

## Removing the DE Tuition Penalty – Financial Analysis

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### Background

In 1997, UNC moved from an FTE-based model to an SCH-based model (the 12-cell matrix) for the purpose of computing enrollment funding. The UNC formula calculates a “total requirement” for enrollment change funding based on the change in SCHs from the previous year in each of the 12 cells. The actual appropriation is determined by subtracting the projected tuition revenues (not including CITI) from the total requirement.

The total requirement calculations for regular-term instruction and DE are identical; i.e., the UNC formula assumes that the per-enrollment cost of delivering a given course by DE is exactly the same as the per-enrollment cost for delivering that course on campus. Whether or not that assumption is true is irrelevant to the current discussion. The key point is, whether a given SCH is counted as “regular-term” or “DE” in the enrollment matrix, it generates exactly the same “total requirement” dollars.

When UNC moved to the SCH-based model, it was intended that the campuses would also move to an SCH-based model for tuition and fees. The SCH-based model was implemented for DE tuition and fees; however, tuition and fees for regular-term instruction remain on the FTE-based model. DE tuition is actually derived from the campus FTE tuition, and prorated based on the assumption that an average full-time DE student would pay the same total tuition as an average full-time regular-term student. Fees are identically prorated, except that only two fees are approved for DE instruction; the Education and Technology Fee (ETF), and the Association of Student Governments Fee (ASG). (Note: the Engineering Computing Fee is also approved for DE, but will be ignored for the analysis in this paper.)

While the legislative intent was that both enrollment funding and tuition load would be identical for regular term and DE, the structural differences between the FTE-based and SCH-based tuition and fee models create inequities. The result of these inequities is that full-time students who take a mixture of DE and regular-term courses generally pay *more* tuition and fees than they would if they took all of their coursework either on campus or by DE, while part-time students taking a mix of DE and regular-term courses generally pay *less* tuition and fees than they would otherwise. These inequities present a significant barrier to moving towards a blended learning model; i.e., a model in which students work towards their degree through a combination of on-campus and DE instruction.

### Eliminating the inequities

The simplest way to eliminate the tuition and fee inequities would be for the Office of the President to adopt a single tuition model for regular-term and DE instruction. While

these inequities were never intended by the legislation or by OP policy, the impact of moving to an SCH-based tuition model would have an enormous impact on course-taking patterns, and consequently on enrollment funding; therefore, it is not likely to happen in the foreseeable future.

An alternative approach to eliminating the inequities would look at the classification of the student, rather than the delivery mode of the course, in determining whether an SCH is counted as regular-term or DE. In this model, all of the SCHs taken in a given semester by a degree seeking student would be counted as regular-term, including those delivered via DE, and tuition and fees would be charged accordingly. This solution would eliminate the penalty for full-time students who take a course through DE, and also close the loophole through which part-time students can end up paying lower tuition and fees by taking certain combinations of regular-term and DE courses. This model would not require a policy change at the OP level; however, it may require OP approval (or notification, at least).

The remainder of this paper takes a quantitative look at the inequities described, and considers the financial impact to the institution of the proposed solution. Only North Carolina residents are considered in the analysis, since DE funding and tuition for non-residents are off the model.

### Quantifying the inequities

Table 1 contains the in-state, regular-term tuition and fee schedule for 2003-04.

