contact E-mail: _____				
Line	Population	Number of Students in the Numerator	Number of Students in the Denominator	State Adjusted Level of Performance	Actual Level of Performance	Adjusted vs. Actual Level of Performance	Met 90% of Adjusted Level of Performance (Y,N)
1	GRAND TOTAL	481	498	68.0%	96.6%		
2	GENDER						
3	Male	248	258		96.1%		
4	Female	233	240		97.1%		
5	RACE/ETHNICITY* (1977 Standards)						
6	American Indian or Alaska Native						
7	Asian or Pacific Islander						
8	Black (not Hispanic)						
9	Hispanic						
10	White						
11	Unknown						
12	RACE/ETHNICITY* (1997 Revised Standards)						
13	American Indian or Alaska Native	0	0		100.0%		
14	Asian	0	0		100.0%		
15	Black or African American	2	2		100.0%		
16	Hispanic/Latino	36	37		97.3%		
17	Native Hawaiian or Other Pacific Islander	0	0		#DIV/0!		
18	White	406	421		96.4%		
19	Two or More Races	1	1		100.0%		
20	Unknown	18	19		94.7%		
21	SPECIAL POPULATIONS AND OTHER STUDENT CATEGORIES						
22	Individuals With Disabilities (ADA)	14	14		100.0%		
23	Economically Disadvantaged	145	151		96.0%		
24	Single Parents	9	9		100.0%		
25	Displaced Homemakers	0	0		#DIV/0!		
26	Limited English Proficient	1	1		100.0%		
27	Nontraditional Enrollees	40	41		97.6%		
28	Tech Prep	32	32		100.0%		
*See "Definition of Terms" for guidance with reporting the Race and Ethnicity Categories.							
Additional Information:							
Measurements include the following assessments: <u>Automotive</u> : Automotive Service Excellence Certification (ASE); <u>Aviation</u> : Federal Aviation Administration; <u>Computer Networking Technology</u> : CISCO Certified Network Associate; <u>Computer Numerical Control</u> : HAAS CNC Operator Certificate; <u>Electronics Technology</u> : ISCET; <u>Emergency Medical Services</u> : National Registry Test for EMT; <u>Fire Science</u> : State Fire Marshall Examination; <u>Nursing</u> : NCLEX RN National Council of State Board of Nursing; <u>Police Certification Program</u> : NARTA AZ Post Results; <u>Radiologic Technology</u> : Radiography National Registry Board Exam; <u>Welding</u> : Nat'l Center for Construction Education Research							

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Overall Summary of Academic Disciplines

Enrollment Trends

Instructional Degrees and Certifications	Instructional Division	Total SCH AY 2011-12	SCH 5 Year Forecast Comments
AAS in Administration of Justice Criminal Justice & Security Certificate Justice Studies Certificate Law Enforcement and Corrections Certificate Police Certification Certificate	TECH	1323 SCH for 2012 but large jump of 41% in 13 of which data is not shown here.	AAS has grown with the onset of online and new areas in Justice Studies. It should grow through 2013-14 and then stabilize. The NARTA forecast is year by year but the average has been 24 per class. No increase is forecast in that area and it should remain stable as agency budgets permit. Facilities will not be impacted based on online courses.
AAS in Agriculture Technology Management Horticulture Science Certificate	TECH	1065 SCH for 11-12	The program has been stable consistently and has experienced a 20% uptick in the fall of 12 with the addition of viticulture and enology degrees that require the ag core. Dual enrollment has increased 110%. Facilities are exceptional but starting to show slight aging.
AAS in Applied Pre-Engineering	TECH	N/A	This is a new degree area that does not have enrollment patterns yet. The program should grow based on JTED and regular college student numbers.
AAS in Automotive Technology Auto Body Paint and Collision Technology Certificate Automotive Master Certificate Automotive Technician Certificate	TECH	2793 SCH and growing. Dual enrollment changed from fall to spring because of individual course.	Continues to increase in SCH with some additional growth of about 180 SCH anticipated because of certificate in auto body being excepted for financial aid. We would like to cap out with a max of 300 students and roughly 3000 SCH due to space limitations at CTEC and the overall cost of the program. Instructor turnover in dual enrollment has been problematic.
AAS in Diesel Technician Diesel Technician Certificate	TECH	2264 SCH	SCH is growing slightly with the mining contracts. The facility is crunched for space but that could be alleviated by moving the IPT program into a different location in CTEC. This would allow for 10% more SCH based on space. Job prospects are exceptional so it could

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			spike greater than 10%, but 10% is conservatively what we can handle.
AAS in Electrical Instrumentation Technician Electrical Instrumentation Certificate Electronics Technology Certificate	TECH	2055 SCH and rising	This area is poised to grow in SCH because of the addition of the grant funded lineman program which will include this core. This program could accommodate 2350 SCH at full build out. Mining contracts are still in place.
AAS in Fire Science Fire Science Driver/Operator Certificate Firefighter I & II Academy Certificate	TECH	3271 SCH	We are recommending the reduction of the fire academy from 3 to 2 annually. This is based on employment projections and the number of cadets in the reserves waiting for openings. FSC SCH should decline but will balance out with the onset of the emergency management degree.
AAS in Gunsmithing Gunsmithing Certificate Gunsmithing Advanced Certificate	TECH	2003 SCH and rising	2013 enrollment and 4 year wait list effectively will double the SCH going forward where it should peak at 3500 by the fall of 2014. Facilities are already updated/expanded to accommodate growth.
AAS in Industrial Plant Technician Industrial Plant Technician Certificate	TECH	1913 SCH	This program is not where we would like it in SCH but suffers from identity issues in that the public does not know what IPT means. This program needs marketing and a name change to perhaps "Industrial Mechanic". SCH will be stagnating without the aforementioned occurring. We would like to see it hit 2500 SCH and stabilize at that point.
AAS in Paramedicine Paramedicine Certificate	TECH	621 SCH	Growth has been problematic with increased private competition from "Wizard". The director is working on a shorter format while staying within accreditation guidelines. Because all stations need a paramedic on all shifts, we should see this program get to 100-1200 SCH provided we can beat competition.
AAS in Professional Pilot - Airplane	TECH	N/A	Degree has not been in place long enough to have any data.
AAS in Professional Pilot -	TECH	2110 SCH	The helicopter program can support 125

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Helicopter		and rising	students and approximately 3000 SCH. The program is still in its infancy but has grown steadily. This program SCH is impacted by YC's ability to stay compliant with the VA rules of 85% military and 15% civilian in any one program area. This is difficult because of civilian's inability to garner loans.
AAS in Residential Building Technology Residential Building Advanced Skills Certificate Residential Building Skills Certificate Residential Building Technology Certificate	TECH	280 SCH	The program has been temporarily halted although not sunset. We do not expect SCH growth to return until 2014-2016. IN the meantime the instructor has been reassigned to other areas where he is credentialed to teach. It will be some time before we see the return of 2000+ sch.
Animal Care and Management Certificate Equine Practitioner Certificate	TECH	1337 SCH	SCH has the potential to grow to over 2000 if the arrangement with AAEC comes through and equine classes are YC credit. Fall of 13 saw a dip in the equine due to summer NC offerings.
Computer Numerical Controlled (CNC) Machining Certificate	TECH	N/A	Certificate was just created. Before that it was just a couple of courses. We are projection the program to be in the 1000-1200 range at full capacity. Expensive machinery limits too much growth.
Digital Filmmaking Certificate	TECH	620 SCH	DFM had a comfortable growth for fall of 2013 but 800-1200 SCH will be a challenge to maintain as most students come from out of state for this highly specialized program. The program required one person working diligently to meet growth targets for 2013. It will be difficult to continue that way.
Emergency Medical Services Certificate	TECH	1380 SCH	Because of new hospital contracts the SCH growth should hit 1500-2000 in the fall of 2014. Steady job growth is predicated which should help SCH to maintain or grow.
Welding Certificate	TECH	2496 SCH	With the inclusion of JTED student the welding area should maintain nearly 2500 SCH. Any more than that would require more space which is not possible and not

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			recommended at this point. The program SCH is very stable and reliable.
Viticulture Certificate	TECH	629 SCH	The program is very new and has limited SCH data. Projections are for the program to stabilize at 900-1000 SCH.

Employment Trends

Instructional Degrees and Certifications	Instructional Division	Comments
AAS in Administration of Justice Criminal Justice & Security Certificate Justice Studies Certificate Law Enforcement and Corrections Certificate Police Certification Certificate	TECH	Trending upward 6% through 2017 nationwide and 3% for the county. Impacted by retiree replacement and newly created positions for agency and town growth.
AAS in Agriculture Technology Management Horticulture Science Certificate	TECH	Increased growth in Arizona by 19% through 2017 fueled by the greenhouse industry and medical marijuana legalization. Nationally upward trend of 4%.
AAS in Applied Pre-Engineering	TECH	Expected to follow national trend of 30% engineer turnover and 11% shortfall with onset starting now and lasting through 2020.
AAS in Automotive Technology Auto Body Paint and Collision Technology Certificate Automotive Master Certificate Automotive Technician Certificate	TECH	Yavapai County expects 4% growth or 465 positions on a 5 year trend line. Arizona is trending up 8%. Program is producing both mechanics and general interest students.
AAS in Diesel Technician Diesel Technician Certificate	TECH	Diesel jobs are trending up 8% in Arizona and slightly down in Yavapai County. However, program is contracted to two mines and all grads have gotten great jobs in various sectors of the industry.
AAS in Electrical Instrumentation Technician Electrical Instrumentation Certificate Electronics Technology	TECH	Another program on contract with the mines and getting ready to be affiliated with APS. 16% growth projected for Arizona. No hard data available for the county but all mining grads have been placed in the industry.

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Certificate		
AAS in Fire Science Fire Science Driver/Operator Certificate Firefighter I & II Academy Certificate	TECH	1% change in Yavapai County which is why the program reduced the number of academies. 4% nationally equates to 13,000 plus jobs.
AAS in Gunsmithing Gunsmithing Certificate Gunsmithing Advanced Certificate	TECH	Arizona is growing 12% in this area and gun sales have skyrocketed prompting the need for gunsmiths. One of only 5 programs nationally, YC is in a very good position with long waitlists to get in.
AAS in Industrial Plant Technician Industrial Plant Technician Certificate	TECH	Yavapai County in expecting a 20% growth in IPT and grads are not finding it very difficult to find gainful employment. Arizona is starting at a 5% increase primarily with the mines and heavy manufacturers.
AAS in Paramedicine Paramedicine Certificate	TECH	Yavapai County is projected to have a 30% growth rate while Arizona is at 26% or over 1,000 new jobs. Most of this centers around fire agencies new requirement to have a paramedic on every shift.
AAS in Professional Pilot - Airplane	TECH	The U.S. is poised to have a major pilot shortfall beginning in 2014 based on mandatory retirements. That shortage will call for more than 10,000 new pilots needed annually through 2024. Although Yavapai county shows only a 7% growth pattern, this program is designed for national hiring into commercial airlines.
AAS in Professional Pilot - Helicopter	TECH	Like airplane, there are plenty of opportunities for helicopter pilots as Vietnam Vets move into retirement. EMSI data does not separate out helicopters but YC works with multiple agencies who hire our grads.
AAS in Residential Building Technology Residential Building Advanced Skills Certificate Residential Building Skills Certificate Residential Building Technology Certificate	TECH	Although EMSI data shows and uptrend through 2017, YC has not seen enough movement in large scale home production to draw builders back into the county. Projects hover around 4% growth. Yavapai County is usually two years behind the growth started in Phoenix. Phoenix is barely beginning to rebound so the department feels that it won't see significant growth until at least 2016.
Animal Care and Management Certificate Equine Practitioner Certificate	TECH	Equine employment in Yavapai County is projected to grow 6% while the state is at 20% or 3,500 jobs. Per capita, Yavapai County has the largest horse ownership population in the state. If the racetrack reopens, employment spikes to 600 jobs during the racing season. It remains to be seen whether a proposed buyer for Yavapai Downs will have their proposal approved at the

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		U.S.D.A. levels. Animal care remains steady with 4% growth in areas such a vet assistant, pet store workers, zoo techs, and groomers.
Computer Numerical Controlled (CNC) Machining Certificate	TECH	In general machinists are showing a decline of 10% nationally. However, the data has not factored in CNC Machining which the market has quickly shifted into. This program was created as a result of the Specialized Light Industrial Manufacturing Association wanting CNC machinist in Yavapai County. 73% of the completers have been able to secure jobs locally.,
Digital Filmmaking Certificate	TECH	Yavapai County only shows a 4% growth but nationally the growth is projected to be 8% or 17,025 jobs. This is a destination program that draws students from all over the state and essentially the go where the jobs are when complete with their education.
Emergency Medical Services Certificate	TECH	Yavapai county is looking at a 30% increase in jobs. This is coupled with a 26% increase in Arizona and 15% increase Nationally. YC is in a very good position with this program and continues to have robust enrollments and great placement opportunities. It is a career where grads can pick where they want to live.
Welding Certificate	TECH	Yavapai county shows 6% growth with only 8 positions but YC is finding that certified welding grads are in hot demand all over the state. Pipe certified students seem to be getting the most out of the upswing. Nationally EMSI project a 1% decline. YC is not seeing that.
Viticulture Certificate	TECH	Unfortunately there is no job data for the industry that is stand alone and it is lumped in with the regional and national plant and soils science jobs. YC is working with other agencies to try and estimate. Currently there are 140 employed in the industry in Yavapai County.

Capital Equipment Needs

Instructional Degrees and Certifications	Instructional Division	Comments
AAS in Administration of Justice Criminal Justice & Security Certificate Justice Studies Certificate Law Enforcement and Corrections Certificate Police Certification	TECH	Minimal centering on computer replacement.

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Certificate		
AAS in Agriculture Technology Management Horticulture Science Certificate	TECH	Replace existing greenhouse controls \$15,000+, Add chiller to fish raceways \$10,000+
AAS in Applied Pre- Engineering	TECH	Potentially add liquid CNC machining at \$45,000 as well as Water Jet at \$25,000
AAS in Automotive Technology Auto Body Paint and Collision Technology Certificate Automotive Master Certificate Automotive Technician Certificate	TECH	Continue purchase or donation of diesel engine trainers until 20 are onsite. 7 more needed at \$4000 each. Replacement of Solvent Gun cleaners \$2,500, additional alignment machine \$25,000.
AAS in Diesel Technician Diesel Technician Certificate	TECH	Same as above.
AAS in Electrical Instrumentation Technician Electrical Instrumentation Certificate Electronics Technology Certificate	TECH	480 volt modern switch gear. \$35,000. Hoping to have one donated by the mines. Replacement of 5 GE Fanuc trainers at \$30,000 each = \$150,000.
AAS in Fire Science Fire Science Driver/Operator Certificate Firefighter I & II Academy Certificate	TECH	Replacement of PPE's at \$2,500 each x 50 = \$125,000 SCBA'S up to date and tested \$5,000 each time 2 = \$10,000.
AAS in Gunsmithing Gunsmithing Certificate Gunsmithing Advanced Certificate	TECH	Equipment is current with most being exchanged on the 5 year equipment replacement cycle. Approximately \$4,500 per year per machine.
	TECH	
AAS in Paramedicine Paramedicine Certificate	TECH	Replacement of manikins over 10 year period at \$85,000 each potentially 2. Upgrade of cardiac monitors 2 x \$2,500 = \$5,000.
AAS in Professional Pilot - Airplane	TECH	Simulators are the biggest issue. 8 x \$15,000 = \$120,000
AAS in Professional Pilot - Helicopter	TECH	Simulators are the biggest issue. 8 x \$15,000 = \$120,000
AAS in Residential Building Technology	TECH	Primarily software if the department can get the CADD program going again. \$12,000

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Residential Building Advanced Skills Certificate Residential Building Skills Certificate Residential Building Technology Certificate		
Animal Care and Management Certificate Equine Practitioner Certificate	TECH	\$10,000 raceway chiller, used water tank truck to keep arena dust under control \$5,000
Computer Numerical Controlled (CNC) Machining Certificate	TECH	Potential replacement of CNC Mills or lathes. Low end \$45,000. Hi end >\$200,000. However, the department feels that the machines will last 8-10 years based on current use.
Digital Filmmaking Certificate	TECH	5 HD cameras at \$1,200 each. \$6,000.
Emergency Medical Services Certificate	TECH	Same as Paramedicine.
Welding Certificate	TECH	Welding is mainly focused on replacing antiquated welders through the replacement cycle. On average the department would spend \$4,500 to \$9,000 per year over a 5 year period.
Viticulture Certificate	TECH	Dollars tied to this program exceed 3 million through a separate funding campaign.

Physical Resources/Facility Needs

Instructional Degrees and Certifications	Instructional Division	Comments
AAS in Administration of Justice Criminal Justice & Security Certificate Justice Studies Certificate Law Enforcement and Corrections Certificate Police Certification Certificate	TECH	Current facility is meeting needs.
AAS in Agriculture Technology Management Horticulture Science Certificate	TECH	Current facility is meeting needs.
AAS in Applied Pre- Engineering	TECH	Current facility is meeting needs.

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AAS in Automotive Technology Auto Body Paint and Collision Technology Certificate Automotive Master Certificate Automotive Technician Certificate	TECH	Some expansion into other parts of CTEC will be necessary but that is already planned and will only require in-house moves. Expanded parking, and larger hand wash stations.
AAS in Diesel Technician Diesel Technician Certificate	TECH	Needs additional space which will be available when IPT moves into another area within the building.
AAS in Electrical Instrumentation Technician Electrical Instrumentation Certificate Electronics Technology Certificate	TECH	Should be in remodeled part of building as part of grant funding recently received. Curve ball was thrown when the facilities department informed the division that the numbers used to budget for the remodel were in error.
AAS in Fire Science Fire Science Driver/Operator Certificate Firefighter I & II Academy Certificate	TECH	Current facility is meeting needs. However, leases with Prescott and Verde Valley always pose challenges for the department with only costly alternatives available.
AAS in Gunsmithing Gunsmithing Certificate Gunsmithing Advanced Certificate	TECH	Current facility is meeting needs.
AAS in Industrial Plant Technician Industrial Plant Technician Certificate	TECH	Facility should be moved as part of the YC master plan and dollars already committed to completing CTEC. The program needs closer to 5,000 feet of lab. Currently it has less than 1800.
AAS in Paramedicine Paramedicine Certificate	TECH	Additional clinical skills space needs to be addressed as part of master plan.
AAS in Professional Pilot - Airplane	TECH	There is a need for two classrooms at CTEC to house the flight simulation as well as the ATC SIM. Those needs are currently budgeted for 2013-14 but may need to readdress as part of the master plan.
AAS in Professional Pilot - Helicopter	TECH	Reference above.
AAS in Residential Building Technology Residential Building Advanced Skills Certificate Residential Building Skills	TECH	Current facility is meeting needs.

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Certificate Residential Building Technology Certificate		
Animal Care and Management Certificate Equine Practitioner Certificate	TECH	The arena is wired for lights in order to offer night delivery but those plans were put on hold in the CIP. The costs would be between \$25,000 to \$50,000.
Computer Numerical Controlled (CNC) Machining Certificate	TECH	Current facility is meeting needs.
Digital Filmmaking Certificate	TECH	Sound stage and film editing space are needed. Costs could readily exceed \$100, 000. Recommendation is to flesh it out in master plan.
Emergency Medical Services Certificate	TECH	Reference Para medicine.
Welding Certificate	TECH	Current facility is meeting needs.
Viticulture Certificate	TECH	Current facility is meeting needs.

Technology Needs

Instructional Degrees and Certifications	Instructional Division	Comments
AAS in Administration of Justice Criminal Justice & Security Certificate Justice Studies Certificate Law Enforcement and Corrections Certificate Police Certification Certificate	TECH	No additional needs anticipated.
AAS in Agriculture Technology Management Horticulture Science Certificate	TECH	Rebuild media room; configure ITV system that allows for successful communication to Verde. Greenhouse controls are antiquated.
AAS in Applied Pre- Engineering	TECH	No additional technology needs anticipated.
AAS in Automotive Technology Auto Body Paint and Collision Technology Certificate Automotive Master Certificate	TECH	Computer stations needed in automotive shop. Also wireless projectors and potential virtual SIM as it becomes available.

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Automotive Technician Certificate		
AAS in Diesel Technician Diesel Technician Certificate	TECH	Same as automotive.
AAS in Electrical Instrumentation Technician Electrical Instrumentation Certificate Electronics Technology Certificate	TECH	New trends in printed circuit boards, potential changes to soldering.
AAS in Fire Science Fire Science Driver/Operator Certificate Firefighter I & II Academy Certificate	TECH	Maintain the ability to deliver online courses in a consistent format.
AAS in Gunsmithing Gunsmithing Certificate Gunsmithing Advanced Certificate	TECH	Computers are the primary issue. Current lab at CTEC cannot accommodate the use of multiple programs. Another computer lab is needed.
AAS in Industrial Plant Technician Industrial Plant Technician Certificate	TECH	Updated as needed per mines.
AAS in Paramedicine Paramedicine Certificate	TECH	Tablets will need to replace some technology as the new standard for healthcare. Real time recording of patient problems needs to be addressed as well.
AAS in Professional Pilot - Airplane	TECH	
AAS in Professional Pilot - Helicopter	TECH	
AAS in Residential Building Technology Residential Building Advanced Skills Certificate Residential Building Skills Certificate Residential Building Technology Certificate	TECH	
Animal Care and Management Certificate Equine Practitioner Certificate	TECH	
Computer Numerical	TECH	

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Controlled (CNC) Machining Certificate		
Digital Filmmaking Certificate	TECH	
Emergency Medical Services Certificate	TECH	Tablets will need to replace some technology as the new standard for healthcare. Real time recording of patient problems needs to be addressed as well.
Welding Certificate	TECH	
Viticulture Certificate	TECH	

Staffing Needs

Instructional Degrees and Certifications	Instructional Division	Comments
AAS in Administration of Justice Criminal Justice & Security Certificate Justice Studies Certificate Law Enforcement and Corrections Certificate Police Certification Certificate	TECH	May require additional full time faculty if growth continues. Okay with adjunct for now. Primarily online delivery.
AAS in Agriculture Technology Management Horticulture Science Certificate	TECH	No additional staffing other than adjuncts.
AAS in Applied Pre-Engineering	TECH	Only adjunct faculty going forward.
AAS in Automotive Technology Auto Body Paint and Collision Technology Certificate Automotive Master Certificate Automotive Technician Certificate	TECH	No additional full time faculty. Adjuncts will continue to be needed.
AAS in Diesel Technician Diesel Technician Certificate	TECH	No additional staffing. Adjuncts only.
AAS in Electrical Instrumentation Technician Electrical Instrumentation Certificate	TECH	An additional instructor will be brought on board as part of TAA grant. There is also need for lab aids.

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Electronics Technology Certificate		
AAS in Fire Science Fire Science Driver/Operator Certificate Firefighter I & II Academy Certificate	TECH	Continued hiring and training of adjunct faculty.
AAS in Gunsmithing Gunsmithing Certificate Gunsmithing Advanced Certificate	TECH	Staffing is adequate with the addition of adjuncts.
AAS in Industrial Plant Technician Industrial Plant Technician Certificate	TECH	No additional staffing is needed.
AAS in Paramedicine Paramedicine Certificate	TECH	No additional staffing needed.
AAS in Professional Pilot - Airplane	TECH	Adjunct faculty will continue to be hired as sections dictate.
AAS in Professional Pilot - Helicopter	TECH	Adjunct faculty will continue to be hired as sections dictate.
AAS in Residential Building Technology Residential Building Advanced Skills Certificate Residential Building Skills Certificate Residential Building Technology Certificate	TECH	Adjunct faculty will continue to be hired as sections dictate.
Animal Care and Management Certificate Equine Practitioner Certificate	TECH	Adjunct faculty will continue to be hired as sections dictate.
Computer Numerical Controlled (CNC) Machining Certificate	TECH	Adjunct faculty will continue to be hired as sections dictate.
Digital Filmmaking Certificate	TECH	Adjunct faculty will continue to be hired as sections dictate. However, a full time faculty member will be needed if current trends continue.
Emergency Medical Services Certificate	TECH	Adjunct faculty will continue to be hired as sections dictate.
Welding Certificate	TECH	Adjunct faculty will continue to be hired as sections dictate.

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Viticulture Certificate	TECH	Adjunct faculty will continue to be hired as sections dictate.
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Professional Development Needs

Instructional Degrees and Certifications	Instructional Division	Comments
AAS in Administration of Justice Criminal Justice & Security Certificate Justice Studies Certificate Law Enforcement and Corrections Certificate Police Certification Certificate	TECH	Training needed for adjuncts in online delivery.
AAS in Agriculture Technology Management Horticulture Science Certificate	TECH	Paid internships in summer, summer conference attendance.
AAS in Applied Pre-Engineering	TECH	Perhaps some training on SIGMA 6 or LEAN.
AAS in Automotive Technology Auto Body Paint and Collision Technology Certificate Automotive Master Certificate Automotive Technician Certificate	TECH	Factory training as new technology emerges in automobiles.
AAS in Diesel Technician Diesel Technician Certificate	TECH	Same as automotive.
AAS in Electrical Instrumentation Technician Electrical Instrumentation Certificate Electronics Technology Certificate	TECH	FANUC, LR MATE training as well as various electrical courses that is equipment specific as needed.
AAS in Fire Science Fire Science Driver/Operator Certificate Firefighter I & II Academy Certificate	TECH	Most training occurs in the Phoenix area which calls for budget allocations.

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AAS in Gunsmithing Gunsmithing Certificate Gunsmithing Advanced Certificate	TECH	Continued funding to attend the national shot show.
AAS in Industrial Plant Technician Industrial Plant Technician Certificate	TECH	Continue to take courses that assist in becoming a master teacher.
AAS in Paramedicine Paramedicine Certificate	TECH	Mainly needed within the confines of what TELS provides.
AAS in Professional Pilot - Airplane	TECH	A boot camp is needed on an annual basis due to the high turnover of adjuncts in aviation as they obtain their needed flight hours and move on.
AAS in Professional Pilot - Helicopter	TECH	Same as above.
AAS in Residential Building Technology Residential Building Advanced Skills Certificate Residential Building Skills Certificate Residential Building Technology Certificate	TECH	Will be dependent upon program status going forward.
Animal Care and Management Certificate Equine Practitioner Certificate	TECH	Same as Ag.
Computer Numerical Controlled (CNC) Machining Certificate	TECH	Various workshops and some classroom management courses are needed.
Digital Filmmaking Certificate	TECH	Various film shows and potential internships with major movie corporations could revitalize the program.
Emergency Medical Services Certificate	TECH	Same as Paramedicine.
Welding Certificate	TECH	Continued training to maintain welding certification inspector status. Attendance at state summer conference.
Viticulture Certificate	TECH	Traveling to other schools to see completed programs and gain ideas on how to improve going forward.

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Projections and Plans for the Future

Instructional Degrees and Certifications	Instructional Division	Comments
AAS in Administration of Justice Criminal Justice & Security Certificate Justice Studies Certificate Law Enforcement and Corrections Certificate Police Certification Certificate	TECH	Creation of AA degree, continued online growth, marketing.
AAS in Agriculture Technology Management Horticulture Science Certificate	TECH	Continue trying to attract private partners into mix.
AAS in Applied Pre-Engineering	TECH	With appropriate marketing the program should begin to grow.
AAS in Automotive Technology Auto Body Paint and Collision Technology Certificate Automotive Master Certificate Automotive Technician Certificate	TECH	Stay as current as possible given the dramatic changes happening in the auto industry.
AAS in Diesel Technician Diesel Technician Certificate	TECH	Maintain mining contracts and add more where appropriate.
AAS in Electrical Instrumentation Technician Electrical Instrumentation Certificate Electronics Technology Certificate	TECH	Continue to add corporate partners in mining and other areas such as aviation.
AAS in Fire Science Fire Science Driver/Operator Certificate Firefighter I & II Academy Certificate	TECH	Add emergency management; grow as prescribed by county and reserve needs.
AAS in Gunsmithing Gunsmithing Certificate Gunsmithing Advanced	TECH	The wait list continues to grow but the program is situated to handle 100 FTE. Beyond that would require more space and capital investment.

