Lawrence Technological University

Assessment Report

2010-2011 Academic Year

University Assessment Committee

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Executive Summary of 2010-2011 Assessment Report

Assessment of student educational outcomes at Lawrence Technological University is the responsibility of the University Assessment Committee (UAC). The function of the UAC is to advise the Director of Assessment, to plan and carry out assessment of student learning in the academic programs of the University, and to disseminate results of assessment activities to the University and the general public. Committee membership typically accounts for the equivalent of three academic hours of service to the University.

The UAC is chaired by the Director of Assessment (who is a faculty member appointed by the Provost), one member from each academic department, and the Provost (*ex officio*), the Associate Provost and the Coordinator of Institutional Research and Assessment (as non-voting members).

The UAC meets regularly during the academic year (usually 90-minute bi-weekly meetings) to discuss assessment methodology best practices in each program. These meeting help to ensure the vitality of assessment within individual programs. The UAC meets for annual semester planning retreats. The UAC meets with all the University full time faculty, department chairs, program directors and College Deans during the annual University Assessment Day.

All UAC meeting minutes and associated assessment materials are stored on the university learning management system.

The 2010-2011 University Assessment Committee (UAC) spent a significant amount of effort on policies, procedures, and revision of the University Educational Goals. In previous years, the quantity and quality of undergraduate assessment reports varied widely by program. In addition, several programs focused more on data collection than a formal assessment and evaluation of student learning and program improvement. To rectify this situation, the UAC established faculty agreed upon templates for annual reports along with common matrices for mapping outcomes. In addition, the annual Assessment Day (Section 3) was devoted to "Closing the Loop" and action plans based on assessment. Another significant effort on campus undertaken by the UAC was the revision of Undergraduate Educational Outcomes and the establishment of Graduate Educational Outcomes. The undergraduate learning objectives had been in place for five years and were scheduled to be evaluated as part of our continuous improvement plan. There are seventeen educational objectives in five goal groups (Section 2.b) and several of the objectives have proven difficult to assess as written.The revision process included significant faculty input from the entire campus and a new set of ten undergraduate learning outcomes in three general categories (Discipline Specific Knowledge, Critical Thinking, and Leadership & Ethics). The new outcomes were approved (Section 4.a) and will be official for the 2011-2012 academic year. In addition, a provisional set of graduate educational outcomes was devised (Section 4.b) by the UAC with assistance from a committee of Graduate Program Directors. These outcomes would represent the first common set of graduate educational outcomes for Lawrence Technological University. They are scheduled to be approved during the 2011-2012 academic year for implementation in 2012-2013.

This report contains the 2010 Assessment Day presentations (which close-the-loop on the previous year assessment activities), and annual reports from programs for the 2010-2011 academic year (which describe assessment activities for the academic year and assessment plans for the next academic year).

Assessment Committee Membership Rules
(Adopted, May 7, 2007)

Membership Composition
The Assessment Committee includes a representative from each academic department at LTU, a chairman that is the Director of Assessment for the University, and two *ex officio* members: the Provost and the Coordinator of Institutional Research.

The Assessment Committee is made up of the following individuals:

The Director of Assessment (Chair, faculty representative)
One faculty representative from each academic department.
The Provost, *ex officio* and non-voting
The Associate Provost, *ex officio* and non-voting
The Director of Institutional Research and Academic Planning, *ex officio* and non-voting
The Director of eLearning Services, *ex officio* and non-voting
One representative from any other academic program as the Dean of the appropriate College and/or Provost direct.

Chairperson
The Chairperson of the Assessment Committee is the University's Director of Assessment. He/she is a faculty member appointed by the Provost.

Committee Members
(1) Each department, and each other program designated by the Provost, names its own representative.
(2) Each department or unit representative serves for a term of three years. In the event of a vacancy during a term, the department or unit will name a representative to serve the unexpired part of the regular term.
(3) Continuous membership as a department or unit representative is limited to two regular terms plus up to two semesters' service in an unexpired term before the first regular term. A member who becomes ineligible because of this limit remains ineligible for three years unless the Provost decides that the department or unit lacks sufficient faculty for a normal rotation.
(4) Renewed terms start in August of each year.
(5) Members will serve 3 years in staggered terms.
(6) Each member will attend an NCA conference, or another conference on academic assessment approved by the Director and the Provost, during his or her first year of service.

Rules of Order
(1) A two-thirds majority vote of the voting members of the Assessment Committee is required to change any of the membership rules once this proposal is approved.
(2) Robert's Rules of Order will be followed in other details that may not have been mentioned in the membership rules.

UAC Membership 2010-2011 Academic Year

Chair and Director of Assessment	Donald Carpenter
College of Architecture and Design	
Architecture	Ashraf Ragheb
Art and Design	Keith Nagara
College of Arts and Sciences	
Humanities, Social Sciences, and Communication	Jason Barrett
Mathematics and Computer Science	Chris Cartwright
Natural Sciences	Nicole Villeneuve
College of Engineering	
Biomedical Engineering	Yawen Li
Civil Engineering	John Tocco
Electrical and Computer Engineering	Philip Olivier
Engineering Technology	Sabah Abro
Mechanical Engineering	Vernon Fernandez
College of Management	
DBA, DMIT, MBA, MSIS, MSOM, BSIT	Tim Landon
Ex-Officio Members	
Associate Provost	Alan McCord
Coordinator, Institutional Research and Assessment	Mary Thomas
eLearning Services	Diane Cairns

UAC Membership 2010-2011 Service and Rotation

Member		**Years Served**	**Year Started**	**Year Ends**
Chair and Director of Assessment	Donald Carpenter	2	2009-2010	2011-2012
College of Architecture and Design				
Architecture	Ashraf Ragheb	2	2009-2010	2011-2012
Art and Design	Keith Nagara	2	2009-2010	2011-2012
College of Arts and Sciences				
HSSC	Jason Barrett	3	2008-2009	2012-2013
Mathematics and Computer Science	Chris Cartwright	1	2010-2011	2012-2013
Natural Sciences	Nicole Villeneuve	3	2008-2009	2010-2011
College of Engineering				
Biomedical Engineering	Yawen Li	1	2010-2011	2012-2013
Civil Engineering	John Tocco	3	2008-2009	2010-2011
Electrical and Computer Engineering	Philip Olivier	1	2010-2011	2012-2013
Engineering Technology	Sabah Abro	1	2010-2011	2012-2013
Mechanical Engineering	Vernon Fernandez	3	2008-2009	2011-2012
College of Management				
BSBA, BSIT, MBA, MSIT	Tim Landon	3	2008-2009	2011-2012

University Undergraduate Educational Goals
(September 2007)

Lawrence Technological University is a student-centered, comprehensive**,** teaching university with focused, technologically oriented professional programs. The vision of the University is to be the region's preeminent private university producing leaders with an entrepreneurial spirit and global view, by 2015.

The mission of the University is to develop leaders through innovative and agile programs embracing theory and practice.

Lawrence Tech's values are:

- Theory and Practice
- Agility and Teamwork
- Integrity and Trust

Lawrence Tech's cause is the intellectual development and transformation of its students into critical thinkers, leaders, and lifelong learners.

The educational goals for the University's undergraduate curricula emphasize five areas:

- Application of Advanced Knowledge
- Fundamental Cognitive Skills and Abilities
- Leadership and Entrepreneurship
- Teamwork
- Character Education

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Goal Group I – Application of Advanced Knowledge
Undergraduates will participate in one of the major programs offered by the University, all of which include a capstone experience. This goal is supported by the following outcomes:

I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.

I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.

Goal Group II –Fundamental Cognitive Skills and Abilities
Graduates will have the attributes of a well-educated person. These will include both breadth and depth of knowledge in the humanities, social sciences, mathematics and analysis, and the natural sciences, consistent with the basic educational philosophy of the University. This goal is supported by the following outcomes:

II. 1. Graduates will be skilled in written and oral communication.

II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.

II. 3. Graduates will be aware of the foundations and development of American society.

II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.

II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem-solving skills consistent with the technological focus of the University.

Goal Group III – Leadership

Undergraduates will receive an education that enables them to exhibit entrepreneurial skills and to assume positions of leadership. This goal is supported by the following outcomes:

III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision-making, confidence in approaching opportunities, and pride in their abilities.

III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.

III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.

III. 4. Graduates will have been made aware of the importance of lifelong learning.

III. 5. Graduates will have had experiences that promote a global and societal perspective.

Goal Group IV – Teamwork

Undergraduates will have opportunities to develop the ability to work with others, including those unlike themselves, so that they can contribute to a diverse society. This goal is supported by the following outcomes:

IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.

IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.

IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.

Goal Group V – Character Education

Undergraduates will have opportunities to develop their ethical and personal values, so that they can exercise their professional skills in the interests of society. This goal is supported by the following outcomes:

V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.

V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.

2010-2011 Undergraduate Assessment Plan

Group I. Application of Advanced Knowledge	**Assessment Strategy**	**Responsible Academic Unit**	**Level**	**Timeline**
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their professional fields	To be decided and developed by Departments	All programs	4th yr	Update plan 2009 – 2010
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their professional fields	To be decided and developed by Departments	All programs	4th yr	Update plan 2009 - 2010
Group II. Foundation Cognitive Skills and Abilities	**Assessment Strategy**	**Responsible Academic Unit**	**Level**	**Timeline**
II. 1. Graduates will be literate and skilled in written and oral communication including communication appropriate to their professional fields	Assessment of writing in first and second year core courses	Humanities Department	1st yr/ 2nd yr	Ongoing
	Writing Proficiency Exam	Multi-disciplinary committee	3rd yr	Pull sample in focus years
	Observation of oral presentations	Multi-disciplinary committee	3rd / 4th yr	Every 5 yr, from sp03
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities	Place topics relevant to this outcome on LLT and SSC junior/senior elective writing assignments	HSSC	3rd / 4th yr	Develop plan 2009 - 2010; implement Fall 2010
II. 3. Graduates will be aware of the foundations and development of American society	Place topics relevant to this outcome on LLT and SSC junior/senior elective writing assignments	HSSC	3rd / 4th yr	Develop plan 2009 – 2010 ; Implement Fall 2010
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	To be decided and developed by Departments of MCS and NS	MCS and NS	2nd yr	Develop plan 2009 - 2010; Implement Fall 2010
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University	ACT-CAAP Test	UAC	Fr & Sr	Surveyed in 2007; Again in 2011.

Group III. Leadership	**Assessment Strategy:**	**Responsible Academic Unit**	**Level**	**Timeline**
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching professional opportunities, and pride in their abilities and professional self-presentation.	Leadership Survey, Focus Groups, & Portfolios	Leadership Program & LCIC	All	Phased in 2009 – 2012
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.	Leadership Survey, Focus Groups, & Portfolios	Leadership Program & LCIC	All	Phased in 2009 – 2012
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.	Leadership Survey	Leadership Program & LCIC	All	Phased in 2009 – 2012
III. 4. Graduates will be aware of the importance of lifelong learning in their profession.	Leadership Survey	Leadership Program & LCIC	All	Phased in 2009 – 2012
III. 5. Graduates will have had experiences that promote civic responsibility and a global and societal perspective of contemporary professional life.	Leadership Survey, Focus Groups, & Portfolios	Leadership Program & LCIC	All	Phased in 2009 – 2012

Group IV. Teamwork	**Assessment Strategy:**	**Responsible Academic Unit**	**Level**	**Timeline**
IV. 1. Graduates will have had team experiences in which roles and responsibilities are defined and the team process and their team's progress is monitored.	Teamwork survey Develop a plan of action based on baseline assessment of teamwork	UAC	All	Spring 2010 Fall 2011
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	***Same as for IV. 1.***	***Same as for IV. 1.***	***All***	***Same as for IV. 1.***
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	***Same as for IV. 1.***	***Same as for IV. 1.***	***All***	***Same as for IV. 1.***
Group V. Character Education	**Assessment Strategy:**	**Responsible Academic Unit**	**Level**	**Timeline**
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society	Leadership Survey and Focus Groups	***(Part of Leadership Program proposal)*** Leadership Program & UAC	All	Fall 2010
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics	***Same as for V. 1***	***Same as for V. 1***	All	***Same as for V. 1***

University Graduate Educational Goals (Draft)

October 18, 2011

Lawrence Tech offers graduate programs where students enhance and expand their discipline-specific and professional skills by being able to:

1. Apply advanced knowledge within their discipline.
2. Analyze and interpret information and implement decisions using latest techniques and technologies.
3. Analyze scholarly literature and, in accordance with their course of study, contribute to that literature.
4. Communicate effectively using written, oral, graphical, and digital formats.
5. Develop a broad perspective on professional issues, such as lifelong learning, sustainability, leadership, and ethics.

NSSE Executive Summary

National Survey of Student Engagement
Executive Snapshot 2011
Lawrence Technological University

Dear Colleague:

This document presents some key findings from your institution's participation in the 2011 National Survey of Student Engagement. We hope you can use this information to stimulate discussion on your campus about the undergraduate experience at Lawrence Technological University.

Sincerely,
Alexander C. McCormick
Director, National Survey of Student Engagement

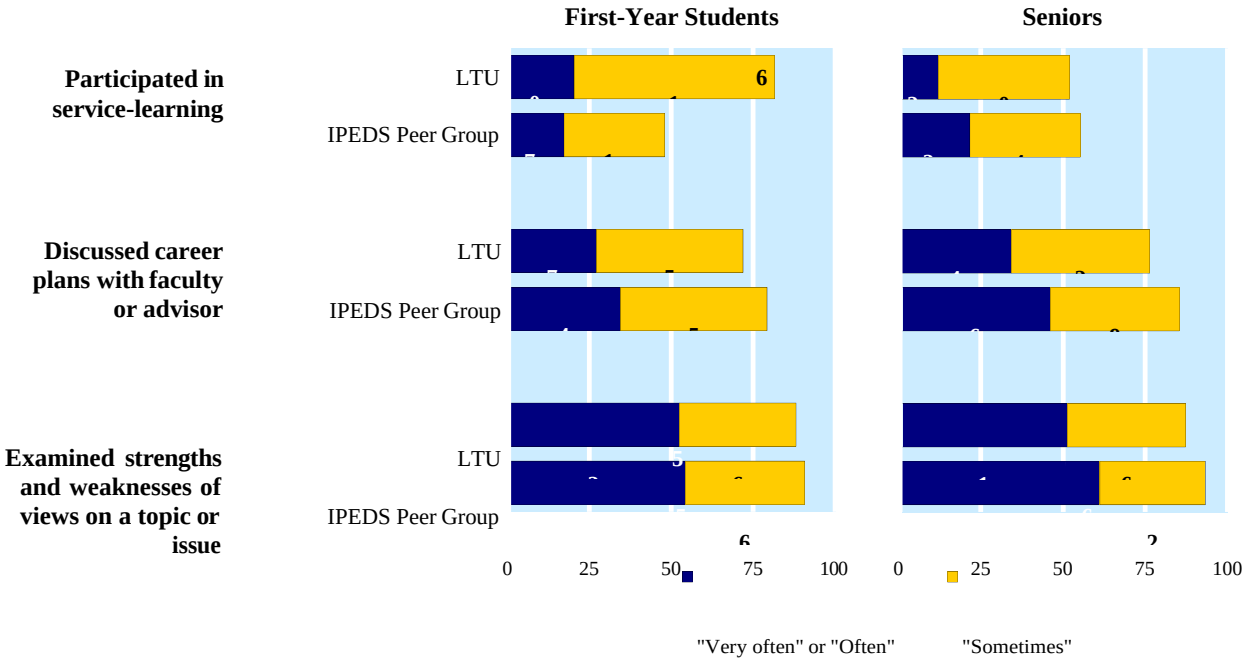
Fostering Student Engagement Campuswide

NSSE is more than a survey. It's an improvement enterprise, an agenda for action to improve undergraduate education that depends on collaboration among many players on your campus. The featured theme of NSSE's *Annual Results 2011* – "Supporting Student Engagement Across Campus" – emphasizes the value of connecting NSSE results to specific campus programs and units, and suggests sharing pertinent results to promote campus partnerships dedicated to the quality of the undergraduate experience.

Having received your NSSE reports and data, the next step is to dig into the results to develop a contextualized understanding of student engagement at your institution. Many constituents—leadership, faculty, student affairs staff, institutional researchers, and students—can contribute to this process. What should follow is the design and implementation of improvement-focused action plans.

Student engagement data can inform the work of many departments and offices on campus, such as academic affairs, career services, and student activities. For example, the figure below illustrates comparative results for survey items that might be examined by these units at your institution. Results like these may suggest areas to investigate or may validate the impact of ongoing improvement efforts.

Percentage of Students Participating in Selected Activities at LTU and Selected Comparison Institutions*



*Response options were "Very often," "Often," "Sometimes," and "Never." "Never" responses are not displayed. Comparison institutions are the first comparison group from your *NSSE 2011 Selected Comparison Groups* report unless your institution requested a different group for this *Snapshot* .

National Survey of Student Engagement
Executive Snapshot 2011 (Lawrence Technological University)

NSSE 2011 Question Comparisons

By examining individual NSSE questions, you can better understand what contributes to your institution's overall benchmark scores. This section features the five questions on which your first-year and senior students scored the highest and the five questions on which they scored the lowest, relative to students at the indicated comparison group (the group's members are listed in your *NSSE 2011 Selected Comparison Groups* report).

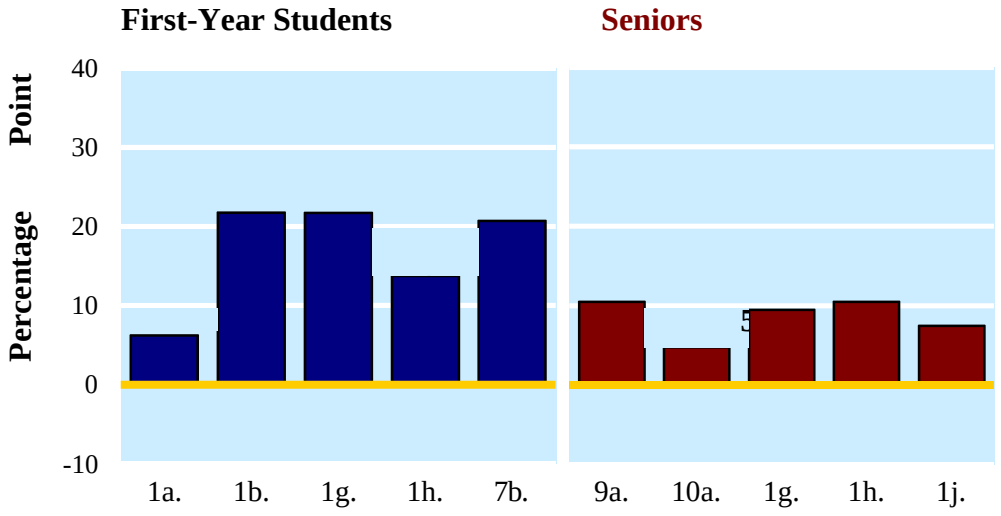
While we chose these questions to represent the largest differences (in percentage points), they may not be the most important to your institutional mission or current program or policy goals. We encourage you to review your NSSE *Institutional Report 2011* for additional results of particular interest to your campus.

