For 2007-2008 Implementation

Section III: Planning for fiscal sustainability

Guaranteed proposals and identified Budget Reductions for 2007-2008 should also be listed in the Excel spreadsheet (FY08 Budget Proposals template.xls) with detailed budget information that will be submitted to the budget development process and will focus on Fund 111100.

Preamble: Planning parameters included at the Institutional level

- \$6 million recurring deficit for FY 08
- Recovery of deficit will occur in the general Fund 111100
- 2% FTE growth over 2005-2006

Division Planning	Parameters:				
FY 08	T	Μ	ATB		
	Budget	Reduction	Budget	Reduction	
Worst Case	\$2,737,284	\$406,408	\$2,819,618	\$311,307	
Mid Case	\$2,836,510	\$317,104	\$2,919.076	\$212,156	
Best Case	\$2,920,853	\$217,878	\$3,014,531	\$116,086	

Compare to FY07 Science Division budget of \$3,079,194

2007-2008 (FY 08) Incremental changes:

1. Revenue Enhancements: (Include impact, consequences, and comments).

Guaranteed Revenue Enhancements: Enrollment Enhancement

Description	Impact	Consequences	\$	R/NR
Enrollment Enhancement	Increased student	Increased revenue,	\$23,400	R
	enrollment	tuition	to	
			\$51,200	

Additional Narrative:

We estimate that at worst, 10% of the non-guaranteed revenue enhancements planned will be successful and are including that amount in this section. Complete narratives are in the non-guaranteed section in the description of the enrollment enhancement projects.

Guaranteed Revenue Enhancements: New SI Instructional Units

Description	Impact	Consequences	\$	R/NR
Supplemental Instruction	Increased enrollment in	Improved retention,	Between	R
for CH 221 students	CH 222 and 223	increased FTE and	\$5,253	
		tuition revenue	and	
			\$28,713	
SI for Biobonds students	Increased enrollment in	Improved retention,	Between	R
	BI 231, 232, 233, and	increased FTE and	\$14,626	
	234; increased student	tuition revenue	and	
	success in 100-level		\$96,188	
	science courses.			

Additional Narrative:

Supplemental Instruction

We are planning SI interventions for two target audiences. First, students in General Chemistry 221 have a typical success rate below 77%, and second, many students taking our 100-level courses, especially the A&P prerequisite courses BI112 and CH112 (Biobonds), are similarly challenged. The success rate for students in Biobonds and five other 100-level courses is less than 77%.

General Chemistry

CH 221 enrolled about 181 students last year; 134 of them passed the course. The target audience is the 47 students who did not pass, however, not knowing in advance who is going to pass, we would recruit as many as we had capacity to reach.

If we set up sections of 25 each, we estimate that two sections could be filled in fall. Revenues:

- Tuition for this SI unit would bring in approximately \$3475 in tuition (2 sections X 25 students X 1 credit X \$69.50/credit)
- Fees from SI would be \$150 (2 sections X 25 students X \$3/cr tech fee)
- SI would generate 1.08 FTE (2 sections X 25 students X 11 hours / 510) and \$2480 in State reimbursement (1.08 FTE X \$2300)
- If we conservatively estimate that half of the previously unsuccessful students pass CH 221 and then register for CH 222 and CH 223, then 25 additional students would pay for 10 more credits each, or \$17,375 in additional tuition (25 students X 10 credits X \$69.50/credit), and \$400 in class fees (\$8/section X 2 sections X 25 students) plus \$750 in tech fees (25 students X 10 credits X \$3/cr). These students would produce an additional 7.5 FTE in two terms (\$17,250 in State reimbursement).

Costs:

- Costs for instruction are approximately \$1242 S/OPE per one credit section (typical per credit rate for our Chemistry part time instructors). SI costs for 2 sections would be \$2484 (2 sections X \$1242/section).
- Enrolling these students may require the opening of 1-2 new sections of Chemistry 222 and 223, at an approximate cost of \$7500 in salary and OPE per 5-credit chemistry section. It's difficult to predict the direct effect. For example, perhaps the non-completers have been re-enrolling in CH 221 at a later time, and perhaps we are already enrolling them in downstream courses. We need to know the number of students who retake CH 221 and who subsequently pass. In any case this proposal serves students well, especially if we can increase their success earlier in their academic careers. We may actually experience a decrease in enrollment in 221 if fewer students must repeat the class.