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Certificate		
AAS in Industrial Plant Technician Industrial Plant Technician Certificate	TECH	Move into a larger space and continue to grow partnerships with mines.
AAS in Paramedicine Paramedicine Certificate	TECH	Competition could mean dramatic changes in delivery for the program. Clinical space will also challenge the program.
AAS in Professional Pilot - Airplane	TECH	Consolidation of degree into one degree with 4 emphasis areas.
AAS in Professional Pilot - Helicopter	TECH	Same as above.
AAS in Residential Building Technology Residential Building Advanced Skills Certificate Residential Building Skills Certificate Residential Building Technology Certificate	TECH	The program is not showing any signs of growth. It is not known at this juncture whether any changes will bring back growth in the future. The industry must turn around before any students will be seen.
Animal Care and Management Certificate Equine Practitioner Certificate	TECH	It is possible to entertain the notion that a veterinary tech program could emerge based on data. Equine needs to pay attention to competition.
Computer Numerical Controlled (CNC) Machining Certificate	TECH	The department needs to seek partners willing to send students through the program. Decisions will need to be made on how to capture a wider market share by casting as bigger net.
Digital Filmmaking Certificate	TECH	The program needs to position itself with a major corporate partner that will lend credibility to the program.
Emergency Medical Services Certificate	TECH	Same as Paramedicine
Welding Certificate	TECH	Welding will need to try and partner with an x-ray provider or get their own in order to complete the entire AWS certification on site.
Viticulture Certificate	TECH	Multiple partnerships and opportunity to create the most unique program in the nation should continue to be a primary directive.

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Associate of Applied Science in Agriculture Technology Management Horticulture Science Certificate

Mission Statement

The Agriculture Technology Management program prepares students for entrepreneurship, employment, or advancement in a variety of agricultural fields including horticulture, aquaculture and fisheries, and animal care and management.

Graduate Summary

Agribusiness AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Agriculture Technology Mngt	Associate of Applied Science		1	1	1		3
Sports Turfgrass	Associate of Applied Science	1					1
Solar Renewable Energy	Certificate <1 yr.					2	2
Horticulture	Certificate >1 yr.					1	1
Turfgrass Management	Certificate >1 yr.				1		1

Enrollment Trend

Agribusiness AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	8	11	9	13
Enrollment	113	163	126	175
Avg. Class Size	14.1	14.8	14.0	13.5
Total SCH	372.0	585.0	440.0	625.0
SCH by Location				
Verde Valley	8.0	24.0	20.0	32.0
C.T.E.C	78.0	66.0		
Chino Valley	160.0	313.0	341.0	372.0
Online	66.0			
Dual Enrollment	60.0	182.0	79.0	221.0
Enrollee Success				
%Successful	75%	82%	71%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
Fall 2012 Academic Period may be incomplete.				

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Agribusiness AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	11	13	15
Enrollment	119	156	164
Avg. Class Size	10.8	12.0	10.9
Total SCH	419.0	540.0	567.0
SCH by Location			
Verde Valley		32.0	69.0
Chino Valley	253.0	409.0	278.0
Online	39.0	60.0	69.0
Dual Enrollment	127.0	39.0	151.0
Enrollee Success			
%Successful	81%	81%	76%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>			

Agribusiness AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	0		
Enrollment	0		
Avg. Class Size			
Total SCH			
SCH by Location			
Enrollee Success			
%Successful			
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>			

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Agribusiness AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	19	24	24	13
Enrollment	232	319	290	175
Avg. Class Size	12.2	13.3	12.1	13.5
Total SCH	791.0	1125.0	1007.0	625.0
SCH by Location				
Verde Valley	8.0	56.0	89.0	32.0
C.T.E.C	78.0	66.0		
Chino Valley	413.0	722.0	619.0	372.0
Online	105.0	60.0	69.0	
Dual Enrollment	187.0	221.0	230.0	221.0
Enrollee Success				
%Successful	78%	82%	74%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
AY 2012-13 Academic Period may be incomplete.				

Course Enrollment

Agribusiness AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
AGS101	1	21.0	21	63.0	71%	24%	5%
AGS102	3	8.7	26	78.0	77%	8%	15%
AGS105	1	23.0	23	69.0	74%	13%	13%
AGS107	1	23.0	23	69.0	61%	22%	17%
AGS115	2	10.0	20	60.0	75%	10%	15%
AGS120	4	12.0	48	192.0	77%	19%	4%
AGS215	1	11.0	11	33.0	82%	0%	9%
AGS250	2	10.0	20	80.0	70%	15%	15%
AGS252	2	6.0	12	48.0	83%	8%	8%
AGS261	2	13.0	26	104.0	69%	15%	15%
AGS264	1	7.0	7	28.0	71%	14%	14%
AGS274	2	14.5	29	87.0	79%	10%	10%
AGS280	1	13.0	13	52.0	77%	23%	0%
AGS282	1	11.0	11	44.0	64%	27%	9%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

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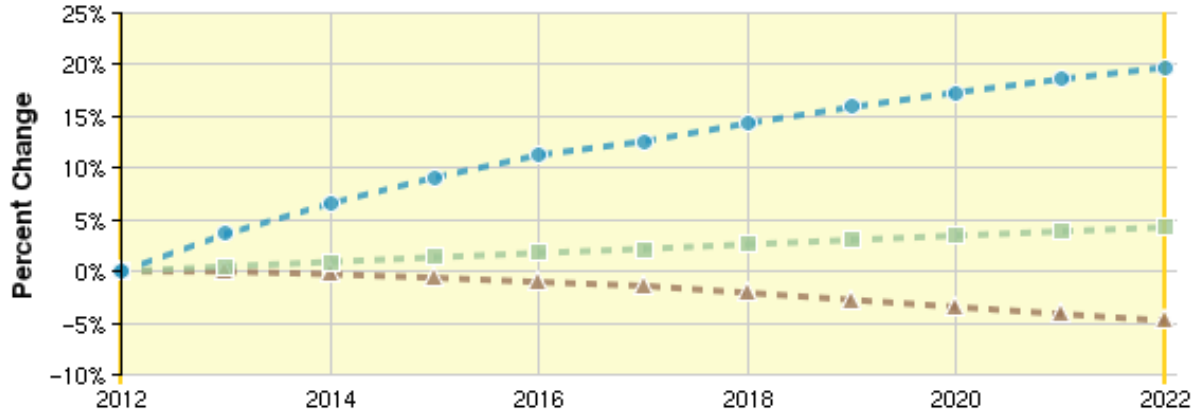
Course Forecast

Agribusiness AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
AGS101	54.8	35.3	15.8	-3.8	-23.3	-19.5	-0.87
AGS102	99.8	107.3	114.8	122.3	129.8	7.5	0.58
AGS105	68.7	77.1	85.5	93.9	102.3	8.4	0.90
AGS107	67.2	72.6	78.0	83.4	88.8	5.4	0.68
AGS115	65.0	65.9	66.8	67.7	68.6	0.9	0.06
AGS120	206.8	200.4	194.0	187.6	181.2	-6.4	-0.20
AGS215	33.2	27.5	21.8	16.1	10.4	-5.7	-0.38
AGS250	83.0	93.0	103.0	113.0	123.0	10.0	0.91
AGS252	52.4	57.2	62.0	66.8	71.6	4.8	0.79
AGS261	Insufficient Data						
AGS264	42.6	39.8	37.0	34.2	31.4	-2.8	-0.36
AGS274	73.5	88.5	103.5	118.5	133.5	15.0	0.71
AGS280	57.0	59.0	61.0	63.0	65.0	2.0	0.44
AGS282	49.4	48.2	47.0	45.8	44.6	-1.2	-0.19

Agribusiness AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
AGS101	123.0	141.0	78.0	66.0	63.0	-19.5	-0.87
AGS102	57.0	81.0	87.0	114.0	78.0	7.5	0.58
AGS105	33.0	48.0	66.0	60.0	69.0	8.4	0.90
AGS107	51.0	42.0	39.0	60.0	69.0	5.4	0.68
AGS115	42.0	96.0	99.0	69.0	60.0	0.9	0.06
AGS120	244.0	188.0	112.0	228.0	192.0	-6.4	-0.20
AGS215	36.0	90.0	39.0	39.0	33.0	-5.7	-0.38
AGS250	48.0	40.0	64.0	76.0	80.0	10.0	0.91
AGS252	36.0	28.0	44.0	52.0	48.0	4.8	0.79
AGS261	328.0	40.0		60.0	104.0	Insufficient Data	
AGS264	52.0	40.0	44.0	60.0	28.0	-2.8	-0.36
AGS274	24.0		3.0	45.0	87.0	15.0	0.71
AGS280	52.0	40.0	48.0	60.0	52.0	2.0	0.44
AGS282	56.0	44.0	68.0	56.0	44.0	-1.2	-0.19

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Employment Trends



	2012 Jobs	2022 Jobs	% Change
Arizona	51,335	61,467	19.7%
Nation	3,373,458	3,517,546	4.3%
Yavapai County	1,501	1,429	-4.8%

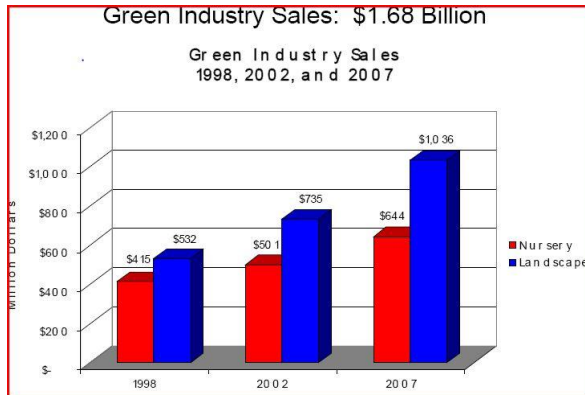
Source: Economic Modeling Specialists, Inc. November 2012

Employment nationally and in Arizona is trending upwards, and although Yavapai County is trending somewhat downward, the opportunities still exist and turnover of employees will remain.

Enrollment Trends

Student numbers and FTSE are trending up 20% this Fall Semester 2012. With the increase in dual credit and JTED students in other CTE classes the department is poised to capture some of these students by offering Horticulture and Aquaculture to the JTED. There are many success stories about juniors and seniors at Chino Valley High School during the 1pm-3pm time frame attending CTEC classes are emerging. The department would like to capture students from the on-line market, but the department will have to continue to develop methods or classes that can be delivered as successfully as the current Hybrid model. With the JTED increase, increasing interest in food production, marketing classes to Renewable Natural Resource students and employees, and expansion of on-line offerings, the department is planning for a 20% increase in student numbers by 2022. According to data provided from the Arizona Nursery Association the Green Industry increased significantly as seen below.

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Capital Equipment Needs

- Modify/replace existing Micro Grow computerized controls for greenhouse. (-\$15,000)
- Troubleshoot and fix heaters, vents, and other problem units in greenhouse. (-\$varied)
- Chiller for raceway to allow for the raising of cold water species and staying current with industry standards/needs. (-\$10,000)

Physical Resources/Facility Needs

The department has adequate facilities and an increase in student numbers would allow for more sections, better utilizing the facilities we have.

Technology Needs

- Rebuild the media room by 2015
 - The present media room is outdated. The Teaching & eLearning Support department, along with ITS will be updating this one computer station media room to provide a space for recording lectures, voicing over PowerPoints and housing instructor shared technology resources. Currently this room is not utilized and has become outdated.
- Update of ITV Chino to match Verde by 2015
 - Verde was updated as part of the remodel in 2012, and it is apparent that Chino is now out of date. It is extremely hard to have three completely different set-ups (Chino vs. 2 rooms at Verde) for ITV. The department would like these systems to mirror each other. It is an amazing technology and we are fortunate to have it, but it can be improved.
- Greenhouse control systems trouble shoot December 2012 (quote to follow), replace micro grow control system with a link 4 system and implement improvements from the 2012 quote. This is extremely important because we are touting a climate controlled greenhouse growing system, but we are not there. Department previously gave up allocated funds for capital replacement, and have been inefficiently limping along, and now it is time to get this done.

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Staffing Needs

Currently the two full-time faculty and adjunct can teach all of the department program areas. Another adjunct will be hired to help with the student increase. Current teaching load will be shuffled to accommodate the early afternoon classes for JTED. Aides are needed to help accommodate labs for the remote site when offering ITV.

Professional Development Needs

- Paid Internships at Agribusiness facilities 40 or 80 hours paying \$1,000-2,000 starting Summer 2013
- 2013 ACTE Summer Conference 2013-2022
- Official tours of successful college agribusiness programs

Partnerships

The department continues to have a good relationship with management and employees at Color Spot Nursery. The Manager serves on the advisory board. Two current students work in the operation. The department needs to build the same relationships with Bonnie Plant Farm, V&P, and the other Tomato Greenhouse. One current student is building an Organic Farm in Chino Valley that could serve as an opportunity for other students.

The department has a great relationship with The Arizona Game and Fish Department Page Springs Hatchery, Bubbling Ponds, and Silversprings. Faculty have interned at these locations. The Manager serves on the Advisory Board. Current and former students have interned and worked for the AZGFD. Classes are currently held at and tours are conducted at Bearizona, Heritage Park Zoo and Out of Africa. The department needs to continue to work with these people, get them on the advisory board, and place students.

The USFS run by the Department of Agriculture should be a major market for Ag students and an opportunity for current forest personnel to move up the pay scale. Many classes that fill Ag Degree requirements are soils, entomology, water management, environmental Bio, and even Plant Bio. These are the same classes that a person working for the Forest Service would need to land entry level jobs, or to move up the pay scale based on education if they have been stagnant. A quick search at USA Jobs found that these positions pay at a higher grade when these classes are taken. The steps are GS-02 (no education), GS-03 (6 credit hours), GS-04 (12 credit hours), and GS-05 (24 credit hours). The Department can sell this as a direct and quantifiable increase in pay for those workers. These people would not just be from Forest Service, but also USGS, BLM, State Parks, and Game and Fish to name a few. A Renewable Natural Resources certificate could be added by teaching a few more classes. The additional class options allowed by these agencies would be range, forestry or wildlife management. This would also be a direct transfer for higher degree seekers going to NAU.

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Program Outcomes

The department will be doing a program modification to change our Program Outcomes in 2013 for the AAS Agribusiness Technology Degree. Learning outcomes for each course are solid and have been frequently updated, however, current Program Outcomes do not reflect and outcomes from the following courses: Soils-AGS 105, Water Management-AGS 274, Entomology-AGS 107, and Ag Mechanics 1&2-AGS 115&215. The Faculty will discuss this with the Advisory Board in the Fall of 2012, and submit changes via the curriculum committee in 2013.

Projections and Plans for the Future

Promote horticulture classes for the sustainable crop market. Previously the sole interest was in ornamental production and hydroponics. The department could change some learning outcomes and capture/teach students who want to learn how to grow plants regardless of the reason –plan 2013
Have ability to raise species of both cold and warm waters in Aquaculture facility (with addition of chiller).
Create classes targeting the basic pet owner (i.e. birds, pet CPR/first aid, aquarium set up/care/maintenance, etc.)

Educational Master Plan 2012-2017

Associate of Applied Science in Administration of Justice
Criminal Justice & Security Certificate
Justice Studies Certificate
Law Enforcement and Corrections Certificate
Police Certification Certificate

Mission Statement

The Administration of Justice degree program is an interdisciplinary program of study which prepares students for a broad range of employment opportunities including law enforcement, corrections, probation/parole officer, and social services in the courts or community agencies.

In addition to preparing students for entry-level employment, this degree program is appropriate for individuals already employed in the justice field who are seeking skill upgrade and promotional opportunities, and individuals preparing to transfer to a four-year college/university with a major in Justice Studies.

Arizona State University, Arizona State University-West, Grand Canyon University, Northern Arizona University and the University of Arizona all offer baccalaureate degree programs in Justice Studies/Administration of Justice.

Graduate Summary

Administration of Justice AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Administration of Justice	Associate of Applied Science	1	3	2	2	8	16

Police Certification Certificate Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Police Certification	Certificate <1 yr.	44	38	18	48	32	180

Educational Master Plan 2012-2017

Administration of Justice AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	6	8	10	14
Enrollment	104	124	214	218
Avg. Class Size	17.3	15.5	21.4	15.6
Total SCH	312.0	372.0	642.0	654.0
SCH by Location				
Prescott		75.0	141.0	138.0
Verde Valley				36.0
Prescott Valley	213.0	207.0	237.0	228.0
Online	99.0	90.0	264.0	225.0
Enrollee Success				
%Successful	79%	86%	73%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
Fall 2012 Academic Period may be incomplete.				

Administration of Justice AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	10	11	10
Enrollment	164	200	223
Avg. Class Size	16.4	18.2	22.3
Total SCH	492.0	600.0	669.0
SCH by Location			
Prescott	171.0	144.0	69.0
Verde Valley	18.0		
Prescott Valley	189.0	195.0	273.0
Online	114.0	261.0	327.0
Enrollee Success			
%Successful	79%	75%	66%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>			

Educational Master Plan 2012-2017

Administration of Justice AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	1	1	0
Enrollment	24	25	0
Avg. Class Size	24.0	25.0	
Total SCH	72.0	75.0	
SCH by Location			
Prescott		72.0	75.0
Enrollee Success			
%Successful		63%	84%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>			

Administration of Justice AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	16	20	21	14
Enrollment	268	348	462	218
Avg. Class Size	16.8	17.4	22.0	15.6
Total SCH	804.0	1044.0	1386.0	654.0
SCH by Location				
Prescott	171.0	291.0	285.0	138.0
Verde Valley	18.0			36.0
Prescott Valley	402.0	402.0	510.0	228.0
Online	213.0	351.0	591.0	225.0
Enrollee Success				
%Successful	79%	78%	70%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
AY 2012-13 Academic Period may be incomplete.				

Educational Master Plan 2012-2017

Course Enrollment

Administration of Justice AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
AJS101	5	21.0	105	315.0	73%	10%	17%
AJS109	1	20.0	20	60.0	55%	25%	20%
AJS170	1	24.0	24	72.0	71%	17%	13%
AJS200	1	27.0	27	81.0	78%	0%	22%
AJS212	1	27.0	27	81.0	59%	19%	22%
AJS225	1	30.0	30	90.0	77%	7%	17%
AJS230	1	16.0	16	48.0	88%	6%	6%
AJS240	1	12.0	12	36.0	83%	8%	8%
AJS250	1	29.0	29	87.0	31%	0%	69%
AJS260	1	16.0	16	48.0	81%	0%	19%
AJS270	1	16.0	16	48.0	75%	6%	19%
AJS275	1	14.0	14	42.0	57%	29%	14%
AJS290	1	31.0	31	93.0	71%	10%	19%
PSY241	1	24.0	24	72.0	83%	8%	8%
SOC212	3	23.7	71	213.0	73%	17%	10%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

Educational Master Plan 2012-2017

Course Forecast

Administration of Justice AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
AJS101	318.9	353.7	388.5	423.3	458.1	34.8	0.89
AJS109	Insufficient Data						
AJS170	Insufficient Data						
AJS200	44.6	49.7	54.9	60.0	65.1	5.1	0.28
AJS212	72.3	84.9	97.5	110.1	122.7	12.6	0.58
AJS225	84.2	93.5	102.8	112.1	121.4	9.3	0.84
AJS230	Insufficient Data						
AJS240	Insufficient Data						
AJS250	Insufficient Data						
AJS260	58.9	59.8	60.6	61.5	62.4	0.9	0.16
AJS270	Insufficient Data						
AJS275	44.3	42.8	41.3	39.8	38.3	-1.5	-0.67
AJS290	Insufficient Data						
PSY241	111.8	113.3	114.8	116.3	117.8	1.5	0.05
SOC212	206.3	264.8	323.3	381.8	440.3	58.5	0.99

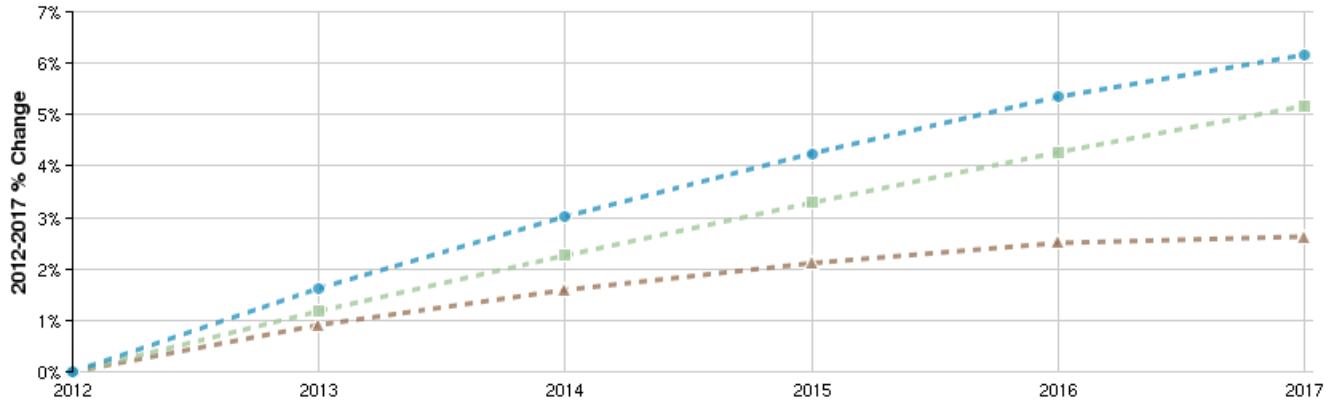
Administration of Justice AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
AJS101	195.0	180.0	294.0	288.0	315.0	34.8	0.89
AJS109	48.0	69.0		60.0	60.0	Insufficient Data	
AJS170	30.0	36.0		45.0	72.0	Insufficient Data	
AJS200	39.0		45.0	3.0	81.0	5.1	0.28
AJS212		27.0	87.0	51.0	81.0	12.6	0.58
AJS225		63.0	57.0	69.0	90.0	9.3	0.84
AJS230	42.0	36.0		39.0	48.0	Insufficient Data	
AJS240	18.0	66.0		36.0	36.0	Insufficient Data	
AJS250					87.0	Insufficient Data	
AJS260	51.0		54.0	69.0	48.0	0.9	0.16
AJS270	39.0			45.0	48.0	Insufficient Data	
AJS275		48.0	45.0	48.0	42.0	-1.5	-0.67
AJS290					93.0	Insufficient Data	
PSY241		75.0	126.0	150.0	72.0	1.5	0.05
SOC212			96.0	141.0	213.0	58.5	0.99

Enrollment Trend

The AJS program has seen significant growth in the last two years because of the changes in the program and because most of the course are now being offered online. The trend shows that the growth will slow and trend up only slightly over the next ten years.

Educational Master Plan 2012-2017

Employment Trends



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	20,660	21,933	1,273	6%	\$29.29
B Nation	854,364	898,521	44,157	5%	\$26.32
C Yavapai County - All Shared	802	823	21	3%	\$27.19

Source: Economic Modeling Specialists, Inc. November 2012

The EMSI data above shows a steady growth in this field with an increase throughout the state of Arizona and the rest of the country being better than in Yavapai County. NARTA continues to do very well and attracts cadets from multiple agencies. Recent changes to the core Judicial studies piece has provided a strong uptick in the online market.

Capital Equipment Needs

The AJS program does not anticipate any major capital equipment needs. It will be necessary to upgrade computer systems.

Physical Resources/Facility Needs

Students will continue to need access to computers and assistance with technology. The current facilities at YC are meeting the needs at this time.

Technology Needs

Technology will continue to play a very large role in both the future delivery method and in the content of courses offered. Less NARTA, most of the AJS courses are being offered online and the technology is the backbone of that delivery method. Students will need to have access to computers and the college will need to have adequate support of technology.

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Staffing Needs

If enrollments continue to grow staffing needs will increase. The program has added additional adjunct faculty and may request one additional full-time faculty in the future.

Professional Development Needs

With the increase in the use of technology as a platform for delivery of material as well as the use of technology that is AJS specific, instructors will need support via professional development opportunities in order to remain current. TeLS has traditionally provided support and training for developing online materials and this system currently seems to be meeting those needs. Professional development opportunities to help instructors stay abreast of developments with AJS specific software and the use of technology will need to be included in the budgeting process.

Partnerships

Currently, the major partnerships are with all of the law enforcement agencies in Yavapai County. Dual enrollment opportunities may also exist and need to be explored; especially with charter schools such as AAEC.

Program Outcomes

Upon successful completion of the Administration of Justice Degree program, the learner will be able to:

1. Explain the historical development of American criminal law from its English common law roots to the present. (AJS 101)
2. Analyze criminal conduct in the context of historical, social, political and legal developments. (AJS 101, AJS 109)
3. Identify the organization and jurisdiction of local state and federal law enforcement, courts and correctional systems. (AJS 101, AJS 230, AJS 240)
4. Describe the relationships between the three components of the criminal justice system. (AJS 109, AJS 230, AJS 240)
5. Summarize the philosophy of legal sanctions and corrections and the historical development of theories of punishment and rehabilitation. (AJS 109, AJS 240)
6. Analyze the intersection of law, morality and ethics in our modern society. (AJS 123)
7. Summarize the modern scientific tools used in criminal investigation. (AJS 170)
8. Analyze current issues and trends in crime rates, criminal behavior, and social trends as they impact the criminal justice process. (AJS 200)
9. Outline the modern philosophies, organization and treatment/intervention goals of the juvenile justice system. (AJS 212)
10. Identify and summarize the various theories of the causes of criminal behavior. (AJS 225)
11. Analyze the role of the US Supreme Court in defining the Constitutional protections and procedural due process safeguards in the criminal justice system. (AJS 260)
12. Describe the economic and psychological impact of crime on society. (AJS 225, AJS 240)

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13. Identify the primary governmental agents responsible for the formation of U.S security policy, and evaluate and respond to key threats to global business security, including trade secret protection, theft, computer hacking and protection of employees. (AJS 250)
14. Explain the current issues relating to police-community relations. (AJS 270)
15. Define investigation and describe the goals of criminal investigation. (AJS 275)
16. Identify the key provisions of the Bill of Rights and the U.S. Constitution that pertain to civil liberties and civil rights, and explain various competing theories of constitutional interpretation and judicial review. (AJS 290)
17. A) Compare and contrast various theoretical approaches which have suggested explanations of human behavior. (241) or B) Summarize the psychological and biological perspectives on gender. (SOC 212)
18. Use creative leadership techniques to lead, motivate and inspire others. (BSA 111)

Projections and Plans for the Future

- The AJS program staff is working on making the program an AA to ease the transfer process for students. The program may also be re-named from “AJS” degree to “Criminal Justice”. This would offer greater name–recognition and reflect the increase in students in the program with non-law enforcement career intentions and continue to move away from “cop-shop,” with the broadening of course offerings.
- The program will continue to move courses to an online environment; this is not intended to replace face-to-face but will compliment it.
- The program staff plans to increase and improve marketing in order to increase enrollment.

Educational Master Plan 2012-2017

**Associate of Applied Science in Automotive Management
Auto Body Paint and Collision Technology Certificate
Automotive Master Certificate
Automotive Technician Certificate**

Mission Statement

The Automotive Technology degree program is designed for individuals preparing for positions utilizing a combination of automotive technology and business management skills including service managers, insurance adjusters, and small business owners. This degree program will prepare students for the National Automotive Service Excellence (ASE) certification examinations to become an ASE Certified Master Automobile Technician and a Certified Engine Machinist. ASE certification requires hands-on working experience as well as completion of written examinations. Two years of post-high school educational training, such as that offered in this automotive degree program at Yavapai College, may be substituted for up to one year of the hands-on work experience requirement of the ASE certification.