Highest Performing Benchmark Items Relative to IPEDS Peer Group

Question	*Benchmark* [1]		*LTU*	Comparison Groups: IPEDS Peer Group	Carnegie Class	NSSE 2011
			Percentage of students who...			
First-Year Students						
1a.	ACL	Asked questions/contributed to class discussions[2]	**76%**	69%	62%	60%
1b.	ACL	Made a class presentation[2]	**59%**	37%	37%	33%
1g.	ACL	Worked with other students on projects during class[2]	**66%**	44%	46%	45%
1h.	ACL	Worked with classmates outside of class to prepare class assignments[2]	**62%**	48%	44%	45%
7b.	EEE	Participated in community service or volunteer work	**65%**	44%	36%	39%
Seniors						
9a.	LAC	Spent more than 10 hours/week preparing for class (studying, etc.)	**72%**	62%	59%	62%
10a.	LAC	Said the institution emphasizes studying and academic work[4]	**87%**	83%	81%	82%
1g.	ACL	Worked with other students on projects during class[2]	**62%**	53%	53%	49%
1h.	ACL	Worked with classmates outside of class to prepare class assignments[2]	**71%**	60%	60%	60%

The adjacent figure, based on the table above, displays the questions on which your students compared most favorably with those in your selected comparison group named:

IPEDS Peer Group

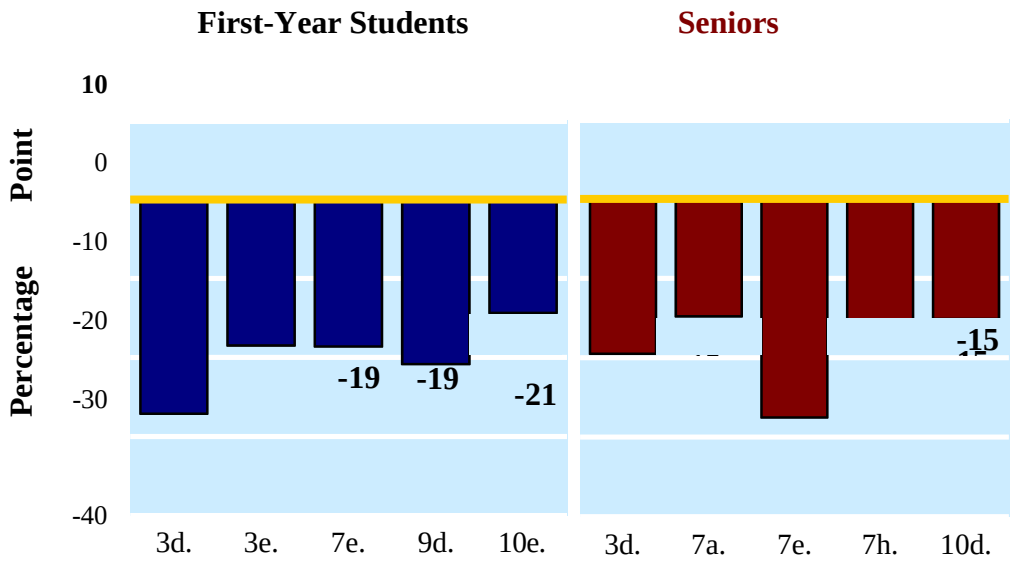


Lowest Performing Benchmark Items Relative to IPEDS Peer Group

Question	Benchmark [1]		LTU	Comparison Groups: IPEDS Peer Group	Carnegie Class	NSSE 2011
		Percentage of students who...				
First-Year Students						
3d.	LAC	Wrote more than 4 papers or reports between 5 and 19 pages	**17%**	44%	29%	29%
3e.	LAC	Wrote more than 10 papers or reports of fewer than 5 pages	**22%**	40%	29%	28%
7e.	EEE	Completed foreign language coursework	**8%**	26%	16%	20%
9d.	EEE	Spent more than 5 hours/week participating in co-curricular activities	**14%**	35%	26%	30%
10e.	SCE	Said the institution provides substantial support for students' social needs [4]	**40%**	55%	51%	51%
Seniors						
3d.	LAC	Wrote more than 4 papers or reports between 5 and 19 pages	**36%**	55%	46%	45%
7a.	EEE	Did a practicum, internship, field experience, clinical assignment	**44%**	58%	47%	50%
7e.	EEE	Completed foreign language coursework	**14%**	41%	34%	40%
7h.	EEE	Completed a culminating senior experience (capstone, thesis, comp. exam)	**29%**	45%	30%	32%

The adjacent figure, based on the table above, displays the questions on which your students compared least favorably with those in your selected comparison group named:

IPEDS Peer Group



Notes

[1] LAC=Level of Academic Challenge; ACL=Active and Collaborative Learning; SFI=Student-Faculty Interaction; EEE=Enriching Educational Experiences; SCE=Supportive Campus Environment

[2] Combination of students responding "Very often" or "Often"

[3] Rated at least 5 on a 7-point scale

[4] Combination of students responding "Very much" or "Quite a bit"

Respondent Characteristics

The adjacent table displays your number of respondents, response rate, and sampling error by class. Sampling error is an estimate of the margin by which the true percentage of your students may differ from the reported percentage on a given item (because not all of your students completed surveys).

	N	Resp. Rate	Sampling Error
First-Year Students	111	37%	+/-7.4%
Seniors	228	36%	+/-5.2%

Benchmarks of Effective Educational Practice

To represent the multi-dimensional nature of student engagement, NSSE developed five indicators of effective educational practice. These "benchmarks" are created from clusters of NSSE questions that best represent these practices.

The table below summarizes key benchmark results for your institution and institutions in your selected comparison groups. A '+' symbol indicates that your institution's score is higher than than the comparison group and a '-' symbol indicates a lower score (p <.05). A blank space indicates no significant difference. For additional details, review your *NSSE 2011 Benchmark Comparisons* report.

			Comparison Groups		
		LTU	IPEDS Peer Group	Carnegie Class	NSSE 2011
	Class				
Level of Academic Challenge (LAC)					
How challenging is your institution's intellectual and creative work?	First-Year	**53**	**-**		
	Senior	**58**	**-**		
Active and Collaborative Learning (ACL)					
Are your students actively involved in their learning, individually and working with others?	First-Year	**52**	**+**	**+**	**+**
	Senior	**55**		**+**	**+**
Student-Faculty Interaction (SFI)					
Do your students work with faculty members inside and outside the classroom?	First-Year	**35**			
	Senior	**41**	**-**		
Enriching Educational Experiences (EEE)					
Do your students take advantage of complementary learning opportunities?	First-Year	**28**			
	Senior	**35**	**-**	**-**	**-**
Supportive Campus Environment (SCE)					

Do your students feel the institution is committed to their success?	First-Year	**62**	
	Senior	**58**	–

IPEDS:170675

For More Information

A comprehensive summary of all results is contained in your institutional report, which we sent in August to Mary Thomas, Institutional Research. Reports used in this Executive Snapshot included the: NSSE 2011 Mean Comparisons, Frequency Distributions, Benchmark Comparisons, and Respondent Characteristics.

National Survey of Student Engagement

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Bloomington, IN 47406-7512

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Assessment Day 2010
Friday, September 17, 2010
Lear Auditorium – T429
AGENDA

Continental Breakfast		8:30 – 9:00
Welcome	*Dr. Maria Vaz, Provost*	9:00 – 9:05
Introduction	*Dr. Maria Vaz, Provost* *Dr. Donald Carpenter, Director of Assessment*	9:05 – 9:15
Overview of University Assessment		9:15 – 9:30
Assessment Updates	*Teamwork: Donald Carpenter* *Character Education: John Tocco* *Leadership: Andrew Gerhart*	9:30 – 10:30
	Break	10:30 – 10:50
ePortfolio Development for Student Portfolios	*Diane Cairns*	10:50 – 11:10
Assessment, Accreditation, and the HLC Visit	*Alan McCord*	11:10 – 11:40
Setting the Stage for the Afternoon Sessions	*Donald Carpenter*	11:40 – 12:00
Lunch - Cafeteria		12:00 – 1:00
Departmental Closing the Loop Sessions		1:00 – 3:00
Departmental Meetings		3:00 – 4:00
Adjournment		

Lawrence Technological University

ASSESSMENT DAY 2010

September 17, 2010

Where

UTLC - T429

&

Cafeteria

Sponsored by

University Assessment Committee

Closing the Loop: Meaningful Assessment Leads to Meaningful Action

September 17, 2010
8:30 a.m. – 4:00 p.m.

Continuous improvement for academic programs is achieved in a three-step process, commonly referred to as "Closing the Loop:" *Assessment* is the gathering of data and *evaluation* is the analyzing of the data. These two steps lead to *implementation* of an action plan. All too often, however, programs gather great amounts of data without ever taking the time to reflect on the meaning of the information, or to implement an action plan to improve the program.

Assessment Day 2010 will focus on effectively completing loop closing activities through the creation of a specific action plan. The event begins in T429 with a series of updates and presentations, followed by lunch in the newly refurbished cafeteria. The afternoon session includes departmental meetings that focus on loop closing activities and a "Closing the Loop" reporting session in T429.

Agenda

I. Assessment Presentations
When: 8:30 am – 12:00 pm
Where: T429 Lear Auditorium
Continental breakfast provided

II. Lunch in Cafeteria
12:00 pm – 1:00 pm

III. Department Breakout Sessions
When: 1:00 pm – 3:00 pm Where:
To Be Announced

IV. Reporting Session
When: 3:00 pm – 4:00 pm
Where: T429 Lear Auditorium

No RSVP Required for Full-Time LTU Faculty

Closing the Loop: Meaningful Assessment Leads to Meaningful Action

Assessment Day 2010

September 17, 2010

Lawrence Tech

Agenda

- **Assessment Presentations**
  - 9:00 am – 12:00 pm
- **Lunch in Cafeteria**
  - 12:00 pm – 1:00 pm
- **Department Breakout Sessions**
  - 1:00 pm – 3:00 pm
  - Where: Various Locations
- **Reporting Session**
  - 3:00 pm – 4:00 pm
  - Where: T429 Lear Auditorium

Lawrence Tech

AM Schedule of Events

- **9:00 – 9:15 Welcome & Introductions**
  Maria Vaz, Provost & Donald Carpenter, Director of Assessment
- **9:15 – 9:30 Overview of University Assessment**
  Donald Carpenter
- **9:30 – 10:30 Assessment Updates**
  Teamwork – Donald Carpenter
  Character Education – John Tocco
  Leadership – Andrew Gerhart
- **10:30 – 10:50 Break**
- **10:50 – 11:10 e-Portfolio Development for Student Portfolios**
  Diane Cairns
- **10:40 – 11:00 Assessment, Accreditation, and the NCA Visit**
  Alan McCord
- **11:40 – 12:00 Closing the Loop**
  Donald Carpenter

Lawrence Tech

Assessment Committee

- ***College of Arts and Science***
  - Christopher Cartwright
  - Nicole Villeneuve
  - Jason Barrett
- ***College of Engineering***
  - John Tocco
  - Philip Olivier
  - Sabah Abro
  - Vernon Fernandez
- ***College of Management***
  - Tim Landon
- ***College of Architecture & Design***
  - Ashraf Ragheb
  - Keith Nagara
- ***Ex-Officio Members***
  - Alan McCord, Associate Provost
  - Mary Thomas, Institutional Research and Academic Planning
  - Diane Cairns, eLearning Services

Lawrence Tech

Overview of University Assessment

- Five Educational Goal Groups for the University (Seventeen Objectives)
  - Group I: Application of Advanced Knowledge
  - Group II: Fundamental Cognitive Skills and Abilities
  - Group III: Leadership
  - Group IV: Teamwork
  - Group V: Character Education

Lawrence Tech

2009 - 2010

- Application of Advanced Knowledge (rubrics & common reporting matrices)
- Leadership (pilot tested a survey instrument)
- Teamwork (surveyed students in spring 2010)
- Character Education Sub-Committee
- APPR (assessment and resource allocation)

Lawrence Tech

2010 – 2011

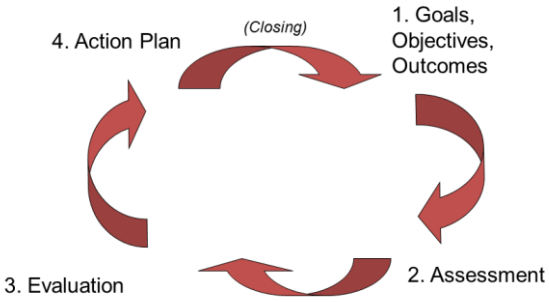
- NCA-HLC in October of 2011
- Closing the Loop, and Action Plans
- Critical Thinking (administering ACT-CAAP)
- Investigating assessment strategies for Fundamental Cognitive Skills and Abilities Goals
- Assess Character Education
- Initiate the process for revising Univ. Educational Goals (including graduate goals)

Assessment Updates

ePortfolio Development for Student Portfolios

Assessment, Accreditation, and the NCA Visit

The Assessment Loop



Why the loop doesn't get closed ...

- Incomplete understanding of the assessment process
- Poor planning
- Lack of leadership or responsibility
- Inadequate resources
- Trying to do too much (unsustainable)
- A compliance mentality (accreditation)

Why the loop doesn't get closed...

- Philosophical resistance to assessment
- Conflict with other faculty duties
- "Assessment fatigue" after to much focus on #1, #2
- Poor collaboration with colleagues
- It's someone else's job

Why the loop *should* be closed -

- Return on the investment on #1, #2
- Improvement of student learning
- Stronger programs
- More collegiality
- More successful students
- More satisfied employers of our graduates

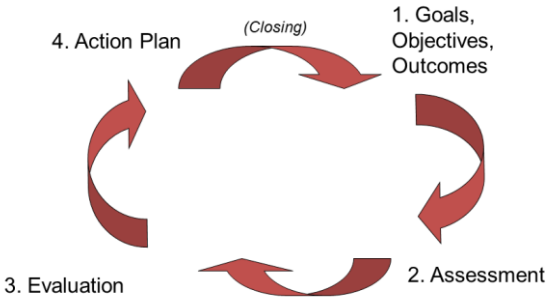
Why close the loop, cont.

- Better retention, graduation rates
- More successful accreditation review
- Shared campus understanding of mission, learning goals, and what is being done to achieve them
- Clearer, more substantive communication with our constituents

Action Plan

- Defining the Action Plan
- Implementation of the Action Plan
  - Who is responsible? Who will support?
  - What expertise will action plan take?
  - What funding (if any) is needed?
  - How will we get what we need?
- Timeline for Implementing the Plan

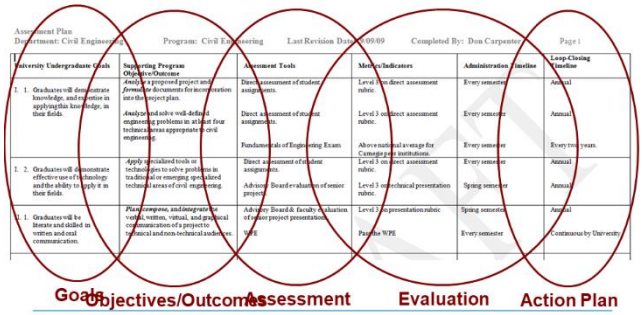
The Assessment Loop



Closing the loop: Back to Step #1

- What do the findings tell us now?
- Did our "action plan" improve student learning?
- What's the next step?
- What have we learned about our assessment process? What can be improved?

Assessment Planning Matrix



Program Name
Closing the Loop—2009/2010

Questions to address:

- Objective: What Program Objective/Outcome are you considering?
- Assessment: What assessment tool(s) was applied, by whom, and when?
- Evaluation: What results were analyzed and what did they tell you?
- Actions: What actions did you take based on these results? AND/OR What actions will you take based on these results?
- Responsibility: Who is responsible for implementing the plan or tracking the results?

Civil Engineering
Closing the Loop—2009/2010

- Objective: Communication = Plan, compose and integrate the verbal, written, virtual and graphical communication of a project to technical and non-technical audiences.
- Assessment: A grading rubric was specifically designed for the capstone poster session and completed by the faculty and the advisory board (professionals) separately.

Civil Engineering
Closing the Loop—2009/2010

- Evaluation: Amount of content on posters was inconsistent between teams, graphics were poor in some cases, and it was unclear to the students and evaluators whether additional project components on display should be a part of the evaluation.
- Actions: Need to clarify expectations of the poster session and have a poster design tutorial and/or workshop in 2011 for the students.
- Responsibility: Luis Mata, Senior Design Project Coordinator

Now What?

- Lunch
- Program Breakouts (see back of agenda for room location)
- 3pm – 4pm there will be an information session (5 minutes per department)
- Questions?
  - Donald Carpenter (dcarpente@ltu.edu)
  - Alan McCord (amccord@ltu.edu)
  - UAC Representative

Spring 2010 Teamwork Survey: Overview & Initial Observations

Donald D. Carpenter

Introduction

- Teamwork was one focal area of University Assessment Committee in '05-'06 & '09-'10
  - Focus of 2005 Assessment Day Keynote/Workshop was teamwork.
  - Definition of "Team" – A team is a group of two or more students who are committed to a common purpose for which they share responsibility for the final outcome.
- Teamwork Evaluation Survey
  - Comprehensive survey was drafted by Walter Dean, Daniel Faoro, and Donald Carpenter based on literature
  - Reviewed by Assessment Committee
  - Pilot testing performed by Student Government
  - Results & Method were peer reviewed through presentations.

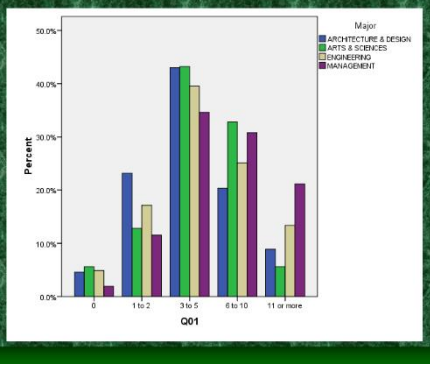
LTU Teamwork Evaluation Survey

- Survey consists of 5 sections:
  - Background on Teamwork Experiences
  - Team Process & Progress
  - Constructive Teamwork Experiences
  - Negative Teamwork Experiences
  - Demographics
- Department level data for 2010 and college level comparison data for 2006 vs. 2010

Demographics - 2010

- N = 523 students (118 female, 401 male, 4 undeclared)
- College (145 Architecture & Design, 81 Arts & Sciences, 227 Engineering, 25 Management)
- Class (103 Freshman, 123 Sophomore, 126 Juniors, 171 Seniors; 15 Graduate Students were excluded from analysis and not reported in sample)
- Balance between Day (179), Evening (156), and Both (185)
- 219 Transferred to LTU

In how many courses have you worked on a team?



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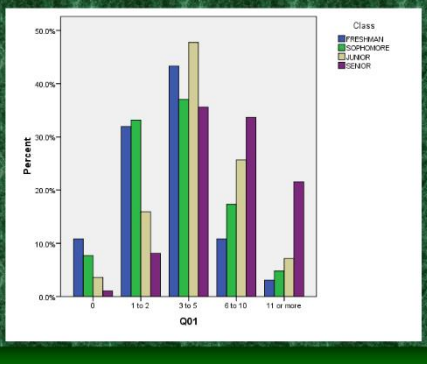
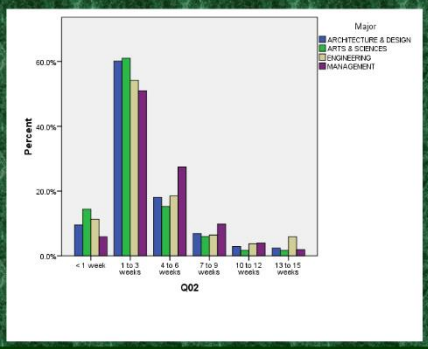


What is the average length of these team assignments?



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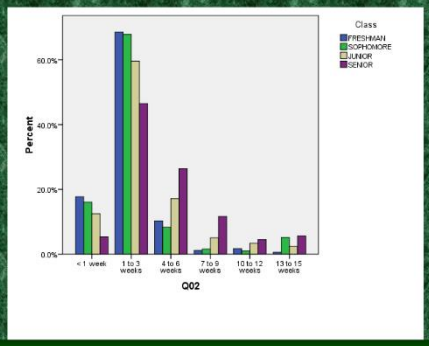
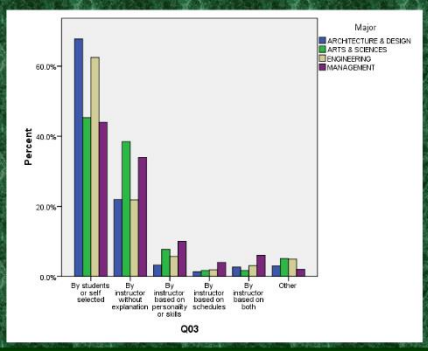


What was the primary way that teams were assigned?



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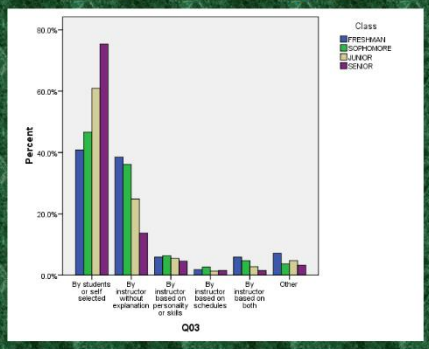


Proposed Educational Goals Goal Group IV - Teamwork

Graduates will have had team experiences in which roles and responsibilities are defined and the team process and their team's progress in monitored.

Teamwork Goal IV.1

- If team roles were assigned, how often were responsibilities associated with those roles communicated?
  - Never/Almost Never = 27.7%
  - Half of the Time = 37.0%
  - Most of the Time/Always = 35.3%

Teamwork Goal IV.1

- How often did the instructor monitor the teamwork process and team progress?
  - Never/Almost Never = 27.6%
  - Half of the Time = 36.9%
  - Most of the Time/Always = 35.3%

Proposed Educational Goals Goal Group IV - Teamwork

Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.

Teamwork Goal IV.2

- How often did your team focus on a common goal?
  - Never/Almost Never = 2.8%
  - Half of the Time = 19.4%
  - Most of the Time/Always = 77.8%

Teamwork Goal IV.2

- How often did team members take responsibility for their work and contributions to the team?
  - Never/Almost Never = 9.8%
  - Half of the Time = 26.4%
  - Most of the Time/Always = 63.8%

Teamwork Goal IV.2

- How often were you required to evaluate your team members as a component of the team process?
  - Never/Almost Never = 29.3%
  - Half of the Time = 30.3%
  - Most of the Time/Always = 40.4%

Proposed Educational Goals Goal Group IV - Teamwork

Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.

