Advanced Technology Division
Unit Plan for FY 2009

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Efficiencies, Effectiveness
Revenue Enhancements

Section III – Efficiences, Productivity and Revenue Enhancements

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Advanced Technology Division
Unit Plan for FY 2009

Section III
Efficiencies, Effectiveness
Revenue Enhancements

Advanced Technology Division

Unit Plan 2007-2008

Auto Body and Fender

FY09 Revenue Enhancements

Description	Impact	Consequences	Fiscal
Develop a program in conjunction with ICAR (Inter-industry conference on auto collision and repair) that will provide students an ICAR certificate after they complete different areas of the programs. This will make students more employable. Shop employees have to be ICAR certified to do insurance work for most insurance companies. Technicians must attend training sessions to obtain and maintain this certification. The shops and our students will both be beneficiaries of this program	Additional 5 student FTE per year. Additional employment benefit for students completing the certificate. Should increase the number of students who want to complete the program.	None	$10,000 in tuition and fees $13,000 in future Total Public Support

Advanced Technology Division

Unit Plan 2007-2008

Automotive

FY09 Efficiencies and Productivity

Description	Impact	Consequences	Fiscal
Increase the automotive credit students program by 10 students	Additional 21 student FTE per year.	The effective teaching capacity of the instructor is increased by using the new automotive computer lab and its learning management information system.	37,000 in tuition and fees. 58,000 in future Total Public Support.

FY09 Revenue Enhancements

Description	Impact	Consequences	Fiscal
The fast track automotive program will provide accelerated and focused training for students to enter the workforce in less than one year.	Will serve an additional 45 student FTE annually. Will use the existing automotive curriculum, facilities, equipment and computer laboratory.	The program could compete with the traditional credit two-year program. Students who do not have financial sponsorship, dedicated time (one year full-time) or who require financial aid will still have access to the traditional two-year credit program.	30,000

Aviation Maintenance

FY09 Efficiencies and Productivity

Description	Impact	Consequences	Fiscal
The curriculum change we have been working on will of coarse make us more efficient but I think I have an additional slant on it ... we teach every subject area to one of three skill levels ... and basically they are skill level 1 --- you must know about the topic area and be able to discuss it ... skill level 2 --- you must have an absolute understanding of the subject area and be able to discuss it with authority, you must be able to demonstrate your knowledge and skill if asked to .... Skill level 3 --- You must have and absolute understanding and you will demonstrate your knowledge of the subject area .... skill area 3 and parts of skill area 2 have definite lab time ... which brings me to skill level 1 and parts of skill level 2 ... they can be 100% CBT ... to the point that we (faculty) will not be involved with class room training ... these can be set up as online computer classes ... this will reduce faculty work load, which in turn will allows larger classes ... it will allow off campus students an opportunity to get involved with our program.	Additional 10 student FTE.	Students will have to be more accountable for their learning.	12,000 in tuition and fees. 25,000 in future TPS

Diesel

FY09 Revenue Enhancements

Description	Impact	Consequences	Fiscal
Take on outside repair work through the advisory committee recommendation. "An example of this would be complete hydraulic hose replacement on a backhoe".	May increase student FTE through a Cooperative Experience. Students would get some production repair experience on campus.	Starting a business within a program is risky. It will demand more supervision from the faculty (increased workload).	1,000
Obtain certification and begin training for Commercial Driver's License (CDL) certification.	This could be a new non-credit program which would generate 30 student FTE per year.	None	75,000 in future Total Public Support
Add a 12 credit pre-requisite to Diesel Tech that would be simply "Boot Camp for Mechanical Technologies" offer it every term and make it available at the main campus and at all satellite campuses. It could be offered CBT and online.	Would increase the skill level of students in the programs. Could be offered by RTEC.	None	Unknown
Work together with Lane transit district to coordinate a training program tailored to their technician needs.	Work with customized training non-credit. Could generate 10 student FTE per year.	None	25,000 in future TPS