Costs		Revenues			
SI S/OPE	\$2484	Fees - technology, SI	\$150		
CH 222 & 223	\$15,000	Fees - class, CH	\$400		
S/OPE					
		Fees – tech, CH	\$750		
		Tuition, SI	\$3,475		
		Tuition, CH	\$17,375		
		FTE, SI	\$2,480		
		FTE, CH	\$17,250		
Net	\$37,896 inclue	\$37,896 including State reimbursement, \$18,166 without			

Table of costs and revenues

SI for 100-level students

SI for the 100-level population would be useful for students in all science courses regardless of discipline. Many non-science majors students find their science requirements particularly challenging and a large number of students fail to successfully complete 100 level science courses. Because science is a required component of the AAOT and other programs, it is quite likely that frustration with science causes some of these students to give up on their college education. Another group served by this SI proposal is the large population of students aiming toward the health occupations who must take CH 112 and BI 112 (Biobonds). Many students find these courses to be challenging as they begin their science coursework. To meet the needs of both groups, we envision an SI course that teaches science fundamentals (including elementary chemistry, physics, and cell biology), essential mathematical operations, and study and writing skills.

We have estimated the high and low range of revenues and costs. At the low end, we estimate 130 students per year would enroll in approximately 5 one-credit SI sections. The higher estimate is that 403 students would enroll in 17 one-credit SI sections. Revenues

- At the lower end, this 100-level SI would generate approximately \$9035 (low revenue in the table below) in tuition (130 students X 1 credit X \$69.50/credit). The higher estimate is \$28,009 (403 X \$69.50).
- SI would generate between 2.8 and 8.69 FTE (130 X 11 hours / 510; 403 X 11 / 510) and \$6449 to \$19,992 in State reimbursement (FTE X \$2300).
- If 50 students with career goals in the health occupations are able to continue into Anatomy & Physiology who would not otherwise do so, that's \$55,600 in new tuition (50 X 4 credits X 4 classes X \$69.50), and 25 new FTE (50 students X 4 sections X 66 hours/510), and \$57,500 in State reimbursement (FTE X \$2300). Because we are already at capacity in our A&P discipline, adding these courses will be a stretch goal. For this reason, we are not at this time planning for more A&P sections if more SI units are added.
- Many more students besides those heading into health occupations would be retained at LCC and would take other classes as a result of this project. We have not attempted to estimate the numbers of these students.

Costs

- SI costs for 5 sections (low costs in the table below) would be \$6210 (5 sections X \$1242/section); for 17 sections (high in the table) it would be \$21,114.
- Two new sequences (7 sections of Bi 231-234; not all students end up taking microbiology at the end of the sequence) of A&P would cost \$43,799 (7 sections X \$6257 S/OPE/section) (same caveat as in general chemistry: we may already be enrolling these students in A&P if they are now repeating Biobonds until they finally succeed. Again, we may see a paradoxical effect of decreased repeat enrollment.)

Table of costs and revenues

	Costs		Revenues			
	S/OPE		FTE		Tuition & Fees	
	Low	High	Low	High	Low	High
	\$6210	\$21,114	\$6449	\$19,992	\$9035	\$28,009
	\$43,799	\$43,799	\$57,500	\$57,500	\$55,600	\$55,600
total	\$50,009	\$64,913	\$63,949	\$77,492	\$64,635	\$83,609

Net

To estimate the net return on this investment, we've reported the sums of costs and revenues with and without State reimbursement, and because there are two different scenarios here, I've summarized the net in four cases:

Case 1 high tuition & fees plus high FTE minus high S/OPE	\$96,188.
Case 2 low tuition & fees plus low FTE minus low S/OPE	\$78,575.
Case 3 high tuition & fees minus high S/OPE:	\$18,696.
Case 4 low tuition & fees minus low S/OPE	\$14,626.