Graduate Summary

Automotive AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Automotive Management	Associate of Applied Science	1	1		1	4	7
Automotive Technician	Associate of Applied Science		1				1
Automotive Technician	Certificate <1 yr.	1	3	2	7	3	16
Automotive Master Technician	Certificate >1 yr.			2	5	3	10

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Enrollment Trend

Automotive AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	29	24	31	17
Enrollment	479	522	605	328
Avg. Class Size	16.5	21.8	19.5	19.3
Total SCH	1276.0	1526.0	1815.0	947.0
SCH by Location				
Prescott	66.0	192.0	150.0	150.0
Verde Valley	80.0	79.0	92.0	33.0
C.T.E.C	509.0	661.0	609.0	128.0
Online	339.0	287.0	337.0	331.0
Dual Enrollment	282.0	307.0	627.0	305.0
Enrollee Success				
%Successful	70%	73%	74%	0%

*Enrollee success equals a letter grade of A,B,C, or S.

Fall 2012 Academic Period may be incomplete.

Automotive AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	26	29	32
Enrollment	413	455	566
Avg. Class Size	15.9	15.7	17.7
Total SCH	1243.0	1427.0	1846.0
SCH by Location			
Prescott	135.0	132.0	222.0
Verde Valley	98.0	24.0	
C.T.E.C	398.0	411.0	503.0
Online	233.0	331.0	452.0
Dual Enrollment	379.0	509.0	556.0
Enrollee Success			
%Successful	74%	78%	78%

*Enrollee success equals a letter grade of A,B,C, or S.

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Automotive AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	5	6	5
Enrollment	105	125	145
Avg. Class Size	21.0	20.8	29.0
Total SCH	315.0	375.0	435.0
SCH by Location			
Online	315.0	375.0	435.0
Enrollee Success			
%Successful	69%	76%	73%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>			

Automotive AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	60	59	68	17
Enrollment	997	1102	1316	328
Avg. Class Size	16.6	18.7	19.4	19.3
Total SCH	2834.0	3328.0	4096.0	947.0
SCH by Location				
Prescott	201.0	324.0	372.0	150.0
Verde Valley	178.0	103.0	92.0	33.0
C.T.E.C	907.0	1072.0	1112.0	128.0
Online	887.0	993.0	1224.0	331.0
Dual Enrollment	661.0	816.0	1183.0	305.0
Enrollee Success				
%Successful	72%	75%	76%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
<i>AY 2012-13 Academic Period may be incomplete.</i>				

Educational Master Plan 2012-2017

Course Enrollment

Automotive AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
AUT101	10	21.2	212	424.0	73%	18%	9%
AUT122	1	16.0	16	80.0	88%	6%	6%
AUT123	9	15.0	135	540.0	85%	11%	4%
AUT126	3	11.7	35	140.0	80%	6%	14%
AUT131	2	12.0	24	120.0	67%	21%	13%
AUT132	6	12.8	77	385.0	87%	9%	4%
AUT151	7	17.3	121	605.0	69%	8%	22%
AUT252	1	11.0	11	33.0	100%	0%	0%
AUT253	1	11.0	11	33.0	100%	0%	0%
AUT255	1	16.0	16	48.0	81%	0%	19%
COM134	20	25.8	515	1545.0	79%	9%	12%
CSA111	7	17.4	122	122.0	54%	31%	15%
*Cross-listed courses counted as individual course sections (not merged).							
Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U							
Incomplete student courses excluded from Success measures							

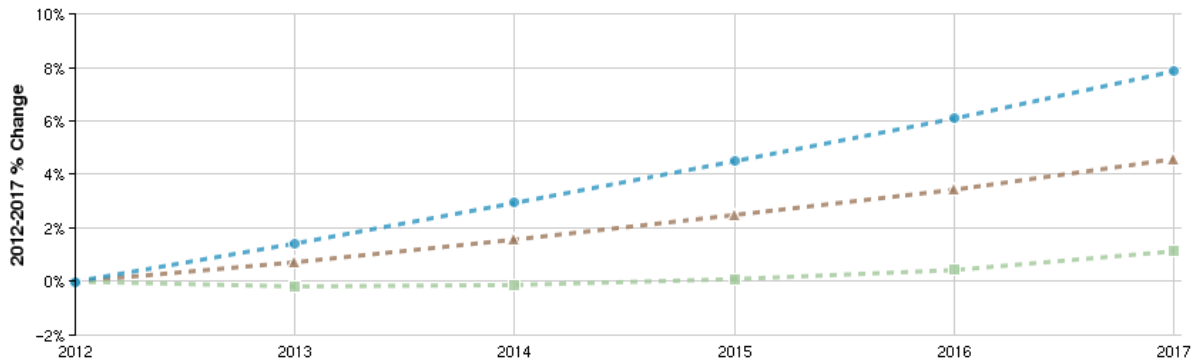
Course Forecast

Automotive AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
AUT101	331.3	269.9	208.5	147.1	85.7	-61.4	-0.57
AUT122	79.8	84.3	88.8	93.3	97.8	4.5	0.35
AUT123	467.2	517.6	568.0	618.4	668.8	50.4	0.67
AUT126	92.0	72.0	52.0	32.0	12.0	-20.0	-0.30
AUT131	152.5	147.5	142.5	137.5	132.5	-5.0	-0.22
AUT132	408.5	485.5	562.5	639.5	716.5	77.0	0.97
AUT151	564.5	673.5	782.5	891.5	1000.5	109.0	0.82
AUT252	Insufficient Data						
AUT253	33.2	27.5	21.8	16.1	10.4	-5.7	-0.87
AUT255	48.2	48.5	48.8	49.1	49.4	0.3	0.22
COM134	1486.2	1665.6	1845.0	2024.4	2203.8	179.4	0.96
CSA111	122.1	115.2	108.3	101.4	94.5	-6.9	-0.75

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Automotive AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
AUT101	622.0	518.0	192.0	300.0	424.0	-61.4	-0.57
AUT122	45.0	100.0	85.0	75.0	80.0	4.5	0.35
AUT123	348.0	224.0	440.0	344.0	540.0	50.4	0.67
AUT126	104.0	336.0	204.0	64.0	140.0	-20.0	-0.30
AUT131	175.0	130.0	200.0	190.0	120.0	-5.0	-0.22
AUT132	105.0	145.0	195.0	355.0	385.0	77.0	0.97
AUT151	205.0	125.0	120.0	415.0	605.0	109.0	0.82
AUT252	24.0	18.0		3.0	33.0	Insufficient Data	
AUT253	57.0	48.0	33.0	39.0	33.0	-5.7	-0.87
AUT255	48.0	45.0	51.0	48.0	48.0	0.3	0.22
COM134	807.0	930.0	984.0	1248.0	1545.0	179.4	0.96
CSA111	141.0	160.0	135.0	129.0	122.0	-6.9	-0.75

Employment Trends Mechanics



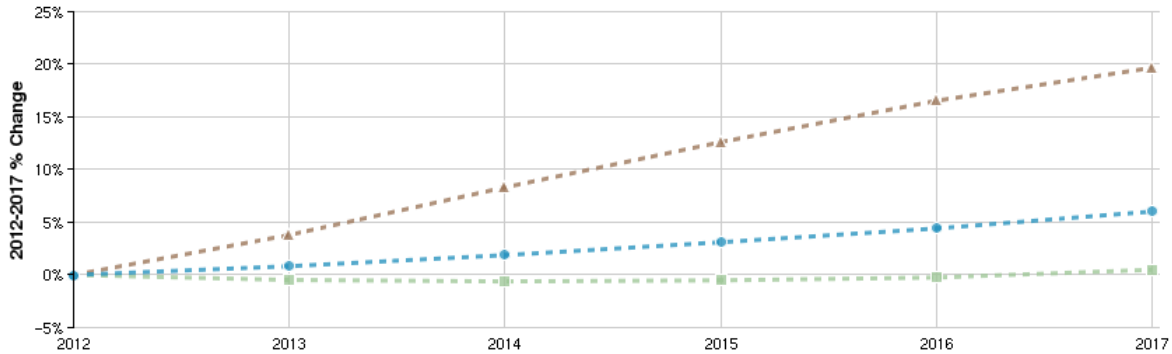
Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	15,784	17,024	1,240	8%	\$16.37
B Nation	827,687	837,046	9,359	1%	\$15.70
C Yavapai County - All Shared	445	465	20	4%	\$16.53

Source: Economic Modeling Specialists, Inc. November 2012

Arizona as a whole is trending along the 8% margin while the national growth is only projected to be 1% through the next 5 years. County wide is 4% in terms of new positions created but does not include backfill from retirees which is in constant flux.

Educational Master Plan 2012-2017

Auto Body and Paint



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	4,892	5,186	294	6%	\$16.47
B Nation	245,080	246,284	1,204	0%	\$16.96
C Yavapai County - All Shared	131	157	26	20%	\$18.81

Source: Economic Modeling Specialists, Inc. November 2012

Yavapai is trending for 20% new growth in the industry plus retiree backfill. The college is positioned well to accommodate this and is the only local program and one of only three in the state. Arizona looks to be somewhat promising collectively over the next 5 years given so few programs. Recommendation is to stay the course.

Enrollment Trends

Student numbers and FTSE are trending up slightly each year partially due to the increase in dual enrollment/JTED students. The enrollment should continue to grow with increased marketing and with the continued success of the JTED students.

Capital Equipment Needs

With the need to keep student to trainer ratios low, we will have to continue purchasing trainers for all auto classes. Updated tire equipment and an additional alignment machine are also needed. More vehicle trainers are needed for multiple classes. The department will also need to replace the solvent base gun cleaner, spray guns, one of the paint booths, the vehicle lift and a media blasting booth will need to be added in order to keep the program current with industry standards.

Physical Resources/Facility Needs

With the addition of more trainers and equipment, storage of these items may be a problem. Instructors will need offices in their lab areas. Larger hand-wash stations in the Auto/Diesel lab area. If YC purchases the adjoining lot to the East to expand parking, back alley way access to Auto/Diesel shop should be widened for better access. In addition, the program needs a gated area outside on the first row of parking spaces as a storage area for vehicles that students bring in to work on during class each semester.

Educational Master Plan 2012-2017

Technology Needs

The automotive shop area needs additional computer stations because there are often multiple students waiting to use the one computer. A video projector in the lab for visual aids and instruction during lab operations would enhance learning. A wireless tablet such as iPad or something similar to connect to projector and internet would be a useful instructional tool. The program needs to start phasing out older scan tools.

Virtual and simulation tools are becoming more common in this field. In order to teach how to paint without having students experiment on expensive material auto-body virtual painting equipment would be helpful.

Staffing Needs

If enrollments continue to grow, staffing needs may increase. At this time however, the program has an adequate number of full-time faculty.

Professional Development Needs

Factory training is very important along with specialized training such as: Navigation, industry trade shows and specialized manufacture training for certifications.

Partnerships

Partnerships in the automotive program include the ICAR Training Center and Sherwin Williams Training Center. Creating partnerships with local businesses and employers is a goal for the future of the program. Partnering with local and national industry to support events, possible lease of equipment, and grant funding for new and enhances programs are ideas for the future.

Program Outcomes

Upon successful completion of the Automotive Technology Degree program, the learner will be able to:

1. Identify the parts and rebuild a basic engine and a modified performance engine. (AUT 108, AUT 151)
2. Explain and diagnose electrical circuits, electrical components, and computer related problems. (AUT 100, AUT 109, AUT 252)
3. Rebuild an automatic transmission and transaxle manual transmission, and transaxle driveline and differential. (AUT 122, AUT 124)
4. Replace steering and suspension components and align a front-end. (AUT 126)
5. Diagnose and repair automotive air conditioning and heating systems. (AUT 128)
6. Tune up, adjust and diagnose an internal combustion engine system. (AUT 131)
7. Diagnose, remove, and replace an entire automotive brake system including ABS and traction control system. (AUT 123)

Educational Master Plan 2012-2017

Projections and Plans for the Future

Enhance and improve the current courses and program. Build new course offerings as needed as industry changes. Anticipate new educational trends and technologies in order to stay current in the industry.

Educational Master Plan 2012-2017

Associate of Applied Science in Diesel Technician Diesel Technician Certificate

Mission Statement

This program offers two options for completion:

Option A: Diesel Technician - prepares the student to enter the diesel mechanics field as an entry-level apprentice diesel technician.

Option B: Mining Diesel Technician Track - Freeport McMoRan, Inc. sponsors a mining program which is designed to prepare students for direct employment in the mining industry.

Graduate Summary

Diesel Technician AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Diesel Technician	Associate of Applied Science		4	5	2	3	14
Diesel Technician	Certificate >1 yr.				2	6	8

Educational Master Plan 2012-2017

Enrollment Trend

Diesel Technician AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	15	14	14	25
Enrollment	241	226	257	459
Avg. Class Size	16.1	16.1	18.4	18.4
Total SCH	670.0	650.0	760.0	1298.0
SCH by Location				
Prescott	72.0	72.0	72.0	72.0
Verde Valley	90.0	72.0	66.0	66.0
Prescott Valley	45.0	66.0	69.0	
C.T.E.C	205.0	245.0	172.0	354.0
Chino Valley			63.0	69.0
Sedona	42.0			
Online	195.0	177.0	267.0	213.0
Dual Enrollment	21.0	18.0	24.0	470.0
Enrollee Success				
%Successful	78%	73%	77%	4%

*Enrollee success equals a letter grade of A,B,C, or S.

Fall 2012 Academic Period may be incomplete.

Diesel Technician AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	14	15	17
Enrollment	225	226	287
Avg. Class Size	16.1	15.1	16.9
Total SCH	608.0	608.0	807.0
SCH by Location			
Prescott	69.0	72.0	72.0
Verde Valley	87.0	72.0	75.0
Prescott Valley	54.0		
C.T.E.C	179.0	217.0	307.0
Online	186.0	186.0	315.0
Dual Enrollment		22.0	14.0
Enrollee Success			
%Successful	78%	74%	80%

*Enrollee success equals a letter grade of A,B,C, or S.

Educational Master Plan 2012-2017

Diesel Technician AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	1	2	2
Enrollment	32	31	46
Avg. Class Size	32.0	15.5	23.0
Total SCH	96.0	93.0	159.0
SCH by Location			
C.T.E.C			84.0
Online	96.0	90.0	75.0
Enrollee Success			
%Successful	75%	68%	74%

**Enrollee success equals a letter grade of A,B,C, or S.*

Diesel Technician AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	30	31	33	25
Enrollment	498	483	590	459
Avg. Class Size	16.6	15.6	17.9	18.4
Total SCH	1374.0	1351.0	1726.0	1298.0
SCH by Location				
Prescott	141.0	144.0	144.0	72.0
Verde Valley	177.0	144.0	141.0	66.0
Prescott Valley	99.0	66.0	69.0	
C.T.E.C	384.0	462.0	563.0	354.0
Chino Valley			63.0	69.0
Sedona	42.0			
Online	477.0	453.0	657.0	213.0
Dual Enrollment	21.0	40.0	38.0	470.0
Enrollee Success				
%Successful	78%	73%	78%	4%

**Enrollee success equals a letter grade of A,B,C, or S.*

AY 2012-13 Academic Period may be incomplete.

Educational Master Plan 2012-2017

Course Enrollment

Diesel Technician AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
AGS101	1	21.0	21	63.0	71%	24%	5%
AUT108	1	20.0	20	80.0	95%	5%	0%
AUT109	1	15.0	15	60.0	80%	13%	7%
AUT124	1	15.0	15	60.0	87%	13%	0%
AUT128	1	21.0	21	84.0	81%	5%	14%
AUT135	1	17.0	17	68.0	94%	0%	6%
AUT208	1	4.0	4	16.0	100%	0%	0%
AUT209	1	13.0	13	39.0	77%	23%	0%
AUT295	4	4.3	17	51.0	100%	0%	0%
CSA126	14	24.6	345	1035.0	72%	15%	13%
MET116	1	20.0	20	20.0	85%	10%	5%
MET150	1	14.0	14	14.0	100%	0%	0%
MET160	1	19.0	19	38.0	95%	5%	0%
WLD113	4	12.3	49	98.0	84%	14%	2%

*Cross-listed courses counted as individual course sections (not merged).

Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U

Incomplete student courses excluded from Success measures

Course Forecast

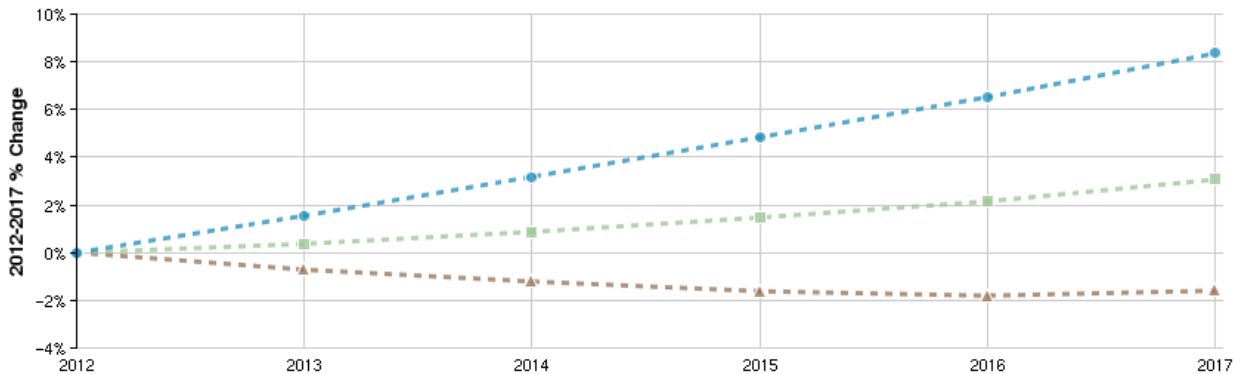
Diesel Technician AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
AGS101	54.8	35.3	15.8	-3.8	-23.3	-19.5	-0.87
AUT108	90.2	102.6	115.0	127.4	139.8	12.4	0.67
AUT109	56.7	65.1	73.5	81.9	90.3	8.4	0.95
AUT124	57.0	66.0	75.0	84.0	93.0	9.0	0.97
AUT128	Insufficient Data						
AUT135	Insufficient Data						
AUT208	19.4	18.2	17.0	15.8	14.6	-1.2	-0.47
AUT209	41.3	39.8	38.3	36.8	35.3	-1.5	-0.29
AUT295	46.7	32.0	17.3	2.6	-12.2	-14.7	-0.95
CSA126	939.5	958.4	977.3	996.2	1015.1	18.9	0.36
MET116	16.9	14.7	12.5	10.3	8.1	-2.2	-0.52
MET150	10.2	4.6	-1.0	-6.6	-12.2	-5.6	-0.88
MET160	32.7	26.1	19.5	12.9	6.3	-6.6	-0.75
WLD113	102.3	114.9	127.5	140.1	152.7	12.6	0.77

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Diesel Technician AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
AGS101	123.0	141.0	78.0	66.0	63.0	-19.5	-0.87
AUT108	44.0	36.0	20.0	88.0	80.0	12.4	0.67
AUT109	27.0	27.0	36.0	45.0	60.0	8.4	0.95
AUT124	24.0	27.0	42.0	45.0	60.0	9.0	0.97
AUT128					84.0	Insufficient Data	
AUT135	24.0				68.0	Insufficient Data	
AUT208		21.0	21.0	24.0	16.0	-1.2	-0.47
AUT209		48.0	33.0	45.0	39.0	-1.5	-0.29
AUT295		96.0	69.0	57.0	51.0	-14.7	-0.95
CSA126	873.0	960.0	957.0	825.0	1035.0	18.9	0.36
MET116		23.0	29.0	16.0	20.0	-2.2	-0.52
MET150	32.0	32.0	15.0	12.0	14.0	-5.6	-0.88
MET160	56.0	64.0	34.0	34.0	38.0	-6.6	-0.75
WLD113	54.0	56.0	40.0	94.0	98.0	12.6	0.77

Employment Trends

Although the EMSI data indicates a downward trend in Yavapai County, the department is not finding that to be the case. Our partnerships with ASARCO and Freeport McMoRan have continued to allow 100% of our graduates to be placed in very good careers. The state trends are promising and recent conversations with Empire indicate that they will be hiring nearly 300 diesel techs over the next three years in Arizona. The Yavapai data from EMSI only takes into consideration new jobs in diesel. The data does not take into consideration replacement of retirees. This is a promising area for YC.



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	4,952	5,366	414	8%	\$19.10
B Nation	260,257	268,227	7,970	3%	\$19.10
C Yavapai County - All Shared	152	150	-2	-1%	\$16.81

Source: Economic Modeling Specialists, Inc. November 2012

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Enrollment Trends

Enrollments have been stable and should begin to trend up with the partnerships with Mountain Institute JTED (Diesel Program), RDO, Empire CAT and increased involvement with Asarco Mining and other mining companies.

Capital Equipment Needs

The equipment needs for the next ten years will include Diesel hybrid electric trainers, hydraulic trainers, engine trainers and replacement of current truck trainers. The program should focus on the repair side of Electrical systems such as electric drive, diesel hybrid, electric steering and brakes. These will be industry changes in the next 10 years. It is important to maintain and purchase equipment that meets industry standards so that students in the program remain competitive when seeking employment.

Physical Resources/Facility Needs

Increased enrollment and future partnership prospects will require the department to increase the space that the program currently occupies. The program will also have an increased need for storage of equipment and trainers. In addition, the exhaust ventilation system needs to be upgraded in the diesel/auto shop area.

Technology Needs

The program shop area needs additional computer stations. A video projector in the lab for visual aids and instruction during lab operations would enhance learning. A wireless tablet such as an iPad or something similar to connect to projector and internet would be a useful instructional tool. Virtual and simulation tools and software are becoming more common in this field. Technology needs in this field are continually changing and the program staff needs to be aware and these changes.

Staffing Needs

With program growth there will be a need for additional funding to staff adjuncts.

Professional Development Needs

Professional development should include involvement of all Auto and diesel department faculty with NCAT (North American Counsel of Automotive Teachers.) This could also include hosting a NACAT conference at our CTEC campus.

Partnerships

The college and program currently has a strong partnership with Freeport McMoRan, Inc. and ASARCO. Additional partnerships should be developed with manufacturers like John Deere, Caterpillar, and local Arizona companies such as RDO Equipment, Empire CAT Mesa, and local mining companies.

Program Outcomes

Upon successful completion of the Diesel Technician Degree program, the learner will be able to:

1. Troubleshoot, repair, and replace diesel engines. (AUT 108, AUT 208, AUT 295, MET 116, MET 150, MET 160)

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2. Troubleshoot, repair, and replace diesel fuel system components. (AUT 113)
3. Troubleshoot, repair, and replace diesel electrical system components. (AUT 109, AUT 225, AUT 295)
4. Perform basic service maintenance on diesel equipment. (AUT 102, AUT 108, AUT 125, AUT 208, AUT 209, AUT 225, AUT 295, WLD 113)
5. Troubleshoot, repair, and replace drivetrains. (AUT 124, AUT 295)
6. Analyze diesel computer controlled systems. (AGS 101, AUT 225)

The outcomes were all recently revised which should hold for 3-5 years.

Projections and Plans for the Future

The job outlook for Diesel Service Technicians and Mechanics from 2010-2020 according to the U.S. Department of Labor is as follows:

“Employment of diesel mechanics is expected to grow 15 percent from 2010 to 2020, about as fast as the average for all occupations. As more freight is shipped across the country, additional diesel-powered trucks will be needed. As a result, diesel mechanics will be needed to maintain and repair the nation’s truck fleet. Demand for new workers in the freight trucking and automotive repair and maintenance industries is expected to drive overall diesel mechanic job growth.

Some older vehicles will need to be retrofitted and modernized to comply with environmental regulations, creating additional jobs for diesel mechanics.

Overall employment growth, however, may be dampened due to increasing durability of new truck and bus diesel engines. Continuing advances in repair technology, including computerized diagnostic equipment, also will result in fewer mechanics doing the same amount of work, further reducing demand for mechanics.”

Job Prospects

Job opportunities should be good for those who have completed formal postsecondary education and have strong technical skills, as employers sometimes report difficulty finding qualified workers.

Workers without formal training often require more supervision and on-the-job instruction than others—an expensive and time-consuming process for employers. Because of this, untrained candidates will face strong competition for jobs. (U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, 2010-2020.)

In addition to the above, plans for the future includes expansion into the growing industries of green diesel and hybrid diesel electric. This will require increased funding to expand trainers in these areas. The program staff will be considering options that would allow students to complete in one year.

Educational Master Plan 2012-2017

Digital Filmmaking Certificate

Mission Statement

The Sedona Film School (SFS) is dedicated to mentoring the new generation of filmmakers. Whether you are experienced or new to the craft, take advantage of the latest technology and learn from the best, within a film industry model. The film school is located in beautiful Sedona, a small city in Northern Arizona, just south of Flagstaff and two hours north of Phoenix. Sedona's inspiring red rocks make it one of the most photographed destinations in the world and home to numerous artists.

Graduate Summary

Digital Filmmaking Certificate Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Digital Filmmaking	Certificate <1 yr.	25	20				45
Digital Filmmaking Documentary	Certificate >1 yr.	1		6	7	3	17
Digital Filmmaking Feature	Certificate >1 yr.		2				2
Digital Filmmaking Narrative	Certificate >1 yr.		3	18	9	13	43

Enrollment Trend

Digital Filmmaking Certificate				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	16	17	16	14
Enrollment	264	186	153	217
Avg. Class Size	16.5	10.9	9.6	15.5
Total SCH	503.0	345.0	288.0	620.0
SCH by Location				
Sedona	503.0	345.0	288.0	620.0
Enrollee Success				
%Successful	98%	94%	90%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
Fall 2012 Academic Period may be incomplete.				

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Digital Filmmaking Certificate			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	9	6	8
Enrollment	141	98	74
Avg. Class Size	15.7	16.3	9.3
Total SCH	423.0	314.0	218.0
SCH by Location			
Sedona	423.0	314.0	218.0
Enrollee Success			
%Successful	95%	94%	99%

**Enrollee success equals a letter grade of A,B,C, or S.*

Digital Filmmaking Certificate			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	1	0	
Enrollment	1	0	
Avg. Class Size	1.0		
Total SCH	1.0		
SCH by Location			
Sedona		1.0	
Enrollee Success			
%Successful		100%	

**Enrollee success equals a letter grade of A,B,C, or S.*

Digital Filmmaking Certificate				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	25	24	24	14
Enrollment	405	285	227	217
Avg. Class Size	16.2	11.9	9.5	15.5
Total SCH	926.0	660.0	506.0	620.0
SCH by Location				
Sedona	926.0	660.0	506.0	620.0
Enrollee Success				
%Successful	97%	94%	93%	0%

**Enrollee success equals a letter grade of A,B,C, or S.*

AY 2012-13 Academic Period may be incomplete.