Drafting

FY09 Efficiencies and Productivity

Description	Impact	Consequences	Fiscal
Drafting degree requirements revision. Drafting's sustainability initiative was begun spring term 2006 which entailed the creation of one core program from three emphasis areas. This change was initiated to improve student skill sets and enhance their employability. Both financial benefits and efficiency improvements will be realized by the college through the new core program. It requires 33% fewer part-time TLC's than the original program design and enrollment in second year classes will significantly increase thus improving full-time faculty/student ratios.	Increased course enrollment; decreased part-time faculty salary costs	Improved skill development; students better prepared for employment.	10,000 includes OPE
Create a new integrated construction mini-certificates and/or one-year certificate. Collaborate with Construction Technology program to create a new one-year certificate that utilizes existing courses from Drafting and Construction.	1) New certificate programs increase FTE. 2) Increased enrollment in existing classes.	1) Creation of program that meets local employer needs. 2) Increased enrollment in Construction classes could result in need for additional instructor.	Increase; amount unknown
Create a new integrated manufacturing mini-certificates and/or one-year certificate. Collaborate with Manufacturing Technology and Welding to create a new one-year certificate that utilizes existing courses from Drafting, Manufacturing, and Welding. Combine four programs: Mfg, Welding Electronics and Drafting under one title. 72 credits total with each program having 18 credits of instruction. Maybe call it - Technology Cluster. Of coarse Mfg is already taken, not that I wouldn't mind changing ours to Machine Technology but Mfg is already known locally as the "Machinist trade" degree title. This new degree would work best if offered with the RTEC/OIT 4yr Bachelor of Applied Science degree as a likely outcome. The "would be" entrepreneur maybe attracted also if marketed that way. There should be room to customize their electives. Engineering	1) New certificate programs increase FTE. 2) Increased enrollment in existing classes.	1) Creation of program that meets local employer needs. 2) Increased enrollment in Construction classes could result in need for additional instructor.	Increase amount unknown

students may also be attracted.			
Integrate credit and non-credit Drafting courses. Currently, Drafting courses through Continuing Education are similar but not identical in content to credit courses. Non-credit courses cannot currently be articulated with credit courses primarily because of assessment differences. Students are prevented from making an easy transition from non-credit to credit and must repeat content. Offering all CAD courses for both credit and non-credit simultaneously, that is, within one class, has the potential to 1) increase enrollment, thus optimizing faculty and space utilization, and 2) increase the numbers, times, and locations of classes available to students. Offering students the option of taking a class for non-credit allows them a non-threatening way to see that they can be successful in a college environment. A policy would need to be created that would allow a student to convert a non-credit CAD class to a credit class. This could include attendance requirements, additional assessment activities, a maximum time limit, and additional fees.	1) Optimizes faculty and space utilization. 2) Maximizes schedule flexibility and student access to courses. 3) Opens a pathway to continued college studies.	Need to align course content of continuing education with credit classes. Need for creation of noncredit-to-credit conversion policies.	Increase amount unknown
Eliminate duplication of courses across disciplines in Advanced Tech by having students in one program access appropriate courses in another program. e.g., Eliminate Electrical Drafting class; students will instead learn electrical concepts through Electronic Technician program. Eliminate Hydraulics Drafting class; students will instead learn hydraulics concepts through Diesel Technology program. Eliminate two credits of the four-credit Drafting: Strength of Materials class; students will instead learn metallurgy and materials concepts through Fabrication program.	Increased enrollment in Electronics Technician, Diesel, and Fabrication programs.	Improved student-teacher ratio in some courses in Electronics Technician, Diesel, and Fabrication program. Approx. 30 drafting students will take these courses: Electronics Tech – 1 credit Diesel – 1 credit Fabrication – 2 credits There is no net gain or loss in FTE or tuition from this efficiency since	No change in revenue

		students are taking the same number of credits, just from different instructors in other programs.	