Description	Impact	Consequences	\$	R/NR
1. SRC Fee	New revenue	Increased revenue to	\$15,556	R
		help support the SRC		
2. Science Course Fee	New revenue	Increased revenue to	\$43,968	R
		help support the		
		Division		

Guaranteed Revenue Enhancements: New Fees

Additional Narrative:

1. We plan to assess a \$2 per class fee for all courses in the Division. The new revenues would be used to provide technical support and evening/weekend hours for the SRC. We estimate that approximately 7778 students enroll in Science classes each year.

2. This fee would be applied to all Science courses that do not at present have fees more than \$8, not counting field trip or wet lab fees.

Description	Impact	Consequences	\$	R/NR
1. Sustainability	Meets community			
Emphasis	needs	Increased tuition	\$512,579	
2. Increased Marketing	Increased enrollment		including State	R
& Outreach		Increased State	reimbursemen,	
		FTE	\$233,982	
		reimbursement	without	
3. Curriculum	Increase enrollment,			
Mapping for Science	greater efficiencies			
Majors	for students			

Non-Guaranteed R	evenue Enhance	ments Enrollm	ent Enhancement
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Additional Narrative:

1. The college and larger community support the concepts of sustainability. Lane's Energy Management Program is promoting sustainability in its curriculum. We recommend creating a Sustainability Emphasis track using existing courses in the first year (07-08) and moving toward new courses in subsequent years. The GIS modules under development through the NSF grant will provide exciting new learning activities for many of the courses that could be tied into the Sustainability Emphasis. Learning communities and service learning could also be built in.

Initially, all that is needed is analysis of current courses to determine which contain sufficient sustainability concepts and themes. These would be packaged in a brochure, shared with student advisors, promoted at career days and high school orientations, and broadly advertised. Some funding could be used from the Science M&S for this effort.

Initially, the emphasis should result in increased capacity in existing courses, such as some biology sections and EES. In 05-06, the % Full numbers for BI, G and ENVS were 95.2%, 69.7% and 60.3%, respectively. By promoting the sustainability emphasis, we could expect to bring the G and ENVS up to at least 80% capacity that would add a minimum of 97 students per year. Estimating 100 students x 4 credits x 69.50/credit = 27,800, plus state reimbursement of approximately 2300/FTE.

2. To estimate annual returns from this effort, I (KH) used 2005-06 enrollment data, assumed that our student enrollment of 7778 students was 93% of our capacity and determined that we have the capacity to add approximately 503 more students without increasing staffing costs. New tuition would be approximately \$139,834 (503 students X 4 credits X \$69.50). These new students would also register in other classes, but I have not estimated that revenue. New fees would be approximately \$38,605 (Technology fee: 503 new students X 4 credits X \$45.75/term). Transportation fee: 503 students X \$19/term; and Activity fee: 503 students X \$45.75/term). New FTE would be approximately 65.09 (503 students X 66 clock hours/510) and could generate about \$149,716 in State revenues (FTE X \$2300).

To increase enrollment, we plan a series of events including a Science Fair, presentations in College Now high school classes, and advertisements in local media. There are no expenses beyond the cost for advertising, which we will accomplish within our existing M&S budget. Science faculty and the Division Chair will meet with College Now and other high school classes; we will invite students in these classes to visit Lane; we will have a strong presence at all community outreach events and will work closely with Karen Edmonds to ensure success.

3. This project is also an efficiency, but for greater cohesiveness in this report it is included in this section. Every year a significant number of students leave Lane to complete science courses at four-year institutions that they could have completed here. If students are provided with a suggested program of study (courses of study) similar to those provided in Lane's career and technical programs, we would improve retention and create increased enrollment in other required science courses. By improving coordination between courses and getting students on track earlier we can capture these students who may otherwise take required classes at a four-year institution. To a great measure, biology drives enrollment in science. Biology majors make up the largest group of majors we have; geology, physics and chemistry majors are much smaller groups. Both groups, however, need to complete chemistry and physics to continue in the majors. We recommend designing one or more recommended programs of study fashioned after guidelines in career and technical programs, such as Family & Health Career Programs.