Teamwork Goal IV.3

- How often did all members of the team participate in decision-making with no single team member dominating?
  - Never/Almost Never = 16.1%
  - Half of the Time = 33.0%
  - Most of the Time/Always = 50.9%

Teamwork Goal IV.3

- How often did members of the team communicate and resolve conflict in a respectful manner?
  - Never/Almost Never = 6.6%
  - Half of the Time = 17.9%
  - Most of the Time/Always = 75.5%

Observations

- Almost 90% of freshman had at least one team experience – significantly improved from 2006
- Shift in number of experience as students move through curriculum, but 3-5 is most common (Fr. to Sr. both in 2006 and 2010).
- Very few long term team assignments so experiences might be more "group" work than "team" work even though definition was provided.

Observations

- Overwhelmingly self select or by instructor with no explanation were the most common methods for team formation.
- Student responses on Section 2 (team process and progress) were good with lack of peer evaluation and group decision making being only issues.
- Students recognize the importance of teamwork but there were relatively high percentages of students who were neutral on statements about constructive teamwork experiences.

Observations

- Approximately half of students cite inability to schedule common meeting times as a negative aspect of teamwork. The same fraction either agrees with or is neutral on "too much effort and not productive"
- Overall, approximately 70% thought teamwork experiences were positive and 77% thought grades are fair.
- As in 2006, about half of student body doesn't engage in teamwork outside of class. This should be improved by the Leadership Curriculum.

2006 vs. 2010

- Independent t-test or Mann-Whitney as appropriate both on college and university wide level.
- With regard to positive outcomes, students reported that they completed more courses with a teamwork component, evaluated team members more often, resolved conflict more respectfully, and that egos dominate less.
- With regard to negative outcomes, students reported that teams focused less on common goals and that teamwork assignments were less necessary.

Next Steps

- Further analysis of data and evaluation of information by UAC
- Distribute college level reports and department level data for evaluation
- Establish Action Plan

Questions?

Assessment Day 2010
Character Education Subcommittee

Charge to Subcommittee
- Provide recommendations to Assessment Committee as to what measures might be necessary to assess Goal Group V including possible existing tools.

Goal Group V
- V. 1. Value of contributing to community and society
- V. 2. Opportunity to develop personal values as the foundation for integrity and ethics

Lawrence Tech

Assessment Day 2010
Character Education Subcommittee

'07-08
- Identify where professional ethics was covered in the curriculum – no way to standardize ethics curriculum across professional programs.
- Institutional self-evaluation of importance of character education through a series of faculty focus groups and the Character Education Quality Standards (CEQS was never implemented).
- Evaluation of possible student surveys to assess ethical/moral development (none was administered).

'08-09
- '08-09: NSSE results come back, contain questions related to character/ethics – create possibility for a different approach.

'09-10
- '09-10: Character subcommittee re-formed…

Lawrence Tech

Assessment Day 2010
Character Education Subcommittee

National Survey of Student Engagement (NSSE) Review

V. 1. Relevant Questions
- Participated in a community-based project (service learning)
- [Participated in] community service or volunteer work
- Contributed to the welfare of your community

V. 2. Relevant Question
- Developing a personal code of values and ethics

Lawrence Tech

Assessment Day 2010
Character Education Subcommittee

Lawrence Tech Leadership Program Survey

V. 1. Relevant Question
- Actively participate in service/volunteer activities

V. 2. Relevant Questions
- My decisions and actions align with my personal values
- I am ethical when I'm in leadership positions

Lawrence Tech

Assessment Day 2010
Character Education Subcommittee

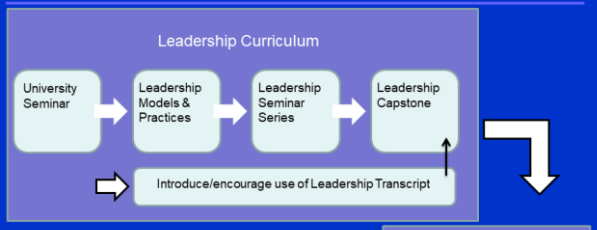
Conclusion Based on NSSE and Leadership Review
- The Assessment Committee is satisfied that character education is sufficiently assessed to address Goal Group V
- Utilize existing instruments to assess character education (implement in 2010-2011)

Lawrence Tech

Leadership (and Entrepreneurial) Skills Assessment Instrument

Andrew L. Gerhart
Donald D. Carpenter
Melissa L. Grunow
Katie Hayes

Leadership Education



Leadership Certificate

Use data entered into Transcript application to identify highly involved students who may be good certificate candidates

Leadership Curriculum – Required Curriculum			
Freshman Year:	Sophomore Year:	Junior Year:	Senior Year:
University Seminar (Studies) (COM 1001/ Com 1002)	Leadership Models and Practices (LDR 2001)	Leadership Seminar Series (LDR 3000)	Leadership Capstone (LDR 4000)
Credits: 1/2	Credits: 1	Credits: 0	Credits: 0
			Total Cumulative Credits: 2-3

Co-Curricular Activities

Quest Projects	Service Projects	Leading student activities	Participating in a competition
Presenting at a conference	Attending a workshop or conference	Advising, teaching, or training others	Entrepreneurial Activities

Leadership Education

Relational Model of Leadership:

- regardless of personality traits an individual can access leadership skills and take purposeful action to create positive, sustainable change
- comprised of five key elements: purposeful, process-oriented, inclusive, empowering, and ethical
- Data from many studies "supported the value of those five elements, demonstrated how they connect in a developmental theory", and support focusing on this model for post-secondary education leadership development.

Leadership Education Goals

Graduates will have:

1. had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities;
2. had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills;
3. had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action;
4. been made aware of the importance of lifelong learning; and,
5. had experiences that promote a global and societal perspective.

Existing Leadership Instruments

Our criteria for the instrument:

- Self administered
- Focuses on university's leadership goals
- Focuses on Relational Model of Leadership
- Not lengthy (~30 to 40 statements)

Eight self administered instruments exist.

- None meet the criteria above.
- A few are customizable but still miss some important points to assess.

Development of the survey

- Statements from Council for the Advancement of Standards in Higher Education ("CAS") Self-Assessment Guide for Student Leadership Programs.
- Original form – 30 statements and 8 demographics questions
- 5-point Likert scale
- Between 5 and 15 minutes

Development of the survey

- Worded in first person so that students respond to perceptions of themselves, not understanding what a leader is or is not
- Arranged in a particular order so a particular response is not influenced by an earlier one
- Electronic delivery
- Instrument piloted in Sophomore-level Leadership Models and Practices

LTU Leadership Goals:

1. 19 questions
2. 26 questions
3. 6 questions
4. 4 questions
5. 7 questions

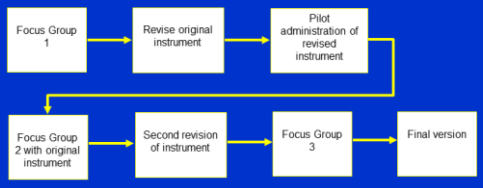
Development of the survey

Intended to aid in answering the following research questions:

- How do students perceive their own leadership traits and skills?
- Are students' self-perceptions demonstrating growth in confidence in their leadership abilities because of the experiences and education from each component of the curriculum?
- What impact do all the courses in the four-year leadership curriculum have on this perception?
- What modifications are necessary to the curriculum to adequately address the student learning outcomes?

Development of the survey

As implied by these research questions, the instrument will be used for both formative and summative assessment, as well as a longitudinal study of the leadership growth of the students.



Block diagram of the validation and reliability process

Preliminary results – The set-up

- Final version of survey: 35 statements and 8 demographics questions
- Instrument administered during second class period (the pre-test)
- Two weeks later the statements were scrambled and re-administered to measure test-retest temporal stability and internal consistency
- Instrument administered during final class period (the post-test) to preliminarily determine the shift in perception of their leadership/entrepreneurial skills

Preliminary results – Reliability

- Caution with small sample of test/retest (n=15)
- Using Cronbach's alpha, 23 of 31 statements reliably measure the same concept at both test and re-test administrations
- 3 of the remaining 8 did not possess a statistical assumption to generate robust estimates
- 4 of the remaining 8 exhibit marginal coefficients
- 1 of the remaining 8 exhibits poor reliability

Preliminary results – Reliability

- Using Spearman's rank correlation coefficient, 21 of 31 statements were stable across time from test to re-test administrations
- 3 of the remaining 10 did not possess a statistical assumption to generate robust estimates
- 7 of the remaining 10 exhibit marginal-to-poor coefficients
- Jointly considering both coefficients, only two statements are deemed non-reliable
- Test-retest will be conducted with revised survey with larger sample

Preliminary results – Pilot Test

- Paired t-test conducted on pre- and post-test
- n = 41
- 8 of 31 statements had statistically significantly different means (>0.1)
- Fortunately all eight statements were reliable in test-retest.
- With only eight statements indicating an increase, less leadership skill improvement than desired, but encouraging considering this is a one credit hour course in a four year curriculum.

Conclusions

- Instrument addresses the Relational Model of Leadership and the LTU Leadership Education Goals
- Revised based on three focus group studies
- Preliminary evidence suggests that the instrument is temporally stable and internally consistent.
- A pilot test revealed that the students perceived an improvement in some leadership skills upon completion of one component of the leadership curriculum.

Moving Forward

- One additional reliability/validation study conducted this Fall semester
- Begin longitudinal study Fall 2011 to determine if the overall leadership curriculum has an impact on students' self-perception of leadership skills and traits, and which components in the curriculum have the greatest impact, or where revision to the curriculum should occur.

Assessment and the Upcoming Higher Learning Commission Visit

Alan McCord

Assessment and the Commission Visit

- See accreditation.ltu.edu for Self-Study and Evidence Repository
- Criterion 3: Lawrence Tech provides evidence of student learning and teaching effectiveness that demonstrates it is fulfilling its educational mission.

Criterion 3a - Assessment

- Criterion 3a: Student learning outcomes are clearly stated for each program, making assessment possible
  - 3a1: Differentiated outcomes for undergrad/grad programs
  - 3a2: Course, program, and institutional levels
  - 3a3: Use of multiple direct and indirect measures
  - 3a4: Assessment results available to students
  - 3a5: Accountability data (grad, placement, transfer rates)
  - 3a6: Includes credit and noncredit programs
  - 3a7: Faculty define outcomes and assessment strategies
  - 3a8: Assessment enterprise is routinely reviewed

Criteria 3b and 3c

- Criterion 3b: Lawrence Tech values and supports effective teaching
- Criterion 3c: Lawrence Tech creates effective learning environments
  - 3c1: Assessment drives improvements in curriculum, pedagogy, instructional resources, and services
  - 3c6: QA includes regular review of educational strategies, activities, processes, and technologies

Criterion 3d

- Criterion 3d: Lawrence Tech's learning resources support student learning and effective teaching
  - 3d2: Evaluates use of learning resources to enhance teaching and learning
  - 3d3: Regularly assesses effectiveness of learning resources to support learning and teaching
  - 3d7: Budgeting priorities reflect commitment to teaching and learning

Criterion 3 Closing Argument

- Lawrence Tech's learning environment, commitment to professional accreditation, and mature University assessment initiative directly respond to Criterion Three
  - Extending assessment focus to include master's and doctoral programs
  - Faculty understand importance of assessment within programs and courses
  - Assessment Day provides forum for faculty to review assessment results and plan future initiatives

Criterion 3 Opportunities

- Some departments use assessment results to drive program improvement. Other departments need additional support to effectively use assessment data.
- Assessment practices for graduate programs are less mature and consistent than for undergraduate programs.
- Course evaluation system can be improved. Current evaluation focuses on delivery and instructor presence but not on what students learn w/r/t their program.
- Continue to pursue additional professional accreditation for academic programs.

What To Expect During the Visit

- Review of web sites for program goals and learning outcomes
- Direct and indirect questions about assessment, perhaps during an open faculty forum
- Possible meeting with Assessment Committee
- Focus on assessment of master's and doctoral program
- Focus on loop-closing and continuous improvement of the assessment enterprise

Annual Assessment Reports 2010-2011

College of Architecture and Design

BS in Architecture

1. Assessment Plan

The following yearly plan (see Table 1 below) was conceived during Fall 2010: This draft includes reports on the BS. Arch (Daniel Faoro, Interim Chair) and M.Arch program (Dean Ralph Nelson) assessment activities. The Assessment activities in Fall 2010 and Spring 2011 were continuations of prior the Graduate Assessment sub-committees, *Writing, handicapped access (ADA) and Ethics summarized below*.

The Art and Design Chair appointment just made in July 2011, (Amy Deines), Interior Architecture (B.S. Int. Arch.) will report their assessment work in the Art and Design Department report.

As a major assessment activity, at least one assessment goal will be assessed every semester. Assessment goals will be aligned with the NAAB 37 Student Performance Criteria. Our recent Assessment Plan outline prepared by Ash Rageb indicates the correlation between the university educational goals and the NAAB criteria required for the Architecture Degree Accreditation (see Table 1). The Committee will continue to coordinate a yearly schedule as to which goals and which core courses are to be assessed every semester for the next few years in preparation for the next NAAB Accreditation visit. Every selected goal (i.e., performance criterion) will include outcomes, objectives, and assessment implementation strategies.

The Architecture Assessment Committee will continue to work in collaboration with the COAD Curriculum Committee concerning the review of the current curriculum during the academic year 2010-2011).

2. Action Plan (Loop-Closing)

a. Report on 2010-2011 Academic Year

During the close-the-loop meeting for the 2010-2011 academic year, the Architecture Department (Department) reviewed the following outcomes:

Objective: Students will be literate and skilled in writing in the Design Projects/HDE classes (Univ. Goal II-1)

Assessment: Surveys, sample student work, rubrics developed from last year's assessment day. A pool of writing samples was drawn from the following courses:
ARC 4173 Frank Lloyd Wright and His Historical Context (Fall 2010)
ARC 4183 20th Century Architecture (Spring 2011)
The writing samples evaluated came from term paper assignments. The sample consisted of nine papers from the Frank Lloyd Wright class and thirteen papers from the 20th Century class. No student took both classes so there was no overlap in writers.
Evaluation: The samples were evaluated for structure, grammar, syntax, and other mechanical issues, using the LTU College of Arts and Sciences lists of "Banned Errors" and "Minor Writing Errors" as guidelines. They were also examined for structural components like a thesis sentence and an introduction-body-conclusion form. Each sample was assigned a letter grade for purposes of the course, and an alternative grade of "*Acceptable*" or "*Unacceptable*" for purposes of assessment. All papers were graded by the same instructor using the same guidelines to ensure consistency. For purposes of assessment, it was determined that twenty-one of the papers (95

percent) were "*Acceptable*" and only one (5 percent) was "*Unacceptable*."

Actions: We propose to run the test again, once. We think that it may be more successful if the assessment be aimed specifically at competition studios in which writing is already required. This may make it easier for the faculty to respond. We also then recommend that English Composition 2 be added to the curriculum of the undergraduates in place of Technical and Professional Communications to address the known fact that our students do not write well.

Responsibility: The chair and the dean of CoAD need to direct this effort. Further assessment, of writing in the curriculum, should be undertaken by English composition faculty who are fully qualified to teach writing.

Objective: Students will have experience that promote a high level of professionalism and demonstrate expertise in showing ADA and accessibility requirements in upper design studios (Univ. Goal II-1 and III-1)

Assessment: The latest NAAB Review cited ADS-5 with a lack of handicap and HVAC Indications on the plans, etc. shown in the Project Books. Review sample of student design projects, Review syllabi in ALL design studio sequence (Are instructors addressing it? Are students doing it?); Include NAAB accessibility criteria/objectives within the syllabi.

Evaluation: Lack of proper/complete documentation for ADA graphics and accessibility. Provision for handicap access and HVAC is one of the many NAAB Criteria associated with ADS-5, the undergraduate design capstone course.

Actions: Need to clarify ADA requirements/standards for each arch. design studio level; Students' evidence of incorporating ADA standards for accessible design (ADA 2010), Assess results of rubrics for individual projects/studio for completeness and consistency (by faculty and/or individual external jurors). The coordinator has addressed the need to update the ADA code provisions and shared a documentation standard covering ADA standards for parking areas, rest rooms, and ramp requirements.

Responsibility: Dept. Chair and/or Coordinators

Ethics Undergraduate Assessment

The Ethics Assessment Committee has been developing the standard Defined Issues Test (D.I.T) based exams with expert consultants for the freshman and junior levels classes in Summer 2011 and Fall 2011.

Objective: a. Students will have opportunity to develop personal values as foundation of integrity and professional ethics (Univ. Goal V-2) b. Students will be exposed to professional ethics topic in architecture *(based on 2008 NAAB accreditation report)*

Assessment: Direct Assessment using Defined Issues Test [D.I.T.] was administered based on accepted references in professional and academic circles, In junior year IDS3

Studio classes, Freshman VisCom.1 classes, and the Graduate Level Studios.

Evaluation: The exams are scored based on feedback from faculty familier with these instruments and results are to be tabulated and evaluated for student performance.

Actions: In phase I tests were administered in Fall 2011 and the results tabulated in Spring 2012. Faculty to make recommend curricular change based on test results. In Fall 2012 and Spring 2013 the phase II will be completed, and in Fall 2014 or NAAB accreditation will take place and their comments will provide an indirect assessment.

Responsibility: Ethics sub-committee, and Graduate Faculty.

Architecture Graduate Level Ethics Assessment.

Objective: Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics . (University Goals III.I and V.2). NAAB Criteria, C.8, C.9,C5,C6.

Assessment: Martin Schwartz based on discussions with Dean Nelson, Professor Schwartz prepared a memo, **Outline of Essential Issues in Professional Ethics** that forms the basis of our new work in this area. During the meeting, the adjunct instructors were asked to enhance and extend ethics subject area coursework and to save samples of student work for assessment and review.

Evaluation: Adjunct Professor Matthew Bohde reworked the teaching of ethics in the foundation practice course, ARC 5913 Professional Practice 1 (PP 1. The students address ethics in the midterm exam and in a new written assignment: **Our Ethical Responsibility to Society.** We expect to collect samples of student responses to the new assignment and to ask Professor Bohde to evaluate the results of the initial use of the assignment and readings.

Responsibility: The Assistant Dean and the graduate faculty has agreed to revise the teaching of professional practice and management in the coming year so that two pro practice and management courses are required of all M.Arch students.

Actions: We plan to eliminate one class, which we consider redundant and to rework a practice management course, which will become the second of the two required courses. We expect to incorporate ethics materials into the required second class.

Teamwork and Learning Styles Study

Objective: Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored –. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts. University Goal IV-1,2,3, NAAB Goal C1,C6.

Assessment: A research study was initiated in the summer of 2010 looking at the relationship between team member interaction, cognitive thinking style and design processes. The study involved the engagement of 84 graduate architectural design students engaged in a design-based "master class" with a leading professional. The study organized the students into teams based on

cognitive thinking style preferences. This was done in order to create heterogeneous composition due to the following presupposition: personality-based instruments have low probability of predicting individual success but personality-based instruments may have a predictive quality for how team members interact with each other.

Evaluation : Each of the 12 teams of six to seven individuals had representatives of each of the four gradients of thinking style follow Basadur's Simplex model. Gender, ethnicity, cultural background where not factored into the team selection. The study set up a team structure in which no member was identified as a 'leader' or 'coordinator'. Success was judged based on clear criteria of success.
Each of the individuals quadrant where involved in a workshop providing instruction and tools on how to apply their thinking style patterns to the design process.

Actions: The results of the pilot study are being analyzed and will be applied in a second study during the summer of 2012.

Responsibility: Philip Plowright, Matt Cole, Consultants and Masters Class Faculty.

a. Plan for <2011-2012> Academic Year. In 2010-2011 The College of Architecture, Art and Design focused on *Sustainability* as a new educational goal. The Architecture Department had significant representation (Prof.'s, Orlowski and Means) on the " Sustainability in Education Task Force (SETF)" which was convened in 2008-2009 and consisted of representatives of numerous academic departments on the Lawrence Tech campus. The sections below represent reports from 2011 Assessment Day.

1. Our topic for the LTU Assessment Day sessions on 09-2011; Educational Goal was Sustainability.

Our summary table see below (Table 1: Assessment Plan for the Department of Architecture.) has been revised to indicate loop closing activity for only work currently in progress. The inclusion of the new sustainability university goal needs to be included as well in the table. The department has been encouraging the development of rubrics for augmenting direct in-class assessment methods.
The Department broke down in the afternoon sessions into four sub-groups to develop educational objectives and assessment plans based on sustainability related to their fields. The initial effort was to identify the sustainability criteria as related our architecture degree accreditation criteria (NAAB).
Ability was defined as "to design projects that optimize, conserve, or reuse natural and built resources, provide healthful environment for occupants/users, and reduce the environmental impacts of building construction and operation on future generations through means such as carbon-neutral design, bioclimatic design, and energy efficiency." *Developed from NAAB and NCARB definitions.*

Definition of *Ability*? Proficiency in using specific information to accomplish a task, correcting selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

1a. Urban Design Sub group report. Joonsub Kim, Ph.D, Anirban Adhya, Ph.D, Constance Bodurow, MCP, AICP.