FY09 Revenue Enhancements

Description	Impact	Consequences	Fiscal
Create five new courses in Landscape Technology to begin fall 2008. Has been approved by the State as a Landscape Technology mini-certificate.	Increased student FTE and tuition.	15 students, 17 credits each, for an increase of 21.25 FTE and associated tuition.	$ 42,000 FTE reimbursement and $ 1,775 tuition

Electronics

FY09 Efficiencies and Productivity

Description	Impact	Consequences	Fiscal
Move our daytime E.T. classes from morning to late afternoon and evening.	This would expand the offerings for evening E.T. students (currently taking CBT classes) by giving them the opportunity to take second year classes in the same time slots that they are accustomed. The additional advantage is that we will probably be able to design our classes to include some Apprenticeship students which would also increase the student to teacher ratio.	Unknown RISK: how many daytime students would be lost vs. evening student gained.	Unknown
Develop online classes to further reduce E.T. Faculty load. Lectures for Shop Practices, Robotics, PLC's, Electrical theory 3, digital 2 and Microcomputer Hardware could be presented online and the instructor could use his/her time for managing the labs associated with these classes..	Improve the use of existing faculty resources.	This will require curriculum development funding	Unknown
In general terms, modify the E.T. program away from a "Component Level" and more towards a "System Level" program.	Attract local industries to the type of training offered by LCC	Program redesign changes staffing from 2 full time instructors to 1. Some additional part time instruction will be needed.	$50,000 annual savings
Modify and combine E.T. classes with Manufacturing Plant Electricians, HVACR, and LME classes.	Eliminates the need for Apprenticeship To hire credit	Allows several E.T. classes to be modified towards system	$35,000 Annual savings

	instructors for at 6 to 8 classes.	level electronics.	
Modify Shop Practices from 1 1 credit to 2 credit class.	This will enhance our industrial electrical presentation and replace DRF 203	This will increase the ATD efficiency by rerouting Drafting students into an E.T. class.	$4000

Fabrication and Welding

FY09 Efficiencies and Productivity

Description	Impact	Consequences	Fiscal
Reduce the duplication of non-credit offerings. Continuing Education offerings utilize credit welding facilities, curriculum and instructional staff for certain welding courses. The non-grade CE practice functionally duplicates the credit "audit" grade. Inasmuch as CE provides no real alternative to credit welding for certain courses the net effect is that a single population of students is supporting two instructional and administrative functions without value being added. This seems inefficient and wasteful of resources	Reduces administrative/staff costs to the college.	May limit access to some students.	
First year of program: Last year we said that we wanted to modify the first year of the program to improve retention increase FTE. Rewriting and rearranging some of the curriculum was anticipated to accomplish this. The program wrote two new courses, traded curricular content from first year to second year and vice versa. As I write this it sounds like it should go into Section II. Even so we want to continue to work in this area to improve FTE.	Requires some curriculum rewrite. Modularization is dependant on availability/cost of educational materials.	Improve retention. Increase program access opportunities.	$8,000 cost for curricular materials
The curriculum books referred to above that were created by the program will be added to so as to make them more self tutoring. It is hoped that in doing so that less P-T instructional staff will be required to teach the current work load.			

FY09 Revenue Enhancements

Description	Impact	Consequences	Fiscal
Add to, eliminate, rearrange program content. Modularize some program content.	Requires some curriculum rewrite. Modularization is dependant on availability/cost of educational materials.	Improve student retention. Open more points of access to program.	$1,000 (cost for curricular materials)
Change the student contact hours in welding labs from 20 (8 lecture + 12 lab) to 24 lecture/lab.			

Flight Technology

FY09 Efficiencies and Productivity

The following projects are intended to accomplish two objectives: 1) enhance our ability to market the program with a higher profile, and 2) access a larger market so as to increase revenue hours which enhances revenues and efficiency.

An articulation agreement has been struck with Linn Benton Community College to support aviation related training. The general plan is to work with LBCC to recruit student into an aviation track. The LBCC students will complete their general education programs at LBCC, add aviation specific skills and certificate training at Lane, and for students electing an airline pilot career track LBCC students will complete an AAS degree and an AAOT degree at Lane and enter the direct transfer track to OSU. A similar program is being developed with Umpqua Community College and the intent is to do much the same thing at Chemeketa CC.