Our revenue projections are based on current numbers in BI 201, Organic Chemistry and General Physics (PH 201). We currently have 104 students in BI 201, but only 44 in Chemistry and 39 in Gen Physics. By improved advising, we could keep as many as 60, but for this analysis consider 48 additional students at Lane. We would need to add a total of 12 sections in chemistry and physics. Since these are sequences, we project these students will fill 12 courses over the year at 5 credits per course. That's an additional 30 credits taken by 48 students completed at Lane, rather than taken at a four-year college. New tuition revenues would be \$100,080 (48 students x 30 credits x \$69.50 per credit), with costs of approximately \$83,928 (6 sections at approximately \$7505 per section in S/OPE for chemistry and 6 sections at \$6483 for physics). 43.48 new FTE would add state FTE reimbursement of \$100,009 (43.48 FTE X \$2300).

Mapping Design:

- Identify courses that science majors need to complete. May lead to multiple tracks (physics, geology, chemistry, biology)
- Reduce conflicts between timing of offering maximum enrollment and completion lower division introductory courses offered in Science.
- Work with counselors, all disciplines within Science and other critical divisions (Math) as necessary.
- Distribute Science major pamphlets at the beginning of all introductory science major courses, in EOR Packets, and other appropriate venues and to counseling and advising staff.

Costs		Revenues		
		Sustainability		
CH & PH S/OPE	\$83,928	Tuition	\$26,966	
		College Fees	\$7,445	
		FTE	\$28,872	
		M&O		
		Tuition	\$139,834	
		College Fees	\$38,605	

Table of costs and revenues for Enrollment Enhancement projects

Costs		Revenues		
		FTE	\$149,716	
		Curr. Mapping		
		Tuition	\$100,080	
		College Fees	\$3,828	
		Class Fees	\$1,152	
		FTE	\$100,009	
Net	\$512,579 includ	ing State reimbursen	nent, \$233,982 without	

2. Efficiencies and Productivity: (Include impact, consequences, and comments; examples might include: increasing maximum class size, consolidating courses of two instructional programs).

Guaranteed Efficiencies/Productivity:

Description	Impact	Consequences	\$	R/NR
1. Projection system	Save cost of	Net savings	\$1000	R
timers reduce bulb	replacing two bulbs			
replacement cost	each year			
2. Division Chair to	Save cost of one pt-	Requires partial	\$6275	R
teach 1 section each	taught section per	reduction in		
year.	year	Chair's college		
		responsibilities		
3. Reduce number of	Savings of up to 18	Minimal, so long	\$108,126	R
sections offered	sections	as the cut sections		
		are balanced		
		among the		
		Division's		
		disciplines.		
4. Close Division last	Savings to Division	Requires	\$32,348	NR,
four weeks of summer	budget	significant		effectiveness
		planning to avoid		to be
		disruption of		evaluated
		Division work and		
		to mitigate impact		
		on student		
		enrollment.		
5. Reduce HVAC	Reduced energy	Net savings of	Savings to	R
costs by fully	consumption	approximately	known at	
implementing control		\$350,000 to	present	
strategies already		\$400,000 annually,	-	
developed.		campus-wide		
6. Organizational	See narrative	See narrative	\$10,000,000	
Efficiencies, college-				
wide				

Additional Narrative:

1. Auto-off software is easily installed and set. There is no cost to implementing this efficiency. If implemented college-wide, there could be significantly more savings.

2. Hammon volunteers to teach one telecourse each year.

3. We estimate there is sufficient capacity in existing courses to absorb displaced students without loss of enrollment. All disciplines would share in the reduction.

4. We recommend very careful implementation of a summer closure to avoid creating feedback loops that could cause continued enrollment decline. The employees affected by a summer closure are: Randy Manford, Star Glass, Connie Rowlett, Kyle Hammon, and one now-vacant position to be filled by someone on the recall list. Because of their seniority, two of the classified employees affected likely would be reassigned during the time of no work assigned in the Science Division. The chair highly recommends careful planning of the time of the closure as we can't simply ignore the tasks normally done during the last 4 weeks of summer. Some tasks can be rescheduled, but others are tied to the annual cycle of registration and work systems, and would require some office presence for EOAR, fall registration, schedule building, contract preparation, and inservice.

5. Adopting energy efficiency campus wide could produce a 50% reduction in our utility bills. These efficiencies include: improve HVAC controls, use current equipment as it was intended to be used to save energy, turn off lights in parking lots and buildings earlier – one hour after last class, put signs up on the automatic doors asking students to save energy by not using them unless necessary, turn off computers when not in use, install low flow devices on sinks campus wide.