Educational Master Plan 2012-2017

Course Enrollment

Digital Filmmaking Certificate - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
DFM101	2	9.5	19	38.0	79%	0%	21%
DFM102	2	9.0	18	54.0	83%	0%	17%
DFM103	2	9.0	18	36.0	83%	0%	17%
DFM104	2	13.5	27	54.0	100%	0%	0%
DFM105	1	13.0	13	13.0	92%	8%	0%
DFM106	2	8.5	17	17.0	100%	0%	0%
DFM107	1	17.0	17	34.0	100%	0%	0%
DFM108	2	11.5	23	23.0	96%	4%	0%
DFM109	2	9.5	19	19.0	100%	0%	0%
DFM110	2	9.0	18	36.0	83%	0%	17%
DFM111	2	3.0	6	6.0	83%	17%	0%
DFM201	2	8.0	16	96.0	100%	0%	0%
DFM202	2	8.0	16	80.0	100%	0%	0%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

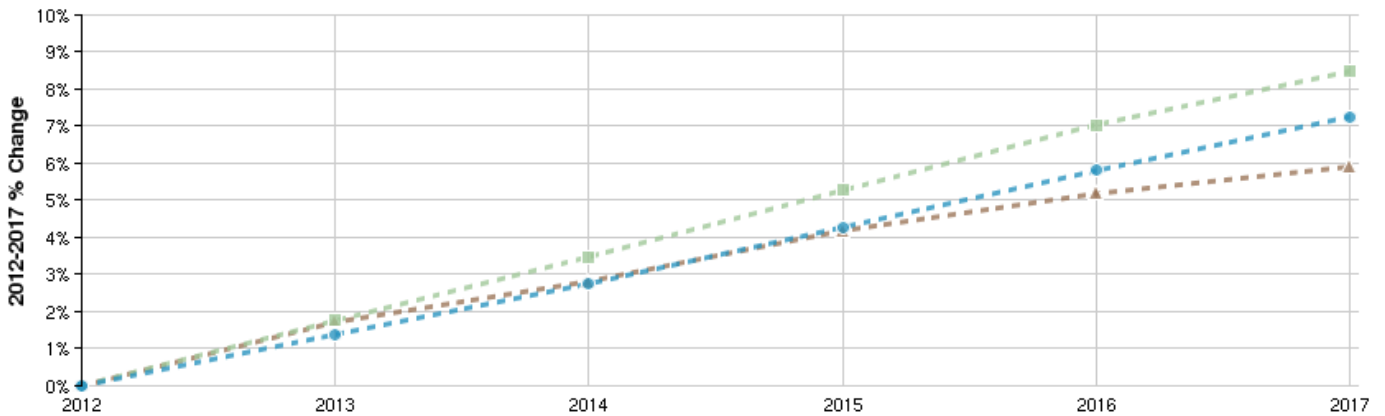
Course Forecast

Digital Filmmaking Certificate - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
DFM101	39.0	35.0	31.0	27.0	23.0	-4.0	-0.59
DFM102	56.7	50.1	43.5	36.9	30.3	-6.6	-0.62
DFM103	37.8	33.4	29.0	24.6	20.2	-4.4	-0.62
DFM104	47.1	37.3	27.5	17.7	7.9	-9.8	-0.52
DFM105	12.3	8.9	5.5	2.1	-1.3	-3.4	-0.89
DFM106	19.9	15.6	11.3	7.0	2.7	-4.3	-0.87
DFM107	37.4	30.2	23.0	15.8	8.6	-7.2	-0.78
DFM108	22.2	19.5	16.8	14.1	11.4	-2.7	-0.94
DFM109	19.0	16.9	14.8	12.7	10.6	-2.1	-0.66
DFM110	37.9	33.7	29.5	25.3	21.1	-4.2	-0.59
DFM111	6.7	6.1	5.5	4.9	4.3	-0.6	-0.26
DFM201	99.0	87.0	75.0	63.0	51.0	-12.0	-0.68
DFM202	82.5	72.5	62.5	52.5	42.5	-10.0	-0.68

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Digital Filmmaking Certificate - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
DFM101	54.0	52.0	66.0	44.0	38.0	-4.0	-0.59
DFM102	81.0	78.0	99.0	66.0	54.0	-6.6	-0.62
DFM103	54.0	52.0	66.0	44.0	36.0	-4.4	-0.62
DFM104	66.0	124.0	80.0	50.0	54.0	-9.8	-0.52
DFM105	24.0	27.0	23.0	15.0	13.0	-3.4	-0.89
DFM106	35.0	34.0	35.0	27.0	17.0	-4.3	-0.87
DFM107	60.0	68.0	68.0	48.0	34.0	-7.2	-0.78
DFM108	34.0	29.0	30.0	24.0	23.0	-2.7	-0.94
DFM109	25.0	30.0	30.0	21.0	19.0	-2.1	-0.66
DFM110	54.0	50.0	66.0	44.0	36.0	-4.2	-0.59
DFM111	8.0		15.0	8.0	6.0	-0.6	-0.26
DFM201	144.0	138.0	168.0	114.0	96.0	-12.0	-0.68
DFM202	120.0	115.0	140.0	95.0	80.0	-10.0	-0.68

Employment Trends



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	2,458	2,636	178	7%	\$21.98
B Nation	200,789	217,814	17,025	8%	\$26.83
C Yavapai County - All Shared	61	65	4	7%	\$20.78

Source: Economic Modeling Specialists, Inc. November 2012

Educational Master Plan 2012-2017

Enrollment Trends

Overall enrollment has been declining for several years. The 2012-13 enrollment is double that of the previous year primarily due to a very concentrated marketing effort. Enrollment increase is a direct result of time-consuming targeted recruiting efforts. With a lack of funding and staffing the department would expect the 2013-14 enrollment to return to the declining trend.

Capital Equipment Needs

Five more HD cameras will be needed in the next 12-24 months. An additional Steady-cam rig and a Grip/Electric could actually provide a source of revenue for the program.

Physical Resources/Facility Needs

Faculty have discussed the possibility of re-implementing the Advanced Certificate program. This would require a location with properly designed space for filming and editing. The DFM program would benefit from a sound stage/green screen facility.

Technology Needs

Many of the online instructors have mentioned the need for a better orientation system for students to improve their success in online courses. Campus-wide Lynda.com membership should be considered.

Staffing Needs

Staffing requirements will be monitored each semester to determine upcoming needs.

Professional Development Needs

Technology training will continue to be important. Specialized equipment training for faculty and staff continues to be critical to keeping pace with the changing field of digital filmmaking. Mandatory biennial service on a working feature film set should be considered. At least one instructor should be certified to train and certify Steadi-cam operators.

Partnerships

Dual Enrollment is a new area of focus for DFM. Mingus Union High School will be the first successful Dual Enrollment partnership. Articulation of DFM107 and DFM106 is currently offered in three area high schools. The Minor in Filmmaking offered by NAU is a good source of applicants. Additional opportunities exist within the NAU partnership.

Educational Master Plan 2012-2017

Program Outcomes

The Department is discussing new ways in which to offer introductory courses in both screenwriting and editing. They are also exploring options for changes to the DFM 109 class. The Department continues to use the final thesis film as an assessment tool and will continue to expand in order to fulfill assessment requirements and maintain standards. The following are the current and revised outcomes.

Upon successful completion of the Digital Filmmaking - Narrative Certificate program, the learner will be able to:

1. Exhibit a working knowledge of filmmaking equipment. (DFM 102, DFM 103, DFM 106, DFM 107, DFM 108, DFM 109, DFM 201)
2. Create a short screenplay. (DFM 101, DFM 103, DFM 104)
3. Produce and direct a three act short film. (DFM 102, DFM 103, DFM 105, DFM 201)
4. Utilize team building techniques. (DFM 106, DFM 107, DFM 108, DFM 110)

Projections and Plans for the Future

A new Certificate in Special Short Film Projects is being reviewed to determine possible implementation. Discussions regarding the right balance of online, traditional, and hybrid courses will continue. There are several opportunities to offer individual classes in filmmaking that are not part of a certificate.

Educational Master Plan 2012-2017

**Associate of Applied Science in Electrical Instrumentation Technician
Electrical Instrumentation Certificate
Electronics Technology Certificate**

Mission Statement

The Electrical Instrumentation Technician degree is designed to prepare students for positions in the installation, repair and maintenance of commercial electrical equipment and microprocessors.

Graduate Summary

Electrical Instrumentation Technician AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Electrical Instrumentation	Associate of Applied Science		10	9	4	2	25
Electrical Instrumentation	Certificate >1 yr.	1	1	2	4	2	10

Electronics Technology Certificate Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Electronics Technology	Certificate <1 yr.					6	6

Enrollment Trend

Electrical Instrumentation Technician AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	22	26	25	23
Enrollment	320	387	409	353
Avg. Class Size	14.5	14.9	16.4	15.3
Total SCH	1038.0	1226.0	1328.0	1096.0
SCH by Location				
Prescott	392.0	378.0	453.0	349.0
Verde Valley	88.0	151.0	90.0	
C.T.E.C	278.0	292.0	185.0	228.0
Chino Valley			63.0	69.0
Dual Enrollment	280.0	378.0	510.0	399.0
Enrollee Success				
%Successful	88%	83%	82%	5%

**Enrollee success equals a letter grade of A,B,C, or S.*

Fall 2012 Academic Period may be incomplete.

Educational Master Plan 2012-2017

Electrical Instrumentation Technician AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	16	22	22
Enrollment	221	300	316
Avg. Class Size	13.8	13.6	14.4
Total SCH	663.0	940.0	959.0
SCH by Location			
Prescott	250.0	217.0	133.0
Verde Valley	90.0	56.0	94.0
C.T.E.C	89.0	181.0	218.0
Online	78.0	81.0	175.0
Dual Enrollment	108.0	366.0	318.0
Enrollee Success			
%Successful	81%	81%	85%

**Enrollee success equals a letter grade of A,B,C, or S.*

Electrical Instrumentation Technician AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	3	2	3
Enrollment	52	30	53
Avg. Class Size	17.3	15.0	17.7
Total SCH	187.0	103.0	193.0
SCH by Location			
Prescott	187.0	103.0	193.0
Enrollee Success			
%Successful	81%	77%	77%

**Enrollee success equals a letter grade of A,B,C, or S.*

Educational Master Plan 2012-2017

Electrical Instrumentation Technician AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	41	50	50	23
Enrollment	593	717	778	353
Avg. Class Size	14.5	14.3	15.6	15.3
Total SCH	1888.0	2269.0	2480.0	1096.0
SCH by Location				
Prescott	829.0	698.0	779.0	349.0
Verde Valley	178.0	207.0	184.0	
C.T.E.C	367.0	473.0	403.0	228.0
Chino Valley			63.0	69.0
Online	78.0	81.0	175.0	
Dual Enrollment	388.0	744.0	828.0	399.0
Enrollee Success				
%Successful	85%	82%	83%	5%
<i>*Enrollee success equals a letter grade of A, B, C, or S.</i>				
AY 2012-13 Academic Period may be incomplete.				

Educational Master Plan 2012-2017

Course Enrollment

Electrical Instrumentation Technician AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
AGS101	1	21.0	21	63.0	71%	24%	5%
CNT100	10	19.2	192	576.0	78%	14%	8%
CNT110	10	16.6	166	664.0	86%	5%	9%
CNT115	7	21.1	148	592.0	82%	9%	9%
CSA170	1	21.0	21	63.0	67%	5%	29%
ELT111	1	13.0	13	39.0	77%	15%	8%
ELT112	1	11.0	11	33.0	91%	9%	0%
ELT115	1	12.0	12	12.0	75%	0%	25%
ELT126	1	10.0	10	30.0	90%	0%	10%
ELT161	1	9.0	9	27.0	100%	0%	0%
ELT171	1	11.0	11	33.0	64%	18%	9%
ELT183	2	15.5	31	93.0	94%	3%	3%
ELT258	1	8.0	8	16.0	88%	0%	13%
ELT272	1	7.0	7	21.0	100%	0%	0%
ELT295	4	4.0	16	48.0	100%	0%	0%
MET116	1	20.0	20	20.0	85%	10%	5%
MET150	1	14.0	14	14.0	100%	0%	0%
MET160	1	19.0	19	38.0	95%	5%	0%
WLD113	4	12.3	49	98.0	84%	14%	2%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

Educational Master Plan 2012-2017

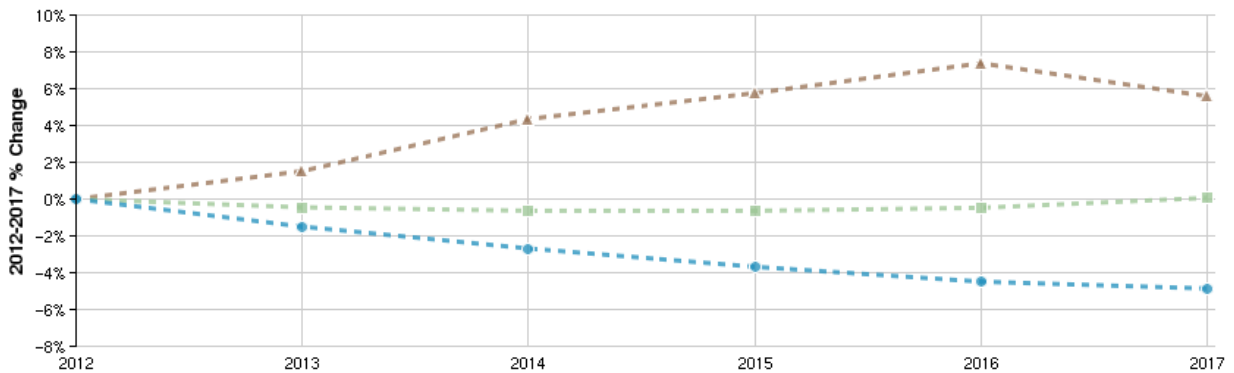
Course Forecast

Electrical Instrumentation Technician AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
AGS101	54.8	35.3	15.8	-3.8	-23.3	-19.5	-0.87
CNT100	592.4	658.1	723.8	789.5	855.2	65.7	0.92
CNT110	626.0	630.0	634.0	638.0	642.0	4.0	0.17
CNT115	587.4	670.2	753.0	835.8	918.6	82.8	0.93
CSA170	75.9	83.7	91.5	99.3	107.1	7.8	0.56
ELT111	47.4	49.2	51.0	52.8	54.6	1.8	0.24
ELT112	37.4	37.1	36.8	36.5	36.2	-0.3	-0.06
ELT115	13.2	13.6	14.0	14.4	14.8	0.4	0.21
ELT126	41.3	48.8	56.3	63.8	71.3	7.5	0.50
ELT161	34.2	33.6	33.0	32.4	31.8	-0.6	-0.12
ELT171	Insufficient Data						
ELT183	Insufficient Data						
ELT258	Insufficient Data						
ELT272	13.5	7.5	1.5	-4.5	-10.5	-6.0	-0.70
ELT295	34.4	1.1	-32.3	-65.6	-98.9	-33.3	-0.96
MET116	16.9	14.7	12.5	10.3	8.1	-2.2	-0.52
MET150	10.2	4.6	-1.0	-6.6	-12.2	-5.6	-0.88
MET160	32.7	26.1	19.5	12.9	6.3	-6.6	-0.75
WLD113	102.3	114.9	127.5	140.1	152.7	12.6	0.77

Educational Master Plan 2012-2017

Electrical Instrumentation Technician AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
AGS101	123.0	141.0	78.0	66.0	63.0	-19.5	-0.87
CNT100	291.0	456.0	411.0	543.0	576.0	65.7	0.92
CNT110	616.0	640.0	572.0	584.0	664.0	4.0	0.17
CNT115	212.0	432.0	412.0	500.0	592.0	82.8	0.93
CSA170	27.0	75.0	78.0	81.0	63.0	7.8	0.56
ELT111	36.0	42.0	21.0	54.0	39.0	1.8	0.24
ELT112	36.0	39.0	21.0	42.0	33.0	-0.3	-0.06
ELT115	11.0	12.0	6.0	14.0	12.0	0.4	0.21
ELT126			15.0	45.0	30.0	7.5	0.50
ELT161	33.0	36.0	21.0	42.0	27.0	-0.6	-0.12
ELT171	33.0	36.0		18.0	33.0	Insufficient Data	
ELT183				48.0	93.0	Insufficient Data	
ELT258				10.0	16.0	Insufficient Data	
ELT272		33.0	36.0	12.0	21.0	-6.0	-0.70
ELT295		144.0	99.0	54.0	48.0	-33.3	-0.96
MET116		23.0	29.0	16.0	20.0	-2.2	-0.52
MET150	32.0	32.0	15.0	12.0	14.0	-5.6	-0.88
MET160	56.0	64.0	34.0	34.0	38.0	-6.6	-0.75
WLD113	54.0	56.0	40.0	94.0	98.0	12.6	0.77

Employment Trends Electronics



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	4,212	4,007	-205	-5%	\$25.62
B Nation	158,511	158,613	102	0%	\$27.44
C Yavapai County - All Shared	20	21	1	5%	\$28.89

Source: Economic Modeling Specialists, Inc. November 2012

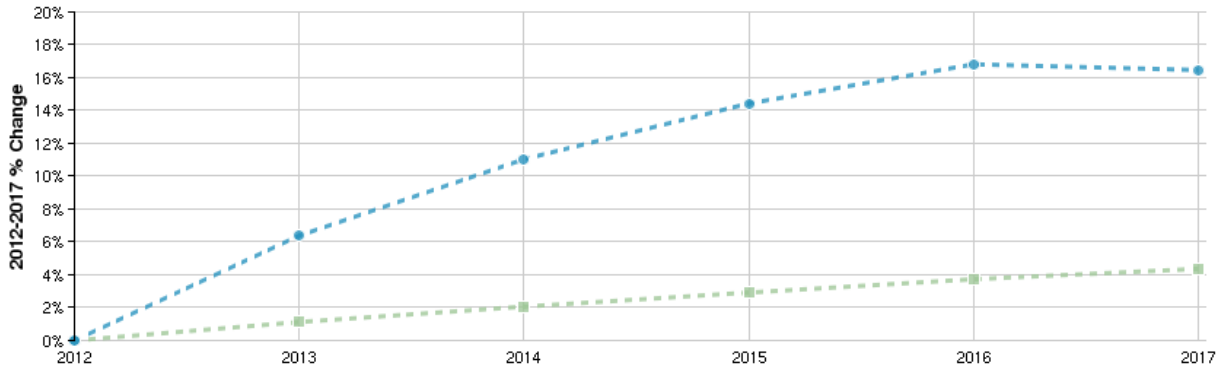
Yavapai College

Career and Technical Education Division

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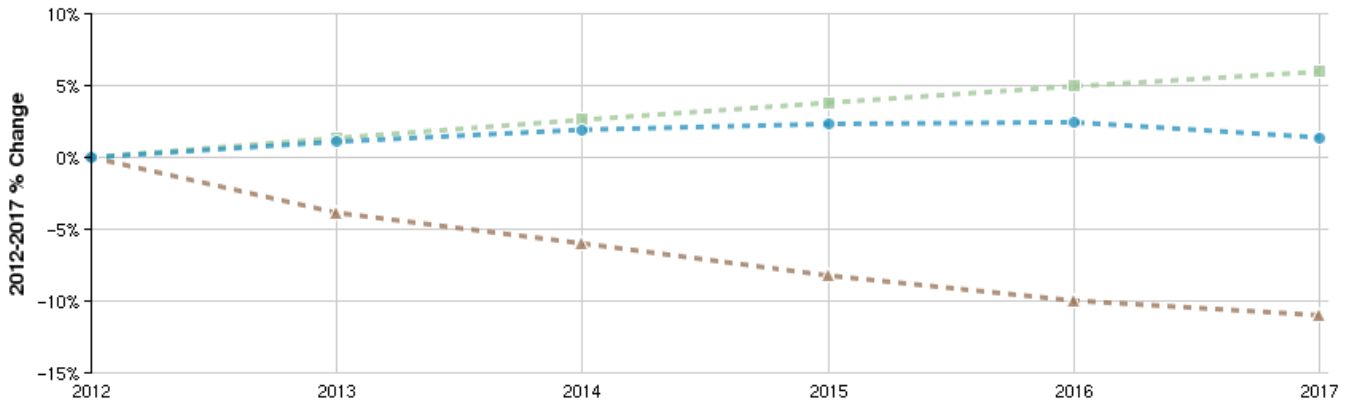
Substation and Relay



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	413	481	68	16%	\$35.83
B Nation	24,274	25,333	1,059	4%	\$32.43
C Yavapai County - All Shared	<10	<10	--	--	\$29.19

Source: Economic Modeling Specialists, Inc. November 2012

Install



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	1,503	1,524	21	1%	\$31.98
B Nation	108,463	114,933	6,470	6%	\$28.93
C Yavapai County - All Shared	17	15	-2	-12%	\$34.24

Source: Economic Modeling Specialists, Inc. November 2012

Educational Master Plan 2012-2017

The EMSI data presented does not line up with the Power company data which portrays a very different picture. New spaces should allow for double classes and double labs as necessary, and all of this will get fleshed out with the grant received. What this data does not include is the mining industry and/or manufacturing industry which has considerable industrial electrician needs. This is why the data from EMSI is not truly indicative of what boots on the ground can find out.

Capital Equipment Needs

The only capital needs involve replacing the GE FANUC CERT carts over time and possibly the 480V switchgear (motor control center). The CERT carts should last 5-7 years before needing to be replaced. Unfortunately, they cost over \$35k each. A wiser investment may be to send instructors to FANUC to go through their LR MATE electrical and mechanical maintenance courses in the hopes of keeping these robots up and running for a longer period of time. The department MCC was donated by FMI and is late 1970's technology. The department needs to get a system that's less than 10-15 years old to stay current with new technology. The department can possibly get FMI or Asarco to donate a newer system or maybe purchase a used system.

Physical Resources/Facility Needs

With the CEWD grant the department is going to be in really good shape as to the spaces at CTEC. The Chino lineman and substation requirements are yet to be determined.

Technology Needs

New technology in MCC's is moving from old clunk and bang magnetic contactors to SSRs (solid state relays). The department needs to keep pace with this trend by getting a new MCC (see capital needs above). New trends in communications equipment and their associated PCBs (printed circuit boards) are to move away from leaded components and go with chip or SMT (surface mount technology). With the addition of new Metcal soldering stations purchased last year the department is current with this trend (although it wouldn't hurt to add a couple of SMT desoldering stations).

Staffing Needs

There is a need for one new instructor with the CEWD grant. The department would also like to plug in money to hire lab assistants to handle larger classes in the lab (particularly with the JTED students).

Professional Development Needs

As mentioned earlier, the department should send instructors to FANUC for LR MATE electrical and mechanical courses. Also, both instructors should be cross trained to cover each other's classes. Depending on course load, the department may want to send the new instructor to ISA process control training and/or NTT motor control training. The department should also send one/both instructors to IPC high-reliability solder training so that we can offer certification to local assemblers/technicians as well as our students.

Partnerships

There should be continuous work with FMI and Asarco. The department would like to bring RDL (Radio Design Labs) in Prescott on board and is still working with them. Cobham will eventually start picking up interns again as their business improves.

Educational Master Plan 2012-2017

Program Outcomes

The department recently updated the Electrical & Instrumentation Technology outcomes. Lineman and Substation maintenance outcomes have been written but are subject to change depending on input from the new instructor. The following represent current outcomes.

1. Troubleshoot, replace, and repair motor controls. (ELT 110, ELT 111, ELT 112, ELT 272, ELT 295)
2. Troubleshoot, repair, and replace microprocessors. (AGS 101, ELT 110, ELT 111, ELT 112, ELT 161, ELT 271, ELT 295)
3. Troubleshoot, repair, and replace process controls. (ELT 110, ELT 111, ELT 112, ELT 171, ELT 271, ELT 272, ELT 295, MET 150, MET 160)
4. Troubleshoot and build electrical raceways. (ELT 115, MET 116, WLD 113)

Projections and Plans for the Future

If the employment projections of our CEWD partners are accurate, the department should have no problem placing graduates. The focus should be in marketing/promoting new programs and strengthening recruitment and selection process for JTED Applied Pre-engineering program.

The department would like to add a “MIT Materials” course and a “Conceptual Calculus” to our Applied Pre-Engineering program (in lieu of the advanced digital and robot vision classes).

Educational Master Plan 2012-2017

Emergency Medical Services Certificate

Mission Statement

The Emergency Medical Technician certificate provides fundamental knowledge about emergency medical procedures and techniques. These include artificial respiration, cardio-pulmonary resuscitation, control of bleeding, splinting, extrication and light rescue, and ten hours of hospital training and observation to give Emergency Medical Technicians improved clinical knowledge of the profession. Successful completion of EMS 131, with a grade of "C" or better, qualifies the student to take the National Registry of EMT Certification examination for EMT.

Graduate Summary

Emergency Medical Services Certificate Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Emergency Medical Services	Associate of Applied Science	1					1
Emergency Medical Tech-Basic	Certificate <1 yr.		5	167	135		307
Emergency Medical Services	Certificate <1 yr.	145	173				318
Emergency Medical Technician	Certificate <1 yr.					83	83

Enrollment Trend

Emergency Medical Services Certificate				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	5	4	4	3
Enrollment	118	97	95	70
Avg. Class Size	23.6	24.3	23.8	23.3
Total SCH	708.0	582.0	570.0	700.0
SCH by Location				
Prescott Valley	564.0	438.0	426.0	460.0
Enrollee Success				
%Successful	79%	78%	76%	0%

*Enrollee success equals a letter grade of A,B,C, or S.

Fall 2012 Academic Period may be incomplete.

Educational Master Plan 2012-2017

Emergency Medical Services Certificate			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	5	5	3
Enrollment	108	89	68
Avg. Class Size	21.6	17.8	22.7
Total SCH	648.0	534.0	680.0
SCH by Location			
Prescott Valley	498.0	414.0	480.0
Enrollee Success			
%Successful	78%	84%	68%

**Enrollee success equals a letter grade of A,B,C, or S.*

Emergency Medical Services Certificate			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	0		
Enrollment	0		
Avg. Class Size			
Total SCH			
SCH by Location			
Enrollee Success			
%Successful			

**Enrollee success equals a letter grade of A,B,C, or S.*

Emergency Medical Services Certificate				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	10	9	7	3
Enrollment	226	186	163	70
Avg. Class Size	22.6	20.7	23.3	23.3
Total SCH	1356.0	1116.0	1250.0	700.0
SCH by Location				
Prescott Valley	1062.0	852.0	906.0	460.0
Enrollee Success				
%Successful	78%	81%	72%	0%

**Enrollee success equals a letter grade of A,B,C, or S.*

AY 2012-13 Academic Period may be incomplete.

Educational Master Plan 2012-2017

Course Enrollment

Emergency Medical Services Certificate - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
EMS131	7	23.3	163	1250.0	72%	14%	13%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A, B, C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

Course Forecast

Emergency Medical Services Certificate - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
EMS131	1166.4	1133.2	1100.0	1066.8	1033.6	-33.2	-0.35

Emergency Medical Services Certificate - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
EMS131	1218.0	1512.0	1356.0	1116.0	1250.0	-33.2	-0.35

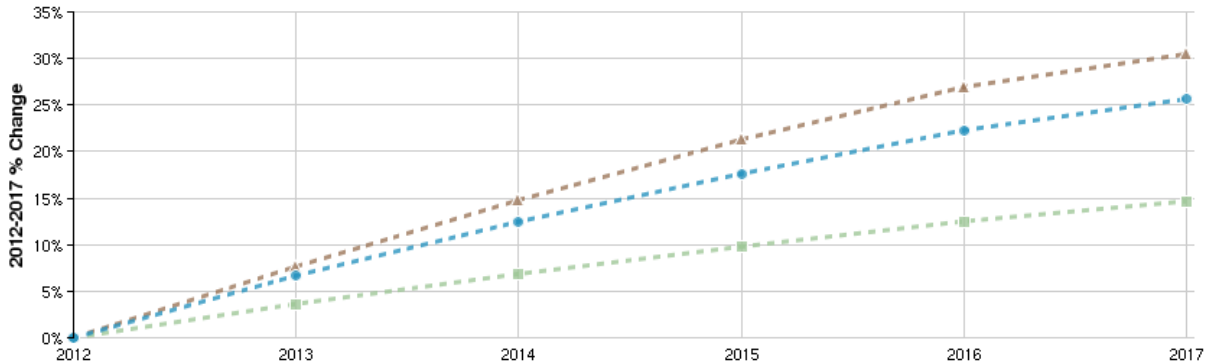
Enrollment Trends

Enrollment caps for EMS 131 are dictated by Arizona Department of Health Services rules. The college will remain far more competitive than other for-profit programs due to affordability. The program has had consistent enrollment in courses with most of them filling to capacity. The decrease in enrollment came as the result of eliminating one section during the budget crises two years ago.

Educational Master Plan 2012-2017

Employment Trends

The EMSI data below shows a slight but steady growth in this field. The additional information gathered for this report shows much greater growth (Projections and Plans for the Future).



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	3,921	4,927	1,006	26%	\$14.13
B Nation	230,934	264,806	33,872	15%	\$14.77
C Yavapai County - All Shared	112	146	34	30%	\$15.42

Source: Economic Modeling Specialists, Inc. November 2012

Capital Equipment Needs

Within the next 5-10 years most of the high-end medical equipment and training manikins will be approaching 10-years in service. Simulator equipment, cardiac monitors will be reviewed by program staff to make sure the technology used meets industry standards and will need to be upgraded and/or replaced. Current medical equipment will be old technology with two year and will need to be upgraded to state of the art equipment to remain competitive and deliver the most current industry based training available. Future DHS rules may mandate an upgrade in medical equipment.