Objective: Ability to design projects based on holistic knowledge of multiple dimensions of sustainability (social-economic-environmental) across multiple scales of architecture-site- community-city-region

Assessment: A grading rubric can be specifically developed for certain studios such as (Junior-year integrated design studios, especially Detroit Studio and Capstone studio-Advanced Design 5) incorporating specific sustainability measurement criteria such as, Evaluation criteria and ratings from the LEED ND. Comparative evaluation of ecological footprints of the constituents in the design study area (before and after)

Evaluation: Students designs will be analyzed in terms of exceeding/meeting/ underachieving the abovementioned evaluation criteria
Actions:
Responsibility:

1b**. Architecture Technical subgroup report, Janice Means, PE, LEED AP, Ashraf Rageb, Ph.D Daniel Faoro, RA, M.Arch/UD developed two objectives (below). However, we developed assessment tools for only #1.**

Objective: Students will demonstrate ability to exceed codes and standards for sustainability criteria e.g. energy conservation, selecting and integrating materials and systems, Indoor Environmental Quality IEQ. Students will also demonstrate an ability to use Building Information Modeling BIM and other computer tools in an interoperable manner for design, construction and simulation to support sustainable outcomes.

Assessment Tools: Students complete design and construction documented projects entered in local, national, and international competitions.

Evaluation: External body evaluates students' project entries to evaluate sustainable criteria.

Action: Based on feedback from jurors and evaluation of successful winners, we adjust program curricular content to address shortcomings.

Responsibility: Technical and design faculty that support sustainable educational outcomes .

1c. Architecture History sub group summary. Dale Gyure, Ph.D.

*Objective***:** CoAD graduates will demonstrate an awareness of how architects and designers have incorporated sustainable techniques and/or materials throughout the history of world architecture**.**

Assessment Tools: Assessment: Examinations in History of the Designed Environment I and II courses.
Evaluation: Exams will be evaluated to determine if students scored 70% or higher on questions pertaining to sustainable issues.

Action: Emphasis will be placed on explaining aspects of sustainable design whenever possible during lectures; extra readings may be assigned if applicable.

R*esponsibility*: History of the Designed Environment I and II instructors.

1d. Architecture Design sub group. Ed Orlowski, M.Arch, RA, LEED Tom Nashlen, B.Arch/RA, Gretchen Maricak, RA, MFA, Jim Stevens. M.Arch.

Objective. Goal: Students completing the core architectural design studio sequence will demonstrate an understanding of, and an ability to implement, design solutions reflecting the current imperatives of sustainable design as outlined by the CoAD curriculum

committee.

Method: It is proposed that each of the core architectural design studios identify one issue of sustainable design pertinent to the larger educational goals of that studio (i.e.: IDS1, site orientation; IDS2, daylighting; IDS3 & 4, sustainable urbanism; and AD5, systems integration).

Assessment Instrument: Each of the established learning sub-objectives will be measured against criteria derived from and comparable to those found in established industry measurement tools such as LEED, the Living Building Challenge, Green Globes, and the SEED Network.

Additional Department tasks for 2012.

The Assessment plan (Table 1 below) for Architecture has been revised and requires revisions to update the NAAB criteria to the NAAB 2012 Criteria and match them to the existing University Goals and new undergraduate and graduate educational goals.

Table 1: Assessment Plan for the Department of Architecture.

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Most of the prog objectives below	Class Assignments, examinations, design project work, documentation, class participation	Mean results for tests Internal & external jury for projects	Every semester	2011/12
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Obj. 2, 3, 4, 5, 23, 26	Class Assignments, examinations, design project work, documentation, class participation, cap-stone projects	Mean results for tests Internal & external jury for projects	Every semester	2011/2012
II. 1. Graduates will be literate and skilled in written and oral communication.	Obj 1 & 3	Writing assignments Technical papers COM 3000	Writing Proficiency Exam	Every semester	2013/14
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.	Obj. 8, 9, 10, 12, 13	Class Assignments, examinations, design project work, documentation, class participation, cap-stone projects	Mean results for tests Internal & external jury for projects	Every semester	NA
II. 3. Graduates will be aware of the foundations and development of American society.	Obj. 8, 31, 32	Class Assignments, examinations, design project work, class participation, cap-stone projects	CoAD core curriculum courses	Every semester	NA

II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	Obj. 2, 3, 4, 5, 18, 19	Class Assignments, examinations, design project work, class participation, cap-stone projects Group projects in research	Mean results for tests Internal & external jury for projects	Every semester	NA
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Obj. 18, 19, 20, 21, 22, 23, 26	Class Assignments, examinations, design project work, class participation, cap-stone projects Group projects in research	Mean results for tests Internal & external jury for projects	Every semester	NA
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Obj. 29, 30, 31, 32	Cap-stone and senior level projects Field projects and case studies Group projects in research	Internal & external jury for projects	Every semester	2011/12
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.	Obj. 12, 13	Class Assignments, examinations, design project work, class participation	Internal & external jury for group projects.	Every semester	NA
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.	Obj. 2, 31, 32, 34	Cap-stone and senior level projects Field projects and case studies Group projects in research	Internal & external jury for group projects Peer evaluation for group projects	Every semester	NA
III. 4. Graduates will have been made aware of the import-ance of lifelong learning.	Obj. 31, 32	Cap-stone and senior level projects Field projects and case studies	Students & Alumni surveys	Every semester	NA

III. 5. Graduates will have had experiences that promote a global and societal perspective.	8, 9, 10, 11, 32	CoAD core curriculum courses	Students & Alumni surveys	Every semester	NA
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Obj. 7, 32	Group assignments Group projects in design Group projects in research	Internal & external jury for group projects Peer evaluation for group projects	Every semester	2013/14
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	Obj. 7, 30	Group assignments Group projects in design Group projects in research	Internal & external jury for group projects Peer evaluation for group projects	Every semester	2013/14
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	Obj. 7, 31, 33	Group assignments Group projects in design Group projects in research	Internal & external jury for group projects Peer evaluation for group projects	Every semester	2013/14
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	Obj. 29, 31, 33	Field projects and case studies	- Voluntary programs participation e.g. Habitat for Humanity	Every semester if there is a chance by the organization	NA
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Obj. 29, 32, 34	Cap-stone and senior level projects Field projects and case studies Group projects in design Group projects in research	Student & alumni surveys		2012/13

Program Objectives and Performance Criteria 2009 (NAAB Criteria 2012)

1. Speaking and writing skills (Communication skills A1)
2. Critical thinking skills (Design thinking A2)
3. Graphics skills (Visual Communication A3)
4. Research skills (Technical Documentation A4)
5. Formal ordering systems (Ordering Skills- A8)
6. Fundamental design skills (no change A6)
7. Collaboration skills (Same now C1)
8. Western traditions (*no clear counterpart 2012*)
9. Non-western traditions (Historical Traditions/Global Culture A9)
10. National and regional traditions *(no clear counterpart in 2012)*
11. Use of precedents (Use of Precedents A7)
12. Human behavior (Human Behavior C2)
13. Human diversity (Cultural Diversity A10)
14. Bldg design accessibility (Accessibility B2)
15. Sustainable design (Sustainability B3)
16. Design programming preparation (Pre-Design B1)
17. Site conditions (B4 Site Design)
18. Structural systems (same, now B9)
19. Environmental systems (same now B8)
20. Life safety (same now B5)
21. Bldg envelope systems (same now B10)
22. Bldg service systems (same now B12)
23. Bldg systems integration (*no clear counterpart 2012*)
24. Bldg materials and assemblies (same now B.12)
25. Construction cost control (Financial Considerations B7)
26. Technical documentation (*no clear counterpart 2012*)
27. Client role in architecture (same now C3)
28. Comprehensive design (same now B6)
29. Architect's administrative role (Project Management C4)
30. Architectural practice (Practice Management C5)
31. Professional development (*No clear counterpart 2012*)
32. Leadership (same now C.6)
33. Legal responsibilities (Same now C.7)
34. Ethics and professional judgment (same now C.8)

Unmatched 2012 criteria (Client Role in Architecture C3) Community and Social Responsibility (C9) (Applied Research A11)

BS in Transportation Design

1. **Assessment Plan**
   See Table 1 on following page.

2. **Action Plan (Loop-Closing)**
   a. **Report on 2010-2011 Academic Year**

Program Objective: Showcase projects using industry tools (CS5 and other programs) and integration of technology into the concept proposal.
Goal: Maintain high level of student achievement (Concept Communication on ECEO-f Evaluation Form to have a minimum rating of 8 on a 1-10 scale)
Assessment: Industry evaluation of student project execution and presentation (Creativity and Proposal Defense).
Evaluation: Student performance meets goals (minimum rating of 8 on a scale of 10) Actions: No specific action required; continue to monitor assessment data and develop rubic Responsibility: Keith Nagara

Program Objective: Leadership Portfolio – Students will demonstrate knowledge and expertise in applying this knowledge, in their professional fields
Goal: Achieve high percentage for student placement in profession (Advanced Studies on ECEO-h Evaluation Form to have a minimum rating of 8 on a 1-10 scale)
Assessment: Industry evaluation of student project and interviews
Evaluation: Analyze the projects based on the portfolio rubrics (minimum rating of 8) Actions: Implement feedback from students and industry for future portfolio deliverables.

- Develop portfolio tutorials and workshops
- Create higher standards (more selective) of industry projects to be course integrated Responsibility: Keith Nagara

b. Report on Plan for 2011-2012 Academic Year

- Update and enhance rubric for LDR Portfolio
- Administer assessment tools for industry reviews
- Focus on discipline specific knowledge (Sustainability) and Leadership to showcase in LDR Portfolio.

Re-assess program learning goals in regard to revisions in the university's undergraduate learning goals.

Table 1: Assessment Plan for B.S. Transportation Design

Goals (University)	Supporting Program Objective	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	ECEO-a, b, c, e, f, g, j, k	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
I.2.Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	ECEO-a, b, c, e, g, i, j	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
II.1.Graduates will be literate and skilled in written and oral communication.	ECEO-d, e, f, g	COM3000	Writing Proficiency Exam	Annual	Tri-Annual 2013-2014
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.	ECEO-c, f, h	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
II.3. Graduates will be aware of the foundations and development of American society.	ECEO-c, h	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
II.4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	ECEO-d, e, g, i	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
II.5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	ECEO-a, b, e, f, g, i	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	ECEO-d, e, f, j	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.	ECEO-d, f, h, j	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.	ECEO-a, d, e	Industry assessment of student project execution utilizing the	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-

		ECEO Evaluation Form			2014
III. 4. Graduates will have been made aware of the importance of lifelong learning.	ECEO-a, c, d, e, h	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
III. 5. Graduates will have had experiences that promote a global and societal perspective.	ECEO-a, c, g, h	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	ECEO-k, e, f	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	ECEO-k, e, f	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	ECEO-k, e, f	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	ECEO-d, e, h, j	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	ECEO-d, j	Industry assessment of student project execution utilizing the ECEO Evaluation Form	ECEO Evaluation Form meeting Employment Consideration	Annual	Tri-Annual 2013-2014

Bachelor in Interior Architecture

1. Assessment Plan:

See Table 1 beginning on page 5

A. Program Objective: Complete an Interim CIDA Accreditation Review addressing shortcomings from 2008 Accreditation Review.
Goal: Maintain Program accreditation
Assessment: Review curriculum matrix and identify primary focus of content areas and review delivery with faculty. Collect student examples of work that demonstrate improvement in areas previously identified as deficient.
Evaluation: CIDA review date is scheduled for October 1, 2011.
Actions: All Interiors Faculty (adjunct and full-time) will be active in assembling student work for the review exhibition
Responsibility: IA Coordinator

B. Program Objective: Address IDS-2 consistencies in delivery of Interiors component course content
Goal: Streamline and make more consistent the content of Interiors component to students Assessment: Create a repository of Lecture Notes, Assignments, Quizzes, and other resources For Interiors Faculty to share and add to
Evaluation: Faculty all use the same content in their courses Actions: Maintain the data from year to year
Responsibility: IA Coordinator and all Interiors faculty teaching a section of IDS-2

C. Program Objective: Continue Employer evaluations of intern students
Goal: To understand Employers' perception of the abilities of LTU Interior Architecture students' performance in Internship position
Assessment: Collect evaluation data from all Internship Employers at the end of each semester Evaluation: Compile data and compare from year to year to track feedback
Actions: IA Coordinator will collect data sheets from Internship faculty every semester Responsibility: IA Coordinator and Internship Faculty

D. Program Objective: Continue Internship student evaluations of Interiors core curriculum Goal: Increase awareness of student perceptions of the core curriculum of Interior Architecture Assessment: Collect evaluation data form Internship students at the end of each semester Evaluation: Compile data in graphic form and compare from year to year to track feedback and adjust curriculum to address deficiencies.
Actions: Address any deficiencies in curriculum identified with Curriculum Committee and make adjustments to courses as needed.
Responsibility: IA Coordinator and Internship Faculty

2. Action Plan (Loop-Closing) for Bachelor of Interior Architecture

a. Report on 2010-2011 Academic Year

A. Outcome was a successful Interim visit and review with preliminary report granting continued Accreditation for the Program through 2014. Final copy of report is expected in April 2012. Preparation for Interim Accreditation included:

- Sprinkler layout – addressed in Allied Interiors
- Art & accessory, decorative elements incorporated into students designs – addressed across studio curriculum, addition of artwork, plants, accessories to renderings of spaces
- Voice/data & telecommunications plans – addressed in Furniture & Millwork and IA-2 data/electrical

plans and raised flooring
- Detailed furniture drawings and layouts – addressed in Furniture & Millwork, IA-1 and IA-2
- Security systems planning – addressed in Allied Interiors
- HVAC/Plumbing systems evident in students projects – reviewed content in Building Systems 1 & 2 and applied in senior studios IA-3 and Allied Interiors
- Raised flooring systems incorporated into students projects – applied in Furniture & Millwork and IA-2
- Code/Standards research – applied across studio curricula
- Research on sustainability –applied across studio curricula
- Additional ergonomic and human factors data shown in students projects – applied in Allied Interiors
- Contract documentation – Increased application in IA-2 and applied in IA-3 and Allied Interiors
- Universal design concepts incorporated in students projects – increased application in IDS-2 and IA-2
- Course content building in difficulty and complexity over the curriculum – aligned square footages of student projects and complexity of requirements for projects increasing with Sophomore, Junior and Senior level studios
- Application of the metric system to projects – IA-1
- Post occupancy evaluations, productivity assessments, square footage ratios, life cycle assessments – IA-1 and Materials
- Providing clear, consistent, reliable information to the public regarding course of study – updated website information and developed new program flyers

The preparation for the 2014 review process will put this assessment objective on a 3-year cycle.

B. A repository of data for IDS-2 was set up on www.Dropbox.com for all Interiors Faculty ot access that includes Lecture notes, presentations, assignment briefs, rubrics, quizzes and supplemental materials all available to be used by the Interiors Faculty. All Faculty are teaching the course with the same syllabus and are sharing their own adaptations of the information for future access. This assessment objective should be reviewed on an annual cycle.

C. Data was collected in the form of Employer Reports for the Fall 2010 and Spring 2011 semesters for Internship students. A graph showing results of the reports is attached. Overall the perception of Employers regarding Interiors Internship students was “Above Average”. This assessment objective should be reviewed on an annual cycle.

D. Data was collected in the form of Student Curriculum Evaluation Reports for the Fall 2010 and Spring 2011 semesters from Internship students. A graph showing results of the reports is attached. Overall the perception of Senior level students regarding Interiors Curriculum was “Above Average”. This assessment objective should be reviewed on an annual cycle.

b. Report on Plan for 2011-2012 Academic Year

A. Program Objective: Review new 2011 CIDA Accreditation Standards and complete a matrix identifying the Primary and Secondary focus of each of the Standards as it specifically applies to LTU Interior Architecture curriculum.
Goal: Demonstrate with student work collected via electronic archive new Standard 4 “Entry-level interior designers need to apply all aspects of the design process to creative problem solving. Design process enables designers to identify and explore complex problems and generate creative solutions that support human behavior within the interior environment.” Assessment: Collection of student work, hard copy and electronic

Evaluation: Faculty review in preparation for 2014 CIDA Accreditation.
Actions: Faculty review of work to assess complexity of problems and creativity of solutions Responsibility: IA Coordinator and all Interiors Faculty

B. Program Objective: Address IDS-2 consistencies in delivery of Interiors component course content
Goal: Streamline and make more consistent the content of Interiors component to students Assessment: Create a repository of Lecture Notes, Assignments, Quizzes, and other resources For Interiors Faculty to share and add to
Evaluation: Faculty all use the same content in their courses Actions: Maintain the data from year to year
Responsibility: IA Coordinator and all Interiors faculty teaching a section of IDS-2

C. Program Objective: Continue Employer evaluations of intern students
Goal: To understand Employers' perception of the abilities of LTU Interior Architecture students' performance in Internship position
Assessment: Collect evaluation data from all Internship Employers at the end of each semester Evaluation: Compile data and compare from year to year to track feedback
Actions: IA Coordinator will collect data sheets from Internship faculty every semester Responsibility: IA Coordinator and Internship Faculty

D. Program Objective: Continue Internship student evaluations of Interiors core curriculum Goal: Increase awareness of student perceptions of the core curriculum of Interior Architecture Assessment: Collect evaluation data form Internship students at the end of each semester Evaluation: Compile data in graphic form and compare from year to year to track feedback and adjust curriculum to address deficiencies.
Actions: Address any deficiencies in curriculum identified with Curriculum Committee and make adjustments to courses as needed.
Responsibility: IA Coordinator and Internship Faculty

Table 1: Assessment Plan for Bachelor of Interior Architecture

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Standard 4	Class Assignments, examinations, design project work, documentation, class participation	Mean results for tests Internal & external jury for projects	Every semester	Annual
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Standard 3 and Standard 5 Standard 8	Class Assignments, examinations, design project work, documentation, class participation, cap-stone projects	Mean results for tests Internal & external jury for projects	Every semester	Annual
II. 1. Graduates will be literate and skilled in written and oral communication.	Standard 5	Writing assignments Technical papers COM 3000	Writing Proficiency Exam	Every semester	Annual
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.	Standard 3	Class Assignments, examinations, design project work, documentation, class participation, cap-stone projects	Mean results for tests Internal & external jury for projects	Every semester	Annual
II. 3. Graduates will be aware of the foundations and development of American society.	Standard 3	Class Assignments, examinations, design project work, class participation, cap-stone projects	CoAD core curriculum courses	Every semester	Annual

II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	Standard 2	Class Assignments, examinations, design project work, class participation, cap-stone projects Group projects in research	Mean results for tests Internal & external jury for projects	Every semester	Annual
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Standard 2	Class Assignments, examinations, design project work, class participation, cap-stone projects Group projects in research	Mean results for tests Internal & external jury for projects	Every semester	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Standard 2	Cap-stone and senior level projects Field projects and case studies Group projects in research	Internal & external jury for projects	Every semester	Annual
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.	Standard 1 and Standard 2	Class Assignments, examinations, design project work, class participation	Internal & external jury for group projects.	Every semester	Annual

III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.	Standard 2 and Standard 4	Cap-stone and senior level projects Field projects and case studies Group projects in research	Internal & external jury for group projects Peer evaluation for group projects	Every semester	Annual
III. 4. Graduates will have been made aware of the importance of lifelong learning.	Standard 8	Cap-stone and senior level projects Field projects and case studies	Students & Alumni surveys	Every semester	Annual
III. 5. Graduates will have had experiences that promote a global and societal perspective.	Standard 3 and Standard 7	CoAD core curriculum courses	Students & Alumni surveys	Every semester	Annual
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Standard 1 and Standard 8	Group assignments Group projects in design Group projects in research	Internal & external jury for group projects Peer evaluation for group projects	Every semester	Annual
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team .	Standard 1 and Standard 8	Group assignments Group projects in design Group projects in research	Internal & external jury for group projects Peer evaluation for group projects	Every semester	Annual

IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	Standard 1 and Standard 8	Group assignments Group projects in design Group projects in research	Internal & external jury for group projects Peer evaluation for group projects	Every semester	Annual
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	Standard 2	Field projects and case studies	- Voluntary programs participation e.g. Habitat for Humanity - Alumni Surveys	Every semester if there is a chance by the organization	Annual
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Standard 2	Cap-stone and senior level projects Field projects and case studies Group projects in design Group projects in research	Student & alumni surveys		Annual

Program Objectives and Performance Criteria (CIDA REQUIREMENTS)

Standard 1. Curriculum Structure.

The curriculum is structured to facilitate and advance student learning.

A. The curriculum MUST provide exposure to a variety of business, organizational, and familial structures (for example, for-profit, non-profit,
publicly vs. privately held, hierarchical, flat, co-housing, nuclear and extended family).

B. The teaching and learning methods MUST incorporate the experience of team approaches to design solutions, experiences that provide interaction with multiple disciplines (for example, code specialists, engineers, architects, artists, behaviorists) representing a variety of points
of view and perspectives on design problems.