6. Organizational Efficiencies Task Force Report

The following options were among those generated by the Division discussion, subsequently refined, that are deemed to have sufficient merit for consideration.

1. Close down the college during summer term. In the event of a major financial crisis, this option has considerable merit based on the following:

- It has minimal impact on the quality and breadth of the comprehensive academic program of the college.
- Per FTE lost, it produces the highest reduction in costs by eliminating virtually all administrative overhead, maintenance beyond completing projects, and teaching which takes place at a significantly lower level that term, much of which could otherwise take place during the regular school year or, if necessary, at the UO during the summer.
- Savings generated are in the range of \$10M, and thus perhaps useful only when such savings are necessary. However, from the perspective of what is best for students, cessation of instruction in summer term, with the same level of reduction in administrative operations, remains a preferable alternative to reductions or restrictions on classes during the regular school year.
- To transition this measure to reduce any disastrous effect on long-time classified LCC staff, the loss of summer employment could be limited to permanent employees who

are new (after the time of implementation) or have a current salary over \$55K. Current (at the time of implementation) permanent employees with a salary under \$55K would be offered over-time during the regular academic year to reach their current salary and to accomplish tasks needed for the following academic year. Current permanent employees with a salary over \$55K would be offered over-time during the regular academic year. Current permanent employees with a salary over \$55K would be offered over-time during the regular academic year to reach \$55K if cutting the summer term would bring their salary below \$55K. Up-grading of classified work would be encouraged, so that current salaries could be reached without over-time.

2. Eliminate administrative positions that are not needed to support Instruction, including, in particular:

- Eliminate the Professional and Organizational Development management position. The savings to the division should be estimated as the percentage of the staff FTE of the division times the salary of that position.
- Permanently eliminate the Associate Vice-President for Student Services position and transfer those responsibilities to the other two associate vice-presidents. OR temporarily eliminate two of the Associate Vice-President for Instruction and Student Services positions until they can be afforded. The savings to the division should be estimated as the percentage of the staff FTE of the division times the salary of the position (s).
- Eliminate all temporary positions associated with completion of the Bond Project. If it is determined that existing permanent staff positions are inadequately filled, and thus the college requires the ongoing employment of people associated with the completed Bond Project, then the College should examine the staffing and the positions involved, and re-define positions and conduct a hiring process open to people in the temporary positions. The savings to the division should be estimated as the percentage of the Bond Project of the division times the salary savings.

3. Modify the management structure of the division to incorporate lead faculty, in particular:

- The division manager would teach one course per term, including summer term.
- Lead faculty from each major discipline would have up to one class per year release from teaching to engage in strategic planning and implementation of plans in their discipline and engage with the instructional manager in division-wide support of the division. Four releases will be granted per academic year.
- The savings to the division can be estimated in terms of expected efficiencies. For perspective, each 1% increase in efficiency is approximately \$23,700.
- In an option for a larger transition in management structure, the division manager would teach more and focus primarily on those tasks connected to necessary employee supervision that only a manager can legally do.

4. Establish additional permanent faculty positions as long as those positions can be reasonably assured to bring in sufficient tuition and state re-imbursement to pay for them through new courses that students would otherwise take elsewhere. Meeting this rather high standard for establishing new positions is, however, not the only justifiable way to do it (see #5).

• The cost savings include additional efficiencies the full-time positions would create within the division and discipline as well as revenue generated while students stay longer at Lane. The potential for this has been documented in physics, in which nearly two hundred students per year do not take 200-level physics here. Revenue from attendance of less than half of them in additional 200-level courses matches the complete cost of two new positions. It is plausible that this is the case in other disciplines.

5. Establish additional permanent faculty positions as long as those positions can be reasonably assured to bring in sufficient tuition and state re-imbursement to pay the differential cost of consolidating existing ongoing part-time assignments into permanent positions.