Physical Resources/Facility Needs

The current classroom space for EMS 131 is adequate but there is a need for additional clinical skills practice space. This program often competes with other courses at the PV Campus for skills lab space and break-out sessions. As renovations are consider, they should include lab space and technology integrated classrooms . Modifications are being made this year (December 2012) to turn the current break room at the PV Campus into a clinical classroom. This will help with at least some of the space issues.

Staffing Needs

The current staffing is sufficient since there are no anticipated large additions to the EMS course offerings.

Educational Master Plan 2012-2017

Professional Development Needs

With the increase in the use of technology as a platform for delivery of material as well as the use of technology that is health care specific, instructors will need support via professional development opportunities in order to remain current. TeLS has traditionally provided support and training for developing online materials and this system currently seems to be meeting those needs.

The increased use of simulation will require training in this area for full time and adjunct faculty and part time staff. Because the medical field changes so rapidly, staff will need to have continued professional development in order to stay current.

Partnerships

The EMS Program partners with local EMS providers and first responders including fire agencies in the area for clinical and field practicums for all students in the program.

Program Outcomes

Upon successful completion of the Emergency Medical Technician Certificate program, the learner will be able to:

1. Perform one and two person cardiopulmonary resuscitation (CPR) for the adult, child and infant patient according to the latest American Heart Association, Basic Life Support for Healthcare Provider standards. (EMS 131)
2. Manage scene safety including personal protective equipment in the workplace. (EMS 131)
3. Determine priorities of care. (EMS 131)
4. Define the role, scope of practice, legal and ethical responsibilities of an EMT. (EMS 131)
5. Assess, manage, and stabilize patients of all ages suffering airway obstructions, respiratory arrest and cardiac arrest with the use of CPR, automated external defibrillator, ventilatory assistance and oxygen. (EMS 131)
6. Assess, manage, and stabilize patients of all ages with medical emergencies and emergency childbirth. (EMS 131)
7. Assess, manage, and stabilize patients of all ages suffering bleeding, shock, soft tissue injuries, burns, fractures, nervous system injuries, head, chest and abdominal injuries. (EMS 131)
8. Prepare the patient for transport to an appropriate medical facility with a minimum of aggravation to the patient's illness or injury. (EMS 131)
9. Prepare a comprehensive patient care report for each patient assessed in the hospital clinical setting. (EMS 131)

Educational Master Plan 2012-2017

Projections and Plans for the Future

The job outlook for EMS Personnel from 2010-20, according to the U.S. Department of Labor is as follows:

“Employment of emergency medical technicians (EMTs) and paramedics is expected to grow by 33 percent from 2010 to 2020, much faster than the average for all occupations. Emergencies such as car crashes, natural disasters, and violence will continue to create demand for EMTs and paramedics. There will also continue to be demand for part-time, volunteer EMTs and paramedics in rural areas and smaller metropolitan areas.

Growth in the middle-aged and elderly population will lead to an increase in the number of age-related health emergencies, such as heart attacks or strokes. This, in turn, will lead to an increase in the demand for EMTs and paramedic services. An increase in specialized medical facilities will require more EMTs and paramedics to transfer patients with specific conditions to these facilities for treatment.

In recent years, companies that build ambulances have started to update and redesign their interiors to keep EMTs, paramedics, and patients safer during transport. These companies are hiring EMTs and paramedics as consultants to learn their ideas about such updates and designs. (U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, 2010-2020.)”

Additional Trends and Concerns

Continue partnership with Yavapai Regional Medical Center to provide certification required training to their staff. Program staff will explore offering EMS related Homeland Defense related topics in conjunction with AJS program and continuing education topics as related to NREMT recertification areas and community demand for courses in EMS management and leadership.

Educational Master Plan 2012-2017

Animal Care and Management Certificate Equine Practitioner Certificate

Mission Statement

The Equine Practitioner certificate prepares students for entrepreneurship, employment, or advancement in a variety of equine fields including business management, training, breeding shoeing, sales marketing and nutrition.

Graduate Summary

Agriculture Technology Equine Science AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Equine Science	Associate of Applied Science	2	4	1	1	1	9
Equine Science	Certificate <1 yr.	2	4				6
Animal Care & Management	Certificate >1 yr.	1			2		3
Equine Management	Certificate >1 yr.			2		1	3

Enrollment Trend

Agriculture Technology Equine Science AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	13	13	15	12
Enrollment	138	178	181	166
Avg. Class Size	10.6	13.7	12.1	13.8
Total SCH	355.0	491.0	505.0	581.0
SCH by Location				
Prescott			88.0	
Verde Valley	9.0	6.0	22.0	24.0
C.T.E.C	78.0	66.0		
Chino Valley	208.0	213.0	316.0	276.0
Dual Enrollment	60.0	206.0	79.0	281.0
Enrollee Success				
%Successful	84%	77%	76%	0%

*Enrollee success equals a letter grade of A,B,C, or S.

Fall 2012 Academic Period may be incomplete.

Educational Master Plan 2012-2017

The Associate of Applied Science in Agriculture Technology Equine Science is no longer available at Yavapai College.

Agriculture Technology Equine Science AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	18	19	24
Enrollment	173	197	257
Avg. Class Size	9.6	10.4	10.7
Total SCH	455.0	562.0	737.0
SCH by Location			
Prescott		84.0	76.0
Verde Valley	36.0	42.0	74.0
Chino Valley	217.0	343.0	396.0
Dual Enrollment	202.0	93.0	191.0
Enrollee Success			
%Successful	90%	84%	81%

**Enrollee success equals a letter grade of A,B,C, or S.*

Agriculture Technology Equine Science AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	1	1	1
Enrollment	16	12	19
Avg. Class Size	16.0	12.0	19.0
Total SCH	16.0	12.0	19.0
SCH by Location			
Chino Valley	16.0	12.0	19.0
Enrollee Success			
%Successful	75%	100%	95%

**Enrollee success equals a letter grade of A,B,C, or S.*

Educational Master Plan 2012-2017

Agriculture Technology Equine Science AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	32	33	40	12
Enrollment	327	387	457	166
Avg. Class Size	10.2	11.7	11.4	13.8
Total SCH	826.0	1065.0	1261.0	581.0
SCH by Location				
Prescott		84.0	164.0	
Verde Valley	45.0	48.0	96.0	24.0
C.T.E.C	78.0	66.0		
Chino Valley	441.0	568.0	731.0	276.0
Dual Enrollment	262.0	299.0	270.0	281.0
Enrollee Success				
%Successful	87%	81%	79%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
AY 2012-13 Academic Period may be incomplete.				

Educational Master Plan 2012-2017

Course Enrollment

Agriculture Technology Equine Science AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
AGE100	6	10.0	60	180.0	72%	12%	17%
AGE125	1	15.0	15	45.0	87%	7%	7%
AGE126	1	17.0	17	34.0	88%	6%	6%
AGE140	2	14.0	28	84.0	54%	29%	18%
AGE150	4	13.5	54	54.0	96%	2%	2%
AGE220	2	9.0	18	36.0	83%	0%	17%
AGE225	1	5.0	5	15.0	60%	0%	40%
AGE226	1	15.0	15	45.0	87%	13%	0%
AGE250	3	7.0	21	21.0	95%	0%	5%
AGE260	1	14.0	14	42.0	86%	7%	7%
AGE265	1	14.0	14	28.0	93%	0%	7%
AGS101	1	21.0	21	63.0	71%	24%	5%
AGS102	3	8.7	26	78.0	77%	8%	15%
AGS115	2	10.0	20	60.0	75%	10%	15%
AGS120	4	12.0	48	192.0	77%	19%	4%
AGS215	1	11.0	11	33.0	82%	0%	9%
AGS274	2	14.5	29	87.0	79%	10%	10%
CHM121	2	16.5	33	132.0	70%	15%	15%
ENV121	2	4.0	8	32.0	88%	13%	0%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

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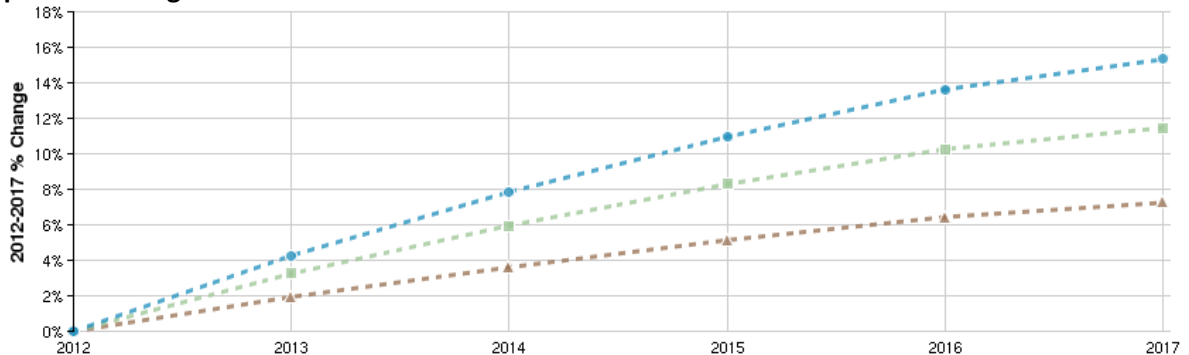
Course Forecast

Agriculture Technology Equine Science AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
AGE100	184.4	199.1	213.8	228.5	243.2	14.7	0.82
AGE125	Insufficient Data						
AGE126	Insufficient Data						
AGE140	63.8	68.3	72.8	77.3	81.8	4.5	0.34
AGE150	56.2	53.6	51.0	48.4	45.8	-2.6	-0.55
AGE220	39.5	52.5	65.5	78.5	91.5	13.0	0.93
AGE225	24.8	20.3	15.8	11.3	6.8	-4.5	-0.37
AGE226	26.9	32.6	38.3	44.0	49.7	5.7	0.46
AGE250	14.6	11.8	9.0	6.2	3.4	-2.8	-0.50
AGE260	37.2	36.6	36.0	35.4	34.8	-0.6	-0.24
AGE265	Insufficient Data						
AGS101	54.8	35.3	15.8	-3.8	-23.3	-19.5	-0.87
AGS102	99.8	107.3	114.8	122.3	129.8	7.5	0.58
AGS115	65.0	65.9	66.8	67.7	68.6	0.9	0.06
AGS120	206.8	200.4	194.0	187.6	181.2	-6.4	-0.20
AGS215	33.2	27.5	21.8	16.1	10.4	-5.7	-0.38
AGS274	73.5	88.5	103.5	118.5	133.5	15.0	0.71
CHM121	Insufficient Data						
ENV121	Insufficient Data						

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Agriculture Technology Equine Science AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
AGE100	138.0	111.0	159.0	174.0	180.0	14.7	0.82
AGE125		57.0	54.0		45.0	Insufficient Data	
AGE126	26.0			28.0	34.0	Insufficient Data	
AGE140	63.0	36.0	39.0	39.0	84.0	4.5	0.34
AGE150	71.0	53.0	55.0	61.0	54.0	-2.6	-0.55
AGE220		2.0	2.0	30.0	36.0	13.0	0.93
AGE225			24.0	39.0	15.0	-4.5	-0.37
AGE226	3.0	30.0	3.0	3.0	45.0	5.7	0.46
AGE250	32.0	17.0	30.0	11.0	21.0	-2.8	-0.50
AGE260	42.0	39.0	36.0	33.0	42.0	-0.6	-0.24
AGE265		2.0		2.0	28.0	Insufficient Data	
AGS101	123.0	141.0	78.0	66.0	63.0	-19.5	-0.87
AGS102	57.0	81.0	87.0	114.0	78.0	7.5	0.58
AGS115	42.0	96.0	99.0	69.0	60.0	0.9	0.06
AGS120	244.0	188.0	112.0	228.0	192.0	-6.4	-0.20
AGS215	36.0	90.0	39.0	39.0	33.0	-5.7	-0.38
AGS274	24.0		3.0	45.0	87.0	15.0	0.71
CHM121				72.0	132.0	Insufficient Data	
ENV121				12.0	32.0	Insufficient Data	

Employment Trends Equine Boarding



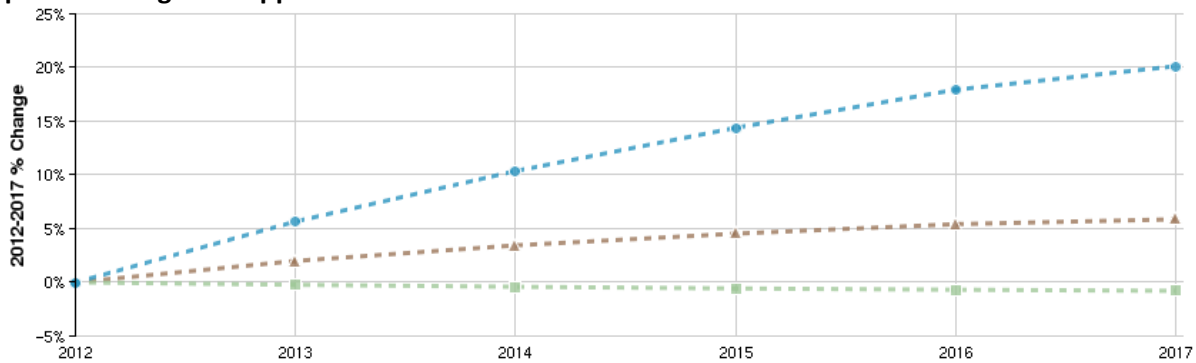
Region	2012Jobs	2017Jobs	Change	% Change
A Arizona	2,865	3,304	439	15%
B Nation	177,089	197,379	20,290	11%
C Yavapai County - All Shared	134	143	9	7%

Source: Economic Modeling Specialists, Inc. November 2012

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Employment Trends

Equine Training and Support



Region	2012 Jobs	2017 Jobs	Change	% Change
A Arizona	17,623	21,170	3,547	20%
B Nation	1,882,602	1,867,729	-14,873	-1%
C Yavapai County - All Shared	708	749	41	6%

Source: Economic Modeling Specialists, Inc. November 2012

Employment trends are growing in the county but not at a fast clip in the aggregate. The good thing is that this program is low cost and taught by adjuncts. Enrollment has remained steady even during the downturn. Using a 2001 study adjusted for inflation, the Arizona Horse industry represents over \$1.5 billion dollars annually to the state economy. Over 64,000 Arizona households own horses and over 100,000 Arizona citizens own horses. Yavapai County is a large portion of this statistic and the tri-city area is extremely horse oriented.

Enrollment Trends

AGE numbers have been steady without much fluctuation, but the department always wants to see an increase in students. If the department can expand into night lighting and offer classes in conjunction with JTED and AAECPV the college could expect an increase of up to 20%

Capital Equipment Needs

In order to expand the hands on aspect of the program, a 10 - 20 stall barn and horses would be necessary. There could be potential in opening it up to local high school students (JTED). A sprinkler system for dust control could be installed by the AGS water management class at a reduced rate. By offering events such as the High Plains event the department brings potential students to the campus to interact in a positive way. The ability to wet down the arena during classes and at events would enhance the events and classes.

Physical Resources/Facility Needs

The AGS 250-252 courses could grow locally adapted trees for a wind block for the arena. Installing a permanent bathroom is very important to the overall experience. Lighting around the arena would allow for night classes, and potentially more students. Classroom-based evening classes in the equine program

Educational Master Plan 2012-2017

tend to fill. Evening classes allow those students that work during the day to take an evening class after work. The courses that entail hands-on components with the horses need to be outside. The department is limited by the hours of daylight for classes that begin 6 p.m. All of the arena-based classes for Fall and Spring semesters have only been offered during the day and therefore filling the classes is sometimes a challenge.

Technology Needs

The ITV system could be better. ITV classroom should match what the Verde has done in upgrades during the remodel in 2012. It is very hard to operate ITV systems that are different at every location. A second ITV classroom would relieve the pressure of competing equine and AGS classes for limited ITV space.

Staffing Needs

This is the only Agribusiness program without a full time faculty member. It is a challenge to fully run a program.

Professional Development Needs

Paid Internships at equine facilities, conferences, tours of successful college equine programs.

Partnerships

Contacting local trainers and other Equine professionals about internships and hiring students. The department needs to potentially offer or partner with AAEC for their equine classes. The department can offer JTED.

Program Outcomes

Major changes were made to the equine program in 2011 including course and program modifications. The current format and outcomes should be adequate for the 10 year term.

Projections and Plans for the Future

The department focus has always been trying to reach the future professional as well as encouraging horse owners to advance their knowledge. Adding new classes to reach the needs of the market and offering classes during a time frame that working adults could get involved with some amazing courses is paramount to success.

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Associate of Applied Science in Fire Science Fire Science Driver/Operator Certificate Firefighter I & II Academy Certificate

Mission Statement

The Fire Science degree program is an interdisciplinary program of study which prepares students for a broad range of employment opportunities including Firefighter, Hazardous Materials Technician, Emergency Medical Technician, Fire Marshal/Inspector, Fire Investigator, CPR, First Aid and Fire Service Supervisor/Manager.

In addition to preparing students for employment, this degree program is appropriate for individuals already employed in the Public Safety field who are seeking skill upgrade and promotional opportunities, and individuals preparing to transfer to a four-year college/university. Students interested in a transfer program in fire science should see an academic advisor for an educational plan.

Graduate Summary

Fire Science AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Fire Science	Associate of Applied Science	7	12	14	18	17	68
Firefighter I & II Academy	Certificate <1 yr.					1	1
Fire Science	Certificate <1 yr.	6	6				12
Fire Science Firefighter	Certificate <1 yr.		1	4	5	3	13
Fire Science Driver/Operator	Certificate >1 yr.		2	4	5	2	13
Fire Science Fire Officer	Certificate >1 yr.		2	5	6	2	15

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Enrollment Trend

Fire Science AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	16	15	14	15
Enrollment	414	338	315	291
Avg. Class Size	25.9	22.5	22.5	19.4
Total SCH	1702.0	1523.0	1336.0	1541.0
SCH by Location				
Prescott Valley	738.0	579.0	639.0	506.0
Online	390.0	225.0	240.0	354.0
Dual Enrollment				20.0
Enrollee Success				
%Successful	80%	83%	82%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
Fall 2012 Academic Period may be incomplete.				

Fire Science AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	23	21	17
Enrollment	450	426	311
Avg. Class Size	19.6	20.3	18.3
Total SCH	2033.0	1841.0	1730.0
SCH by Location			
Verde Valley	3.0		
Prescott Valley	607.0	566.0	538.0
Online	210.0	336.0	159.0
Dual Enrollment	123.0	141.0	165.0
Enrollee Success			
%Successful	79%	87%	82%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>			

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Fire Science AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	1	6	0
Enrollment	16	90	0
Avg. Class Size	16.0	15.0	
Total SCH	32.0	257.0	
SCH by Location			
Prescott Valley			26.0
Online			231.0
Enrollee Success			
%Successful	88%		84%

**Enrollee success equals a letter grade of A,B,C, or S.*

Fire Science AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	40	36	37	15
Enrollment	880	764	716	291
Avg. Class Size	22.0	21.2	19.4	19.4
Total SCH	3767.0	3364.0	3323.0	1541.0
SCH by Location				
Verde Valley	3.0			
Prescott Valley	1345.0	1145.0	1203.0	506.0
Online	600.0	561.0	630.0	354.0
Dual Enrollment	123.0	141.0	165.0	20.0
Enrollee Success				
%Successful	80%	85%	82%	0%

**Enrollee success equals a letter grade of A,B,C, or S.*

AY 2012-13 Academic Period may be incomplete.

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Course Enrollment

Fire Science AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
EMS131	7	23.3	163	1250.0	72%	14%	13%
FSC100	2	23.0	46	138.0	59%	26%	15%
FSC104	8	17.0	136	272.0	88%	1%	9%
FSC105	4	18.8	75	750.0	92%	1%	7%
FSC135	3	25.3	76	228.0	84%	9%	7%
FSC136	1	25.0	25	100.0	88%	4%	8%
FSC155	3	14.7	44	132.0	95%	0%	5%
FSC234	1	2.0	2	6.0	100%	0%	0%
FSC235	1	2.0	2	6.0	100%	0%	0%
FSC236	2	24.5	49	147.0	84%	6%	10%
FSC238	2	21.5	43	129.0	81%	7%	12%
FSC239	1	7.0	7	21.0	100%	0%	0%
FSC240	1	23.0	23	69.0	91%	9%	0%
FSC241	1	25.0	25	75.0	84%	8%	8%

*Cross-listed courses counted as individual course sections (not merged).

Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U

Incomplete student courses excluded from Success measures

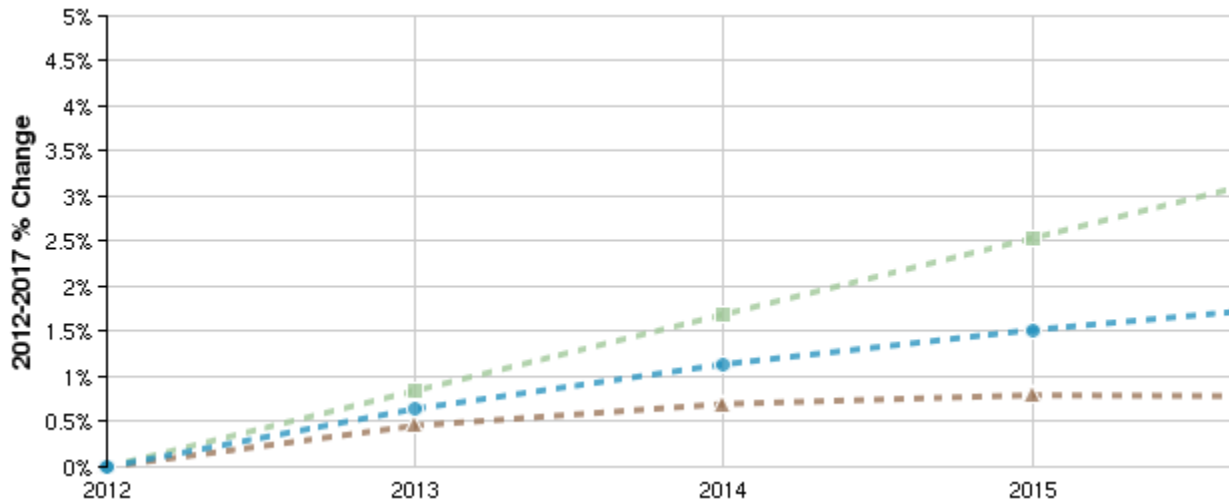
Course Forecast

Fire Science AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
EMS131	1166.4	1133.2	1100.0	1066.8	1033.6	-33.2	-0.35
FSC100	161.1	177.3	193.5	209.7	225.9	16.2	0.45
FSC104	282.4	287.2	292.0	296.8	301.6	4.8	0.18
FSC105	847.0	851.0	855.0	859.0	863.0	4.0	0.07
FSC135	Insufficient Data						
FSC136	Insufficient Data						
FSC155	186.9	203.7	220.5	237.3	254.1	16.8	0.49
FSC234	Insufficient Data						
FSC235	51.3	30.9	10.5	-9.9	-30.3	-20.4	-0.52
FSC236	Insufficient Data						
FSC238	Insufficient Data						
FSC239	69.8	68.3	66.8	65.3	63.8	-1.5	-0.03
FSC240	Insufficient Data						
FSC241	Insufficient Data						

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Fire Science AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
EMS131	1218.0	1512.0	1356.0	1116.0	1250.0	-33.2	-0.35
FSC100	69.0	144.0	228.0	168.0	138.0	16.2	0.45
FSC104	240.0	304.0	354.0	288.0	272.0	4.8	0.18
FSC105	740.0	920.0	810.0	940.0	750.0	4.0	0.07
FSC135	3.0	3.0	228.0		228.0	Insufficient Data	
FSC136	268.0		236.0		100.0	Insufficient Data	
FSC155	105.0	111.0	198.0	225.0	132.0	16.8	0.49
FSC234	9.0	165.0		132.0	6.0	Insufficient Data	
FSC235	138.0	57.0	3.0	117.0	6.0	-20.4	-0.52
FSC236	102.0		168.0		147.0	Insufficient Data	
FSC238	24.0	9.0	183.0		129.0	Insufficient Data	
FSC239	3.0	171.0	3.0	120.0	21.0	-1.5	-0.03
FSC240	18.0	153.0		99.0	69.0	Insufficient Data	
FSC241	21.0	138.0		159.0	75.0	Insufficient Data	

Employment Trends



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	8,011	8,169	158	2%	\$20.84
B Nation	316,419	329,848	13,429	4%	\$21.95
C Yavapai County - All Shared	691	695	4	1%	\$19.25

Source: Economic Modeling Specialists, Inc. November 2012

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The job market is trending up nationally and will continue to have steady growth and job replacement potential at all three levels. This represents only new jobs and is not indicative of replacement of current positions in the county, state and nation. That number looks different.

Enrollment Trends

New enrollment for Fire Science will stay the same but the college should see a decrease of stagnant students. The stagnant students will be returning to finish their Fire Science degrees for promotional opportunities, with newer and higher standards the AAS in Fire Science is lowest degree needed for testing as Captain in the Fire Service. The Fire Science information is an educated estimate from local hiring and promotional opportunities that are starting to rise.

The proposed Emergency Management degree is to fulfill a need in a new and rising field that is a needed, emerging, and growing market that transcends governmental, private, and non-profit sectors which should have an increase in numbers. The Emergency Management information is data driven.

Capital Equipment Needs

The capital equipment needs for Fire Science will be the continued repair and replacement of personal protective equipment. SCBA's will have repair costs including hydrostatic testing and future replacement needs due to end of life. All other power tools (chain saws, extrication equipment, Jaws of Life, etc.), hand tools (axes, pile poles, etc.), and equipment (fire hose, adaptors, nozzles, etc.) will incur maintenance, repair, and replacement costs. Props and apparatus will also incur maintenance, repair, and replacement costs including the immediate need of a new pump for one of the fire engines.

Physical Resources/Facility Needs

Studying the possibility of relocating the Fire Science and Emergency Management programs to the Chino Valley facility depending upon what the institution decides on Allied Health. Live burns can be conducted at the Verde Fire Training Center. Possibly have Fire Science based out of the Verde Fire Training Center to save money since we already have infrastructure at this site including classroom and computers and free use of the burn building and fire training center through our IGA with the Verde Valley Fire Chiefs Association.

Technology Needs

The Fire Science program and Emergency Management Program (if approved) will need to continue buying and maintaining instructor resources for online format to keep up with any changing standards and to enhance the learning environment for students.

Staffing Needs

Adjunct faculty will need to be hired to teach the AAS in Emergency Management (6-8 persons). Part-time assistance may be needed for the Director of Fire Science and Emergency Management. This can all be absorbed into the cost per student ratio with market based or differential credit hours.

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Professional Development Needs

Much of the professional development can be accomplished in house at Yavapai College through the various training programs offered. There is a yearly fire instructor conference in Glendale, Az. That is a good resource for the department's fire academy instructors and every 2 to 3 years there is a certification refresher class that is mandatory for our two instructors who are certified SCBA techs.

Partnerships

Fire Science will need to maintain its continued partnership with; K12 through fire safety programs, continued partnership with Camp Verde High School and Mingus Union High School with the dual enrollment programs. Increase the partnerships with Higher Educational Institutions through adoption of the NFA/FESHE program and continued outreach with Grand Canyon University. Fire Science will need to continue its partnerships with all of the fire departments, fire districts, and emergency response agencies within the county by maintaining our presence, support, and commitment to all through our attendance at the various training officer, fire chief, and advisory board meetings where we can help lead, teach, and guide agencies to help fulfill the educational needs of their agencies. Within the Business and Community sectors the department needs to create more outreach programs and especially with the new Emergency Management program which will give them the knowledge and resources for continuity of operations, short term, and long term sustainability. Partnership expansion is needed in all areas to help promote growth in both programs and to showcase the ease of completing the degrees through our 100% online format which has created an economical and timely path to education for both employer and employee.

Program Outcomes

The Fire Science program outcomes are inline and up to date with IFSAC accreditation standards and NFA/FESHE higher education standards. The Emergency Management program outcomes are new and in line with leading agencies such as FEMA and the Emergency Management Institute.