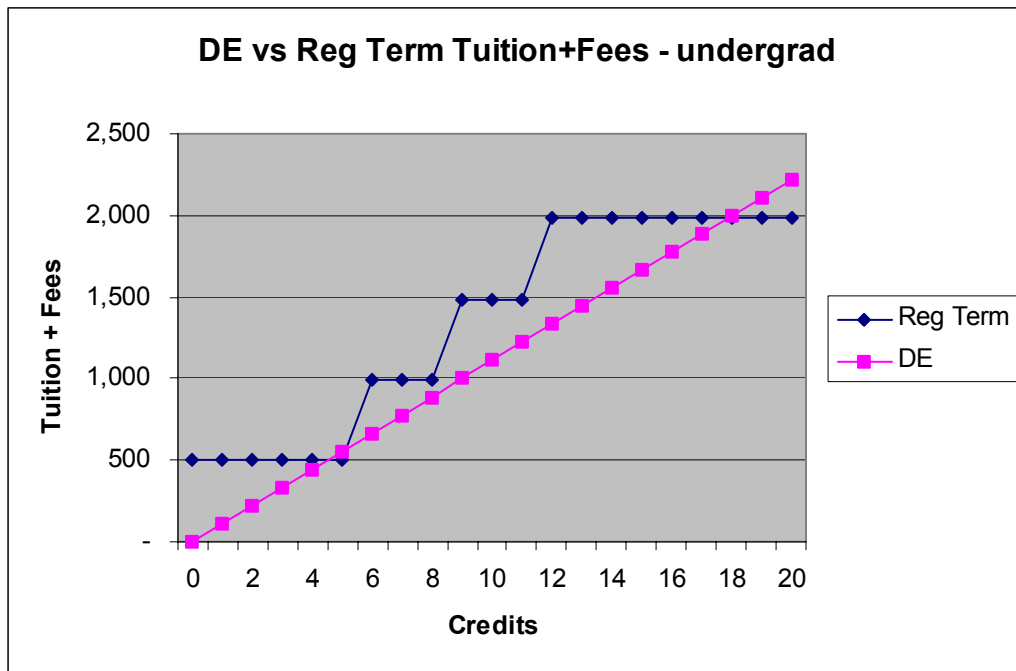
| <b>Undergraduate</b> |                |             |              |
|----------------------|----------------|-------------|--------------|
| <b>Hours</b>         | <b>Tuition</b> | <b>Fees</b> | <b>Total</b> |
| 0 - 5                | 370.00         | 127.25      | 497.25       |
| 6 - 8                | 739.00         | 254.50      | 993.50       |
| 9 - 11               | 1,108.00       | 380.75      | 1,488.75     |
| 12+                  | 1,477.50       | 507.50      | 1,985.00     |
| <b>Graduate</b>      |                |             |              |
|                      | <b>Tuition</b> | <b>Fees</b> | <b>Total</b> |
| 0 - 2                | 396.00         | 171.00      | 567.00       |
| 3 - 5                | 791.00         | 171.00      | 962.00       |
| 6 - 8                | 1,186.00       | 342.00      | 1,528.00     |
| 9+                   | 1,581.50       | 513.00      | 2,094.50     |

**Table 1.** 2003-04 in-state tuition and fee schedule.

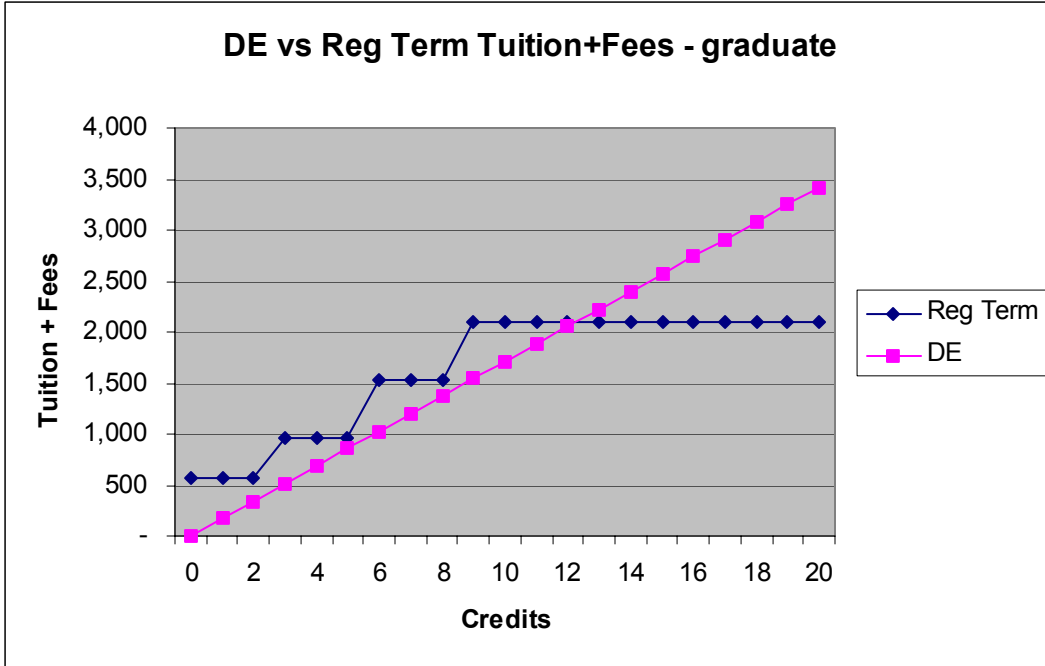
DE tuition per SCH is determined by taking the annual full-time tuition rates and dividing by 29.6 for undergraduate instruction and 20.4 for graduate instruction. (The full-time rates in Table 1 are semester rates, and must be multiplied by 2 to obtain annualized rates.) Applying this formula and rounding to the nearest dollar, the undergraduate DE tuition rate is \$100/SCH, and the graduate rate is \$155/SCH.