• The cost savings include additional efficiencies the full-time positions would create within the division and enhancements from the rise in morale and long term planning that can be expected to take place. If the higher level of revenue described above (#4) is not used to add a new position, then the savings would then justify establishing new positions based on enrollment enhancements. Efficiencies include less office staff time and faculty time engaged in recruiting and hiring, less faculty and staff time in orienting and mentoring, and greater commitment expected when the institution gives a greater commitment. The cost savings of a 1.05% efficiency gain is approximately \$24,900 (based on last year's Science Division Unit Planning Calculation), the differential cost of consolidating temporary assignments into each new permanent position.

6. Support the creation of autonomous faculty-led Science Studies Institutes that are entrepreneurial in character that use unused division facilities. Such institutes could organize and offer classes and workshops as does the NEEI, which uses division facilities, sets prices and pays facilitators independently of the college bureaucracy.

• The financial reward to the division includes enhanced enrollment in other Science and LCC classes, a more supportive environment for innovation and collaboration with partners outside the college, FTE generated in on-campus activities, and having costs of innovation born outside the college. Given that this has essentially no cost to the division or college, estimates of financial enhancements need not be particularly firm to show the benefits to the division and have the support of the division.

{end of Organizational Efficiencies Task Force Report}

3. Budget Reductions: (Include impact, consequences, and comments; examples might include: reducing a faculty or management position in a program, reducing materials and supplies allocation).

Description	Impact	Consequences	\$	R/NR
1. 10% reduction in	Reduction of supplies	Decreased richness of	\$6,728	R
M&S	and other educational	educational		
	material	environment		
2. Office Administrative	Reduced open hours	Significantly reduced	\$6,953	R
Support, additional 2		availability of		
month reduction		Science office to		
		students		
3. Life Science hourly	Reduced lab support	Requires	\$9,222	R
budget		reorganization of		
		100-level biology		
		labs to mitigate		
		impact		
4. Tech support, hourly	Reduced services for	Increased response	\$12,318	R
	students	time, decreased		
		service availability		

Additional Narrative:

1. Cuts to M&S would decrease the diversity and richness of the educational environment, cause delays in equipment repair and replacement, and would shift more of the cost to students through increased fees. If this cut is made simultaneously with an increase in science course fees, we could better maintain our investments.

2. Adding two months results in a total of four months reduction to this position. A reduction of this magnitude would require the Science office to be closed to students and a general decrease in the quantity of work that could be done by office staff. Budgeting, planning, supporting work study students, student registration assistance, and first contact functions would all be reduced. (This proposal must be changed now because of the changed cost of the office support person – the first reduction listed under closing the office for a month alone may end up reducing the position by 3 months; we could not operate the office if we must go deeper).

3. This is a partial reduction and would still allow lab support approximately 520 hours annually. To mitigate the impact, life science faculty will need to streamline their schedules and reduce differences in their lab materials.

4. The division recommends that if any cuts are made to this tech fee funded position, that we also ensure a protected core of service level. A reduction of \$12,318 in S/OPE would maintain some coverage though the F, W, Sp quarters, and would result in delays in service.

NOTE:

Neither the chair, SAC, nor the Division endorse the following budget reductions.

Description	Impact	Consequences	\$	R/NR
1. Reduce PT budget	Cancel 20 sections	Net loss of tuition & FTE	Net loss between \$156,660 and \$13,790	R
2. Eliminate EES discipline: one faculty position (nine sections: 6 per year of 100 level and 3 per year of 200 level) plus 26 sections taught by part-time faculty	Reduction in number of contracted faculty	Loss of one discipline in the science division; loss of up to 44.52 FTE; risk of loss of 9.32 FTE	Net loss between \$100,142 and \$3,412. Loss of the discipline risks an additional \$20,016, recurring (3 course GIS sequence)	R
3. Science Resource Center technical support	Reduce to 20 hrs/wk F, W, Sp	Reduced assistance to students needing help with computer hardware and software	\$8478	R
4. Complete elimination of Life Science lab support hourly position		Would require implementation of rigid sequence of topics in 100-level biology labs	\$9222	R

Additional Narrative:

1. Canceling an additional 20 sections of courses taught by part time faculty would reduce the budget by approximately \$125,140 (20 sections X \$6257 S/OPE), but would cost approximately \$133,440 in tuition (24 students X 20 sections X 4 credits X \$69.50/credit), 62.12 FTE (20 sections X 24 students X 66 clock hours / 510) and up to \$142,870 in State reimbursement (FTE X \$2300). The effect would be a net loss to the college of between \$8300 and \$151,170, depending on the as-yet undetermined system of State reimbursement and the performance of other community colleges.