AAS Fire Science

Upon successful completion of the Fire Science Degree program, the learner will be able to:

1. Develop conditioning strategies, lifelong fitness, nutritional guidelines, and prepare for pre-employment agility tests. (FSC103)
2. Explain issues related to fire prevention and the components and steps of inspection and enforcement. (FSC135)
3. Describe principles and characteristics of hydraulics and operate fire hydraulic pumps currently in use in the fire service. Compute nozzle pressures and characterize related hydraulics problems. (FSC137)
4. Discuss various materials and their relationship to fires as fuel. Describe characteristics of water as a fire suppression agent and identify other suppression agents and strategies. Compare methods and techniques of fire extinguishments. (FSC210)
5. Define types of laws; explain their basic differences, and their function in society. Explain the purpose and roles of national codes and standards concerning their legal influence. Outline the organizational and legal structure of the fire service. Differentiate forms of discrimination and identify areas of potential discrimination in the Fire Service. Explain the scope of the Civil Rights

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Act, list the parameters and explain the basic intent of the American Disabilities Act, Fair Labor Standards Act, and Family Medical Leave Act. (FSC225)

6. Describe fire detection systems and applications, and operate and test fire protection and detection systems. (FSC235)
7. Employ accident control, safety standards, analyze safety hazards, develop inspection safety procedures, evaluate training simulations, prescribe safety procedures for personnel. (FSC236)
8. Direct firefighting operations to achieve maximum property conservation. (FSC238)
9. Lead functions and processes as the emergency scene commander. (FSC239)
10. Incorporate and manage cost containment, budgeting, data analysis, personnel evaluation, community planning, and departmental and public organization. (FSC240)
11. Determine factors and principles related to fire resistance, building codes and fire suppression issues. (FSC241)

EMPHASIS AREA "A"

1. Describe the theory of fire behavior, phases of fire, types of fires, and methods of fire control. (FSC100)
2. Explain the role and functions of fire protection organizations within the community. (FSC100)
3. Identify the main elements determining fire behavior, fuels and fuel properties. (FSC234)
4. Analyze arson, conduct fire investigations, and present evidence and testimony in court. (FSC234)

EMPHASIS AREA "B"

1. Manage scene safety including personal protective equipment in the workplace. Apply steps of wound care including, but not limited to: bleeding control management and splinting swollen/deformed extremities. Show steps of care for the patient suffering from environmental emergencies. (EMS120)
2. Identify the need for cardiopulmonary resuscitation. Manage respiratory and cardiac arrest in adults, children, and infants. Use an Automated External Defibrillator in adults, children and infants. (EMS123)
3. Determine hazardous materials through the identification of placarding, labeling and shipping manifests. Using basic equipment and safety practices respond and control flammable, reactive and toxic hazardous materials incidents. Match the type of control options for each response objective; absorption, damming, diking, dilution, diversion, retention, vapor dispersion, remote valve shut-off. (FSC104)
4. Perform the standard hose rolls and carries used by the fire service. Explain the need for proper ventilation. Explain the method and theory of fire cause determination as it applies to the firefighter to include securing the scene and legal considerations. Explain the components of automatic sprinkler systems and the value of the systems. Perform various drags, lifts, carries, wall breaching, narrow-space manipulation and hoisting techniques directly related to firefighter safety and self-survival. (FSC105)

Driver/Operator Certificate

Upon successful completion of the Fire Science Driver/Operator Certificate program, the learner will be able to:

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1. Describe principles and characteristics of hydraulics and operate fire hydraulic pumps currently in use in the fire service. Compute nozzle pressures and characterize related hydraulics problems. (FSC137)
2. Deploy and operate fire apparatus and equipment and explain the principles and characteristics of water pressure. Identify types of pumps used in fire apparatus. (FSC138)
3. Prescribe safety procedures for personnel operating in the fire ground. (FSC236)
4. Direct firefighting operations to achieve maximum property conservation. (FSC238)
5. Lead and manage functions and processes as the emergency scene commander. (FSC239)
6. Determine factors and principles related to fire resistance, building codes and fire suppression issues. (FSC241)

Firefighter I&II Academy Certificate

Upon successful completion of the Firefighter I & II Academy Certificate program, the learner will be able to:

1. Explain the proper uses for various equipment/tools, the care and use of fire equipment ladders and perform basic ladder raises for multi-person ladders. (FSC105)
2. Describe and perform standard hose rolls and carries used by the fire service. (FSC105)
3. Explain the need for proper ventilation. (FSC105)
4. Explain the method and theory of fire cause determination as it applies to the firefighter to include securing the scene and legal considerations. (FSC105)
5. Identify and explain the components and value of automatic sprinkler systems. (FSC105)
6. Perform various drags, lifts, carries, wall breaching, narrow-space manipulation and hoisting techniques directly related to firefighter safety and self-survival. (FSC105)
7. Identify various hazardous materials and their potential dangers. (FSC104)
8. Perform CPR for victims of all ages and demographics. (EMS123)
9. Provide first aid for victims of all ages and demographics. (EMS120)
10. Develop conditioning strategies, lifelong fitness, nutritional guidelines, and prepare for pre-employment agility tests. (FSC103)

Emergency Management Outcomes

Upon successful completion of the Emergency Management degree program the learner will be able to:

1. Describe the theories, principles, and approaches to the emergency management field.(EMA 101,225)
2. Apply methodology and analytical techniques in emergency planning. (EMA 102)
3. Describe the implementation process for public assistance during disaster recovery. (EMA 110)
4. Communicate the importance of organizational leadership, performance, and vision. (EMA130,250)
5. Identify risks and hazards that affect the sustainability framework for natural and technological hazards and how preparedness, response, recovery, and mitigation efforts can create a sustainable future. (EMA 140)

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6. Identify proper foresight and management to reduce or eliminate losses due to disasters and/or catastrophe. (EMA 210)
7. Define terrorism, typologies of terrorism, financing of terrorism and the tactics and force multipliers of terrorism. (EMA240)
8. Analyze the purpose and scope of legal issues within emergency management to include; administrative agencies, civil liberties, contract and labor issues, employee rights, and the rights of others. (EMA245)
9. Discuss collaborative emergency management, phases of emergency management, health sector planning and response, new technology, budgeting, and the future direction of emergency management. (EMA230,220)

Projections and Plans for the Future

Future projections are for the Fire Science field to slowly grow for the next few years and then see a resurgence in the job market through attrition of retiring workers and the need for higher levels of staffing. The Emergency Management field is very diverse and will keep growing in the private sector, government, non-profit, realms. The Emergency Management program should see continued growth with the possibility of spurring the opportunity of a Homeland Security degree program.

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**Associate of Applied Science in Gunsmithing
Gunsmithing Certificate
Gunsmithing Advanced Certificate**

Mission Statement

The focus of the program is to provide the graduating student with enough knowledge to acquire employment in various areas of the custom gun trade, whether being an employee or a small business owner.

Graduate Summary

Gunsmithing AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Gunsmithing	Associate of Applied Science	7	4	4	5	3	23
Gunsmithing	Certificate <1 yr.	4	5				9
Gunsmithing	Certificate >1 yr.		2	8	13	16	39

Enrollment Trend

Gunsmithing AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	17	18	10	18
Enrollment	304	334	224	385
Avg. Class Size	17.9	18.6	22.4	21.4
Total SCH	839.0	899.0	838.0	1193.0
SCH by Location				
Prescott	126.0	138.0	128.0	81.0
Verde Valley	48.0	67.0	15.0	17.0
Prescott Valley	54.0	56.0		
C.T.E.C	386.0	436.0	542.0	720.0
Chino Valley	22.0	40.0	41.0	24.0
Online	152.0	162.0	112.0	312.0
Enrollee Success				
%Successful	76%	75%	77%	0%

*Enrollee success equals a letter grade of A,B,C, or S.

Fall 2012 Academic Period may be incomplete.

Educational Master Plan 2012-2017

Gunsmithing AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	17	16	13
Enrollment	270	301	243
Avg. Class Size	15.9	18.8	18.7
Total SCH	707.0	829.0	810.0
SCH by Location			
Prescott	105.0	100.0	110.0
Verde Valley	54.0	24.0	
Prescott Valley	51.0	81.0	
C.T.E.C	312.0	368.0	434.0
Chino Valley			15.0
Online	149.0	247.0	164.0
Dual Enrollment	15.0	9.0	87.0
Enrollee Success			
%Successful	74%	74%	82%

**Enrollee success equals a letter grade of A,B,C, or S.*

Gunsmithing AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	4	4	3
Enrollment	74	64	78
Avg. Class Size	18.5	16.0	26.0
Total SCH	104.0	90.0	107.0
SCH by Location			
Prescott	42.0	36.0	58.0
Prescott Valley	38.0	16.0	
Chino Valley		14.0	26.0
Online	24.0	24.0	23.0
Enrollee Success			
%Successful	64%	75%	68%

**Enrollee success equals a letter grade of A,B,C, or S.*

Educational Master Plan 2012-2017

Gunsmithing AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	38	38	26	18
Enrollment	648	699	545	385
Avg. Class Size	17.1	18.4	21.0	21.4
Total SCH	1650.0	1818.0	1755.0	1193.0
SCH by Location				
Prescott	273.0	274.0	296.0	81.0
Verde Valley	102.0	91.0	15.0	17.0
Prescott Valley	143.0	153.0		
C.T.E.C	698.0	804.0	976.0	720.0
Chino Valley	22.0	54.0	82.0	24.0
Online	325.0	433.0	299.0	312.0
Dual Enrollment	15.0	9.0	87.0	
Enrollee Success				
%Successful	74%	74%	78%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
AY 2012-13 Academic Period may be incomplete.				

Course Enrollment

Gunsmithing AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
BSA100	10	21.9	219	219.0	83%	8%	9%
BSA220	4	20.5	82	246.0	84%	12%	2%
BSA221	3	16.7	50	150.0	72%	14%	14%
CSA140	3	27.3	82	164.0	49%	21%	30%
GST100	1	32.0	32	320.0	72%	22%	6%
GST150	1	23.0	23	230.0	91%	0%	9%
GST191	2	12.0	24	96.0	88%	0%	13%
GST200	1	17.0	17	170.0	100%	0%	0%
GST250	1	16.0	16	160.0	100%	0%	0%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

Educational Master Plan 2012-2017

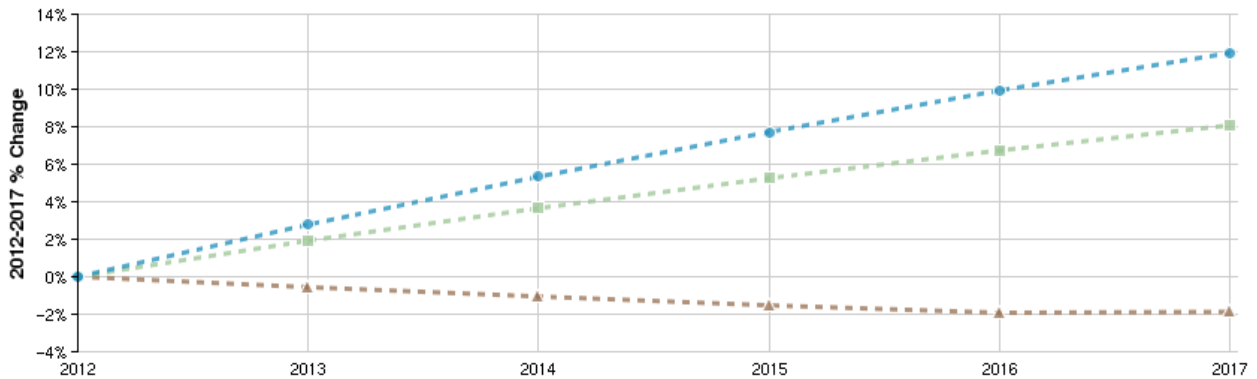
Course Forecast

Gunsmithing AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
BSA100	279.4	290.1	300.8	311.5	322.2	10.7	0.24
BSA220	232.7	227.0	221.3	215.6	209.9	-5.7	-0.12
BSA221	145.4	118.1	90.8	63.5	36.2	-27.3	-0.69
CSA140	239.6	262.7	285.8	308.9	332.0	23.1	0.44
GST100	316.5	359.5	402.5	445.5	488.5	43.0	0.99
GST150	225.0	255.0	285.0	315.0	345.0	30.0	0.94
GST191	94.6	103.8	113.0	122.2	131.4	9.2	0.68
GST200	159.0	177.0	195.0	213.0	231.0	18.0	0.87
GST250	153.0	169.0	185.0	201.0	217.0	16.0	0.88

Gunsmithing AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
BSA100	170.0	320.0	310.0	329.0	219.0	10.7	0.24
BSA220	330.0	114.0	240.0	225.0	246.0	-5.7	-0.12
BSA221	285.0	171.0	120.0	168.0	150.0	-27.3	-0.69
CSA140	134.0	121.0	282.0	292.0	164.0	23.1	0.44
GST100	140.0	200.0	250.0	270.0	320.0	43.0	0.99
GST150	100.0	150.0	200.0	190.0	230.0	30.0	0.94
GST191	68.0	48.0	48.0	84.0	96.0	9.2	0.68
GST200	100.0	90.0	100.0	130.0	170.0	18.0	0.87
GST250	100.0	90.0	100.0	130.0	160.0	16.0	0.88

Employment Trends

YC graduates have continued to be well placed nation-wide and on the national level. Many become machinists while others start their own businesses or go to work for small and large firearm manufacturers. The industry has exploded in recent years and it is unclear what is driving the trends. What is clear is that more firearms are being manufactured and sold in the U.S. than at any point of time in history.



Educational Master Plan 2012-2017

Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	5,073	5,678	605	12%	\$14.82
B Nation	265,905	287,378	21,473	8%	\$15.38
C Yavapai County - All Shared	189	186	-3	-2%	\$13.54

Source: Economic Modeling Specialists, Inc. November 2012

Enrollment Trends

Enrollment has skyrocketed in the Gunsmithing program and the institution recognized the need to pare down the 4 year wait list. Space was expanded to accommodate two cohorts each fall allowing the program to take two cohorts of 25 instead of one. This move allows the program to accommodate 100 students. Even with the expansion the Gunsmithing program, there still is a three year waitlist to get in.

An issue that needs to be addressed is that 30% of students withdraw the first semester. This is due to the 40 hour per week rigor students need to be successful in the program. Many students need to be employed and cannot make the program work in their schedules. Due to the concentrated skill-set of this program, it is important to maintain the hours and rigor of the program. Therefore, the recommendation is to leave the program the same way.

Capital Equipment Needs

Most equipment is fairly current and will continue to be replaced through the college's 5 year equipment replacement cycle. The department has been very strategic in fixing equipment to increase longevity. Some of the older machines are getting difficult to get parts for so that will continue to be an issue over time.

Physical Resources/Facility Needs

Facilities were recently expanded. The department will not be requesting additional space in the new master plan.

Technology Needs

The department strives to maintain current technology. A third year was added to the program to include CNC machining which is quickly replacing traditional manual lathes and mills. That technology is expensive but so far has been funded through grants. The department is well equipped for the next five years.

Staffing Needs

Faculty and lab techs have been increased to accommodate the growth. No new positions will be needed in the foreseeable future.

Educational Master Plan 2012-2017

Professional Development Needs

The department sends instructors to the Vegas Shot Show on an annual basis. This show is the major area that the department receives industry current information and it also allows them to meet with our partners once a year.

Partnerships

YC partners with Browning primarily on the stock making portion of the program. Browning provides the wood for stocks as well as fiberglass knock offs that can be modified. HAAS also partners as part of the CNC program portion and students in the top 10% can attend the HAAS grad school.

Program Outcomes

Outcomes are still current and will be modified based on any shifts in industry which most likely will center around changes in equipment and manufacturing.

Upon successful completion of the Gunsmithing Certificate program, the learner will be able to:

1. Safely operate hand and machine tools common to the Gunsmithing trade.
2. Use measuring tools such as micrometers, indicators, verniers and various gauges.
3. Use a computer to develop ballistic data and to document research assignments.
4. Completely disassemble firearms for metal refinishing and re-assembly.
5. Identify different rifle operating systems.
6. Identify different shotgun operating systems including maintenance, repair and customization.
7. Layout, duplicate, inlet, fit, glass bed, install accessories, apply finish and checker the Classic American rifle stock

Projections and Plans for the Future

The program is well positioned to continue on for the next 10 years and will not require any major renovations. Rather, there may be minor renovations due to lighting problems. The most evident area in need of work is the "grad school" third year where students are entering CNC, Guild Artist and Sporting Firearms. That area will need marketing and a pipeline of students that are from around the country.

Educational Master Plan 2012-2017

Associate of Applied Science in Industrial Plant Technician Industrial Plant Technician Certificate

Mission Statement

The Industrial Plant Technician degree program is designed to prepare students for careers in plant machinery installation, maintenance, and fabrication.

Note: Freeport McMoRan, Inc. sponsors a mining program designed to prepare students for direct employment in the mining industry.

Graduate Summary

Industrial Plant Technician AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Industrial Plant Technician	Associate of Applied Science		1	5	2	1	9
Industrial Plant Technician	Certificate >1 yr.				2	1	3

Enrollment Trend

Industrial Plant Technician AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	23	26	35	24
Enrollment	312	389	570	341
Avg. Class Size	13.6	15.0	16.3	14.2
Total SCH	931.0	1185.0	1638.0	931.0
SCH by Location				
C.T.E.C	673.0	648.0	695.0	451.0
Chino Valley			63.0	69.0
Online	207.0	204.0	165.0	177.0
Dual Enrollment		333.0	703.0	180.0
Enrollee Success				
%Successful	77%	75%	75%	0%

**Enrollee success equals a letter grade of A,B,C, or S.*

Fall 2012 Academic Period may be incomplete.

Educational Master Plan 2012-2017

Industrial Plant Technician AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	21	19	25
Enrollment	266	241	350
Avg. Class Size	12.7	12.7	14.0
Total SCH	694.0	661.0	982.0
SCH by Location			
C.T.E.C	463.0	329.0	686.0
Online	177.0	219.0	201.0
Dual Enrollment	15.0	95.0	83.0
Enrollee Success			
%Successful	77%	73%	78%

**Enrollee success equals a letter grade of A,B,C, or S.*

Industrial Plant Technician AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	0		
Enrollment	0		
Avg. Class Size			
Total SCH			
SCH by Location			
Enrollee Success			
%Successful			

**Enrollee success equals a letter grade of A,B,C, or S.*

Educational Master Plan 2012-2017

Industrial Plant Technician AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	44	45	60	24
Enrollment	578	630	920	341
Avg. Class Size	13.1	14.0	15.3	14.2
Total SCH	1625.0	1846.0	2620.0	931.0
SCH by Location				
C.T.E.C	1136.0	977.0	1381.0	451.0
Chino Valley			63.0	69.0
Online	384.0	423.0	366.0	177.0
Dual Enrollment	15.0	428.0	786.0	180.0
Enrollee Success				
%Successful	77%	74%	76%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
AY 2012-13 Academic Period may be incomplete.				

Educational Master Plan 2012-2017

Course Enrollment

Industrial Plant Technician AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
AGS101	1	21.0	21	63.0	71%	24%	5%
AUT101	10	21.2	212	424.0	73%	18%	9%
AUT151	7	17.3	121	605.0	69%	8%	22%
BSA110	3	26.3	79	237.0	58%	29%	13%
BSA220	4	20.5	82	246.0	84%	12%	2%
CNC101	2	17.5	35	70.0	89%	0%	3%
CNC102	2	17.0	34	68.0	94%	6%	0%
CNC201	2	17.5	35	105.0	97%	0%	3%
IPT110	1	11.0	11	33.0	91%	9%	0%
IPT120	1	11.0	11	33.0	82%	9%	9%
IPT130	1	9.0	9	27.0	100%	0%	0%
IPT140	1	1.0	1	3.0	100%	0%	0%
IPT160	1	1.0	1	3.0	100%	0%	0%
IPT260	1	1.0	1	3.0	100%	0%	0%
IPT295	2	4.0	8	24.0	100%	0%	0%
MET116	1	20.0	20	20.0	85%	10%	5%
MET160	1	19.0	19	38.0	95%	5%	0%
WLD112	5	14.0	70	140.0	64%	29%	7%
WLD113	4	12.3	49	98.0	84%	14%	2%
WLD145	4	12.0	48	192.0	67%	27%	6%
WLD200	2	9.0	18	72.0	67%	28%	6%
WLD210	2	12.0	24	72.0	79%	13%	8%
WLD250	2	5.5	11	44.0	91%	9%	0%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

Educational Master Plan 2012-2017

Course Forecast

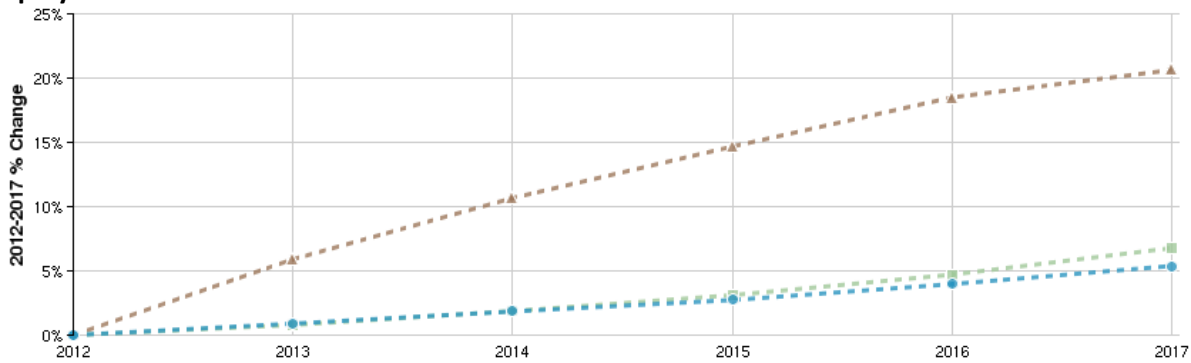
Industrial Plant Technician AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
AGS101	54.8	35.3	15.8	-3.8	-23.3	-19.5	-0.87
AUT101	331.3	269.9	208.5	147.1	85.7	-61.4	-0.57
AUT151	564.5	673.5	782.5	891.5	1000.5	109.0	0.82
BSA110	230.4	247.2	264.0	280.8	297.6	16.8	0.78
BSA220	232.7	227.0	221.3	215.6	209.9	-5.7	-0.12
CNC101	40.1	32.3	24.5	16.7	8.9	-7.8	-0.34
CNC102	55.4	58.2	61.0	63.8	66.6	2.8	0.23
CNC201	93.8	131.3	168.8	206.3	243.8	37.5	0.94
IPT110	Insufficient Data						
IPT120	Insufficient Data						
IPT130	Insufficient Data						
IPT140	Insufficient Data						
IPT160	Insufficient Data						
IPT260	3.0	-3.0	-9.0	-15.0	-21.0	-6.0	-0.83
IPT295	4.4	-23.0	-50.3	-77.6	-104.9	-27.3	-0.89
MET116	16.9	14.7	12.5	10.3	8.1	-2.2	-0.52
MET160	32.7	26.1	19.5	12.9	6.3	-6.6	-0.75
WLD112	109.2	137.6	166.0	194.4	222.8	28.4	0.87
WLD113	102.3	114.9	127.5	140.1	152.7	12.6	0.77
WLD145	172.4	205.2	238.0	270.8	303.6	32.8	0.93
WLD200	71.6	74.8	78.0	81.2	84.4	3.2	0.50
WLD210	64.4	67.1	69.8	72.5	75.2	2.7	0.57
WLD250	39.4	22.2	5.0	-12.2	-29.4	-17.2	-0.81

Educational Master Plan 2012-2017

Industrial Plant Technician AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
AGS101	123.0	141.0	78.0	66.0	63.0	-19.5	-0.87
AUT101	622.0	518.0	192.0	300.0	424.0	-61.4	-0.57
AUT151	205.0	125.0	120.0	415.0	605.0	109.0	0.82
BSA110	147.0	219.0	210.0	207.0	237.0	16.8	0.78
BSA220	330.0	114.0	240.0	225.0	246.0	-5.7	-0.12
CNC101		86.0	48.0	18.0	70.0	-7.8	-0.34
CNC102		48.0	72.0	40.0	68.0	2.8	0.23
CNC201			30.0	45.0	105.0	37.5	0.94
IPT110	24.0	30.0	15.0		33.0	Insufficient Data	
IPT120	24.0	30.0	15.0		33.0	Insufficient Data	
IPT130	21.0	30.0	15.0		27.0	Insufficient Data	
IPT140	21.0	30.0	15.0		3.0	Insufficient Data	
IPT160	21.0	30.0	15.0		3.0	Insufficient Data	
IPT260		18.0	24.0	9.0	3.0	-6.0	-0.83
IPT295		93.0	78.0	12.0	24.0	-27.3	-0.89
MET116		23.0	29.0	16.0	20.0	-2.2	-0.52
MET160	56.0	64.0	34.0	34.0	38.0	-6.6	-0.75
WLD112	14.0	18.0	36.0	50.0	140.0	28.4	0.87
WLD113	54.0	56.0	40.0	94.0	98.0	12.6	0.77
WLD145	44.0	88.0	80.0	120.0	192.0	32.8	0.93
WLD200	56.0	68.0	84.0	68.0	72.0	3.2	0.50
WLD210	54.0	63.0	63.0	54.0	72.0	2.7	0.57
WLD250	128.0	56.0	68.0	52.0	44.0	-17.2	-0.81

Educational Master Plan 2012-2017

Employment Trends



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	4,762	5,019	257	5%	\$21.05
B Nation	344,293	367,620	23,327	7%	\$21.54
C Yavapai County - All Shared	74	89	15	20%	\$18.12

Source: Economic Modeling Specialists, Inc. November 2012

The county growth is set for 20% over the next 5 years. Trends are going up slightly for Arizona with 5% growth anticipated through 2017 followed by a much larger spike from 2018 on. In 2011, there were 4762 openings in Arizona. There are only three programs in Arizona who combined are not meeting the demand. The county and state look to see this continue as the job market opens up. Asarco signed on with interns, YC still has FMI interns, and the department has placed a few students at Drake which may turn into something larger when the economy recovers enough for building to resume. The college and department need to keep educating people as to what this trade is exactly, as most do not have clue.

Capital Equipment Needs

There is a lot of equipment needed for this course. The department needs five lathes at \$2600 each, five mills which would be combined within the lathes. Assorted machine tooling which would run close to \$2000. A standalone drill press at \$1500. Tool grinder at \$500. Centrifugal pump heads at \$450 each 4 each needed. Vane pumps, 4 each at \$200 each. Assorted valves, (gate valves, ball valves, butterfly valves, globe valves, needle valves, pinch valves, safety valves, plug valves, diaphragm valves, and spool valves) these would total around \$3000. Pneumatic control boards, eight each, \$500 per board estimate.

Physical Resources/Facility Needs

The department believes this program requires a shop where labs can be set up and secured to achieve the proper learning level of the students. The department would like to set up dry erase boards attached to the walls and at least one freestanding.

Technology Needs

Technology needs to continuously be updated.

Educational Master Plan 2012-2017

Staffing Needs

Perhaps only adjuncts but no full time for the foreseeable future.

Professional Development Needs

Over the past year the lead instructor has taken two separate courses which have greatly helped in the lab set up and/or lab fabrication. The lead instructor would be interested in taking further courses in these subjects and other subjects that would benefit the department. Pima offers a 24 credit hour block for educators. It would be beneficial for the college to offer a similar program.

Partnerships

Partnerships are good. At present the department has partnerships with Asarco and FMI. The department believes the college should further invest in partnerships, not only in mining but also in manufacturing. CMEX and Phoenix cement, Hansen, Drake, Resolution, and Rosemont are a few companies that may well be interested in partnerships or at the very least jobs for students/completers.

Program Outcomes

Program outcomes are reviewed and while they could use some updating,(which would be in verbiage and not an actual body) they are adequate at this time as indicated below.