Fee rates for DE are calculated similarly, but only a subset of the fees associated with regular-term apply; the ETF fee, which is \$320 annually, and the ASG fee, which is \$1 annually. The resulting fees are \$11.03/SCH undergraduate, and \$16.05/SCH, graduate.

Figure 1 is a plot comparing tuition and fee charges for undergraduate instruction, and Figure 2 provides the same comparison for graduate instruction. As can be seen from these charts, DE tuition and fees are generally lower than regular-term for undergraduate loads of less than 18 hours and graduate loads of less than 12 hours. This is primarily due to the reduced fee burden for DE.

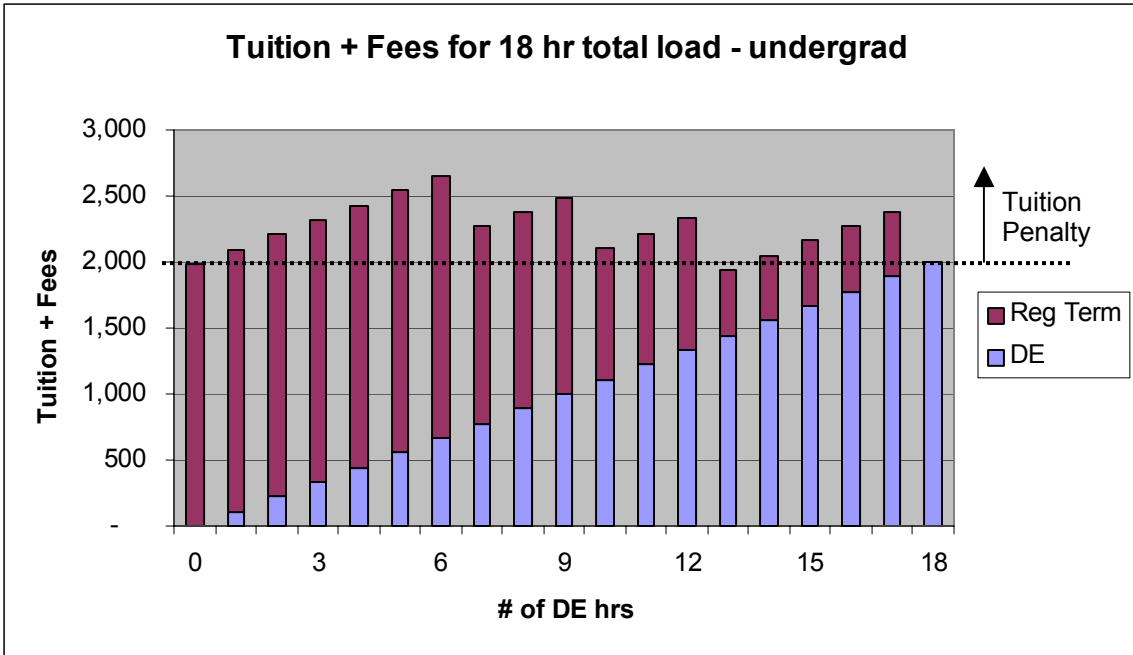


**Figure 1.** Comparison of DE and regular-term tuition and fees – undergraduate.

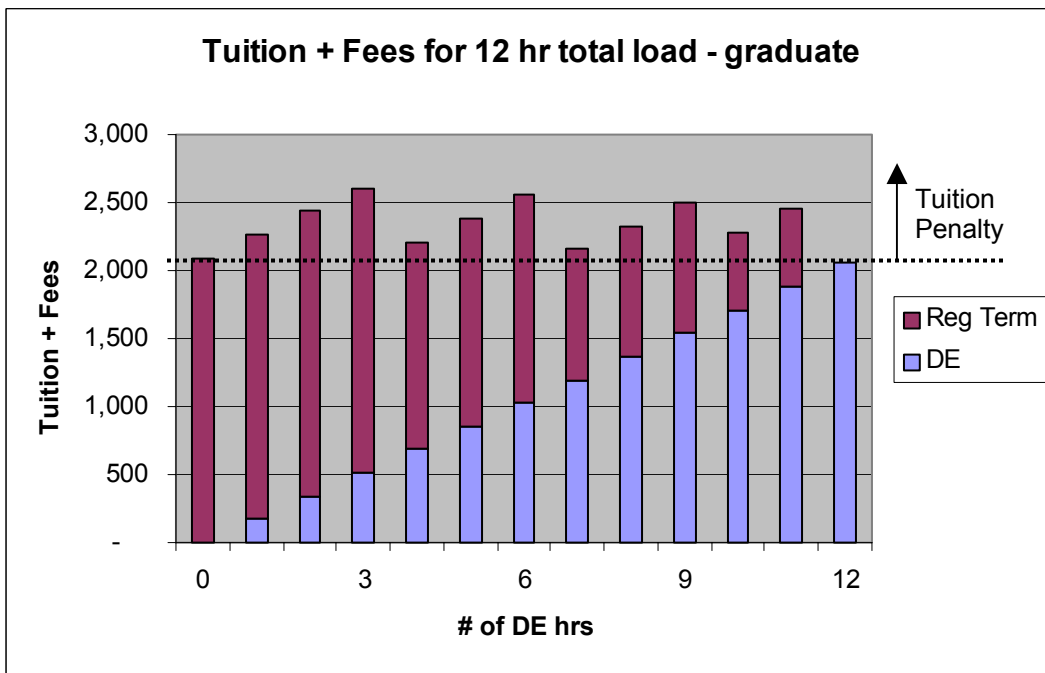


**Figure 2.** Comparison of DE and regular-term tuition and fees – graduate.

Figures 3 and 4 quantify the “tuition penalty” for full-time students taking a mix of regular-term and DE courses in a given semester. Note that for an undergraduate student taking 18 hours or a graduate student taking 12 hours, the tuition and fees are nearly equivalent if the coursework is taken exclusively on campus or exclusively by DE. The dotted horizontal lines in each chart highlight the financial penalty for taking a combination of DE and regular term coursework. Note that the maximum penalty occurs at 6 hours of DE coursework for undergraduates, and 3 hours for graduate students.

