For the Masters of Technology degree there are two main departments involved, Department of Biological Sciences, Chair Dr. Teresa Golden and Department of Chemistry, Computer, & Physical Sciences, Chair Dr. Tim Smith. Assessment of student objectives for the overall program has been sub-program specific since the appointment of separate program specific coordinators in 2009. The MT-Coordinator for Biology is Dr. Teresa Golden and the MT-Coordinator for the Information Technology program is Dr. Su. A copy of this biology specific sub-program plan was provided to Dr. Tim Smith.
MASTER OF TECHNOLOGY-BIOLOGY
ASSESSMENT PLAN UPDATE
September 24, 2011

1. MISSION STATEMENT

The Master of Technology program at Southeastern Oklahoma State University provides an environment of academic excellence that enables students to be nationally competitive in their chosen fields. By having personal access to excellent teaching, challenging academic programs, and collaborative experiences, students will master a body of knowledge, and professional skills and competencies, in their chosen field that promote successful careers, responsible citizenship, and lifelong learning.

2. VISION STATEMENT

The Master of Technology program at Southeastern Oklahoma State University strives to be a leading program for graduate technical education in Oklahoma and northern Texas.

The program will continue to exemplify an innovative and responsive spirit that nurtures excellence in the education of its students. The program will respond effectively to changing technologies, economics, and demographics. Innovative partnerships with regional, constituencies will be one of the program's hallmark achievements.

3. PROGRAM GOAL

The goal of the Master of Technology Degree program is to prepare graduates for successful employment and advancement in science and technology fields which contribute to the economic well-being of southeastern Oklahoma. The program develops a knowledge base through three core courses and provides for an option of specialization.

4. PROGRAM OBJECTIVES AND OUTCOMES

Objectives and outcomes for students;

Students will

1. A) Demonstrate a broad, general knowledge about the foundations of science and technology.
   B) Demonstrate an in depth knowledge of a specialty area in science and technology. The specialty area can include many subdisciplines represented in the Biology Department including, but not limited to: Biotechnology and Conservation.

2. Demonstrate knowledge and skill in the synthesis of information by preparing and presenting written and/or oral reports.
3. Show interpersonal skills that promote the accomplishment of collaboration and communication in the areas of science and technology.

4. Develop basic research skills for the design and execution of experiments and other scientific investigations. This requires the development of skills and knowledge of the methods involved in analyzing, interpreting, and reporting data relevant to one's specialty area.

Objectives and outcomes for program advancement:

5. The Individual Program Coordinators (one for Biology and one for Computer Information Systems), graduate faculty, and Graduate Office will continue efforts to stimulate enrollment in the Master of Technology program. This may include direct mailing, SE website, newspaper advertising, and word of mouth. The outcome is that enrollment in the program will maintain its recent increase, or increase more, in students enrolled. This will be enhanced with information about students who have previously graduated and their success in finding employment.

6. The Coordinators and Department Chairs and graduate faculty will explore possibilities of launching a Master of Science program which may eventually replace the Master of Technology program. Depending on the outcome during the 2011-13 academic years, the Coordinators, Chairs and Advisory Committee will produce a tentative recommendation regarding the next steps, if any, in this direction.

5. STATEMENT FOR ASSESSMENT AND STUDENT LEARNING

The program will undertake a continuous process of assessment of the outcomes from the above four student learning objectives, with a feedback loop for continuous improvement.

6. TYPES OF ASSESSMENT USED:

- Assessment of student objectives for the overall program has been sub-program specific since the appointment of program specific coordinators in 2009 (a copy of this report was provided to Dr. Tim Smith, the Chair of the Department of Chemistry, Computer, & Physical Sciences):

Objective 1A&B. Indicators for Biology: Core course assessment exam and oral exam.

B. Procedure: MT Coordinator for the Biology program will arrange for the administration of a core assessment exam based on questions submitted from the Instructors of those courses. The MT Coordinator will also be sure that each student has a committee of three graduate faculty (including the advisor) who will administer an oral graduation exam required for final graduation from the program.
The Coordinator will also follow up with students in progress towards graduation and those who do not re-enroll, to determine why and to encourage them to continue their work. Obtain transcripts for each student for each year to monitor grades and monitor completion of theses.