C. The program MUST provide interaction with practicing professionals (for example, as jurors, project critics, guest lecturers, mentors), opportunities for design work experience (for example, internship, co-op, shadowing, or other experiences that familiarize students with the culture and environment of the professional studio and professional practice).

Standard 2. Professional Values.

The program leads students to develop the attitudes, traits, and values of professional responsibility, accountability, and effectiveness.

A. The program MUST provide learning experiences that address client and user needs and their responses to the interior environment,

professional ethics and the role of ethics in the practice of interior design, environmental ethics and the role of sustainability in the practice
of interior design, a global perspective and approach to thinking and problem solving (viewing design with awareness and respect for cultural
and social differences of people; understanding issues that affect the sustainability of the planet; understanding the implication of conducting
the practice of design within a world market.

B. The program MUST include learning experiences that incorporate critical, analytical, and strategic thinking, creative thinking (exhibit a variety of ideas, approaches, concepts with originality and elaboration), the ability to think visually and volumetrically, professional discipline (for example, time management, organizational skills), active listening skills leading to effective interpretation of requirements (for example, programming interviews, participatory critiques, role playing).
C. The program MUST present opportunities or experiences that address the value and importance of community or public service.

Standard 3. Design Fundamentals.
Students have a foundation in the fundamentals of art and design; theories of design, green design, and human behavior; and discipline-related history.

A. Student work MUST demonstrate understanding of design fundamentals including design elements (for example, space, line, mass, shape, texture) and principles (for example, scale, proportion, balance, rhythm, emphasis, harmony, variety), color principles, theories, and
systems (for example, additive and subtractive color, color mixing; hue, value, and intensity; the relationship of light and color), theories of design and design composition (for example, functionalism, Gestalt), principles of lighting design (for example, color, quality, sources, use).
B. Student work MUST demonstrate understanding of theories of human behavior in interior environments, human factors (for example, ergonomics, anthropometry/anthropometrics), the relationship between human behavior and the built environment.
C. Student work MUST demonstrate understanding of principles and theories of sustainability.
D. Student work MUST demonstrate understanding of the history of art, architecture, interiors, and furnishings.

Standard 4. Interior Design.
Students understand and apply the knowledge, skills, processes, and theories of interior design.

A. Student work MUST follow a process and demonstrate the ability to apply 2-dimensional design elements and principles in interior design projects, apply 3-dimensional design elements and principles to the development of the spatial envelope (for example, volumes of space, visual continuity and balance, visual passages, interconnecting elements), select and apply color in interior design projects.
B. Student work MUST demonstrate programming skills, including problem identification, identification of client and user needs, information gathering research and analysis (functional requirements, code research, sustainability issues, etc).
C. Student work MUST demonstrate competent schematic design, concept development, and problem solving skills including concept statements, the ability to rapidly visualize concepts through sketching, space planning (adjacencies, circulation, and articulation and shaping of space).
D. Student work MUST demonstrate competent design development skills in selection of interior finishes and materials, detailed and

developed layout of furniture, fixtures, and equipment, detailed and developed furniture selection, space plans, elevations, sketches, and
study models (computer-generated or manual), selection and application of luminaires and lighting sources, justifying design solutions relative to the goals and objectives of the project program, appropriate selection and application of decorative elements (for example trim, hardware, paneling).

E. Student work MUST demonstrate competent skills in preparing drawings, schedules, and specifications as an integrated system of contract documents, appropriate to project size and scope and sufficiently extensive to show how design solutions and interior construction are related.
F. Student work SHOULD demonstrate design development skills, including, appropriate selection and application of art and accessories,
the ability to design custom interior element (for example case goods, floor patterning, textiles), wayfinding methods, graphic identification, such as signage.

Standard 5. Communication.
Students communicate effectively.

A. Student work MUST demonstrate competence in, drafting and lettering, both manual and computer-aided techniques, illustrative sketching.
presentation of color, materials, and furnishings (for example, sample boards, collages, mock-ups, digital representations).
B. Students MUST express ideas clearly in oral presentations and critiques.
communicate clearly in writing (using correct spelling, grammar, and syntax) in specifications, schedules, and contracts and other business-related documents, such as project programs, concept statements, reports, research papers, resumes, and correspondence.
C. Student work MUST demonstrate the ability to render by any medium, manual or computer -generated, that successfully communicates
the design intent, communicate 3-dimensional space and form, such as in perspectives, paralines, and models (computer-generated or manual).
D. Student work SHOULD demonstrate the ability to apply the metric system to design work, communicate through alternative presentation techniques (for example, audio, electronic, film, photography, slides, video).

Standard 6. Building Systems and Interior Materials.
Students design within the context of building systems. Students use appropriate materials and products.

A. Students MUST demonstrate understanding that design solutions affect and are impacted by construction systems and methods (for example, wood-frame, steel-frame, masonry, concrete), power distribution systems, mechanical systems (HVAC, plumbing), energy management, data/voice telecommunications systems, lighting systems, ceiling systems, flooring systems (for example, raised, heated), security systems, acoustics, interface of workstation furniture systems with building systems (for example, columns, fenestration, convector units, and power sources).
B. Student work MUST demonstrate that materials and products are appropriately selected and applied on the basis of their properties and performance criteria.
C. Students MUST demonstrate knowledge of sources for materials and products.

D. Students MUST demonstrate understanding of the concept of sustainable building methods and materials.
E. Students SHOULD demonstrate knowledge of installation methods (for example, carpet, resilient flooring, wallcovering), material maintenance requirements.

Standard 7. Regulations.
Students apply the laws, codes, regulations, standards, and practices that protect the health, safety, and welfare of the public.

A. Student work MUST demonstrate understanding of the impact of fire and life safety principles on space planning (for example, compartmentalization [fire separation], movement [stairwells, corridors, exitways], detection [smoke/heat detectors and alarm systems.
B. Student work MUST demonstrate appropriate application of codes and regulations (for example, International Building Code [IBC] and standards (for example, American National Standards Institute [ANSI]), barrier-free design guidelines (for example, Americans with Disabilities Act [ADA]), ergonomic and human factors data.
C. Students MUST demonstrate understanding of the impact on health and welfare of indoor air quality, noise, and lighting.
D. Student work MUST demonstrate understanding of universal design concepts and principles.

Standard 8. Business and Professional Practice.
Students have a foundation in business and professional practice.

A. Students MUST demonstrate understanding of project management practices estimating (for example, project costs, fees), budget management, coordination (managing input from various members of the project team), time management, scheduling, and contract administration, information management (collecting and disseminating relevant project information), conflict resolution (facilitating solutions to conflicting objectives), assessment processes (for example, post-occupancy evaluation, productivity, square-footage ratios, life cycle assessment).
B. Students MUST demonstrate knowledge of certification, licensing, and /or registration requirements, professional design organizations.
C. Students SHOULD demonstrate understanding of basic business computer applications (for example, word processing, spreadsheets).
D. Students SHOULD demonstrate knowledge of business processes (for example, marketing, strategic planning, and accounting procedures).

College of Arts and Sciences

BA in English and Communication Arts

1. **Assessment Plan**

See Table 1 below

2. **Action Plan (Loop-Closing)**
   a. **Report on 2010-2011 Academic Year**

Program Objective: Students can perform in an exceptional manner in the two internships required in the degree.
Goal: Maintain high level of student achievement Assessment:
Internship evaluations
Evaluation: Student performance meets goals
Actions: No specific action required; continue to monitor assessment data Responsibility:
Melinda Phillips

Program Objective: Students can present orally and in writing coherent and persuasive interpretations of literature; Students can deliver effective oral presentations.
Goal: Maintain high level of student achievement Assessment:
Direct assessment of student assignments Evaluation: Student
performance meets goals
Actions: Student graded rubrics of oral presentations collected in ’10-’11. Student graded rubric (outsiders evaluating their peers), will also be collected Spring 2012.
Responsibility: Melinda Phillips

Program Objective: Students can identify the distinguishing cultural, historical and social attributes of literary periods and gauge the influence of these attributes on the works at hand; Students can gauge the influence of non-white and non-American writers on the origin and development of American literature.
Goal: Maintain high level of student achievement
Assessment: Direct assessment of student assignments from advanced Literature courses Evaluation: TBD (first papers to be assessed in Jan. 2012).
Actions: Assignments collected in ’10-’11. Jan. 2012 English faculty will develop a rubric for an outside scorer to evaluate Jr. Sr. level papers. Papers will be evaluated.
Responsibility: Melinda Phillips

Program Objective: Students can write compelling works in more than one of the following genres: poems, short stories, creative non-fiction, novels, screenplays, theatrical drama, television scripts, radio scripts, electronic media, video games.
Goal: Maintain high level of student achievement Assessment:
Creative writing portfolio Evaluation: Student performance

meets goals

Actions: Jan. 2012 Creative Writing faculty will develop a rubric for an outside scorer to evaluate Jr. Sr. level papers; In January 2012 an outside scorer will assess the creative writing portfolios of our first two graduating English majors.

Responsibility: Melinda Phillips

b. Report on Plan for 2011-2012 Academic Year

- Administer standard annual assessment tools
- Develop less cumbersome approach for administrating the oral assessment component of the degree (coordinating student visits to Speech courses).
- Develop rubric for creative writing portfolio
- Develop rubric for BAECA program objective: Students can identify the distinguishing cultural, historical and social attributes of literary periods and gauge the influence of these attributes on the works at hand; Students can gauge the influence of non-white and non-American writers on the origin and development of American literature.
- Identify appropriate courses to sample assignments related to technical writing and philosophical influences on American society.
- Re-assess program learning goals in regard to revisions in the university's undergraduate learning goals.
- Most important, simplify the BAECA Assessment Plan in order to make it administratively less cumbersome, and to make it truly objective in soliciting outside observers/commentators to review course materials. The first draft of a revised template is attached.

Table 1: Assessment Plan for B.A. in English & Communication Arts

Goals (University)	Supporting Program Objective	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Students can perform in an exceptional manner in the two internships required in the degree.	Internship supervisor evals	Grading rubric	Every Semester	Annual
I.2.Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Students can write and edit technical documents. Students can create effective multi-media presentations. Students have mastery of up-to-date software in editing and desktop publishing.	Direct assessment of student assignments	Pass COM courses	Every semester	Annual
II.1.Graduates will be literate and skilled in written and oral communication.	Students can present orally and in writing coherent and persuasive interpretations of literature Students can deliver effective oral presentations.	Direct assessment of student assignments WPE	Pass LLT/COM courses Pass the WPE Pass Core Curriculum courses	Every semester	Annual
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.	Students can identify the distinguishing cultural, historical and social attributes of literary periods and gauge the influence of these attributes on the works at hand. Students can gauge the influence of non-white and non-American writers on the origin and development of American literature	Direct assessment of student assignments	Pass 'Race, Ethnicity and Identity in American Literature'	Every semester	Annual
II.3. Graduates will be aware of the foundations and development of American society.	Students can directly engage through reading and discussion the formative philosophical influences on American Society.	Direct assessment of student assignments	Pass SSC courses	Every semester	Annual
II.4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	Students can complete calculus-based mathematics problems, understand scientific concepts and conduct laboratory experiments in chemistry, biology, physics, or forensics.	Direct assessment of student assignments	Pass MCS/NS courses	Every semester	Annual
II.5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Students can write compelling works in more than one of the following genres: poems, short stories, creative non-fiction, novels, screenplays, theatrical drama, television scripts, radio scripts, electronic media, video games.	Creative Writing Portfolio	Score a three or better on Creative Writing Portfolio grading rubric*	Every semester	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Students will successfully complete two required internships	Reports from Internship employers	Pass internships with a grade of C or better	Every semester	Annual
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					

Goals (University)	Supporting Program Objective	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.					
III. 5. Graduates will have had experiences that promote a global and societal perspective.					
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Students will complete COM 3563 Collaborative Communication for Leaders and LDR 2001. Both courses involve extensive team-building experiences.	Direct assessment of student assignments .	Pass COM3563 and LDR2001 with C- or better.	Every semester	Annual
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	Students will complete COM 3563 Collaborative Communication for Leaders and LDR 2001. Both courses involve extensive team-building experiences..	Direct assessment of student assignments	Pass COM3563 and LDR2001 with C- or better.	Every semester	Annual
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	Students will complete COM 3563 Collaborative Communication for Leaders and LDR 2001. Both courses involve extensive team-building experiences.	Direct assessment of student assignments	Pass COM3563 and LDR2001 with C- or better.	Every semester	Annual
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.					

BS in Humanities

1. Assessment Plan

See Table 1 below

2. Action Plan (Loop-Closing)

a. Report on 2010-11 Academic Year

Program Objective: Demonstrate a level of cultural literacy matching that of graduates from comparable programs at benchmark institutions.
Goal: Maintain high level of student achievement Assessment:
Embedded assessment of student work Evaluation: No data
collected in ’10-‘11
Actions: No actions taken in ‘10-‘11
Responsibility: Melinda Phillips

Program Objective: Demonstrate the ability to read and analyze challenging texts Goal:
Maintain high level of student achievement
Assessment: Embedded assessment of student work Evaluation:
No data collected in ’10-‘11
Actions: No actions taken in ‘10-‘11
Responsibility: Melinda Phillips

Program Objective: Demonstrate the poise to articulate their ideas orally and in writing Goal:
Maintain high level of student achievement
Assessment: Embedded assessment of student work Evaluation:
No data collected in ’10-‘11
Actions: No actions taken in ‘10-‘11
Responsibility: Melinda Phillips

Program Objective: Demonstrate an understanding of their past and their role as citizens of a free society
Goal: Maintain high level of student achievement Assessment:
Embedded assessment of student work Evaluation: No data
collected in ’10-‘11
Actions: No actions taken in ‘10-‘11
Responsibility: Melinda Phillips

Program Objective: Demonstrate the skill to evaluate conflicting points of view Goal:
Maintain high level of student achievement
Assessment: Embedded assessment of student work Evaluation:
No data collected in ’10-‘11
Actions: No actions taken in ‘10-‘11
Responsibility: Melinda Phillips

Program Objective: Demonstrate the savvy to look for alternative solutions Goal:
Maintain high level of student achievement

Assessment: Embedded assessment of student work Evaluation:
No data collected in ’10-‘11
Actions: No actions taken in ‘10-‘11
Responsibility: Melinda Phillips

Program Objective: Demonstrate the confidence to be creative. Goal:
Maintain high level of student achievement Assessment: Embedded
assessment of student work Evaluation: No data collected in ’10-‘11
Actions: No actions taken in ‘10-‘11
Responsibility: Melinda Phillips

Program Objective: Demonstrate the experience of working in teams and of having to take the lead
Goal: Maintain high level of student achievement Assessment:
Embedded assessment of student work Evaluation: No data
collected in ’10-‘11
Actions: No actions taken in ‘10-‘11
Responsibility: Melinda Phillips

2010-11 Action Items

- Finalize changes in curriculum requirements for Humanities degree.
- Adapt assessment for Humanities to assessments for BAECA degree.

b. Report on Plan for 2011-12 Academic Year

- Implement new assessment measures.
- Adapt current program learning goals to the new LTU undergraduate learning objectives.

Table 1: Assessment Plan for B.S. in Humanities

Goals (University)	Supporting Program Objective	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Demonstrate a level of cultural literacy matching that of graduates from comparable programs at benchmark institutions.	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual
I.2.Graduates will demonstrate effective use of technology and the ability to apply it in their fields.					
II.1.Graduates will be literate and skilled in written and oral communication.	Demonstrate the ability to read and analyze challenging texts Demonstrate the poise to articulate their ideas orally and in writing	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.	Demonstrate a level of cultural literacy matching that of graduates from comparable programs at benchmark institutions.	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual
II.3. Graduates will be aware of the foundations and development of American society.	Demonstrate an understanding of their past and their role as citizens of a free society	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual
II.4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.					
II.5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Demonstrate the skill to evaluate conflicting points of view. Demonstrate the savvy to look for alternative solutions Demonstrate the confidence to be creative.	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.					
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.	Demonstrate a level of cultural literacy matching that of graduates from comparable programs at benchmark institutions. Demonstrate an understanding of their past and their role as citizens of a free society. Demonstrate the experience of working in teams and of having to take the lead	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual

Goals (University)	Supporting Program Objective	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.	Demonstrate the savvy to look for alternative solutions Demonstrate the confidence to be creative.	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual
III. 4. Graduates will have been made aware of the importance of lifelong learning.					
III. 5. Graduates will have had experiences that promote a global and societal perspective.	Demonstrate a level of cultural literacy matching that of graduates from comparable programs at benchmark institutions. Demonstrate an understanding of their past and their role as citizens of a free society.	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Demonstrate the experience of working in teams and of having to take the lead. Demonstrate the skill to evaluate conflicting points of view. Demonstrate the savvy to look for alternative solutions	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.					
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.					
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	Demonstrate an understanding of their past and their role as citizens of a free society.	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Demonstrate a level of cultural literacy matching that of graduates from comparable programs at benchmark institutions.	1. Course design evaluation 2. Embedded assessment of student work 3. Class visitations/ instructor mentoring 4. Graduate interviews	1. Faculty judgment 2. Faculty judgment 3. Chair's evaluation 4. Chair's evaluation	1. Ongoing 2. Ongoing 3. Annual 4. Annual	Annual

BA in Media Communication

1. Assessment Plan

See Table 3 below

2. Action Plan (Loop-Closing)

[NOTE: The Media Communications program had a change in directors at the conclusion of the 2010-2011 academic year. The data collected in that cycle was never analyzed. The new director is implementing an assessment regime suitable to their long-term design for the program.]

a. Report on 2010-2011 Academic Year

Program Objective: Utilize technical and creative expertise in a variety of broadcast and video projects
Goal: Maintain high level of student achievement Assessment: Direct assessment of student assignments. Evaluation: Data collected, never analyzed.
Actions: None.
Responsibility: Suzanne Levine

Program Objective: Apply video and editing techniques to produce a cohesive and technically superior video project
Goal: Maintain high level of student achievement Assessment: Direct assessment of student assignments. Evaluation: Data collected, never analyzed.
Actions: None.
Responsibility: Suzanne Levine

Program Objective: Plan, compose, and integrate verbal, written, virtual, and communication of a project to technical and non-technical audiences.
Goal: Maintain high level of student achievement Assessment:
None implemented.
Evaluation: n.a. Actions: None
Responsibility: Suzanne Levine

Program Objective: Students will interview ESL and International students 2X and write a paper on their perceptions before and after the interview
Goal: Maintain high level of student achievement Assessment:
None implemented.
Evaluation: n.a. Actions: None
Responsibility: Suzanne Levine

Program Objective: Apply critical thinking and creativity to a variety of written, broadcast and video projects
Goal: Maintain high level of student achievement Assessment:
None implemented.
Evaluation: n.a. Actions: None
Responsibility: Suzanne Levine

Program Objective: Students will create: 30 sec promos for non-profit organizations, locally, nationally and

globally
Goal: Maintain high level of student achievement Assessment: Direct assessment of student assignments. Evaluation: Data collected, never analyzed.
Actions: None.
Responsibility: Suzanne Levine

Program Objective: Function effectively as a member of an intra-disciplinary team and evaluate the performance of the team and individual team members
Goal: Maintain high level of student achievement Assessment:
None implemented.
Evaluation: n.a. Actions: None
Responsibility: Suzanne Levine

Program Objective: Explain the many aspects of professionalism and what it means to be a member of the communication (broadcast) profession and analyze a situation involving multiple conflicting professional and ethical interests to determine an appropriate course of action.
Goal: Maintain high level of student achievement Assessment:
None implemented.
Evaluation: n.a. Actions: None
Responsibility: Suzanne Levine

b. Report on Plan for 2011-2012 Academic Year

- New director must get acclimated to assessment culture and implement assessment procedures.
- Program learning goals must be adapted to new LTU undergraduate learning objectives.