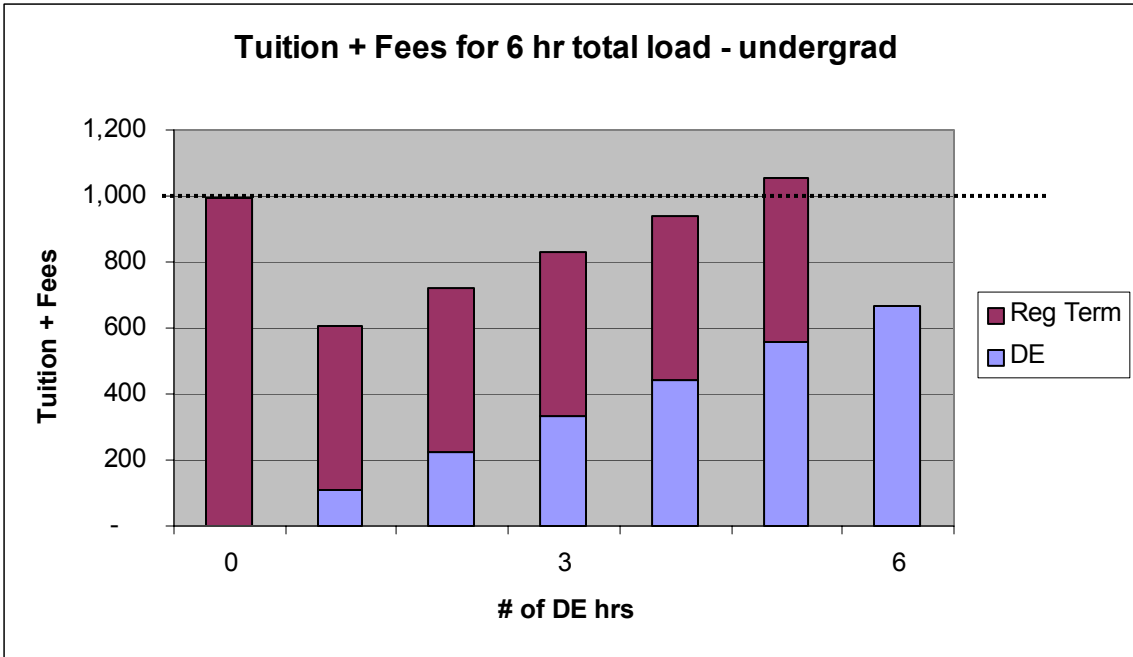


**Figure 3.** Undergraduate tuition and fee charges for 18 hours total load.

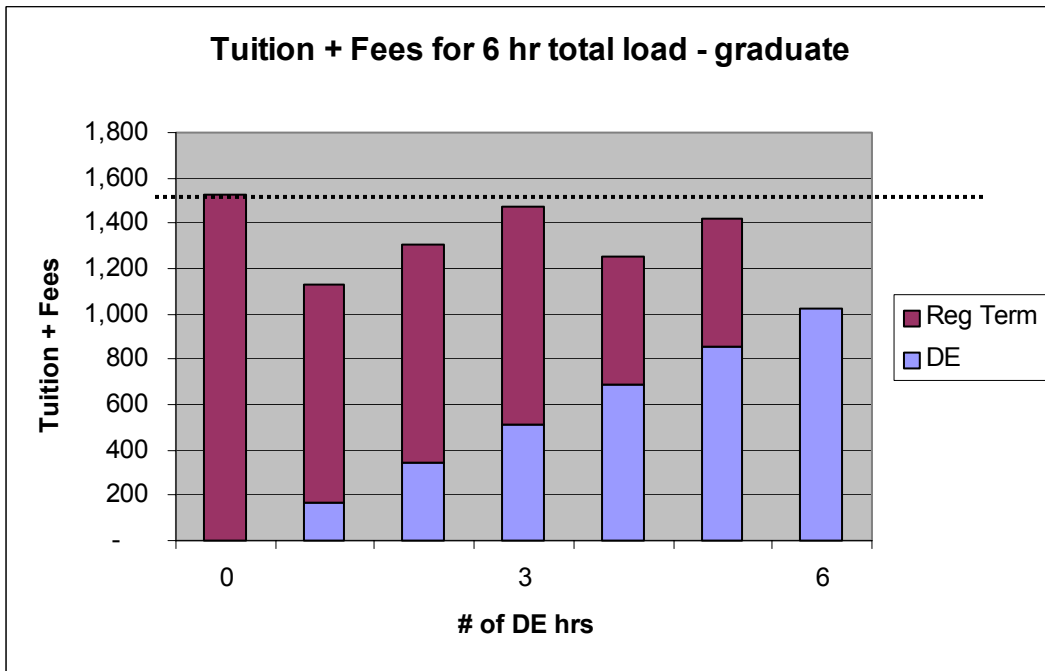


**Figure 4.** Graduate tuition and fee charges for 12 hours total load.

While Figures 3 and 4 illustrate that a full-time student pays higher tuition and fees when mixing regular-term and DE instruction, Figures 5 and 6 illustrate that part-time students taking one or two DE courses would actually pay *lower* tuition and fees. This “loophole” would be partially eliminated by the model proposed in this paper.



**Figure 5.** Tuition and fee “loophole” for part-time undergraduates.



**Figure 6.** Tuition and fee “loophole” for part-time graduate students.

Table 2 presents several typical scenarios of full-time and part-time students taking a combination of regular-term and DE courses. The table illustrates how the tuition penalty would be eliminated for full-time students, and the “loophole” closed for part-time students. Note, however, that part-time students would still realize significant savings by taking all of their coursework through DE.

|  | Tuition + Fees |          |        |
|--|----------------|----------|--------|
|  | Current        | Proposed | change |
