

**Learning with In-class Technology (LIT): The 15-Minute Learning Module Approach**  
**Rouskas and Miller (CSC)**

This project will have the following outcomes:

**Outcomes of the Project:**

- 1) Students will be able to apply Linked List and Tree data structures to solve realistic problems.
- 2) Students will construct Linked List and Tree data structures and implement recursive and non-recursive algorithms for managing these data structures.

Outcomes 1 and 2 are currently outcomes of CSC216 and CSC316. CSC216 covers Linked List data structures. CSC316 covers both Linked List and Tree data structures.

These outcomes will be assessed using the following plan:

**Assessment Plan:**

1. Special questions at mid-term and final exams will be developed to assess the students' ability to solve realistic problems using Linked List and Tree data structures. Results from a non-technology-based class and a technology-based class will be collected and compared.
2. Students will complete programming projects common to a non-technology based class and a technology-based class. A portion of these projects will focus on Linked List and Tree data structures. In CSC316, there will be one common project. In CSC216, there will be two. Results from the grading rubric will be collected and analyzed for the non-technology-based and technology-based classes.
3. Dr. Dianne Raubenheimer, COE Director of Assessment, will observe at least one class for each course for each format and provide feedback regarding the learning environments in the classroom.
4. Students' attitudes to the course will be assessed using surveys at the end of the semester to compare attitudes in courses using technology and those not using technology.

**Timeline:**

- Develop the modules starting in summer 2006.
- Implementation and assessment of CSC 216 - two sections of 216, one technology-based and one non-technology-based for fall 2006
- Implementation and assessment of CSC 316 will be in Spring 2007