Objectives 2&3. Indicators for Biology: Oral exam (categories 3&4), completion of student CVs and presentation of Theses.

Procedure: MT Coordinator for the Biology program will arrange for the administration of the graduation oral exam. The coordinator will obtain copies of a completed Vita that describes all professional activities and presentations. The coordinator will monitor completion of theses.

Objective 4. Indicators for Biology: Oral exam, completion of student CVs and presentation of Theses.

Procedure: MT Coordinator for the Biology program will arrange for the administration of an oral graduation exam. The coordinator will obtain copies of a completed Vita that describes all professional activities and presentations. The coordinator will monitor completion of theses. In addition to taking the required special studies course which encourages some form of inquiry the coordinator will encourage non-thesis seeking students to take some credit hours doing research. Lab notebooks can be kept as a portfolio of their work.

-Assessment of overall program objectives: The completion of the reports and recommendations will help to indicate that objectives 5 & 6 have been met. In addition informal surveys of students' success after graduation will be maintained.

7. FREQUENCY OF ASSESSMENT AND REPORTING

1. The review of transcripts will occur each summer and as students seek advisement or graduation.
2. Each fall, the Coordinator determines which students graduated and what professional advancement they experienced as a result.
3. Each fall, the Coordinator will determine the status of all incoming enrolled and non-enrolled students and attempt to contact non-enrolled students. Students will be contacted if necessary.
4. As the Coordinator is made aware of students who plan to graduate they will advise the student and advisor to arrange for the core assessment test and oral exam.
5. Necessary assessment reports and plans will be completed.

8. FACULTY INVOLVEMENT IN ASSESSMENT PROCES

An MT Advisory Committee (consisting of the Coordinators, chairs, advisors in the respective areas, and instructors of core courses; chairs and all biology graduate faculty in the program are invited to participate) discuss the following:
1. Assessment results for student outcomes
2. Modifications in response to assessment results for student outcomes
3. Possible changes in instruction format.
4. Possible transition to Master of Science program
5. Draft of assessment report
6. Draft modified assessment plan

The full advisory committee meetings customarily occur via e-mail. Sub-meetings of the Biology graduate faculty may be called to address program specific concerns.

9. ANALYSIS METHODS

Due to small enrollment, averages and simple frequency distributions of the results of the student core and oral exams are sufficient to assess the success of the program in the areas of knowledge and competence. For career advancement, case studies are sufficient.

10. APPLICATION OF ASSESSMENT RESULTS

The Advisory Committee discusses the results and suggests modifications. Modifications may include but are not limited to:

1. Modifications within core courses
2. Curricular changes
3. Changes in course delivery format
4. Changes in program requirements
5. Suggestions from students

11. FEEDBACK

Overall program: MT Coordinator for each program will summarize and share ideas with the other coordinator, advisory committee, and graduate faculty to discuss ideas for adjustments in response to assessment information.

MT Coordinator for Biology will summarize core and oral exam results for the assessment report, and share the results with the advisory committee to discuss ideas for adjustments in response to assessment information.

The MT Coordinator may send letters to students who have not re-enrolled in fall courses who may be experiencing difficulties.

The MT Coordinator will maintain information about graduated student's employment success if the student stays in contact.

12. MODIFICATIONS
For modifications that require university or state committee approval, the Coordinator may pass on, to the committee or instructors, suggestions such as the following:

1. Modifications of core courses. The committee may wish to give faculty who teach the core courses suggestions about what the course should contain and achieve.
2. Curricular changes. The committee may wish to pass recommendations for curricular changes on to appropriate campus and state committees. The committee may recommend implementation of suggestions from student comments, within the limits of university budgets and facilities.

MT- Biology Coordinator, Teresa Golden  
Chair Biological Sciences, Teresa Golden  
Dean, Arts and Sciences, Lucretia Scoufos