1. Troubleshoot, replace, and repair hydraulic and pneumatic system components. (IPT 110, IPT 120, IPT 160, IPT 295, MET 160)
2. Fabricate and repair industrial machinery components. (IPT 260, IPT 295, WLD 112, WLD 113, WLD 250)
3. Safely utilize machine shop equipment. (AGS 101, IPT 260, IPT 261, IPT 295, MET 116, MET 150)
4. Troubleshoot and repair conveyance systems. (IPT 260)
5. Troubleshoot and repair bulk material handlers (IPT 140, IPT 260, IPT 261)
6. Repair and replace valves (IPT 130)

Projections and Plans for the Future

In the next two years, the department plans to move into a new shop. Plans are to continue fabricating lab and learning equipment as has been done over the past six years. Improvement is key to staying on top of industrial needs within the Industrial Mechanic trade. Every year text books are reviewed for this course, as new texts becomes available. Some text changes may well be made.

Educational Master Plan 2012-2017

Associate of Applied Science in Paramedicine Paramedicine Certificate

Mission Statement

The Associate of Applied Science in Paramedicine prepares students to work as paramedics in emergency care, stabilization and immobilization of victims.

Graduate Summary

Paramedicine AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Paramedicine	Associate of Applied Science	7	8	12	7	3	37
Paramedicine	Certificate <1 yr.	1	8				9
Paramedicine	Certificate >1 yr.		10	1	7	2	20

Enrollment Trend

Paramedicine AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	1	4	1	1
Enrollment	23	64	23	23
Avg. Class Size	23.0	16.0	23.0	23.0
Total SCH	115.0	527.0	276.0	207.0
SCH by Location				
Prescott Valley	115.0	255.0	276.0	
Enrollee Success				
%Successful	100%	100%	100%	0%

*Enrollee success equals a letter grade of A,B,C, or S.

Fall 2012 Academic Period may be incomplete.

Educational Master Plan 2012-2017

Paramedicine AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	2	2	1
Enrollment	30	34	23
Avg. Class Size	15.0	17.0	23.0
Total SCH	240.0	255.0	276.0
SCH by Location			
Prescott Valley	240.0		276.0
Enrollee Success			
%Successful	100%	94%	100%

**Enrollee success equals a letter grade of A,B,C, or S.*

Paramedicine AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	1	2	2
Enrollment	15	38	46
Avg. Class Size	15.0	19.0	23.0
Total SCH	150.0	264.0	138.0
SCH by Location			
Prescott Valley	150.0	96.0	138.0
Enrollee Success			
%Successful	100%	100%	100%

**Enrollee success equals a letter grade of A,B,C, or S.*

Paramedicine AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	4	8	4	1
Enrollment	68	136	92	23
Avg. Class Size	17.0	17.0	23.0	23.0
Total SCH	505.0	1046.0	690.0	207.0
SCH by Location				
Prescott Valley	505.0	351.0	690.0	
Enrollee Success				
%Successful	100%	99%	100%	0%

**Enrollee success equals a letter grade of A,B,C, or S.*

AY 2012-13 Academic Period may be incomplete.

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Course Enrollment

Paramedicine AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
EMS241	1	23.0	23	276.0	100%	0%	0%
EMS242	1	23.0	23	276.0	100%	0%	0%
EMS243	1	23.0	23	69.0	100%	0%	0%
EMS244	1	23.0	23	69.0	100%	0%	0%
*Cross-listed courses counted as individual course sections (not merged).							
Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U							
Incomplete student courses excluded from Success measures							

Course Forecast

Paramedicine AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
EMS241	231.0	213.0	195.0	177.0	159.0	-18.0	-0.47
EMS242	229.1	241.3	253.5	265.7	277.9	12.2	0.16
EMS243	120.2	131.5	142.8	154.1	165.4	11.3	0.41
EMS244	Insufficient Data						

Paramedicine AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
EMS241	324.0	288.0	180.0	204.0	276.0	-18.0	-0.47
EMS242	100.0	400.0	150.0	170.0	276.0	12.2	0.16
EMS243	50.0	85.0	115.0	160.0	69.0	11.3	0.41
EMS244	348.0	276.0		348.0	69.0	Insufficient Data	

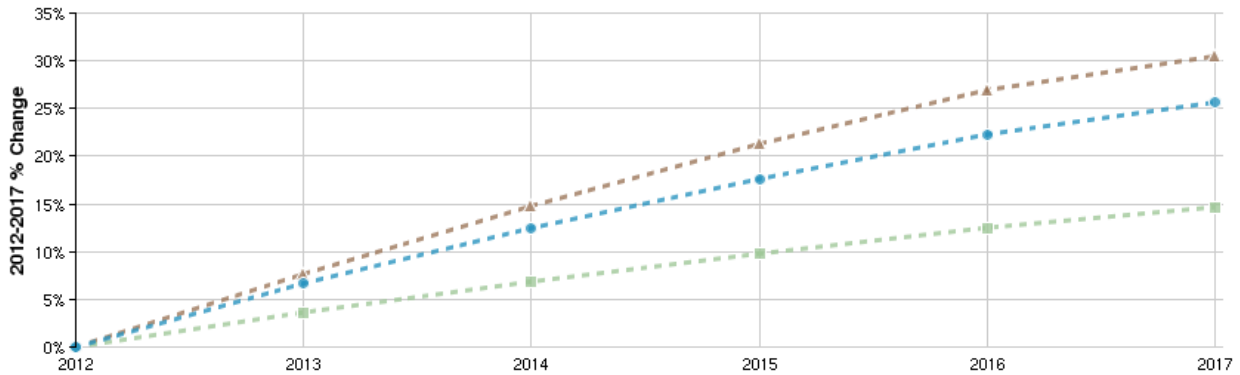
Enrollment Trends

The Paramedicine Program cohort can only include 24 students as mandated by the Department of Health Services. Since the beginning of the program the enrollment has stayed close to the maximum. The EMS Department only offers one Paramedicine Program at a time so there is no overlap of courses. The numbers in each semester will vary dependent on the specific courses that are being taught. The program should remain competitive considering the new accreditation requirement from NREMT which will require all Paramedics to complete a program that is Nationally Accredited by the year 2013. In addition, Yavapai College will remain far more competitive than other programs due to affordability of our programs.

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Employment Trends

The EMSI data below shows a slight but steady growth in this field. The additional information gathered for this report shows much greater growth (Projections and Plans for the Future).



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	3,921	4,927	1,006	26%	\$14.13
B Nation	230,934	264,806	33,872	15%	\$14.77
C Yavapai County - All Shared	112	146	34	30%	\$15.42

Source: Economic Modeling Specialists, Inc. November 2012

Capital Equipment Needs

Within the next 5-10 years most of the high-end medical equipment and training manikins will be approaching 10-years in service. Simulator equipment, cardiac monitors will be reviewed by program staff to make sure the technology used meets industry standards and will need to be upgraded and/or replaced. Current medical equipment will be old technology with two year and will need to be upgraded to state of the art equipment to remain competitive and deliver the most current industry based training available.

Physical Resources/Facility Needs

The current classroom space for the Paramedic Program is adequate. However, the program does need additional clinical skills space. At the current time, the program competes with other EMS courses for skills lab space for break-out sessions. As renovations are consider, they should include lab space, technology integrated classrooms and specialty facilities such as cadaver labs.

Technology Needs

Technology will continue to play a very large role in both the future delivery method and the content of courses offered. Students will need to have access to computers and the College will need to have adequate support of technology maintenance and issues.

Tablet style documentation is becoming the standard of care. The purchase of mobile, portable platforms on which students can learn and practice patient care documentation will enhance learning and prepare

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the students to work in real world environments. Options for real time recording and/or transmission of patient data from ambulance to classroom need to be explored.

As simulations become more dominate in the health care industry, the College will need to consider purchase of additional and more advanced training simulators.

Staffing Needs

The current instructional staffing in the Paramedicine Program meets the needs at this time and the future as long as the college continues to offer only one cohort at a time. An increase in hours of part time technicians to accommodate the teaching needs of the faculty in the program would be beneficial. In addition, a refinement of the hiring process and an increase in wages would help ensure a more dedicated and dependable core group of personnel.

Professional Development Needs

With the increase in the use of technology as a platform for delivery of material as well as the use of technology that is health care specific, instructors will need support via professional development opportunities in order to remain current. TeLS has traditionally provided support and training for developing online materials and this system currently seems to be meeting those needs.

The increased use of simulation will require training in this area for full time and adjunct faculty and part time staff. Because the medical field changes so rapidly, staff will need to have continued professional development in order to stay current.

Partnerships

The Paramedicine Program partners with local EMS providers and first responders including fire agencies in the area for clinical and field practicums for all students in the program. Program staff is currently in discussion with the College Allied Health program to partner in the use of cadaver labs which is now required by accreditation.

Program Outcomes

Upon successful completion of the Paramedicine Degree program, the learner will be able to:

1. Explain the human anatomy and function of the cells to systemic organs and functions of each.
2. Identify the roles, responsibilities, medical, legal and ethical issues that impact decisions within an EMS system.
3. Perform patient assessments, analyzing medical history, physical exam and/or mechanisms of injury to formulate a patient treatment plan.
4. Describe standards and guidelines that help ensure safe and effective ground and air medical care and transport of all types of incidents.
5. Perform all aspects of patient care procedures including communication documentation, administration of medications and readiness of equipment and personnel.

Projections and Plans for the Future

The job outlook for Paramedics from 2010-20, according to the U.S. Department of Labor is as follows:

Employment of emergency medical technicians (EMTs) and paramedics is expected to grow by 33 percent from 2010 to 2020, much faster than the average for all occupations. Emergencies such as

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car crashes, natural disasters, and violence will continue to create demand for EMTs and paramedics. There will also continue to be demand for part-time, volunteer EMTs and paramedics in rural areas and smaller metropolitan areas.

Growth in the middle-aged and elderly population will lead to an increase in the number of age-related health emergencies, such as heart attacks or strokes. This, in turn, will lead to an increase in the demand for EMTs and paramedic services. An increase in specialized medical facilities will require more EMTs and paramedics to transfer patients with specific conditions to these facilities for treatment.

In recent years, companies that build ambulances have started to update and redesign their interiors to keep EMTs, paramedics, and patients safer during transport. These companies are hiring EMTs and paramedics as consultants to learn their ideas about such updates and designs. (U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, 2010-2020.)

Additional Trends and Concerns

Outside companies such as WIZARD may continue to offer programs in our service area and compete with our program for students. As a result, the program is reducing the numbers of months that the students must attend. Moving to a shorter Paramedic cohort has resulted in revision of curriculum. Finding clinical space for students will remain a concern and adds to the importance of maintaining our partnerships.

Program staff will consider offering Critical Care Transport course for Paramedics. Explore the possibility of integrating all Allied Health programs together.

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Associate of Applied Science in Professional Pilot – Helicopter Associate of Applied Science in Professional Pilot – Airplane

Mission Statement

The Professional Pilot - Helicopter degree is designed to provide the student with the necessary skills and Federal Aviation Administration certificates to gain entry-level employment as a commercial helicopter pilot or flight instructor. Emphasis is placed on aeronautical decision making, flight safety and effective flying and teaching techniques.

Graduate Summary

Aviation-Professional Pilot-Helicopter AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Professional Pilot Helicopter	Associate of Applied Science				4	26	30
Helicopter Pilot Entrepreneur	Certificate <1 yr.	1					1
Helicopter Pilot Entrepreneur	Certificate			1			1

Enrollment Trend

Aviation-Professional Pilot-Helicopter AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	2	8	16	20
Enrollment	3	85	204	236
Avg. Class Size	1.5	10.6	12.8	11.8
Total SCH	9.0	363.0	696.0	752.0
SCH by Location				
C.T.E.C			229.0	256.0
Enrollee Success				
%Successful	100%	87%	90%	0%

*Enrollee success equals a letter grade of A,B,C, or S.

Fall 2012 Academic Period may be incomplete.

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Aviation-Professional Pilot-Helicopter AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	3	7	19
Enrollment	29	104	204
Avg. Class Size	9.7	14.9	10.7
Total SCH	129.0	461.0	698.0
SCH by Location			
C.T.E.C	3.0	141.0	220.0
Enrollee Success			
%Successful	90%	84%	86%

**Enrollee success equals a letter grade of A,B,C, or S.*

Aviation-Professional Pilot-Helicopter AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	5	12	20
Enrollment	61	139	197
Avg. Class Size	12.2	11.6	9.9
Total SCH	278.0	562.0	660.0
SCH by Location			
C.T.E.C		166.0	197.0
Enrollee Success			
%Successful	89%	94%	91%

**Enrollee success equals a letter grade of A,B,C, or S.*

Aviation-Professional Pilot-Helicopter AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	10	27	55	20
Enrollment	93	328	605	236
Avg. Class Size	9.3	12.1	11.0	11.8
Total SCH	416.0	1386.0	2054.0	752.0
SCH by Location				
C.T.E.C	3.0	307.0	646.0	256.0
Enrollee Success				
%Successful	89%	89%	89%	0%

**Enrollee success equals a letter grade of A,B,C, or S.*

AY 2012-13 Academic Period may be incomplete.

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Course Enrollment

Aviation-Professional Pilot-Helicopter AAS - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
AVT109	3	17.0	51	102.0	98%	2%	0%
AVT110	2	16.0	32	64.0	97%	3%	0%
AVT111	6	9.0	54	270.0	85%	15%	0%
AVT112	6	9.2	55	275.0	84%	16%	0%
AVT120	3	21.0	63	189.0	90%	10%	0%
AVT121	3	24.7	74	370.0	68%	32%	0%
AVT209	3	6.7	20	40.0	100%	0%	0%
AVT210	3	8.7	26	63.0	88%	8%	0%
AVT211	6	7.3	44	220.0	95%	5%	0%
AVT212	3	5.0	15	75.0	93%	7%	0%
AVT220	3	10.3	31	93.0	97%	3%	0%
AVT221	5	6.2	31	124.0	94%	3%	0%
AVT230	3	10.0	30	60.0	97%	3%	0%
AVT231	3	10.0	30	60.0	77%	3%	0%
AVT240	3	16.3	49	49.0	98%	0%	2%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

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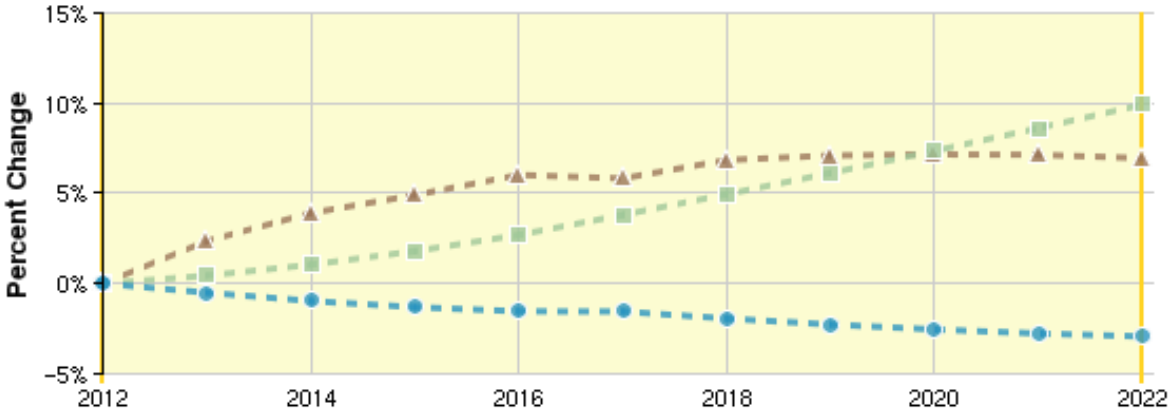
Course Forecast

Aviation-Professional Pilot-Helicopter AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
AVT109	Insufficient Data						
AVT110	127.0	89.0	51.0	13.0	-25.0	-38.0	-0.46
AVT111	308.8	356.3	403.8	451.3	498.8	47.5	0.73
AVT112	360.0	460.0	560.0	660.0	760.0	100.0	0.71
AVT120	Insufficient Data						
AVT121	Insufficient Data						
AVT209	Insufficient Data						
AVT210	66.2	87.5	108.8	130.1	151.4	21.3	0.94
AVT211	Insufficient Data						
AVT212	Insufficient Data						
AVT220	63.6	82.8	102.0	121.2	140.4	19.2	0.79
AVT221	101.0	159.0	217.0	275.0	333.0	58.0	0.91
AVT230	Insufficient Data						
AVT231	Insufficient Data						
AVT240	Insufficient Data						

Aviation-Professional Pilot-Helicopter AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
AVT109					102.0	Insufficient Data	
AVT110			140.0	228.0	64.0	-38.0	-0.46
AVT111			175.0	300.0	270.0	47.5	0.73
AVT112			75.0	345.0	275.0	100.0	0.71
AVT120				114.0	189.0	Insufficient Data	
AVT121				200.0	370.0	Insufficient Data	
AVT209					40.0	Insufficient Data	
AVT210		6.0	6.0	48.0	63.0	21.3	0.94
AVT211				80.0	220.0	Insufficient Data	
AVT212					75.0	Insufficient Data	
AVT220	3.0	3.0	12.0	15.0	93.0	19.2	0.79
AVT221			8.0	20.0	124.0	58.0	0.91
AVT230				14.0	60.0	Insufficient Data	
AVT231				14.0	60.0	Insufficient Data	
AVT240				8.0	49.0	Insufficient Data	

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Employment Trends



Region	2012 Jobs	2022 Jobs	% Change
● Arizona	4,711	4,573	-2.9%
■ Nation	123,665	135,927	9.9%
▲ Yavapai County	23	25	7.0%

Source: Economic Modeling Specialists, Inc. November 2012

Enrollment in the helicopter program has continued to grow and the maximum capacity for the program is between 125 and 150 students annually. The department has consistently run over 100 students ever since the program reached the 6 semester capacity. Because the department is on the front end of a projected 10 year national pilot shortage which is beginning to receive considerable attention due to the lack of pilots in US schools, the department is pushing waiting lists out to three semesters as the word gets out. Veterans continue to heavily populate the program with the tremendous post 911 benefit they get. The program is very new but is already the second largest helicopter program in the United States.

Capital Equipment Needs

Capital equipment will focus on simulation needs. Grants have been written and will fund the program with soft money or profits as necessary as it is costly. 8 simulators are needed heading into the 2013-14 semester. Those will be handled with soft money or program profits and will easily exceed \$100,000.

Physical Resources/Facility Needs & Technology Needs

There are multiple parts to this since the degree is being consolidated into one degree with four emphasis areas. Two areas are in discussion; the need for an ATC SIM lab at CTEC and the need for a runway on the Chino Valley Campus for UAS aircraft. Those will be a major part of the ten year plan. The runway costs

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will be shared with the flight providers. The classroom is scheduled to be built at CTEC in 2013-14 as part of a 6 classroom expansion.

Staffing Needs

Eventually the department will get back to some form of full-time supervision. For now the department is adjunct based but it is anticipated that by 2014-15 the need for at least one full time faculty member will be apparent.

Professional Development Needs

The need to return to an intense “boot camp” for adjunct instructors is evident. There are many adjuncts in aviation as is typical of these programs, and they need to be more rounded and equipped for the classroom. The department needs to develop a more robust mentoring program for adjuncts as there are many that only teach for a couple of semesters. The boot camp can be funded from Perkins dollars.

Partnerships

The department partnerships include both Guidance Aviation and NorthAire. These companies have contributed more than 16 million in aircraft and facilities to the program for the flight training portion. Without them the institution would never have been able to start the program because of the extreme capital costs. Although complex to manage, it is one of the best partnerships in the college and contributes over 9 million annually to the local economy in jobs. It is one of many private/public partnerships that are beginning to emerge on the national scene.

Program Outcomes

Program outcomes are largely dictated by FAA licensure and so any changes would follow regulatory compliance with the Federal Aviation Administration. The following outcomes are in place:

1. Fly a helicopter under normal conditions and at night. (AVT 109, AVT 110, AVT 111, AVT 112, AVT 120, AVT 121, AVT 209, AVT 210, AVT 211, AVT 212)
2. Fly a helicopter under emergency conditions. (AVT 109, AVT 110, AVT 111, AVT 112, AVT 120, AVT 121, AVT 209, AVT 210, AVT 211, AVT 212)
3. Fly a helicopter in clouds and in poor weather conditions. (AVT 120, AVT 121)
4. Teach other students to fly helicopters. (AVT 220, AVT 221, AVT 230, AVT 231)
5. Meet Federal Aviation Administration requirements as a commercial helicopter pilot. (AVT 109, AVT 110, AVT 111, AVT 112, AVT 120, AVT 121, AVT 209, AVT 210, AVT 211, AVT 212)
6. Meet Federal Aviation Administration requirements as a helicopter flight instructor. (AVT 220, AVT 221, AVT 230, AVT 231)
7. Using scenarios and actual flying conditions; make safe aeronautical decisions. (AVT 111, AVT 112, AVT 121, AVT 211, AVT 212, AVT 221, AVT 231)
8. Perform common helicopter pilot maintenance tasks. (AVT 240)

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Projections and Plans for the Future

Plans are already in motion to consolidate the degree into one degree with 4 options as follows:

- Professional Helicopter Pilot
- Commercial Airline Pilot
- UAS (Unmanned) Aircraft Pilot
- Aviation Operations and Management (Includes Air Traffic Control, Dispatch, Flight Service Specialist, and Management).

These areas are high growth jobs nationally and will provide students with many career options in the aviation industry. The industry employs over 716,000 nationally and the ten year pilot projected needs starting in 2014 are over 400,000 based on mandatory retirements. YC is positioned very well going forward and will be a national community college leader in the aviation field. When combined with the local aviation industry presence and Embry Riddle, YC is currently in a good place with the flight partners, location, and employment possibilities.

Educational Master Plan 2012-2017

Associate of Applied Science in Residential Building Technology
Residential Building Advanced Skills Certificate
Residential Building Skills Certificate
Residential Building Technology Certificate

Mission Statement

Teach students to design, build, or manage residential construction that results in crafted, healthy, safe, durable, comfortable, affordable, energy and resource efficient, environmentally responsive houses. Students also learn to incorporate appropriate (climate specific) building materials, systems and technologies, and make design and material selections based on current applied building-science principles and sustainable design/green building practices.

Graduate Summary

Residential Building Technology (RBT) AAS Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Residential Building Tech	Associate of Applied Science	3			4	4	11
Residential Construction Mngt	Associate of Applied Science	1					1
Environmental Structures	Associate of Applied Science		2				2
Architectural Graphics	Associate of Applied Science	2					2
Commercial Construction Mngt	Associate of Applied Science	1					1
Construction Technology	Associate of Applied Science		4				4
Residential Building Tech	Certificate <1 yr.				3	2	5
Residential Building Tech	Certificate <1 yr.	2	3	1	4		10
Residential Building Skills	Certificate <1 yr.				2	2	4
Residential Construction Mngt	Certificate <1 yr.	1			1		2
Construction Technology	Certificate <1 yr.		3				3
Residential Building Adv Skill	Certificate >1 yr.				1	1	2
Residential Design	Certificate >1 yr.		1				1
Residential Construction Mngt	Associate of Applied Science			1			1
Architectural Graphics	Certificate			1			1

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Enrollment Trend

Residential Building Technology (RBT) AAS				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	7	6	7	0
Enrollment	98	78	51	0
Avg. Class Size	14.0	13.0	7.3	
Total SCH	369.0	278.0	194.0	
SCH by Location				
Chino Valley	306.0	245.0	194.0	
Online	63.0	33.0		
Enrollee Success				
%Successful	72%	69%	63%	

**Enrollee success equals a letter grade of A,B,C, or S.*

Fall 2012 Academic Period may be incomplete.

Residential Building Technology (RBT) AAS			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	6	9	5
Enrollment	56	85	23
Avg. Class Size	9.3	9.4	4.6
Total SCH	223.0	262.0	86.0
SCH by Location			
Chino Valley	223.0	262.0	86.0
Enrollee Success			
%Successful	86%	72%	78%

**Enrollee success equals a letter grade of A,B,C, or S.*

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Residential Building Technology (RBT) AAS			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	0		
Enrollment	0		
Avg. Class Size			
Total SCH			
SCH by Location			
Enrollee Success			
%Successful			
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>			

Residential Building Technology (RBT) AAS				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	13	15	12	0
Enrollment	154	163	74	0
Avg. Class Size	11.8	10.9	6.2	
Total SCH	592.0	540.0	280.0	
SCH by Location				
Chino Valley	529.0	507.0	280.0	
Online	63.0	33.0		
Enrollee Success				
%Successful	77%	71%	68%	
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
AY 2012-13 Academic Period may be incomplete.				

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Course Enrollment

Residential Building Technology (RBT) AAS - Academic Year 2011-12								
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals	
RBT101	1	5.0	5	35.0	40%	40%	20%	
RBT102	1	2.0	2	14.0	50%	0%	50%	
RBT110	1	3.0	3	21.0	100%	0%	0%	
RBT111	1	9.0	9	36.0	44%	33%	22%	
RBT112	1	8.0	8	24.0	50%	25%	25%	
RBT116	1	5.0	5	5.0	100%	0%	0%	
RBT121	1	3.0	3	21.0	100%	0%	0%	
RBT122	1	7.0	7	28.0	57%	14%	29%	
RBT231	1	12.0	12	36.0	67%	25%	8%	
RBT233	1	6.0	6	18.0	83%	0%	17%	
RBT237	1	8.0	8	24.0	75%	0%	25%	
RBT241	1	6.0	6	18.0	83%	17%	0%	
<i>*Cross-listed courses counted as individual course sections (not merged).</i>								
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>								
<i>Incomplete student courses excluded from Success measures</i>								

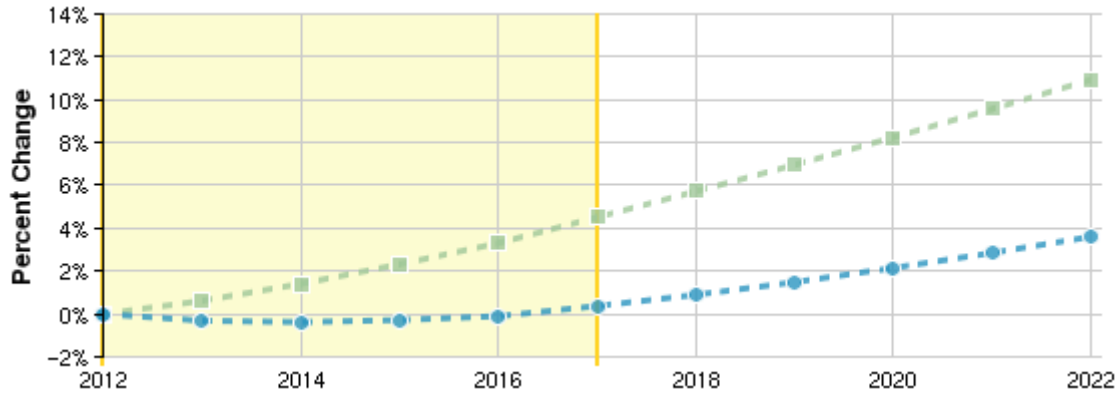
Course Forecast

Residential Building Technology (RBT) AAS - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
RBT101	Insufficient Data						
RBT102	Insufficient Data						
RBT110	Insufficient Data						
RBT111	34.6	19.8	5.0	-9.8	-24.6	-14.8	-0.96
RBT112	28.1	21.2	14.3	7.4	0.4	-6.9	-0.83
RBT116	Insufficient Data						
RBT121	Insufficient Data						
RBT122	14.0	-2.0	-18.0	-34.0	-50.0	-16.0	-0.79
RBT231	48.9	44.7	40.5	36.3	32.1	-4.2	-0.58
RBT233	Insufficient Data						
RBT237	Insufficient Data						
RBT241	15.6	7.8	0.0	-7.8	-15.6	-7.8	-0.93

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Residential Building Technology (RBT) AAS - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
RBT101				56.0	35.0	Insufficient Data	
RBT102				49.0	14.0	Insufficient Data	
RBT110	126.0	108.0	99.0		21.0	Insufficient Data	
RBT111	88.0	92.0	64.0	48.0	36.0	-14.8	-0.96
RBT112	60.0	36.0	45.0	39.0	24.0	-6.9	-0.83
RBT116				9.0	5.0	Insufficient Data	
RBT121	63.0	126.0	63.0		21.0	Insufficient Data	
RBT122	68.0	96.0	52.0	16.0	28.0	-16.0	-0.79
RBT231	60.0	60.0	54.0	66.0	36.0	-4.2	-0.58
RBT233	42.0	3.0		36.0	18.0	Insufficient Data	
RBT237				33.0	24.0	Insufficient Data	
RBT241	48.0	39.0	42.0	21.0	18.0	-7.8	-0.93

Employment Trends



Region	2012 Jobs	2017 Jobs	% Change
A Arizona	37,368	37,507	0.4%
B <input type="text" value="Nation"/>	2,093,094	2,187,567	4.5%

Source: Economic Modeling Specialists, Inc. November 2012

Arizona is expected to stay flat through 2016 and this is clearly indicated by the enrollment trends. We believe we are always two years behind Phoenix and they are just beginning to sniff any kind of turnaround in the construction areas. The national scene is showing signs of life, particularly in states that appear to have recovered such as Colorado and Texas. Growth should return once the industry shows signs of life in Arizona.