Table 1: Assessment Plan for B.S. in Media Communications

Goals (University)	Supporting Program Objective	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Utilize technical and creative expertise in a variety of broadcast and video projects	Direct assessment of student assignments Fulfillment of all Television & Video Production based courses	Level 5 on technical assessment rubric	Every semester	Annual
I.2.Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	***Apply*** video and editing techniques to produce a cohesive and technically superior video project	Direct assessment of student assignments.	Level 3 on direct assessment rubric. Level 5 on technical presentation rubric.	Every semester	Annual Annual
II.1.Graduates will be literate and skilled in written and oral communication.	***Plan, compose,*** and ***integrate*** verbal, written, virtual, and communication of a project to technical and non-technical audiences.	Direct assessment of student assignments	Level 3 on presentation rubric Pass the WPE Pass HSSC core curriculum courses	Every semester	Annual
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.	Students will interview ESL and International students 2X and write a paper on their perceptions before and after the interview	Direct assessment of student assignments	Pass HSSC core curriculum courses	Every semester	Annual
II.3. Graduates will be aware of the foundations and development of American society.					
II.4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.					
II.5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Apply critical thinking and creativity to a variety of written, broadcast and video projects	Direct assessment of student assignments	Pass HSSC core curriculum Pass SSC3723 Ethics Evaluation by instructors of video projects	Every semester courses are offered	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.					
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					

Goals (University)	Supporting Program Objective	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.					
III. 5. Graduates will have had experiences that promote a global and societal perspective.	Students will create: 30 sec promos for non-profit organizations, locally, nationally and globally	Non-profit client evaluations	Level 3 on direct assessment rubric	Every semester	Annual
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	***Function*** effectively as a member of an intra-disciplinary team and ***evaluate*** the performance of the team and individual team members	Team and instructor evaluation of written and video projects by the group	Level 3 on direct assessment rubric	In every technical course	Annual
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	***Function*** effectively as a member of an intra-disciplinary team and ***evaluate*** the performance of the team and individual team members	Team and instructor evaluation of written and video projects by the group	Level 5 on technical assessment rubric	In every technical course	Annual Annual
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.					
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	***Explain*** the many aspects of professionalism and what it means to be a member of the communication (broadcast) profession and ***Analyze*** a situation involving multiple conflicting professional and ethical interests to determine an appropriate course of action.	Direct assessment of student assignments in SSC3723 Ethics	Level 3 on direct assessment rubric.	Every semester	Annual

BS in Psychology

1. Assessment Plan

See Table 4 below

2. Action Plan (Loop-Closing)

a. Report on 2010-2011 Academic Year

I.1 Program Objective: Demonstrate knowledge and understanding that represents breadth and depth in selected content areas of psychology (e.g., learning and cognition, biological psychology, developmental changes in behavior, major history and systems of psychology, etc.).

Goal: Direct Measures: (1) 50% of students will score at least 50% on Psychology Comprehensive Exam; (2) 70% of students will score at least 75% on term papers, reports, and presentations in PSY 3213, 3413, 3613, and 4213; (3) 70% of graduating students will indicate at least "moderately confident" on mastery of psychology knowledge.

Assessment: Psychology Comprehensive Exam; Individual Projects in courses; Exit Survey Evaluation: (1) 78% of students (n = 22) scored at least 50% on the Psychology Comprehensive Exam; (2) 90% of students (n = 14) scored at least 75% on term papers, reports, and presentations in the courses Behavioral Neuroscience, Cognitive Psychology, Developmental Psychology, and Sensation & Perception; (3) No data.

Actions: (1) Criterion for assessing knowledge of psychology via the comprehensive exam will be raised to 60% of students will score at least 60% on the comprehensive exam; (2) No change to criterion; (3) Exit interview will be administered and scored by May 1, 2012.

Responsibility: Matt Cole

I.2. Program Objective: Demonstrate competence and ability to use appropriate software to produce understandable reports and posters in APA style, including use of statistical analysis software, internet and e-mail programs.

Goal: Direct Measures: (1) 70% of students will score at least 80% on term papers, reports, and presentations in PSY 3113; (2) 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in electronic communication, computer skills, and analytical software

Assessment: Individual projects in courses; Exit interview

Evaluation: (1) 95% of students (n = 14) scored at least 75% on term papers, reports, and presentations in the course Research Methods for the Behavioral Sciences; (2) No data.

Actions: (1) No change to criterion; (2) Exit interview will be administered and scored by May 1, 2012.

Responsibility: Matt Cole

II.1. Program Objective: Demonstrate oral and written communication skills in various formats and exhibit effective interpersonal communication skills.

Goal: Direct Measure: (1) 70% of students will score at least 75% on term papers, reports, and presentations in PSY 3213, 3413, 3613, and 4213; (2) 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in oral and written communication

Assessment: Individual projects in courses; Exit interview

Evaluation: (1) 90% of students (n = 14) scored at least 75% on term papers, reports, and presentations in the courses Behavioral Neuroscience, Cognitive Psychology, Developmental Psychology, and Sensation & Perception; (2) No data.

Actions: (1) No change to criterion, but need to conduct writing assessment of a random sample of term papers using the new writing assessment rubric; (2) Analyze exit interview data
Responsibility: Matt Cole

II.2. Program Objective: Demonstrate ability to interact effectively and sensitively with people of diverse abilities backgrounds and cultural perspectives, and ability to explain how individual differences influence beliefs, values, and interaction with others and vice versa.
Goal: Direct Measure: (1) 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand the problems of others and accept options different from their own; (2) 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in interacting effectively with diverse populations
Assessment: Internship evaluations; Exit interview Evaluation:
(1) No data; (2) No data
Actions: (1) Analyze internship evaluations; (2) Analyze exit interview data. Responsibility:
Matt Cole

II.4. Program Objective: Develop appropriate and testable hypotheses that include reasonable controls, and ability to follow the APA ethics code in the treatment of human and nonhuman participants in the design, data collection, interpretation, and reporting of psychological research.
Goal: Direct Measures: (1) 70% of students will score at least 75% on term papers, reports, and presentations in PSY 3221, 3421, 4221, and 3113; (2) 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in psychological research
Assessment: Individual projects in courses; Exit interview
Evaluation: (1) 90% of students (n = 14) scored at least 75% on term papers, reports, and presentations in the courses Behavioral Neuroscience, Cognitive Psychology, Developmental Psychology, and Sensation & Perception; (2) No data.
Actions: (1) No change to criterion, but need to conduct writing assessment of a random sample of term papers using the new writing assessment rubric; (2) Analyze exit interview data
Responsibility: Matt Cole

II.5. Program Objective: Demonstrate effective use of critical thinking and reasoning to recognize, develop, defend, and criticize arguments and other persuasive appeals.
Goal: Direct Measures: (1) 70% of students will score at least 80% on term papers, reports, and presentations in PSY 3113; (2) 70% of graduating students will indicate "at least competent" on items that asses self-reported competence in critical thinking
Assessment: Individual projects in courses; Exit interview
Evaluation: (1) 95% of students (n = 14) scored at least 75% on term papers, reports, and presentations in the course Research Methods for the Behavioral Sciences; (2) No data.
Actions: (1) No change to criterion; (2) Exit interview will be administered and scored by May 1, 2012.
Responsibility: Matt Cole

III.1. Program Objective: Demonstrate ability to apply knowledge of psychology when formulating career choices and demonstrate ability to identify the types of academic experience that will facilitate entry into the workforce, graduate studies, or both.
Goal: Direct Measures: (1) 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand the importance and application of ethical principles; (2) 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in career choices
Assessment: Internship evaluations; Exit interview Evaluation:
(1) No data; (2) No data

Actions: (1) Analyze internship evaluations; (2) Analyze exit interview data. Responsibility: Matt Cole

III.2. Program Objective: Demonstrate reflection on personal experiences and apply psychological principles to promote personal development.

Goal: Direct Measures: (1) 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand the problems of others and accept options different from their own; (2) 70% of graduating students will indicate "at least competent" on items that asses self-reported competence in interacting effectively with diverse populations

Assessment: Internship evaluations; Exit interview Evaluation:

(1) No data; (2) No data

Actions: (1) Analyze internship evaluations; (2) Analyze exit interview data.

Responsibility: Matt Cole

III.3. Program Objective: Demonstrate effective use of critical thinking and reasoning to recognize novel situations and contexts.

Goal: Direct Measures: (1) 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand novel situations, assess risk, and formulate plan; (2) 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in critical thinking

Assessment: Individual projects in courses; Exit interview

Evaluation: (1) 95% of students (n = 14) scored at least 75% on term papers, reports, and presentations in the course Research Methods for the Behavioral Sciences; (2) No data.

Actions: (1) No change to criterion; (2) Exit interview will be administered and scored by May 1, 2012.

Responsibility: Matt Cole

III.5. Program Objective: Demonstrate ability to interact effectively and sensitively with people of diverse abilities backgrounds and cultural perspectives, and ability to explain how individual differences influence beliefs, values, and interaction with others and vice versa.

Goal: Direct Measure: (1) 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand the problems of others and accept options different from their own; (2) 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in interacting effectively with diverse populations

Assessment: Internship evaluations; Exit interview Evaluation:

(1) No data; (2) No data

Actions: (1) Analyze internship evaluations; (2) Analyze exit interview data.

Responsibility: Matt Cole

IV.1., IV.2. Program Objective: Demonstrate ability to think critically with others, and work together to solve common problems.

Goal: Direct Measures: (1) 70% of students will score at least 80% on term papers, reports, and presentations in PSY 3113; (2) 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in critical thinking

Assessment: Individual projects in courses; Exit interview

Evaluation: (1) 95% of students (n = 14) scored at least 75% on term papers, reports, and presentations in the course Research Methods for the Behavioral Sciences; (2) No data.

Actions: (1) No change to criterion; (2) Exit interview will be administered and scored by May 1, 2012.

Responsibility: Matt Cole

V.1. Program Objective: Demonstrate knowledge and understanding that represents breadth and depth in selected content areas of psychology (e.g., learning and cognition, biological psychology, developmental changes in behavior, major history and systems of psychology, etc.)

Goal: Direct Measures: (1) 50% of students will score at least 50% on Psychology Comprehensive Exam; (2) 70% of students will score at least 75% on term papers, reports, and presentations in PSY 3213, 3413, 3613, and 4213; (3) 70% of graduating students will indicate at least "moderately confident" on mastery of psychology knowledge.

Assessment: Psychology Comprehensive Exam; Individual Projects in courses; Exit Interview Evaluation: (1) 78% of students (n = 22) scored at least 50% on the Psychology Comprehensive Exam; (2) 90% of students (n = 14) scored at least 75% on term papers, reports, and presentations in the courses Behavioral Neuroscience, Cognitive Psychology, Developmental Psychology, and Sensation & Perception; (3) No data.

Actions: (1) Criterion for assessing knowledge of psychology via the comprehensive exam will be raised to 60% of students will score at least 60% on the comprehensive exam; (2) No change to criterion; (3) Exit interview will be administered and scored by May 1, 2012.

Responsibility: Matt Cole

V.2. Program Objective: Demonstrate a reasonable skepticism and intellectual curiosity about causes of behavior, and recognize the necessity of ethical behavior in all aspects of the science and practice of psychology, including recognizing and respecting human diversity.

Goal: Direct Measures: (1) 70% of students will score at least 80% on term papers, reports, and presentations in PSY 3113; (2) 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in critical thinking and ethics

Assessment: Individual projects in courses; Exit interview

Evaluation: (1) 95% of students (n = 14) scored at least 75% on term papers, reports, and presentations in the course Research Methods for the Behavioral Sciences; (2) No data.

Actions: (1) No change to criterion; (2) Exit interview will be administered and scored by May 1, 2012.

Responsibility: Matt Cole

b. Report on Plan for 2011-2012 Academic Year

- Administered standard annual assessment tools
- Re-assess program learning goals in regard to revisions in the university's undergraduate learning goals.

Table 1: Assessment Plan for B.S. in Psychology Program

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
I.1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Demonstrate knowledge and understanding that represents breadth and depth in selected content areas of psychology (e.g., learning and cognition, biological psychology, developmental changes in behavior, major history and systems of psychology, etc.).	1. Comprehensive Exam 2. Individual Projects 3. Exit Interview	1. Direct Measure: 50% of students will score at least 50% on comprehensive exam 2. Direct Measure: 70% of students will score at least 75% on term papers, reports, and presentations in PSY 3213, 3413, 3613, and 4213 3. Direct Measure: 70% of graduating students will indicate at least "moderately confident" on mastery of psychology knowledge	1. Annual 2. Every semester 3. Annual	1. 78% of students (n=22) scored at least 50% 2. 90% of students (n=14) scored at least 75% 3. No data **Fall 2012**
I.2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Demonstrate competence and ability to use appropriate software to produce understandable reports and posters in APA style, including use of statistical analysis software, internet and e-mail programs.	1. Individual projects 2. Exit interview	1. Direct Measure: 70% of students will score at least 80% on term papers, reports, and presentations in PSY 3113 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in electronic communication, computer skills, and analytical software	1. Annual 2. Annual	1. 95% of students (n=14) scored at least 75% 2. No data **Fall 2012**
II.1. Graduates will be literate and skilled in written and oral communication.	Demonstrate oral and written communication skills in various formats and exhibit effective interpersonal communication skills about psychology.	1. Individual projects 2. Exit interview	1. Direct Measure: 70% of students will score at least 75% on term papers, reports, and presentations in PSY 3213, 3413, 3613, and 4213 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in oral and written communication	1. Annual 2. Annual	1. 90% of students (n=14) scored at least 75% 2. No data **Fall 2012**
II.2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.	Demonstrate ability to interact effectively and sensitively with people of diverse abilities backgrounds and cultural perspectives, and ability to explain how individual differences influence beliefs, values, and interaction with others and vice versa.	1. Internships 2. Exit interview	1. Direct Measure: 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand the problems of others and accept options different from their own 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in interacting effectively with diverse populations	1. Annual 2. Annual	1. No data 2. No data **Fall 2013**
II.3. Graduates will be aware of the foundations and development of American society.					

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
II.4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	Develop appropriate and testable hypothesis that includes reasonable controls, and ability to follow the APA ethics code in the treatment of human and nonhuman participants in the design, data collection, interpretation, and reporting of psychological research.	1. Individual projects 2. Exit interview	1. Direct Measure: 70% of students will score at least 75% on term papers, reports, and presentations in PSY 3221, 3421, 4221, and 3113 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in psychological research	1. Annual 2. Annual	1. 90% of students (n=14) scored at least 75% 2. No data **Fall 2013**
II.5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Demonstrate effective use of critical thinking and reasoning to recognize, develop, defend, and criticize arguments and other persuasive appeals.	1. Individual projects 2. Exit interview	1. Direct Measure: 70% of students will score at least 80% on term papers, reports, and presentations in PSY 3113 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in critical thinking	1. Annual 2. Annual	1. 95% of students (n=14) scored at least 75% 2. No data **Fall 2013**
III.1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Demonstrate ability to apply knowledge of psychology when formulating career choices and demonstrate ability to identify the types of academic experience that will facilitate entry into the workforce, graduate studies, or both.	1. Internships 2. Exit interview	1. Direct Measure: 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand the importance and application of ethical principles 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in career choices	1. Annual 2. Annual	1. No data 2. No data **Fall 2013**
III.2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.	Demonstrate reflection on personal experiences and apply psychological principles to promote personal development.	1. Internships 2. Exit interview	1. Direct Measure: 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand the problems of others and accept options different from their own 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in interacting effectively with diverse populations	1. Annual 2. Annual	1. No data 2. No data **Fall 2013**
III.3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.	Demonstrate effective use of critical thinking and reasoning to recognize novel situations and contexts.	1. Internships 2. Exit interview	1. Direct Measure: 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand novel situations, assess risk, and formulate plan 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in critical thinking	1. Annual 2. Annual	1. No data 2. No data **Fall 2013**
III.4. Graduates will have been made aware of the importance of lifelong learning.					

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Admin. Timeline	Loop-Closing
III.5. Graduates will have had experiences that promote a global and societal perspective.	Demonstrate ability to interact effectively and sensitively with people of diverse abilities backgrounds and cultural perspectives, and ability to explain how individual differences influence beliefs, values, and interaction with others and vice versa.	1. Internships 2. Exit interview	1. Direct Measure: 70% of interns should be evaluated by internship supervisors as being "at least satisfactory" in their ability to understand the problems of others and accept options different from their own 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in interacting effectively with diverse populations	1. Annual 2. Annual	1. No data 2. No data **Fall 2013**
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Demonstrate ability to think critically with others, and work together to solve common problems.	1. Individual projects 2. Exit interview	1. Direct Measure: 70% of students will score at least 80% on term papers, reports, and presentations in PSY 3113 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in critical thinking	1. Annual 2. Annual	1. 95% of students (n=14) scored at least 75% 2. No data **Fall 2014**
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	Demonstrate ability to think critically with others, and work together to solve common problems.	1. Individual projects 2. Exit interview	1. Direct Measure: 70% of students will score at least 80% on term papers, reports, and presentations in PSY 3113 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in critical thinking	1. Annual 2. Annual	1. 95% of students (n=14) scored at least 75% 2. No data **Fall 2014**
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.					
V.1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	Demonstrate knowledge and understanding that represents breadth and depth in selected content areas of psychology (e.g., learning and cognition, biological psychology, developmental changes in behavior, major history and systems of psychology, etc.).	1. Psychology Comprehensive Exam 2. Individual Projects 3. Exit Interview	1. Direct Measure: 50% of students will score at least 50% 2. Direct Measure: 70% of students will score at least 75% on term papers, reports, and presentations in PSY 3213, 3413, 3613, and 4213 3. Direct Measure: 70% of graduating students will indicate at least "moderately confident" on mastery of psychology knowledge	1. Annual 2. Every semester 3. Annual	1. 78% of students (n=22) scored at least 50% 2. 90% of students (n=14) scored at least 75% 3. No data **Fall 2014**
V.2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Demonstrate a reasonable skepticism and intellectual curiosity about causes of behavior, and recognize the necessity of ethical behavior in all aspects of the science and practice of psychology, including recognizing and respecting human diversity.	1. Individual projects 2. Exit interview	1. Direct Measure: 70% of students will score at least 80% on term papers, reports, and presentations in PSY 3113 2. Direct Measure: 70% of graduating students will indicate at least "moderately competent" on items that asses self-reported competence in critical thinking and ethics	1. Annual 2. Annual	1. 95% of students (n=14) scored at least 75% 2. No data **Fall 2014**

BS in Mathematics

1. Assessment Plan : BS in Mathematics

See Table 1 below

2. Action Plan (Loop-Closing)

a. Report on 2010-2011 Academic Year

#1: Apply knowledge

Assessment:	Common final exams in Calculus 2 to assess the university educational goal II.4. For the Mathematics Program no additional data was collected to assess goal I.1 from mathematics courses independent of regular course grading materials. The collected materials were not archived.
Evaluation:	Calculus 2 data was analyzed during Assessment Day Fall 2011.
Actions:	Calculus 2 final will be standardized Fall 2011. A rubric will be created for Calc 2 common final. Common finals will be expanded to include evening sections. All Mathematics Program courses will be reviewed on a three-year cycle.
Responsibility:	Calc 2 common final= M. Merscher, C. Cartwright Math courses = D. Bindschadler, C. Cartwright

#2: Problem solving

Assessment:	Common final exams in Calculus 2 and Math Analysis 2 to assess the university educational goal II.4. For the Mathematics Program no additional data was collected to assess goal I.1 from mathematics courses independent of regular course grading materials. The collected materials were not archived.
Evaluation:	See #1 above
Actions:	See #1 above
Responsibility:	See #1 above

#3: Mathematical modeling

Assessment:	Data from Senior Projects to assess university goal II.5 was not archived. Performance of student teams in MCM (Mathematical Contest in Modeling) was used. Student work from Mathematical Modeling course and PBL (Problem Based Learning) exercises were not archived.
Evaluation:	Data from Senior Projects or Mathematical Modeling was not analyzed apart from student evaluation for course grades. The performance of our teams in the international math modeling contests indicates that our graduates typically satisfy this goal.
Actions:	Senior Project data will be archived starting Spring 2012. Written reports from Math courses will be archived starting Spring 2012.
Responsibility:	L. Shamir and G. Zhu

#4: Teamwork

Assessment:	A teamwork survey was taken in the PBL sections of Calc 1, 2, and 3 to assess university goal IV.1-2
Evaluation:	Evaluation of data was postponed until Fall 2011. Actions:

	Actions will be decided in Fall 2011.
Responsibility:	C. Cartwright and G. Zhu

#5: Communication

Assessment:	Data from Senior Project and written reports from Math courses were not archived to assess goal II.1.
Evaluation:	Data was not analyzed.
Actions:	Senior Project data will be archived starting Spring 2012. Written reports from Math courses will be archived starting Spring 2012.
Responsibility:	L. Shamir and C. Cartwright

#6: Global society

Assessment:	An assessment tool does not exist for goal III.5. Evaluation: none
Actions:	The CS Alumni survey will be modified to assess Math alumni in Spring 2012.
Responsibility:	C. Chung and C. Cartwright

#7: Lifelong learning

Assessment:	An assessment tool does not exist for goal III.4. Evaluation: none
Actions:	The CS Alumni survey will be modified to assess Math alumni in Spring 2012.
Responsibility:	C. Chung and C. Cartwright

#8: Technology

Assessment:	Assignments that involved the use of technology to assess goal I.2 were not archived.
Evaluation:	none
Actions:	Courses that involve the use of technology will be identified in Spring 2012.
Responsibility:	P. Lowry and C. Cartwright

#9: Secure employment

Assessment:	An assessment tool does not exist for goal V.1. Evaluation: none
Actions:	The CS Alumni survey will be modified to assess Math alumni in Spring 2012.
Responsibility:	C. Chung and C. Cartwright

b. Report on Plan for 2011-2012 Academic Year Fall 2011

- Common final in Calculus 2 will be standardized and a rubric created. Both day and evening sections will participate.
- Common finals and rubrics will be developed for Math Analysis 2, Geometry in Art, and Technical Calculus.
- Data collected from academic year 2010-2011 will be evaluated and action plans developed (closing the loop for 2010-2011)

Spring 2012

- Common finals will be implemented in Math Analysis 2, Geometry in Art and Technical Calculus to assess goal II.4
- Beginning with Spring 2012, all Math courses will be assessed over a three year cycle. Each semester a faculty member will be responsible for all sections of one or two courses to assess goals #1, 2, and 8. Rubrics will be developed to assess student written work (exam problems and assignments), oral presentations, and surveys.
- An exit interview will be developed to assess goal #4
- Data will be archived from Senior Projects to assess goals #3 and 5
- The CS alumni survey will be modified to apply to Math majors to assess goal #6, 7, and 9
- The Math/CS dept. will have a closing the loop assessment retreat in May 2012 to evaluate the data collected and develop an action plan for 2012-2013

Table 1: Assessment Plan for BS in Mathematics

Goals (University)	**Supporting Program Objective / Outcome**	**Assessment Tools**	**Metrics / Indicators**	**Administration Timeline**	**Loop-Closing Timeline**
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	*Apply* knowledge of mathematics appropriate to a problem. (1) *Analyze* a problem, and *identify* and *define* the mathematical techniques appropriate to its solution. (2)	Direct assessment of student exams Direct assessment of student assignments	Level 3 on exam rubric Level 3 on assignment rubric	Annual	Annual
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	*Use* current and established techniques, skills, and tools necessary for applying mathematics. (8)	Direct assessment of student assignments	Level 3 on assignment rubric	Annual	Annual
II. 1. Graduates will be literate and skilled in written and oral communication .	*Communicate* mathematical ideas and models effectively to a range of audiences both orally and in written form. (5)	Direct assessment of student projects WPE	Level 3 on oral and written presentation rubrics Pass WPE	Annual	Annual
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					
II. 3. Graduates will be aware of the foundations and development of American society.					