| Undergraduate taking 18 hours total, all regular term    | 1,985          | 1,985    | -      |
| Undergraduate taking 18 hours total, all DE              | 1,999          | 1,999    | -      |
| Undergraduate taking 18 hours total, 15 reg term + 3 DE  | 2,318          | 1,985    | (333)  |
| Undergraduate taking 18 hours total, 12 reg term + 6 DE  | 2,651          | 1,985    | (666)  |
| Grad student taking 12 hours total, all regular term     | 2,095          | 2,095    | -      |
| Grad student taking 12 hours total, all DE               | 2,053          | 2,053    | -      |
| Grad student taking 12 hours total, 9 reg term + 3 DE    | 2,608          | 2,095    | (513)  |
| Undergraduate taking 6 hours total, all regular term     | 994            | 994      | -      |
| Undergraduate taking 6 hours total, all DE               | 666            | 666      | -      |
| Undergraduate taking 6 hours total, 3 reg term + 3 DE    | 830            | 994      | 163    |
| Graduate student taking 6 hours total, all regular term  | 1,528          | 1,528    | -      |
| Graduate student taking 6 hours total, all DE            | 1,026          | 1,026    | -      |
| Graduate student taking 6 hours total, 3 reg term + 3 DE | 1,475          | 1,528    | 53     |