A “Cross-Town” agreement has been signed with the Air Force ROTC program at OSU. Flight Technology will be the host site for ROTC classes which will include Lane students and U of O students.

A joint project has been initiated with the U of O Psychology Department to engage in research to develop enhanced training effectiveness and efficiency: this project will involve senior scientists from the U of O, NASA and Cranbrook University (Cranbrook, England).

A “bridge agreement” has been signed with American Eagle Airlines for the purpose of training and directing pilots to the airline.

Discussions have been entered into with SkyWest Airlines whereby SkyWest is considering making advanced training materials / programs to Lane so much of the primary crew training will be done by Lane before the pilots enter into crew training after hire.

Discussions have been entered with Horizon Air to train pilots for Horizon’s “Direct Hire Program.” This would require that Lane send a trainer to Horizon to become qualified as a trainer for the Q400 series airplane.

Lane Flight Technology has worked as a partner with the Oregon Department of Aviation and the FAA to establish the new ADS-B system in the State of Oregon. Lane is also the host location for one of three ground based stations west of the Cascades which support the ADS-B system.

The Revised TCO’s (Training Course Outlines) for the Flight Technology programs will be sent to the VA for approval to provide pilot training in addition to the existing credit programs.

The Flight Tech. facilities have been equipped with wireless capability in both buildings used for student training and additional student access computer stations have been added. Students with laptop (wireless) computers can access instructional notes during lectures for some courses.

The entire course called **Aircraft Development (FT103)** has been rewritten and is now available on-line. The course called **Primary Flight Brief (FT130)** is currently being rewritten and it will be available via the internet beginning winter term 2008. In this case, the objective is to make the materials available to students who are not interested in an academic program of instruction and elect not to do their training on a regular schedule in synchronism within the structure of academic calendar. The objective is to have a less structured access to the instructional programs.

These changes accomplish three primary objectives: 1) it reduces costs as these materials are no longer printed for distribution by Printing; 2) having access via the internet at all times enhances flexibility for access for students and the instructional staff, and 3) the materials are highly modularized and very easy to revise and update.

Change of status for the program manager, primarily a cost cutting measure to help make budget adjustments. Potential enhanced flexibility for the purpose of assigning special projects.

New Marketing materials and career planning guide: I expect to go to press with an entirely new marketing piece that will be a dual use document. One side will be an over view and flow chart depicting the training and career pathways for pilots: this part is to be used to market to prospective students and their parents. The reverse side will detail the overall training plan and options.

These materials are to be available for use for normal marketing done by the department, also made available to the Air Force ROTC recruiters as they talk to high school students. Karen Edmonds has agreed to make the materials available as she works with high schools across the state.

FY09 Revenue Enhancements

Commentary

Considering the tremendous need in the industry for skilled people, there is a very real need to be much more aggressive with respect to marketing the aviation programs at Lane. Considering the scope of the need in the industry and the capability of the existing infrastructure, the industry need is greater than existing capacity to train pilots to airline standards one could conclude that the Lane program should always have more student applications than the program can handle.

There are three major elements that must be factored into planning: 1) it is vital that the Flight technology program actually be "self-supporting." To do so does require increasing total revenue hours to a minimum of 7000 hours each year – which represents near 15 percent increase in revenue hours flown. This is primarily a marketing challenge: Further cost cutting is essentially not an option. In order to have the necessary revenue stream to fund equipment upgrades and aircraft replacement, a target activity closer to 8500 hours each year is closer to the "real" need. In the year 2001 the program did deliver 10,500 hours of training, so it can be done.

Marketing design is a challenge: The challenge has two major parts: 1) the program has limited marketing "talent" and limited marketing time resources: 2) the program has essentially no marketing funds that may be used to market and promote the program. This translates into a marketing effort that is largely "funded" by sweat labor with many other responsibilities and a labor force that really lacks the skills that are needed to be highly successful.