II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	Analyze a problem, and identify and define the mathematical techniques appropriate to its solution. (2)	Direct assessment of student assignments	Level 3 on assignment rubric	Annual	Annual
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Design, implement, and evaluate a mathematical model that satisfies specified requirements (3)	Direct assessment of student assignments	Level 3 on assignment rubric	Annual	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.					
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					

III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.	Recognize the need for and engage in life-long learning, continuing professional development and adapt to changes in the field. (7)	Alumni survey	Level 3 on survey rubric	Annual (two years after graduation)	Annual
III. 5. Graduates will have had experiences that promote a global and societal perspective.	Analyze the local and global impact of models on individuals, organizations, and society. (6)	Alumni survey	Level 3 on survey rubric	Annual (two years after graduation)	Annual
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	*Function* effectively on teams to accomplish a common goal, including performing leadership tasks. (4)	Exit interview	Affirmative answers from 80% of interviewees.	Annual	Annual

IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	*Function* effectively on teams to accomplish a common goal, including performing leadership tasks. (4)	Exit interview	Affirmative answers from 80% of interviewees.	Annual	Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.					
V. 1. Graduates will have had opportunities to learn the value of	Secure employment and/or attend graduate school in mathematics or any field	Alumni survey	Level 3 on survey rubric	Annual (two years after graduation)	Annual
contributing to their community and to society.	based on mathematics, drawing on their experiences, both within and outside the major to become responsible citizens and effective professionals. (9).				
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.					

BS in Computer Science

1. **Assessment Plan : BS in Computer Science**

See Table 1 below

2. **Action Plan (Loop-Closing)**
   a. **Report on 2010-2011 Academic Year**

#1: Apply knowledge

Assessment:	No data was collected from computer science courses independent of regular course grading materials. The collected materials were not archived.
Evaluation:	There was no systematic data collection or analysis. Dr. Azar and Dr. Bindschadler did evaluate materials in response to issues. Only the director and the chair were involved in the evaluation.
Actions:	Most materials reviewed were deemed to be at the appropriate level and the evaluation of those materials reflected appropriate expectations from the instructors. There were, however, a couple of instances where instructors were asked to raise the level of their expectations.
Responsibility:	G. Azar and D. Bindschadler

#2: Problem solving

Assessment:	No data was collected from computer science courses independent of regular course materials. The materials collected were not archived.
Evaluation:	No data was analyzed with respect to problem solving abilities, except for instructor selected evidence from MCS4833 Senior Project (and MCS7013 and MCS7033). Dr. Azar and Dr. Bindschadler did evaluate selected students' performances.
Actions:	Frequency of meetings between instructor and students for the project courses MCS4833, MCS7013 and MCS7033 were increased.
Responsibility:	G. Azar and D. Bindschadler

#3: Design and implement a computer-based system

Assessment:	Recording of project presentations from Senior Projects were posted to Blackboard.
Evaluation:	No data were reviewed or analyzed to assess university goal II.5. Actions: Senior Projects will be reviewed to assess goal II.5 beginning Spring 2012.
Responsibility:	L. Shamir and G. Azar

#4: Teamwork

Assessment:	No data was collected from computer science courses. Evaluation: No data to analyze
Actions:	CS courses where teamwork is utilized will be identified Spring 2012.
Responsibility:	G. Azar and D. Bindschadler

#5: Communication

Assessment:	No data was collected from computer science courses except MCS4833 Senior Project where written reports were collected. The materials collected were not archived.
Evaluation:	Students were underprepared in both technical writing and oral presentation

skills necessary for Senior Project.

Actions: Add WPE and COM2103 as a prerequisite for Senior Project. Work with HSSC to improve writing and presentation skills and to develop an oral and written communication rubric. Instructor will spend more time with students revising drafts in the project courses.

Responsibility: G. Azar and D. Bindschadler

#6: Global society

Assessment: Alumni survey

Evaluation: No questions on the survey addressed this goal specifically.

Actions: The survey will be modified or an alternate assessment instrument will be used.

Responsibility: D. Bindschadler and C. Chung

#7: Lifelong learning

Assessment: Alumni survey

Evaluation: 73% of respondents indicated they may seek additional graduate level education.

Actions: CS faculty were satisfied with this result.

Responsibility: D. Bindschadler and C. Chung

#8: Technology

Assessment: No data were collected about the technologies being used by the students in the program.

Evaluation: No data to analyze.

Actions: CS courses in which technology is used will be identified for the purposes of assessing goal I.2

Responsibility: D. Bindschadler and G. Azar

#9: Secure employment Assessment:

Alumni survey

Evaluation: 87 % of respondents indicated they were employed full-time. Actions:

CS faculty deemed no action was necessary.

Responsibility: D. Bindschadler and C. Chung

#10: Complete understanding of a programming language

Assessment: No computer programming assignments were collected independent of regular course grading materials. The collected materials were not archived.

Evaluation: The data reviewed indicated that the problem students suffered more from an inability to solve the programming problem than from a lack of knowledge of a language. However, the work did illustrate a lack of knowledge of the language. The work products from students that were doing okay in the program were not evaluated for language mastery. There was no systematic data collection or analysis. Dr. Azar, Dr. Bindschadler and selected other faculty members did evaluate materials in response to issues. Only the director, selected faculty members and the chair were involved in the evaluation.

Actions: Since it was felt that the bigger problem was one of programming a solution, rather than the mastery of the language itself, it was decided not to take any action to address this item.

Responsibility: G. Azar and D. Bindschadler

b. Report on Plan for 2011-2012 Academic Year Fall 2011

- Add WPE and COM2103 as a prerequisite for Senior Project. Work with HSSC to improve

writing and presentation skills and to develop an oral and written communication rubric.

Spring 2012

- Beginning with Spring 2012, all CS courses will be assessed over a three year cycle. Each semester a faculty member will be responsible for all sections of one or two courses to assess goals #1, 2, 5, 8, and 10. Rubrics will be developed to assess student written work (exam problems and assignments) and oral presentations.
- Courses will be identified to assess goals #5, 8, and 10
- An exit interview will be developed by CS faculty to assess goal #4
- Data will be archived from Senior Projects to assess goals #3 and 5
- A rubric will be developed to evaluate the survey results to assess goals #6, 7, and 9
- The Math/CS dept. will have a closing the loop assessment retreat in May 2012 to evaluate the data collected and develop an action plan for 2012-2013

Table 1: Assessment Plan for BS in Computer Science

Goals (University)	**Supporting Program Objective / Outcome**	**Assessment Tools**	**Metrics / Indicators**	**Administration Timeline**	**Loop-Closing Timeline**
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	*Apply* knowledge of computing and mathematics appropriate to the discipline *(1)* *Display* a complete understanding of a computer language ((syntax, semantics and terminology), *develop* and *debug* complex code. *(10)*	Direct assessment of standard questions on student final exams. Direct assessment of student assignments	Level 3 on direct assessment rubric	Annual	Annual
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	*Apply* current techniques, skills, and tools necessary for computing practice. *(8)*	Direct assessment of student work according to the master course	Level 3 on direct assessment rubric	Annual	Annual
II. 1. Graduates will be literate and skilled in written and oral communication .	*Plan, create and integrate* oral and written communication of [mathematical and algorithmic ideas] effectively to audiences having a range of technical understanding. *(5)*	Direct assessment of Senior Project oral and written reports WPE	Level 3 on oral and written rubrics Pass WPE	Annual	Annual
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					

II. 3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	*Apply* knowledge of computing and mathematics appropriate to the discipline *(1)*	Direct assessment of standard questions on student final exams.	Level 3 on direct assessment rubric	Annual	Annual
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	*Design*, *implement*, and *evaluate* a computer-based system, process, component, or program to meet its specified requirements *(3)*	Direct assessment of Senior Project written reports	Level 3 on direct assessment rubric	Annual	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.					

III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.	*Recognize* the need for and *engage* in continuing professional development [and learn new technologies] and adapt to changes in the field. (7)	Alumni survey	Level 3 on survey rubric	Annual (two years after graduation)	Annual
III. 5. Graduates will have had experiences that promote a global and societal perspective.	*Analyze* the local and global impact of computing on individuals, organizations, and society. (6)	Alumni survey	Level 3 on survey rubric	Annual (two years after graduation)	Annual

IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Function effectively on teams to accomplish a common goal. (4)	Exit interview	Affirmative answers from 80% of interviewees.	Annual	Annual
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	Function effectively on teams to accomplish a common goal (4)	Exit interview	Affirmative answers from 80% of interviewees.	Annual	Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.					

V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	*Secure* employment and/or *attend* graduate school in their field, drawing on their experiences, both within and outside the major to become responsible citizens and effective professionals. *(9)*	Alumni survey	Level 3 on survey rubric	Annual (two years after graduation)	Annual
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.					

BS in Mathematics and Computer Science

1. Assessment Plan : BS in Mathematics and Computer Science

See Table 1 below

2. Action Plan (Loop-Closing)

a. Report on 2010-2011 Academic Year

#1: Apply knowledge

Assessment:	Common final exams in Calculus 2 to assess the university educational goal II.4. For the Mathematics Program no additional data was collected to assess goal I.1 from mathematics courses independent of regular course grading materials. The collected materials were not archived.
Evaluation:	Calculus 2 data was analyzed during Assessment Day Fall 2011.
Actions:	Calculus 2 final will be standardized Fall 2011. A rubric will be created for Calc 2 common final. Common finals will be expanded to include evening sections. All Mathematics Program courses will be reviewed on a three-year cycle.
Responsibility:	Calc 2 common final= M. Merscher, C. Cartwright Math courses = D. Bindschadler, C. Cartwright

#2: Problem solving

Assessment:	Common final exams in Calculus 2 and Math Analysis 2 to assess the university educational goal II.4. For the Mathematics Program no additional data was collected to assess goal I.1 from mathematics courses independent of regular course grading materials. The collected materials were not archived.
Evaluation:	See #1 above
Actions:	See #1 above
Responsibility:	See #1 above

#3: Mathematical modeling and computer-based systems

Assessment:	Data from Senior Projects to assess university goal II.5 was not archived. Performance of student teams in MCM (Mathematical Contest in Modeling) was used. Student work from Mathematical Modeling course and PBL (Problem Based Learning) exercises were not archived.
Evaluation:	Data from Senior Projects or Mathematical Modeling was not analyzed apart from student evaluation for course grades. The performance of our teams in the international math modeling contests indicates that our graduates typically satisfy this goal.
Actions:	Senior Project data will be archived starting Spring 2012. Written reports from Math courses will be archived starting Spring 2012.
Responsibility:	L. Shamir and G. Zhu

#4: Teamwork

Assessment:	A teamwork survey was taken in the PBL sections of Calc 1, 2, and 3 to assess university goal IV.1-2
Evaluation:	Evaluation of data was postponed until Fall 2011. Actions:

	Actions will be decided in Fall 2011.
Responsibility:	C. Cartwright and G. Zhu

#5: Communication

Assessment:	Data from Senior Project and written reports from Math courses were not archived to assess goal II.1.
Evaluation:	Data was not analyzed.
Actions:	Senior Project data will be archived starting Spring 2012. Written reports from Math courses will be archived starting Spring 2012.
Responsibility:	L. Shamir and C. Cartwright

#6: Global society

Assessment:	CS Alumni survey
Evaluation:	Postponed to spring 2012.
Actions:	Decide if any modifications are necessary to apply the survey to Math and CS majors.
Responsibility:	D. Bindschadler and C. Chung

#7: Lifelong learning

Assessment:	CS Alumni survey
Evaluation:	Postponed to spring 2012.
Actions:	Decide if any modifications are necessary to apply the survey to Math and CS majors.
Responsibility:	D. Bindschadler and C. Chung

#8: Technology

Assessment:	Assignments that involved the use of technology to assess goal I.2 were not archived.
Evaluation:	none
Actions:	Courses that involve the use of technology will be identified in Spring 2012.
Responsibility:	P. Lowry and C. Cartwright

#9: Secure employment

Assessment:	CS Alumni survey
Evaluation:	Postponed to spring 2012.
Actions:	Decide if any modifications are necessary to apply the survey to Math and CS majors.
Responsibility:	D. Bindschadler and C. Chung

#10: Complete understanding of a programming language

Assessment:	No computer programming assignments were collected independent of regular course grading materials. The collected materials were not archived.
Evaluation:	The data reviewed indicated that the problem students suffered more from an inability to solve the programming problem than from a lack of knowledge of a language. However, the work did illustrate a lack of knowledge of the language. The work products from students that were doing okay in the program were not evaluated for language mastery. There was no systematic data collection or analysis. Dr. Azar, Dr. Bindschadler and selected other faculty members did evaluate materials in response to issues. Only the director, selected faculty members and the chair were involved in the evaluation.
Actions:	Since it was felt that the bigger problem was one of programming a solution, rather than the mastery of the language itself, it was decided not to take any action to address this item.
Responsibility:	G. Azar and D. Bindschadler

b. Report on Plan for 2011-2012 Academic Year Fall 2011

- Common final in Calculus 2 will be standardized and a rubric created. Both day and evening sections will participate.
- Common finals and rubrics will be developed for Math Analysis 2, Geometry in Art, and Technical Calculus.
- Data collected from academic year 2010-2011 will be evaluated and action plans developed (closing the loop for 2010-2011)

Spring 2012

- Common finals will be implemented in Math Analysis 2, Geometry in Art and Technical Calculus to assess goal II.4
- Beginning with Spring 2012, all Math courses will be assessed over a three year cycle. Each semester a faculty member will be responsible for all sections of one or two courses to assess goals #1, 2, and 8. Rubrics will be developed to assess student written work (exam problems and assignments), oral presentations, and surveys.
- An exit interview will be developed to assess goal #4
- Data will be archived from Senior Projects to assess goals #3 and 5
- The CS alumni survey will be modified to apply to Math and CS majors to assess goal #6, 7, and 9
- The Math/CS dept. will have a closing the loop assessment retreat in May 2012 to evaluate the data collected and develop an action plan for 2012-2013

Table 1: Assessment Plan for BS in Mathematics, BS in Mathematics and Computer Science

Goals (University)	**Supporting Program Objective / Outcome**	**Assessment Tools**	**Metrics / Indicators**	**Administration Timeline**	**Loop-Closing Timeline**
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	*Apply* knowledge of computing and mathematics appropriate to a problem. *(1)* *Display* a complete understanding of a computer language ((syntax, semantics and terminology), *develop* and *debug* complex code. *(10)*	Direct assessment of standard questions on student final exams. Direct assessment of student assignments	Level 3 on direct assessment rubric	Annual	Annual
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	*Apply* current and established techniques, skills, and tools necessary for applying mathematics and computing practice. *(8)*	Direct assessment of student work	Level 3 on direct assessment rubric	Annual	Annual
II. 1. Graduates will be literate and skilled in written and oral communication .	*Plan, create and integrate* oral and written communication of [mathematical and algorithmic ideas] effectively to audiences having a range of technical understanding. *(5)*	Direct assessment of Senior Project oral and written reports WPE	Level 3 on oral and written rubrics Pass WPE	Annual	Annual
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					

II. 3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	*Analyze* a problem, and *identify* and *define* the computing requirements and mathematical techniques appropriate to its solution. *(2)*	Direct assessment of standard questions on student final exams.	Level 3 on direct assessment rubric	Annual	Annual
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	*Design, implement,* and *evaluate* a mathematical model, computer-based system, process, component, or program to meet its specified requirements *(3)*	Direct assessment of Senior Project written reports	Level 3 on direct assessment rubric	Annual	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.					

III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.	*Recognize* the need for and an ability to engage in continuing professional development [and learn new technologies] and adapt to changes in the field. *(7)*	Alumni survey	Level 3 on survey rubric	Annual (two years after graduation)	Annual
III. 5. Graduates will have had experiences that promote a global and societal perspective.	*Analyze* the local and global impact of computing and models on individuals, organizations, and society. *(6)*	Alumni survey	Level 3 on survey rubric	Annual (two years after graduation)	Annual
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Function effectively on teams to accomplish a common goal, including performing leadership tasks (4)	Exit interview	Affirmative answers from 80% of interviewees.	Annual	Annual

IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	Function effectively on teams to accomplish a common goal, including performing leaderships tasks (4)	Exit interview	Affirmative answers from 80% of interviewees.	Annual	Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.					
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	*Secure* employment and/or *attend* graduate school in their field, drawing on their experiences, both within and outside the major to become responsible citizens and effective professionals. *(9)*	Alumni survey	Level 3 on survey rubric	Annual (two years after graduation)	Annual
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.					

BS in Chemical Biology

1. **Assessment Plan – Chemical Biology**
   See Table 1.

2. **Action Plan (Loop-Closing) for Chemical Biology**

   a. Report on 2010-2011 Academic Year

   University Goal: I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.

   Objective: Evaluate knowledge and expertise gained in their field by meeting outcomes on national field exam.
   Assessment: ETS National Exam
   Evaluation: 50% of graduates score at or above 75th percentile (two-year running average) Issue: More Data needed.
   Actions: Evaluation completed and running average not met. More data needed for new program.
   Responsibility: Tony Sky -Chairperson of the Natural Science Department with assistance from NS faculty.

   Evaluation: Alignment of curriculum with exit exam questions; identification of weak points.
   Issue: Need more data.
   Actions: No action taken at this time. Assessment due in 2012-13.
   Responsibility: Tony Sky – Chairperson of the Natural Sciences Department with assistance from NS faculty

   University Goal : I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.

   Objective: Students must individually and successfully use instrumentation available in the department.
   Assessment: Direct assessment of student assignments.
   Course objectives in BIO 2323 and BIO 4813.
   Evaluation: Faculty judgment based on assignment rubrics. 80% “confident” and “very confident” overall of their mastery of the course objectives.
   Issue: Data not received.
   Actions: Goal not met. No further action taken at this time.
   Responsibility: Instructor of BIO 2323 and BIO 4813

   University Goal : II. 1.Graduates will be literate and skilled in written and oral communication.

   Objective: Evaluation of written work including papers and laboratory reports.
   Assessment: Direct assessment of student assignments with a rubric.
   Evaluation: 80% “satisfactory” or “superior” performance based on rubrics.
   Issue: None
   Actions: Goal met at 86%. No further action taken at this time. Responsibility:
   Instructor of BIO 2323, BIO 1221, 1231, 4811 and CHM 3403

University Goal : II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.

Objective: Students will analyze and present a paper from the literature to a panel of faculty and students. Selected courses will include laboratory exercises in which students must apply knowledge to plan experiments and understand results with minimal assistance.
Assessment: Direct assessment of student assignments with a rubric.
Evaluation: 80% "satisfactory" or "superior" performance by the senior year. Issue:
No data received for BIO 4813
Actions: Goal met in BIO 1221. No further action taken at this time.
Responsibility: Instructor of BIO 1221 and 4813

University Goal : III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.

Objective: Students will evaluate their experiences. Assessment:
Course objectives and Exit Survey on paper
Evaluation: 80% "somewhat confident" and "very confident" overall of their mastery of the course objectives and
80% "satisfied" or "very satisfied" with their chemical biology preparation.
Issue: None
Actions: Goal met at 100%. No further action taken.
Responsibility: Tony Sky or Bill Madden and Instructors of program's courses

University Goal : IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.

Objective: On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: Faculty judgment based on rubrics. Issue:
None
Actions: No action taken
Responsibility: Instructor of BIO 1221 and 1231

University Goal : IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.