**Table 2.** Current and proposed tuition and fees for several typical scenarios.

### **Institutional Impact of Proposed Model**

- Change in distribution of 12-cell matrix between regular term and DE.** In 2002-03, approximately 7,140 DE SCH (31.6% of the fundable total) represent degree-seeking students taking a combination of regular term and DE courses. Under the proposed model, these SCH would move from the DE matrix, where they currently reside, to the regular term matrix. Removing the tuition penalty will increase the demand for DE courses by degree-seeking students, perhaps by 20% or more. The net result will be a 20+% *increase* in actual DE activity, while on paper it will appear as a 30-50% *decrease* in DE activity. This paradox is simply an artifact of changing the definition of DE SCH for billing and reporting purposes, but must be fully understood by NCSU and OP administrations. It will necessitate changes in enrollment planning process, the DE budgeting process, and the SCH reporting process.
- Tuition and fees revenue reduction.** Elimination of the tuition penalty for full-time students will result in a net reduction of tuition and fee revenues. The complexities of the differences in charging models between regular term and DE make it impossible to calculate an exact figure without looking at each individual student, a good approximation can be made considering the institutional ratios of full-time to part-time students. According to recent UPA data (Spring 03 enrollment statistics), 78.3% of on-campus undergraduates and 56.7% of on-campus graduate students are full-time. Since no additional tuition and fees would be charged for full-time students taking a DE course, the lost revenue is estimated by applying the full-time percentages to the SCH above and calculating the total tuition and fees represented. This is calculated in Table 3a.

To calculate the revenue recovered from closing the tuition loophole, Table 3b applies the part-time percentages in a similar fashion, and assumes that an “average” part-time student taking a mix of regular term and DE courses is taking one of each per semester. (While this assumption makes the calculation less precise than that for full-time students, the magnitude is small in any case, and will suffice for this present discussion.)

Table 3c shows that the net result is a decrease of approximately \$548K in tuition receipts, \$59K in ETF receipts, and \$254 in ASG receipts.

| a) Full Time |         |        |     |
|--------------|---------|--------|-----|
|              | Tuition | ETF    | ASG |
| UG           | 455,706 | 50,128 | 228 |
| GR           | 116,008 | 11,975 | 37  |
|              | 571,714 | 62,103 | 265 |

| b) Part Time |          |         |      |
|--------------|----------|---------|------|
|              | Tuition  | ETF     | ASG  |
| UG           | (20,837) | (2,292) | (10) |
| GR           | (3,073)  | (317)   | (1)  |
|              | (23,910) | (2,609) | (11) |

| c) Combined |         |        |     |
|-------------|---------|--------|-----|
|             | Tuition | ETF    | ASG |
| UG          | 434,869 | 47,836 | 217 |
| GR          | 112,935 | 11,658 | 36  |
|             | 547,804 | 59,493 | 254 |

**Table 3.** Lost tuition and fee revenues from proposed model.

While these calculations show a significant reduction in tuition and fee revenues, it is essential to understand that the lost tuition revenue will be fully compensated in the calculation of the tuition offset in the enrollment planning process. By charging all students tuition either on the regular term schedule or the DE schedule (and not a combination of the two), we will be charging the students exactly the amounts that the legislature intended, rather than a higher amount due to anomalies in the formula. If the calculations are done correctly, our appropriation should be higher by the amount of the lost tuition revenue. The lost fee revenues will *not* be compensated; however, this is fair and reasonable considering that students are currently in effect being double-charged for these fees, just as they are for tuition.

- **Financial impact of proposed ENG 33x pilot project.** The English department has proposed to offer 34 section of ENG 331, 332, and 333 to on-campus, degree-seeking students by DE as a pilot in 2004-05. These are required courses for many curricula, and the conversion to a DE mode of delivery will only be feasible

if the tuition penalty is eliminated. These sections represent a total of 2,346 U1 SCH, corresponding to \$638K in enrollment funding (total requirement). However, since these SCH were already projected as regular term SCH in the 2004-05 enrollment planning cycle, delivering them by DE but billing and counting them as regular term (per the proposed model) will be revenue-neutral. The pilot project will not be cost-neutral, however, since the costs of the pilot will be borne by the DE budget. This will need to be compensated in the 2005-06 and future enrollment planning cycles to be long-term viable.