Table of cost savings and revenue losses	Table of	cost	savings	and	revenue	losses
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Revenue losses		Cost Savings		
100-level		Part time faculty S/OPE	\$125,410	
tuition	\$133,440			
fees	\$5,760			

Revenue losses		Cost Savings
FTE	\$142,870	
Net	Losses between \$(13,79) reimbursement.	90) and \$(156,660), including or not, State FTE

Conclusion:

Far from providing any net savings to the College, this proposal would result in net losses, perhaps significant ones.

2. Because of academic relationships among the disciplines, only one discipline could be cut without dismantling the entire division, and that is the Earth and Environmental Science discipline. There are many reasons *not* to take this course of action, including:

- Geology, Earth Science and Environmental Science programs are the earmark of quality Community Colleges regionally.
- All other larger Oregon community colleges have geology courses, and several have environmental science courses.
- The Earth and Environmental Science discipline provides the literal and figurative foundation of scientific study and training in field sciences including biology and ecology.
- The importance of a systematic understanding of the natural sciences has become increasingly acknowledged in both the professional and academic communities
- The EES discipline contains some of the most creative and energetic faculty in this division.
- It is a vibrant and forward looking group with past program development and future plans to further major mission goals of the college.
- Lane's MAPS GIS project requires an EES program to support a substantial number of the courses that will embed GIS concepts and applications in them. These courses from EES include but are not limited to ENVS 181, 182, 183, G 101, 102, 201, and 202.
- The third goal of the GIS grant of making Lane the regional leader for lifelong GIS education and training will be substantially undermined by cutting the EES discipline.
- Mary Spilde, Sonya Christian, Mark Williams, Ken Murdorf, Kyle Hammon, Andrea Newton, and many others have offered enthusiastic support of the GIS project.
- Future and ongoing NSF grant opportunities at Lane CC will be judged by the successful implementation of the present GIS grant.
- The college mission of sustainability instruction finds a foundation in the Environmental Science sequence.
- With its ecosystem-based approach, the environmental classes in EES support Lane's stated mission of sustainability.
- Curriculum development in sustainability is an important goal of the Division and the EES discipline is taking leadership in pursuing this aim.
- Non-majors students need more than life science from which to choose their lab science courses.
- Newly developed courses are very well-enrolled (Rocks and Minerals and Geology of National Parks).
- Correction of catalog issues and logistical barriers to full enrollment in some EES courses is underway and soon to take effect.

- EES holds a teaching collection of rocks, minerals, and maps that rivals and is better organized and maintained than lower division undergraduate collections at the Department of Geological Sciences at the University of Oregon.
- The Science Chair, Science Advisory Committee and Science Division do not support eliminating the EES discipline.
- Elimination of the EES discipline would undermine the educational and institutional goals of the college.

Lost revenues resulting from eliminating the EES discipline include:

- The NSF GIS grant would be jeopardized if the discipline were cut. Geology courses are an essential core of the grant, and the college stands to lose \$501,524 from the remaining budget in the grant for FY 08 and FY 09. In addition, the expected outcomes of the grant include a three-course sequence in GIS that will attract new students to Lane. This represents future enrollment losses (at 2005-06 tuition rates) of at least \$20,016 recurring (=\$69.50 X 4 credits X 24 students X 3 sections) plus state reimbursement. This loss may be avoided or at least mitigated if some environmental science courses are retained and faculty in biology can develop and implement GIS modules in a way that meets the grant objectives.
- Later grant applications to the NSF would not be viewed favorably if we were not successful in this GIS grant.
- 15-20 students in G 201, 202 and 203 sequence might choose to go elsewhere to take majors-level geology. It's possible that some would remain, but we cannot estimate this number. The majors also take PH 201, 202, and 203 and CH 221, 222, and 223. The loss of these students would cost: 20 students X 42 credits X \$69.50/credit = \$58,380 in tuition, \$6405 in fees (technology \$3/cr X 42 cr X 20 students, transportation \$19/term X 20 students X 3 terms, and activity fees \$45.75/term X 20 students X 3 terms), and 25.88 FTE or up to \$59,524 in State reimbursement. This also ignores loss of FTE in other divisions where students take classes.
- We estimate that 25% of students are enrolled in EES courses because of personal interest and would not enroll in other 100-level science courses. I (KH) calculated that EES courses are enrolling approximately 80% of capacity (data from Fall '06) and, extrapolating from current enrollment trends, I conclude that the 30 sections of 100-level EES offered 06-07 should enroll about 576 students (30 sections X 24 seats X 80% capacity). If 25% choose not to enroll in other science courses, those 144 (25% of 576) represent \$40,032 in tuition; \$11,052 in fees (technology, transportation, and activity); and 18.64 FTE (144 X 66 hours / 510) or \$42,861 in lost State revenue. This also ignores loss of FTE in other divisions where students might take classes.