There is a need to structure the program so it is available to a larger segment of the community. The traditional academic structure largely precludes casual fliers from taking advantage of the assets available; 3) there is a need to increase revenues enough to have a positive carry so as to be able to begin replacing some rather old airplanes and to up-date avionics systems. A part of the technology upgrade involves new avionics in the airplanes for improved reliability and to have state-of-the-art digital technology, and there is a need to develop gifting sources and grant monies so as to be able to acquire simulation equipment representative of the industry.

Part 1. The number 1 issue we deal with is a lack of funds for the students to support their training. Generally the "head count" is large enough to easily support the revenue need for the program. The typical scenario is students fund their flight accounts at the beginning of the term, largely out of financial aid. Students begin to run out of funds during the second half of the term which means as the term progresses total revenues decrease, flight instructor income decreases and the fleet utilization and efficiency decreases. It is imperative that a major effort be made to develop multiple funding options for our students.

Part 2. The typical strategy has been to recruit students primarily via our website and referrals – this strategy has been useful, but these strategies do not generate the numbers of students we need. The general strategy has been to attempt to recruit a comparatively large number of students so the total population will be enough to carry the program through a term.

FY08 Revenue Enhancements

a) Expand marketing to the university population to encourage traditional degree candidates to add aviation elements to their degrees so as to be better prepared to

compete for jobs in the air transportation industry. (Positions other than as pilots, flight attendants, mechanics)

b) Develop a *Magnet High School Program* targeted toward high school juniors this year that will be seniors in 2007 – 08. Apply for private grant funds to support the costs of informational / educational / marketing materials to develop and promote this program.

c) Complete the ATP certification course: Offer training to both the general aviation population and to military pilots electing to enter into commercial aviation.

d) Complete the Twin Cessna and Twin Piper Command Pilot initial and recurrent training program.

e) Formalize the host role supporting aviation organizations such as OPA and WIAI.

f) Take a lead position preparatory for the 2007 NorWest FlyFest event.

g) Begin a regular series of seminars for the aviation community: offer special courses training pilots how to use current technology GPS / WAAS / ADS-B systems.

i) Take a much more proactive approach to recruiting in the national market place

h) Take the lead on continued promotion of the Oregon Aviation Education industry jointly with OSU and ODA.

j) Take a much more proactive approach to recruiting in the international market place.

k) Develop existing successful courses for distribution on the internet.

l) Look to expand working partnerships in the air transportation industry to increase potential for internships and employment for graduates.

m) Become significantly more aggressive searching for and developing grant fund opportunities.
n) Look additional joint venture opportunities with the two major universities.

o) Become significantly more proactive with respect to developing working partnerships with the other community colleges in the state. Recruit two-year students into the three-year direct transfer program to OSU.

Referencing FY08 Enhancements

Activities associated with parts A, B, H and I are intended to reach populations that are largely outside our traditional market – these are market segment we have had limited contact with historically

Activities associated with C, D, E, F & G serve to enhance our image, or prestige in the market place and to enhance our “professionalism.” These activities show aggressiveness on the part of the program managers to assure the training is consistent with trends and technology in the industry; the desired effect is a perception of enhanced value of the program by virtue of association.

Point G has a potential for substantially changing our stature in the industry, over time all pilots will need to be trained on how to use this new technology. In the future all pilots will have to be skilled in the use of the technology. A part of the design plan associated with the research projects with the university is to have significantly enhanced instructional practices and methods that will serve to assure high levels of proficiency in the use of the technology represented by the ADS-B system.

A secondary advantage is the association with the airline partners helps prospective students recognize an improved potential for employment after training. This is a very important element as students want some kind of assurance that they will be employable after training.