Educational Master Plan 2012-2017

Enrollment Trends

We are at such a nadir with enrollment numbers that the only place left to go is up. Ultimately, in order to have additional enrollment, the college must agree about the nature of the program, commit to a concentrated marketing plan, develop viable connections with the professional building community, and trust that there will be an economic turnaround in Arizona in the construction industry.

Capital Equipment Needs

CAD work environment, necessary construction industry software, and some specialized hardware components. RBT has sufficient tools to handle construction courses and there is still an under-utilized shop with adequate stationary tools that are in top shape.

Physical Resources/Facility Needs

Depending on where the RBT program is directed will determine future physical resources. Again, if CAD is brought back, computers and an appropriate classroom setting will have to be considered. As for physical instruction, the Chino Campus is more than suited to meet the needs of the program as it has been run particularly if we head in the direction of online instruction with minimal lab instruction.

Technology Needs

Apart from computers and software appropriate to the construction industry, the college tends to manage these needs quite well. Nothing special would be required until a direction for the program is agreed upon.

Staffing Needs

The ongoing hope is to have more than one full time faculty member. This is a difficult profession to teach with mainly adjunct faculty. Since this program has existed over the years with only one full time faculty and a collection of adjunct faculty, it is apparent from my research that the program was never cohesive. No one individual is capable of expertly teaching every aspect of construction. This was an assessment made in 2001 by our Advisory Board and I feel that it is still necessary to have a versatile instructional program.

Professional Development Needs

This is vital to the quality and standard of instruction in construction as well as the teaching profession. It is also extremely difficult to foresee the changes that technology will definitely have on both professions!

Partnerships

The department currently has partnerships with JTED and the construction community. It is hard to project if the community would commit to employing graduates in the trades, but this is what is at the heart of creating a sustainable construction program. (If graduates have nowhere to seek employment, why should they waste time and money attending college?) Yavapai College has not had a trade program in the past, nor does Arizona, in general, support trade organizations for residential construction. This is any construction program's biggest hurdle to success in this state.

Educational Master Plan 2012-2017

Program Outcomes

The current (deleted) programs – a two track AAS degree and 3 certificates – have been well devised during the last four years, but have never had the enrollment to test out their worth. It is highly likely that the AAS will be done away with and a more generic AAS will be put in place that allows students to select major areas of study in order to obtain a degree. Residential construction (in Arizona) does not demand a degree in order to find a job! If the college determines that offering to our community courses that will provide knowledge about construction, than short certificate programs piggy-backed on to each other – as the programs are now designed – will be a viable approach for the program. However, it is possible that new construction programs will be designed with other aspects of construction emphasized rather than what we are currently offering.

Projections and Plans for the Future

The program needs marketing. However, the program needs guidance before it can be marketed. Hopefully this is what will take place in the next year and that, as the economy grows, the RBT program will be able to grow along with it.

Educational Master Plan 2012-2017

Viticulture Certificate

Mission Statement

To train a skilled workforce for the emerging Arizona wine growing industry.

Graduate Summary

Viticulture Certificate Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Viticulture	Certificate >1 yr.					4	4

Enrollment Trend

Viticulture Certificate				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	4	4	6	7
Enrollment	77	98	114	118
Avg. Class Size	19.3	24.5	19.0	16.9
Total SCH	153.0	188.0	262.0	313.0
SCH by Location				
Verde Valley	87.0	128.0	193.0	169.0
Chino Valley		60.0	69.0	72.0
Online	66.0			72.0
Enrollee Success				
%Successful	77%	90%	82%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
Fall 2012 Academic Period may be incomplete.				

Educational Master Plan 2012-2017

Viticulture Certificate			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	5	5	7
Enrollment	82	100	117
Avg. Class Size	16.4	20.0	16.7
Total SCH	152.0	210.0	283.0
SCH by Location			
Verde Valley	110.0	105.0	172.0
Chino Valley	3.0	45.0	42.0
Online	39.0	60.0	69.0
Enrollee Success			
%Successful	93%	91%	81%

**Enrollee success equals a letter grade of A,B,C, or S.*

Viticulture Certificate			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	0	1	1
Enrollment	0	4	11
Avg. Class Size		4.0	11.0
Total SCH		12.0	33.0
SCH by Location			
Verde Valley		12.0	33.0
Enrollee Success			
%Successful		100%	45%

**Enrollee success equals a letter grade of A,B,C, or S.*

Educational Master Plan 2012-2017

Viticulture Certificate				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	9	10	14	7
Enrollment	159	202	242	118
Avg. Class Size	17.7	20.2	17.3	16.9
Total SCH	305.0	410.0	578.0	313.0
SCH by Location				
Verde Valley	197.0	245.0	398.0	169.0
Chino Valley	3.0	105.0	111.0	72.0
Online	105.0	60.0	69.0	72.0
Enrollee Success				
%Successful	85%	91%	80%	0%
<i>*Enrollee success equals a letter grade of A, B, C, or S.</i>				
AY 2012-13 Academic Period may be incomplete.				

Course Enrollment

Viticulture Certificate - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
AGS105	1	23.0	23	69.0	74%	13%	13%
AGS107	1	23.0	23	69.0	61%	22%	17%
AGS274	2	14.5	29	87.0	79%	10%	10%
VIT100	1	20.0	20	60.0	75%	5%	20%
VIT101	1	15.0	15	45.0	93%	7%	0%
VIT102	1	20.0	20	60.0	90%	0%	10%
VIT120	2	19.0	38	38.0	95%	0%	5%
VIT121	2	18.0	36	36.0	100%	0%	0%
VIT195	3	12.7	38	114.0	55%	0%	3%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A, B, C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

Educational Master Plan 2012-2017

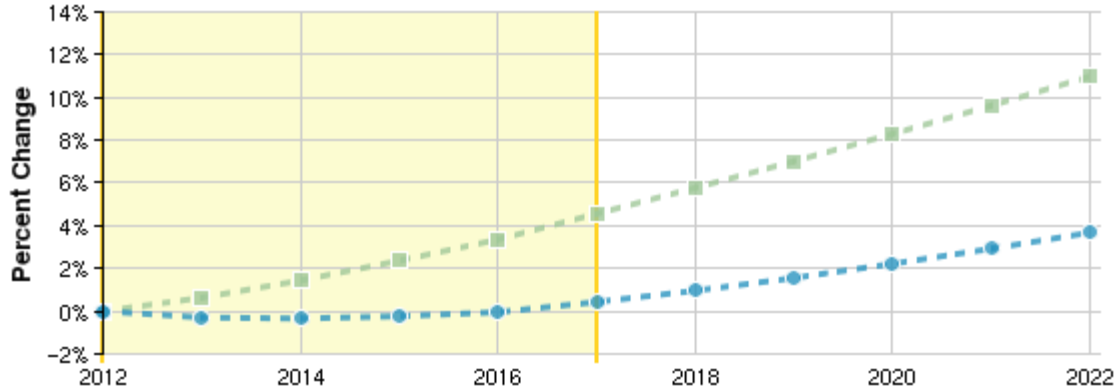
Course Forecast

Viticulture Certificate - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
AGS105	68.7	77.1	85.5	93.9	102.3	8.4	0.90
AGS107	67.2	72.6	78.0	83.4	88.8	5.4	0.68
AGS274	73.5	88.5	103.5	118.5	133.5	15.0	0.71
VIT100	54.8	29.3	3.8	-21.8	-47.3	-25.5	-0.97
VIT101	Insufficient Data						
VIT102	Insufficient Data						
VIT120	42.3	41.8	41.3	40.8	40.3	-0.5	-0.10
VIT121	40.8	35.3	29.8	24.3	18.8	-5.5	-0.71
VIT195	Insufficient Data						

Viticulture Certificate - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
AGS105	33.0	48.0	66.0	60.0	69.0	8.4	0.90
AGS107	51.0	42.0	39.0	60.0	69.0	5.4	0.68
AGS274	24.0		3.0	45.0	87.0	15.0	0.71
VIT100			111.0	75.0	60.0	-25.5	-0.97
VIT101				60.0	45.0	Insufficient Data	
VIT102					60.0	Insufficient Data	
VIT120			39.0	47.0	38.0	-0.5	-0.10
VIT121			47.0	51.0	36.0	-5.5	-0.71
VIT195				12.0	114.0	Insufficient Data	

Educational Master Plan 2012-2017

Employment Trends



Region	2012 Jobs	2017 Jobs	% Change
A Arizona	37,635	37,797	0.4%
B <input type="text" value="Nation"/>	2,112,017	2,208,312	4.6%

Source: Economic Modeling Specialists, Inc. November 2012

Unfortunately there is no job data for the industry that is stand alone and it is lumped in with the regional and national plant and soils science jobs as listed above. The wine industry is quickly building a diverse base of employment throughout the state. Nationally, trends are also quite positive. The Arizona Wine industry is expected to top its projected forecast of contributing \$45 Million dollars to the Arizona economy by 2015, bringing with it more job opportunities, and more entrepreneurs who are ready to further expand this local industry. If I could project, I would say that this industry could provide a total of 600 jobs within the next ten years. Currently it provides around 140 positions in the Verde Valley Alone. Ninety-nine positions are currently available in the Phoenix Area for wine-related positions alone.

Capital Equipment Needs

As the vineyard begins to mature, new expenditures will be needed. A high capacity blower- sprayer, a brush mower, and a vineyard truck will all need to come into the picture within the next couple of years.

Clearly, some of the largest capital expenses will be born from the development of the Southwest Wine Center, slated for 2013. For a detailed view of capital expenditures, there was a consultation with Boxwood SWC Charette – 2012. It is recommended:

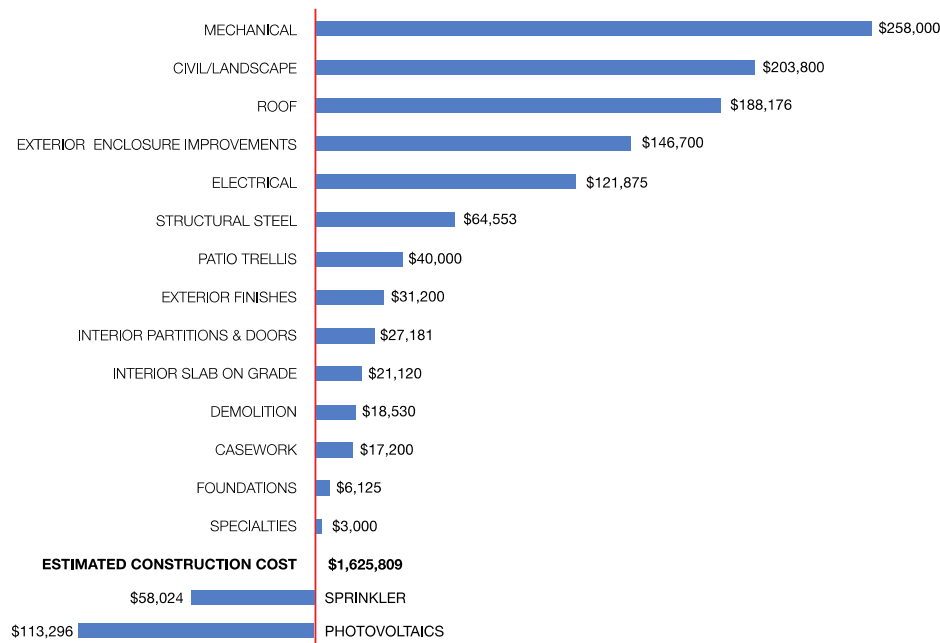
- Barrels
- Barrel Racks
- Large Jacketed Stainless Steel Tanks
- 1.5T Fermenters .5T Fermenters
- 2" and 4" Process Hoses Process Fittings, Valves, Gaskets
- Mobile Process Pumps

Educational Master Plan 2012-2017

- Crusher/Destemmer
- Metering Hopper Sorting Table
- Incline conveyor 9 HL
- Pneumatic Membrane Press
- Electric Forklift 5T w/Rotating Forks Pallet Jack
- Pressure Washer
- 6 Head Bottle Filler Electric Corker with Hopper
- Table Top Capsule Spinner Labeler
- Picking Bin Scale SS Tub and Screen
- Aluminum Catwalk
- Picking Bins
- Small Equipment and Supplies
- Sterile Filtering Equipment
- Bottling Supplies for 1,000-3,000 Cases/year
- Outsourced Fruit though 2015 (33Tons = 2,000 cases \$1500/ton)

Physical Resources/Facility Needs

We must build the Southwest Wine Center and finish the Enology Lab. It's not an understatement to say that the success of the VEN program is hinged tightly to the development of the Southwest Wine Center and Enology lab. The lab is not far from being complete, but the racquetball court has a long way to go before it is a productive winery and tasting room. Everyone is working diligently to make this a physical reality! Below are the needed SWC facility inputs.



Educational Master Plan 2012-2017

Technology Needs

Getting the data repository and the knowledge gateway facets of the Southwest Wine Center up and running as soon as possible will be an important piece of developing credibility within the community and also help us become a regional resource and develop more connectivity to the Southern Arizona Viticultural Areas and the entire Southwest. This will most likely be supported by the University of Arizona's server, but may require some staffing/library resources in the future.

Staffing Needs

As the college acreage and winery expands to its full potential, it is envisioned that the employment opportunities on campus extending well beyond work-study. For one, an assistant vineyard manager/crew chief position is in order, not to exclude future part-time non-work-study labor positions.

It is recommended to add enhancing curriculum for those geared more towards the wine business and marketing, food and wine pairing, and grapevine physiology. It's believed that adjunct instructors would both be available in the community and willing to fulfill these courses in the future. As previously mentioned, library staff will also be important in bringing the knowledge gateway to fruition.

Professional Development Needs

Visiting other educational facilities that have viticulture and enology programs is always going to be a valuable direction for the college to put professional development dollars towards. Also, attending trade shows such as the annual Unified Grape and Wine Symposium in Sacramento and other educational symposiums will be important to keep the Yavapai College Viticulture and Enology Program current and competitive. Other professional development opportunities lie in visiting neighboring viticultural areas such as New Mexico, Colorado, Texas and Southern California. Understanding regional viticultural issues will help us become more of a resource to the Southwest.

Partnerships

The University of Arizona College of Agriculture and Life Sciences will inevitably be a very strong partnership in the future. We anticipate connectivity with the knowledge gateway, with YC Practicum/UofA internship partnerships, future doctoral candidate research taking place at YC, UofA Extension cost sharing and agent/adjunct faculty member in Yavapai County, and cooperative articulation and transfer of the VEN AAS dovetailing into a UofA degree.

However, this shouldn't exclude potential partners such as ASU School of Agribusiness, or New Mexico and Colorado State Universities. VESTA out of Missouri has already become a great partner, and I expect to see the YC VEN program logo on their website in the coming years. I can't neglect to mention Arizona growers and winemakers that already partner with us within our academic practicum and perhaps will partner in the future by leasing college land for cultivation or by providing incubator sites for our future students. Local High schools are also a clear partnership formed by NSF grant monies going towards the development of mini vineyards on high school campuses. Those relationships are projected to continue into the future.

Educational Master Plan 2012-2017

Program Outcomes

I would like to see our program nearly double, growing to 100 students in the program at any given time. I would also like to see increased rates of graduation with both the Viticulture Certificate and the VEN AAS. I feel like that is very possible now that we have all courses available and finding a rhythm with student intake and completion. These goals, however, are difficult to quantify and perhaps belong more in the 5-year plan than the 10.

Projections and Plans for the Future

Each one of the current "Needs" sections is part of the projections and plans for the future. Each of the above listed items is entirely realistic and achievable.

Educational Master Plan 2012-2017

Welding Certificate

Mission Statement

The Welding Department prepares students for employment in welding positions requiring competencies in oxyacetylene and arc welding. Coursework may upgrade skills and assist in career advancement for currently employed welders.

Graduate Summary

Welding Certificate Graduates							
Major	Degree	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Welding	Certificate <1 yr.	3	1				4
Welding	Certificate >1 yr.			1	3		4

Enrollment Trend

Welding Certificate				
	Fall 2009	Fall 2010	Fall 2011	Fall 2012*
District				
Sections	22	28	23	28
Enrollment	400	475	404	545
Avg. Class Size	18.2	17.0	17.6	19.5
Total SCH	907.0	1087.0	1098.0	1242.0
SCH by Location				
Prescott	90.0	90.0	81.0	81.0
Verde Valley	32.0	27.0	15.0	17.0
Prescott Valley	122.0	98.0	66.0	
C.T.E.C	332.0	407.0	468.0	407.0
Chino Valley	121.0	166.0	161.0	144.0
Online	210.0	299.0	227.0	441.0
Dual Enrollment			80.0	152.0
Enrollee Success				
%Successful	75%	67%	65%	0%

*Enrollee success equals a letter grade of A,B,C, or S.

Fall 2012 Academic Period may be incomplete.

Educational Master Plan 2012-2017

Welding Certificate			
	Spring 2010	Spring 2011	Spring 2012
District			
Sections	24	25	22
Enrollment	399	421	382
Avg. Class Size	16.6	16.8	17.4
Total SCH	909.0	944.0	1010.0
SCH by Location			
Prescott	90.0	93.0	81.0
Verde Valley	97.0	24.0	
Prescott Valley	121.0	117.0	63.0
C.T.E.C	440.0	363.0	478.0
Chino Valley	36.0	39.0	99.0
Online	125.0	284.0	289.0
Dual Enrollment		24.0	
Enrollee Success			
%Successful	70%	62%	68%

**Enrollee success equals a letter grade of A,B,C, or S.*

Welding Certificate			
	Summer 2010	Summer 2011	Summer 2012
District			
Sections	6	5	6
Enrollment	120	117	130
Avg. Class Size	20.0	23.4	21.7
Total SCH	224.0	223.0	244.0
SCH by Location			
Prescott Valley	20.0		
Chino Valley	9.0	14.0	80.0
Online	195.0	209.0	164.0
Enrollee Success			
%Successful	65%	61%	75%

**Enrollee success equals a letter grade of A,B,C, or S.*

Educational Master Plan 2012-2017

Welding Certificate				
	AY 2009-10	AY 2010-11	AY 2011-12	AY 2012-13*
District				
Sections	52	58	51	28
Enrollment	919	1013	916	545
Avg. Class Size	17.7	17.5	18.0	19.5
Total SCH	2040.0	2254.0	2352.0	1242.0
SCH by Location				
Prescott	180.0	183.0	162.0	81.0
Verde Valley	129.0	51.0	15.0	17.0
Prescott Valley	263.0	215.0	129.0	
C.T.E.C	772.0	770.0	946.0	407.0
Chino Valley	166.0	219.0	340.0	144.0
Online	530.0	792.0	680.0	441.0
Dual Enrollment		24.0	80.0	152.0
Enrollee Success				
%Successful	72%	64%	68%	0%
<i>*Enrollee success equals a letter grade of A,B,C, or S.</i>				
AY 2012-13 Academic Period may be incomplete.				

Course Enrollment

Welding Certificate - Academic Year 2011-12							
Class	Sections*	Avg. Class Size	Enrolled	SCH	Successful Enrollees	Unsuccessful Enrollees	Withdrawals
BSA100	10	21.9	219	219.0	83%	8%	9%
BSA101	3	23.0	69	69.0	78%	6%	16%
MAT100	18	19.2	346	1038.0	58%	26%	15%
WLD130	2	23.0	46	184.0	50%	22%	28%
WLD140	4	22.0	88	352.0	63%	24%	14%
WLD145	4	12.0	48	192.0	67%	27%	6%
WLD156	2	19.5	39	78.0	62%	21%	18%
WLD200	2	9.0	18	72.0	67%	28%	6%
WLD210	2	12.0	24	72.0	79%	13%	8%
WLD250	2	5.5	11	44.0	91%	9%	0%
WLD282	2	4.0	8	32.0	75%	13%	13%
<i>*Cross-listed courses counted as individual course sections (not merged).</i>							
<i>Enrollee success equals a letter grade of A,B,C, or S; Unsuccessful = D, F, or U</i>							
<i>Incomplete student courses excluded from Success measures</i>							

Educational Master Plan 2012-2017

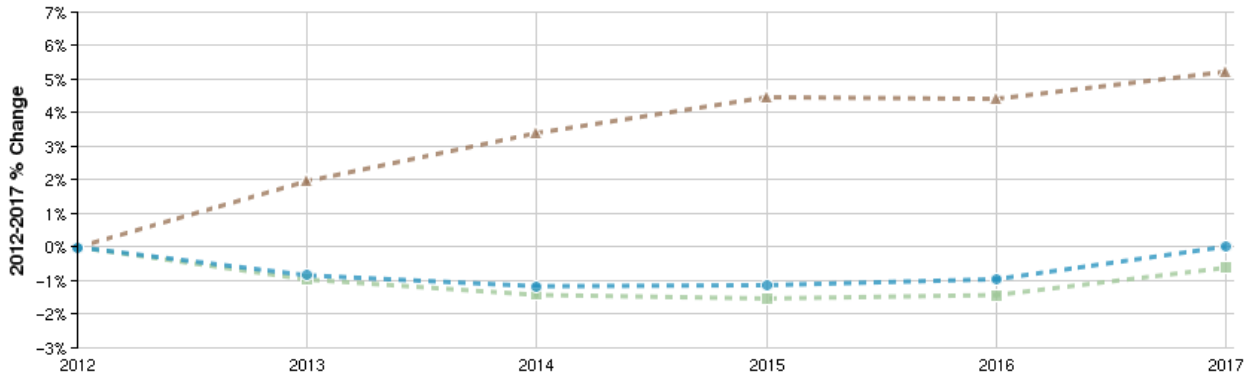
Course Forecast

Welding Certificate - Annual Student Credit Hour Forecast							
Class	AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	Annual Avg. Growth	Growth Trend
BSA100	279.4	290.1	300.8	311.5	322.2	10.7	0.24
BSA101	108.6	124.8	141.0	157.2	173.4	16.2	0.59
MAT100	1098.6	1258.8	1419.0	1579.2	1739.4	160.2	0.96
WLD130	178.4	179.2	180.0	180.8	181.6	0.8	0.11
WLD140	290.2	282.6	275.0	267.4	259.8	-7.6	-0.17
WLD145	172.4	205.2	238.0	270.8	303.6	32.8	0.93
WLD156	76.4	87.2	98.0	108.8	119.6	10.8	0.99
WLD200	71.6	74.8	78.0	81.2	84.4	3.2	0.50
WLD210	64.4	67.1	69.8	72.5	75.2	2.7	0.57
WLD250	39.4	22.2	5.0	-12.2	-29.4	-17.2	-0.81
WLD282	31.6	34.8	38.0	41.2	44.4	3.2	0.61

Welding Certificate - Historical Student Credit Hour Trend							
Class	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11	AY 2011-12	Annual Avg. Growth	Growth Trend
BSA100	170.0	320.0	310.0	329.0	219.0	10.7	0.24
BSA101	22.0	64.0	112.0	132.0	69.0	16.2	0.59
MAT100	450.0	573.0	879.0	999.0	1038.0	160.2	0.96
WLD130	168.0	196.0	172.0	172.0	184.0	0.8	0.11
WLD140	344.0	328.0	200.0	236.0	352.0	-7.6	-0.17
WLD145	44.0	88.0	80.0	120.0	192.0	32.8	0.93
WLD156	36.0	40.0	56.0	64.0	78.0	10.8	0.99
WLD200	56.0	68.0	84.0	68.0	72.0	3.2	0.50
WLD210	54.0	63.0	63.0	54.0	72.0	2.7	0.57
WLD250	128.0	56.0	68.0	52.0	44.0	-17.2	-0.81
WLD282	24.0	12.0	16.0	28.0	32.0	3.2	0.61

Educational Master Plan 2012-2017

Employment Trends



Region	2012 Jobs	2017 Jobs	Change	% Change	Median Hourly Earnings
A Arizona	5,016	5,017	1	0%	\$17.87
B Nation	431,286	428,639	-2,647	-1%	\$16.99
C Yavapai County - All Shared	137	145	8	6%	\$14.58

Source: Economic Modeling Specialists, Inc. November 2012

The trends are stable to very slightly down with traditional replacement in the industry through 2016 at which time the state and nation will begin to see an increase in jobs topping out at 6% in 2022. That figure equates to 5,016 jobs in Arizona annually with a flat replacement rate through 2016. There are 431,286 jobs annually on the nationally level and that is projected to be somewhat flat for three more years followed by the steady gains through 2022.

Capital Equipment Needs

Approximately 30% of the welding machines need to be replaced or updated. They are 15+ years old or wearing out. There is a need to add a larger metal shear, iron worker, 5 oxyacetylene welding stations, and 2 virtual reality welding stations.

Physical Resources/Facility Needs

There are approximately 10-15 of welding hoods need to be replaced. There is a need for 5 more oxyacetylene booths, and 2 more cutting tables (the 7 would need ventilation). The department is cramped for space in the metal storage area and fabrication area. If the department moved the metal storage somewhere else (outside under a covered and locked area) and the empty gas storage area, then it would create the much needed space. There is also a need to add a virtual reality aspect to arc, MIG, and TIG welding curriculum.

Educational Master Plan 2012-2017

Technology Needs

The addition of virtual reality to the welding curriculum would decrease overall cost of metal, gas, and electrodes/wire and increase student efficiency related to learning welding outcomes. Another aspect of welding that the department does not cover at this time is ultrasonic testing. This type of testing is non-destructive and requires a special machine and transducers to test the metal. As new technology develops in the welding industry, the department needs to be able to purchase and teach students new equipment and techniques.

Staffing Needs

Under the current system of the work at your own pace with open lab times for students, supervising JTED welding, mining welding, and shop supervision, the lead instructor is so busy that the department can't see adding anything without help instructing.

Professional Development Needs

It is imperative that professional development in welding is on-going. In order to keep the AWS Certified Welding Inspector credential and to keep current with welding technology one must attend training and conferences regularly. Department members want continued pursuit of non-destructive certification in ultrasonic testing in order to add that aspect to the welding program.

Partnerships

Seeking partnerships is a challenge and must be explored with local industry.

Program Outcomes

The program outcomes for the welding industry will need to be monitored and adjusted according to the needs of industry. The following are the current program outcomes:

1. Use techniques essential for successful employment including self-evaluation and good peer-relationship building.
2. Accomplish basic writing and reading skills required for welding occupations.
3. Employ technical mathematics skills appropriate for proper welding linear measurements and estimating.
4. Practice correct first aid CPR and welding safety techniques.
5. Use mastery skills for oxyacetylene cutting brazing and welding.
6. Use mastery skills for ARC, TIG, MIG and pipe welding.
7. Read interpret and use blueprints including special symbols specifically related to welding tasks.
8. Conduct visual inspections and perform destructive and non-destructive weld tests.

Projections and Plans for the Future

The welding program needs to be flexible and ready to meet the needs of industry. In order to help in that pursuit it is necessary that the faculty and instructors keep current with various welding codes and instruct students in general and specific welding code work so they are prepared to enter the workforce.