There are alternatives to complete elimination of all courses currently in the EES discipline. Within the constraints of the contract, three Environmental Science courses and one section of Oceanography GS 147 could be moved to the Biology discipline. These 4 sections count for less than 0.5 FTE of a faculty assignment. The following numbers are the ones used to calculate net revenue losses.

• If four sections were retained, then 26, not 30, sections would be dropped. Recalculating to estimate lost enrollment – 26 sections of EES represents 500 students (26 sections X 24 students X 80% capacity). If 25% choose not to enroll in other science courses, those 125 (25% of 500) represent \$34,750 in tuition (125 X 4 credits X \$69.50); \$9,594 in fees (technology, transportation, and activity); and 16.18 FTE (125 X 66 hours / 510) or \$37,206 in lost State revenue.

Cost savings

- Contracted: Cost savings include S/OPE for one contracted person (\$105,717).
- Part time: In the main part of section 3 of the Unit Plan we discussed dropping 18 part timetaught sections. For the 06-07 year there are 33 sections of EES listed compared to 37 the year before. The difference of 4 sections should be counted towards the 18 sections listed earlier, since it represents a real budget reduction already implemented. During the 06-07 year there are 24 sections assigned to EES part time faculty; if 4 sections are retained in another discipline, the balance after subtracting 18, accounting for 4 sections already cancelled, and moving 4 to biology is negative two. The result is that the division will have reduced its budget by an extra 2 sections, and there are no further costs to be saved in this discipline.
- The OISS has funded reassignment time for 3 sections each year 05-06 and 06-07, and during the 3-year span of the NSF grant, 3 sections each year are paid by the grant. The preceding calculations assume a full time workload is 9 sections in EES, so the grant and OISS support do not inflate the costs of the program.

Revenue losses		Cost Savings		
100-level			Contracted faculty S/OPE	\$105,717
1	tuition	\$34,750		
	fees	\$9,594		
	FTE	\$37,206		
200-level				
1	tuition	\$58,380		
	fees	\$6,405		
	FTE	\$59,524		
Net		Losses between \$(1 reimbursement.	100,142) and \$(3,412), includ	ing or not, State FTE

Table of cost savings and revenue losses (assumes retention of 3 sections of ENVS and one section of Oceanography

Conclusion:

Far from providing any net savings to the College, this proposal would result in net losses, perhaps significant ones.

3. Reduction to this level would retain 20 hours per week of service to students. A reduction of support for the Science Resource Center would increase the need for instructors to provide more in-class time to

trouble-shoot software applications problems and to explain more completely how to use PowerPoint and other software packages. The impact on Science students and the science technical infrastructure caused by the loss of summer support may be mitigated if we are able to continue with some technical assistance from the other position.

4. A complete elimination of this support position, if implemented all at once, could be very difficult. There are nine contracted and approximately 15 part time Life Science faculty. While many teach the same courses, very few follow precisely the same sequence of topics or assigned the same lab protocols. Even if the same labs are assigned, providing support for many different topics over a period of several weeks is required under the current system. To change this system will require lead time and careful coordination and communication among the faculty.

2008-2009 (FY 09) and beyond, Fundamental changes:

NOTE:

All but one of the items on the FY 08 list are recurring and thus will have fiscal consequences for FY 09 and beyond.