Division

FY09 Efficiencies and Productivity

Description	Impact	Consequences	Fiscal
Change the instructional delivery from lecture and lab to lecture/lab in mechanical technologies.	Student weekly contact hours increase from 20 to 24 which increases student FTE by 17% or an annual student FTE increase of 20.	This complies with the 2002 mechanical technologies workload agreement. The new TLCs will remain less than 17 per term. Instructors are already on campus 30 hours per week, Monday through Friday. The differential pricing will need to be held constant with the amount prior to this change.	56,000 in future Total Public Support.
Increase each section by 1 student	Move from a 20:1 student/teacher divisional average ratio to 21:1 for a 5% increase in efficiency. This will yield and additional 22 student FTEs.	Class sizes will be larger.	65,000 in tuition and fees. 67,000 in future TPS
Change the instructional delivery from lecture and lab to lecture/lab in mechanical technologies.	Student weekly contact hours increase from 20 to 24 which increases student FTE by 17% or an annual student FTE increase of 20.	This complies with the 2002 mechanical technologies workload agreement. The new TLCs will remain less than 17 per term. Instructors are already on campus 30 hours per week, Monday through Friday. The differential pricing will need to be held constant with the amount prior to this change.	56,000 in future Total Public Support.
Increase each section by 1 student	Move from a 20:1 student/teacher divisional average ratio to 21:1 for a 5% increase in efficiency. This will yield and additional 22 student FTEs.	Class sizes will be larger.	65,000 in tuition and fees. 67,000 in future TPS
There are funds available through Foundations, Industries, Governmental Agencies, and individuals for this purpose. Grants require expertise to successfully apply and			

be funded. A grant-writer with the necessary expertise would be hired to provide this service, compensated through a percentage of the grants awarded. Department grant funds would go to the submitting department. Division grant funds would be distributed according to the components of the grant. Departments, Divisions applying for and being awarded grants would not have general fund dollars reduced as a result of being awarded a grant. The College will support this revenue generating effort through institutional approval and authorization of grant applications.			
Design, prototype and implement a college-wide Learning Management Information System (LMIS) that will manage and document student learning, assessment, career exploration, curriculum, competencies, course outcomes, program outcomes, articulation, employers requirements, and interface with the college's other production information system using a lifelong student learning portal. An initial design and prototype of the LMIS can be developed selected programs (advanced technology and mathematics).	This system will be the information infrastructure necessary to create and sustain new approaches to teaching and learning.	This transformational initiative will require substantial commitment and investment by the college.	>1,000,000
Design and implement an Associate of Applied	The college will realize at least three major	This is a win-win-win proposal. It will require a	>100,000

Science to Bachelor of Applied Science degree matriculation agreement with the Oregon Institute of Technology. This agreement would allow any Lane graduate with an Association of Applied Arts degree to transfer 90 credits of that degree to fulfill the lower division graduation requirements. The student would then complete the BAS degree by completing upper division credits in business management (minimal arts and letters courses).	benefits: 1) students will be retained or will want to return to the college to complete their AAS degrees to take advantage of the matriculation agreement; 2) parents, high school counselors and students will see career technical pathways continue to the bachelors level and do not terminate with an associates degree. 3) OIT could offer cohort instruction at Lane employing local instructors. The college should realize more student FTE with better recruitment and retention.	matriculation agreement with the Oregon Institute of Technology.	

FY09 Revenue Enhancements

Description	Impact	Consequences	Fiscal
Design and develop a high school middle college with the following "magnet schools". • Oregon Transfer Module (45 credits) • Transportation Careers (36 credits) • Manufacturing Careers (36 credits) • Construction Careers (36 credits) • Aviation Careers (36 credits) • Health Careers (36 credits) • Computer Careers (36 credits). Qualified high school seniors would select one of the magnet schools, located at the community learning centers or host	This initiative leverages educational resources to facilitate an academic and career pathway for high school seniors who would otherwise not have many options. The college should see a significant increase in earned student FTE and high school capture rates (number of students continuing to Lane).	This transformational initiative will require substantial commitment and investment by the college.	>1,000,000

high schools, and complete a one-year cohort program.			