Objective: On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: Faculty judgment based on rubrics. Issue:
None
Actions: No action taken
Responsibility: Instructor of BIO 1221 and 1231

University Goal : IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.

Objective: On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: Faculty judgment based on rubrics. Issue:
None
Actions: No action taken
Responsibility: Instructor of BIO 1221 and 1231

University Goal : V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Objective: Students will recognize and develop knowledge in integrity and professional ethics.
Assessment: Course Objectives
Evaluation: 80% "confident" and "very confident" overall of their mastery of the course objectives.
Issue: Course objectives need to be redefined to meet this goal.
Actions: Goal met but questionable. No further action taken.
Responsibility: Instructor of PSC 3001

b. Report on Plan for 2011-2012 Academic Year

The following needs to be addressed in the upcoming academic year based on this year's assessment.

University Goal:

I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate on another's contribution to the team.
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Table 1: Assessment Plan for the Chemical Biology Program

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Evaluate knowledge and expertise gained in their field.	ETS National Exam	50% of graduates score at or above 75th percentile (two-year running average) Alignment of curriculum with exit exam questions; identification of weak points.	Annually, late spring.	Every two year starting 2010-11 At least once every four years starting 2012-13
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Students must individually and successfully use instrumentation available in the department. Course work in: Students must individually and successfully use instrumentation available in the department. BIO 2323, BIO 4813	Direct assessment of student assignments. Course objectives	Faculty judgment based on assignment rubrics. 80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual Annual	Annual Annual
II. 1. Graduates will be literate and skilled in written and oral communication.	Evaluation of written work including papers and laboratory reports. Students will write a paper as part of BIO 2323 and CHM 3403 (Biochemistry). Laboratory reports will be evaluated using rubric, including standards for organization, language, and visual communication (tables and graphs). BIO 1221, 1231, and 4811	Direct assessment of student assignments with rubric. Direct assessment of student assignments with rubric. WPE	80% "satisfactory" or "superior" performance. 80% "satisfactory" or "superior" performance. Pass the WPE	Annual Annual Annual	Annual Annual Continuous by University

	Additional Program Objectives/Outcomes	Assessments	Indicators	Administration Timeline	Loop-Closing Timeline
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					
II. 3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.					
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Students will analyze and present a paper from the literature to a panel of faculty and students as part of BIO 4813. Selected courses will include laboratory exercises in which students must apply knowledge to plan experiments and understand results with minimal assistance. BIO 1221	Direct assessment of student assignments with rubric. Direct assessment of student assignments with rubric.	80% "satisfactory" or "superior" performance by the senior year. 80% "satisfactory" or "superior" performance.	Annual Annual	Annual Annual

	Additional Program Objectives/Outcomes	**Assessments**	**Indicators**	**Administration Timeline**	**Loop-Closing Timeline**
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Students will evaluate their experiences.	Course objectives Chair evaluation – survey on paper	80% "confident" and "very confident" overall of their mastery of the course objectives. 80% "satisfied" or "very satisfied" with their chemical biology preparation.	Annual Annual	Annual Annual
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.					
III. 5. Graduates will have had experiences that promote a global and societal perspective.					

	Additional Program Objectives/Outcomes	Assessments	Indicators	Administration Timeline	Loop-Closing Timeline
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. BIO 1221 and 1231 Opportunities to develop leadership skills will be provided in extracurricular professional activities (such as Michigan Biology student section).	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. BIO 1221 and 1231	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. BIO 1221 and 1231	Instructor and team –self evaluation	Faculty judgment based on rubrics	Annual	Annual
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Students will recognize and develop knowledge in integrity and professional ethics. PSC 3001	Course objectives	80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual	Annual

BS in Chemistry

1. Assessment Plan - Chemistry

See Table 1.

2. Action Plan (Loop-Closing) for the Chemistry Program

a. Report on 2010-2011 Academic Year

University Goal: I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.

Objective: Evaluate knowledge and expertise gained in their field by meeting outcomes on national field exam.
Assessment: ETS National Exam
Evaluation: 60% of graduates score at or above 75th percentile (two-year running average) Issue: None
Actions: Evaluation completed and goal met.
Responsibility: Tony Sky -Chairperson of the Natural Sciences Department with assistance from NS faculty.

Objective: Evaluate knowledge and expertise gained in their field by meeting outcomes on national field exam.
Assessment: ETS National Exam
Evaluation: Alignment of curriculum with exit exam questions; identification of weak points. Issue: None
Actions: No action taken at this time. Evaluation will begin Fall 2011.
Responsibility: Tony Sky – Chairperson of the Natural Sciences Department with assistance from NS faculty

University Goal : I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.

Objective: Students must individually and successfully use instrumentation available in the department.
Assessment: Direct assessment of student assignments with rubric/checklist and Course objectives.
Evaluation: Faculty expertise based on rubrics. The designation of Qualified/Not Qualified will be given. 80% will receive a "Qualified" designation and 80% "confident" and "very confident" overall of their mastery of the course objectives.
Issue: None
Actions: Goal met at 100%. No further action taken.
Responsibility: Instructor of CHM 4632/1, CHM 4542 and CHM 3463

University Goal : II. 1.Graduates will be literate and skilled in written and oral communication.

Objective: Evaluation of written work including papers and laboratory reports.
Assessment: Direct assessment of student assignments with a rubric. Evaluation:
80% "satisfactory" or "superior" performance.
Issue: None
Actions: Goal met with an average of 94%. No further action taken.
Responsibility: Instructor of CHM 3452, CHM 3383, CHM 3623 and CHM 3403 and lab courses

University Goal : II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.

Objective: Students will analyze and present a paper from the chemical literature to a panel of faculty and students. Selected courses will include laboratory exercises in which students must apply knowledge to plan experiments and understand results with minimal assistance.
Assessment: Direct assessment of student assignments with a rubrics.
Evaluation: 80% "satisfactory" or "superior" performance by the senior year. Issue:
Not data reported for CHM 4723.
Actions: Goal met in CHM 3463 at 100%. No further action taken. Other course not offered.
Responsibility: Instructor of CHM 3463, 4643, 4632 and 4723

University Goal : III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.

Objective: Students will evaluate their experiences. Assessment:
Course objectives and Exit Survey
Evaluation: 80% "somewhat confident" and "very confident" overall of their mastery of the course objectives and
80% "satisfied" or "very satisfied" with their chemistry preparation.
Issue: None
Actions: Goal met. No further action taken.
Responsibility: Tony Sky or Bill Madden and Instructors of program's courses

University Goal : IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.

Objective: On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation Evaluation:
Faculty judgment based on rubrics.
Issue: Group work is a better definition with low enrollment in upper level courses.
Actions: No action taken.
Responsibility: Instructor of CHM 4632, CHM 4542 and CHM 3463

University Goal : IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate on another's contribution to the team.

Objective: On team exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation Evaluation:
Faculty judgment based on rubrics.
Issue: Group work is a better definition with low enrollment in upper level courses.
Actions: No action taken.

Responsibility: Instructor of CHM 4632, CHM 4542 and CHM 3463

University Goal : IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.

Objective: On team exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation Evaluation:
Faculty judgment based on rubrics.
Issue: Group work is a better definition with low enrollment in upper level courses.
Actions: No action taken.
Responsibility: Instructor of CHM 4632, CHM 4542 and CHM 3463

University Goal : V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Objective: Students will recognize and develop knowledge in integrity and professional ethics.
Assessment: Course Objectives
Evaluation: 80% "confident" and "very confident" overall of their mastery of the course objectives.
Issue: Course objectives need to be redefined to meet this goal.
Actions: Goal met but questionable. No further action taken.
Responsibility: Instructor of PSC 3001

b. Report on Plan for 2011-2012 Academic Year

The following needs to be addressed in the upcoming academic year based on this year's assessment.

University Goal:

I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate on another's contribution to the team.
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Table 1: Assessment Plan for the Chemistry Program

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Evaluate knowledge and expertise gained in their field.	ETS National Exam	60% of graduates score at or above 75th percentile (two-year running average) Alignment of curriculum with exit exam questions; identification of weak points	Annually, late spring.	Annual At least once every four years. Fall 2011.
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Students must individually and successfully use instrumentation and chemical literature available in the department. Includes analysis of unknown substances, student-synthesized materials, or natural samples. Course work in: CHM4632 – Instrumental Analysis CHM4542 – Physical Analytical Lab II CHM3463 – Advanced Synthesis	Direct assessment of student assignments with rubric. Course objectives	The designation of Qualified/Not Qualified will be given. 80% will receive a "Qualified" designation 80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual Annual	Annual Annual

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
II. 1. Graduates will be literate and skilled in written and oral communication.	Evaluation of written work including papers and laboratory reports.	Direct assessment of student assignments with rubric	80% "satisfactory" or "superior" performance.	Annual	Annual
	Students will write a paper as part of CHM3452 (Intermediate Inorganic Chemistry), CHM3383 (Environmental Chemistry), CHM3623 (Polymer Chemistry) and CHM 3403 (Biochemistry).	Direct assessment of student assignments with rubric	80% "satisfactory" or "superior" performance.	Annual	Annual
	Laboratory reports will be evaluated using rubric, including standards for organization, language, and visual communication (tables and graphs).	WPE	Pass the WPE	Annual	Continuous by University
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					
II. 3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.					

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Students will analyze and present a paper from the chemical literature to a panel of faculty and students as part of CHM4643 (Advanced Inorganic), and CHM4723 (Advanced Organic).	Direct assessment of student assignments with rubric	80% "satisfactory" or "superior" performance by the senior year.	Annual	Annual
	Selected courses will include laboratory exercises in which students must plan experiments and understand results with minimal assistance. Courses may include: CHM 4632 - Instrumental Analysis and/or CHM 3463 - Advanced Synthesis	Direct assessment of student assignments with rubric	80% "satisfactory" or "superior" performance.	Annual	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Students will evaluate their experiences.	Course objectives	80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual	Annual
		Chair evaluation –survey on paper	80% "satisfied" or "very satisfied" with their chemistry preparation.	Annual	Annual
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.					
III. 5. Graduates will have had experiences that promote a global and societal perspective.					
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. Courses may include: CHM4632 - Instrumental Analysis and/or CHM4542 - Physical Analytical Lab II CHM 3463 - Advanced Synthesis Opportunities to develop leadership skills will be provided in extracurricular professional activities (ACS Student Section).	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. Courses may include: CHM4632 - Instrumental Analysis and/or CHM4542 - Physical Analytical Lab II CHM 3463 - Advanced Synthesis	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. Courses may include: CHM4632 - Instrumental Analysis and/or CHM4542 - Physical Analytical Lab II CHM 3463 - Advanced Synthesis	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Students will recognize and develop knowledge in integrity and professional ethics. PSC 3001	Course objectives	80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual	Annual

BS in Environmental Chemistry

1. Assessment Plan – Environmental Chemistry

See Table 3.

2. Action Plan (Loop-Closing) for the Environmental Chemistry Program

a. Report on 2010-2011 Academic Year

University Goal: I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.

Objective: Evaluate knowledge and expertise gained in their field by meeting outcomes on national field exam.
Assessment: ETS National Exam
Evaluation: 60% of graduates score at or above 75th percentile (two-year running average) Issue: None
Actions: Evaluation completed and goal met.
Responsibility: Tony Sky -Chairperson of the Natural Sciences Department with assistance from NS faculty.

Objective: Evaluate knowledge and expertise gained in their field by meeting outcomes on national field exam.
Assessment: ETS National Exam
Evaluation: Alignment of curriculum with exit exam questions; identification of weak points. Issue: None
Actions: No action taken at this time. Evaluation will begin Fall 2011.
Responsibility: Tony Sky – Chairperson of the Natural Sciences Department with assistance from NS faculty

University Goal : I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.

Objective: Students must individually and successfully use instrumentation available in the department.
Assessment: Direct assessment of student assignments with rubric/checklist and Course objectives.
Evaluation: The designation of Qualified/Not Qualified will be given. 80% will receive a "Qualified" designation and 80% "confident" and "very confident" overall of their mastery of the course objectives.
Issue: None
Actions: Goal met at 100%. No further action taken.
Responsibility: Instructor of CHM 4632/1, CHM 4542 and CHM 3463

University Goal : II. 1.Graduates will be literate and skilled in written and oral communication.

Objective: Evaluation of written work including papers and laboratory reports.
Assessment: Direct assessment of student assignments with a rubric. Evaluation:
80% "satisfactory" or "superior" performance.
Issue: None
Actions: Goal met at 94%. No further action taken.

Responsibility: Instructor of CHM 3452, CHM 3383, and CHM 3403 and lab courses

University Goal : II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.

Objective: Students will analyze and present a paper from the chemical literature to a panel of faculty and students and may include laboratory exercises in which students must apply knowledge to plan experiments and understand results with minimal assistance.
Assessment: Direct assessment of student assignments with a rubric.
Evaluation: 80% "satisfactory" or "superior" performance by the senior year. Issue:
None
Actions: Goal met at 100%. No further action taken.
Responsibility: Instructor of CHM 4632 and 3463 and other selected courses.

University Goal : III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.

Objective: Students will evaluate their experiences.
Assessment: Course objectives and Exit Survey
Evaluation: 80% "somewhat confident" and "very confident" overall of their mastery of the course objectives and
80% "satisfied" or "very satisfied" with their environmental chemistry preparation.
Issue: None
Actions: Goal met. No further action taken.
Responsibility: Tony Sky or Bill Madden and Instructors of program's courses

University Goal : IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.

Objective: On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: Faculty judgment based on rubrics.
Issue: Group work is a better definition with low enrollment in upper level courses.
Actions: No action taken.
Responsibility: Instructor of CHM 4632, CHM 4542 and CHM 3463

University Goal : IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate on another's contribution to the team.

Objective: On team exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: Faculty judgment based on rubrics.
Issue: Group work is a better definition with low enrollment in upper level courses.
Actions: No action taken
Responsibility: Instructor of CHM 4632, CHM 4542 and CHM 3463

University Goal : IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.

Objective: On team exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: Faculty judgment based on rubrics.
Issue: Group work is a better definition with low enrollment in upper level courses.
Actions: No action taken
Responsibility: Instructor of CHM 4632, CHM 4542 and CHM 3463

University Goal : V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Objective: Students will recognize and develop knowledge in integrity and professional ethics.
Assessment: Course Objectives
Evaluation: 80% "confident" and "very confident" overall of their mastery of the course objectives.
Issue: Course objectives need to be redefined to meet this goal.
Actions: Goal met but questionable. No further action taken.
Responsibility: Instructor of PSC 3001

b. Report on Plan for 2011-2012 Academic Year

The following needs to be addressed in the upcoming academic year based on this year's assessment.

University Goal:

I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate on another's contribution to the team.
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Table 1: Assessment Plan for the Environmental Chemistry Program

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Evaluate knowledge and expertise gained in their field.	ETS National Exam	60% of graduates score at or above 75th percentile (two-year running average) Alignment of curriculum with exit exam questions; identification of weak points	Annually, late spring.	Annual At least once every four years. Fall 2011
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Students must individually and successfully use instrumentation and chemical literature available in the department. Includes analysis of unknown substances, student-synthesized materials, or natural samples. Course work in: CHM4632 – Instrumental Analysis CHM4542 – Physical Analytical Lab II CHM 3392 – Environmental Sampling CHM3463 – Advanced Synthesis	Direct assessment of student assignments with rubric. Course objectives	The designation of Qualified/Not Qualified will be given. 80% will receive a "Qualified" designation 80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual Annual	Annual Annual

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
II. 1. Graduates will be literate and skilled in written and oral communication.	Evaluation of written work including papers and laboratory reports. Students will write a paper as part of CHM3452 (Intermediate Inorganic Chemistry) and CHM3383 (Environmental Chemistry) Laboratory reports will be evaluated using rubric, including standards for organization, language, and visual communication (tables and graphs).	Direct assessment of student assignments with rubric Direct assessment of student assignments with rubric WPE	80% "satisfactory" or "superior" performance. 80% "satisfactory" or "superior" performance. Pass the WPE	Annual Annual Annual	Annual Annual Continuous by University
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					
II. 3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.					

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Students will analyze and present a paper from the chemical literature to a panel of faculty and students and may include laboratory exercises in which students must apply knowledge to plan experiments and understand results with minimal assistance. Courses may include: CHM 4632 - Instrumental Analysis and/or CHM 3463 - Advanced Synthesis	Direct assessment of student assignments with rubric	80% "satisfactory" or "superior" performance by the senior year.	Annual	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Students will evaluate their experiences.	Course objectives Chair evaluation – survey on paper	80% "confident" and "very confident" overall of their mastery of the course objectives. 80% "satisfied" or "very satisfied" with their chemistry preparation.	Annual Annual	Annual Annual
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.					
III. 5. Graduates will have had experiences that promote a global and societal perspective.					
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. Courses may include: CHM4632 - Instrumental Analysis and/or CHM4542 - Physical Analytical Lab II CHM 3463 - Advanced Synthesis Opportunities to develop leadership skills will be provided extracurricular professional activities (ACS Student Section).	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. Courses may include: CHM4632 - Instrumental Analysis and/or CHM4542 - Physical Analytical Lab II CHM 3463 - Advanced Synthesis	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. Courses may include: CHM4632 - Instrumental Analysis and/or CHM4542 - Physical Analytical Lab II CHM 3463 - Advanced Synthesis	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Students will recognize and develop knowledge in integrity and professional ethics. PSC 3001	Course objectives	80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual	Annual

BS in Molecular and Cell Biology

1. Assessment Plan - Molecular and Cell Biology

See Table 4.

2. Action Plan (Loop-Closing) for the Molecular and Cell Biology Program

a. Report on 2010-2011 Academic Year

University Goal:I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.

Objective: Evaluate knowledge and expertise gained in their field by meeting outcomes on national field exam.
Assessment: ETS National Exam
Evaluation: 50% of graduates score at or above 75th percentile (two-year running average) Issue: More Data needed.
Actions: Evaluation completed and running average not met. More data needed for new program.
Responsibility: Tony Sky -Chairperson of the Natural Science Department with assistance from NS faculty.

Evaluation: Alignment of curriculum with exit exam questions; identification of weak points.
Issue: Need more data.
Actions: No action taken at this time. Assessment due in 2012-13.
Responsibility: Tony Sky – Chairperson of the Natural Sciences Department with assistance from NS faculty

University Goal : I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.

Objective: Students must individually and successfully use instrumentation available in the department.
Assessment: Direct assessment of student assignments.
Course objectives in BIO 2323 and BIO 4813.
Evaluation: Faculty judgment based on assignment rubrics. 80% “confident” and “very confident” overall of their mastery of the course objectives.
Issue: Data not received.
Actions: Goal not met. No further action taken at this time.
Responsibility: Instructor of BIO 2323 and BIO 4813

University Goal : II. 1.Graduates will be literate and skilled in written and oral communication.

Objective: Evaluation of written work including papers and laboratory reports.
Assessment: Direct assessment of student assignments with a rubric.
Evaluation: 80% “satisfactory” or “superior” performance based on rubrics. Issue:
None
Actions: Goal met at 86%. No further action taken at this time. Responsibility:
Instructor of BIO 2323, BIO 1221, 1231, 4811 and CHM 3403

University Goal : II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.

Objective: Students will analyze and present a paper from the literature to a panel of faculty and students. Selected courses will include laboratory exercises in which students must apply knowledge to plan experiments and understand results with minimal assistance.
Assessment: Direct assessment of student assignments with a rubric.
Evaluation: 80% "satisfactory" or "superior" performance by the senior year. Issue:
No data received for BIO 4813
Actions: Goal met in BIO 1221. No further action taken at this time.
Responsibility: Instructor of BIO 1221 and 4813

University Goal : III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.

Objective: Students will evaluate their experiences. Assessment:
Course objectives and Exit Survey on paper
Evaluation: 80% "somewhat confident" and "very confident" overall of their mastery of the course objectives and
80% "satisfied" or "very satisfied" with their chemical biology preparation.
Issue: None
Actions: Goal met at 100%. No further action taken.
Responsibility: Tony Sky or Bill Madden and Instructors of program's courses

University Goal : IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.

Objective: On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: Faculty judgment based on rubrics. Issue:
None
Actions: No action taken
Responsibility: Instructor of BIO 1221 and 1231

University Goal : IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.

Objective: On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: Faculty judgment based on rubrics. Issue:
None
Actions: No action taken
Responsibility: Instructor of BIO 1221 and 1231

University Goal : IV. 3. Graduates will have had team experiences in which they practice making

decisions, reaching consensus, and resolving conflicts.

Objective: On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: Faculty judgment based on rubrics. Issue:
None
Actions: No action taken
Responsibility: Instructor of BIO 1221 and 1231

University Goal : V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Objective: Students will recognize and develop knowledge in integrity and professional ethics.
Assessment: Course Objectives
Evaluation: 80% "confident" and "very confident" overall of their mastery of the course objectives.
Issue: Course objectives need to be redefined to meet this goal.
Actions: Goal met but questionable. No further action taken.
Responsibility: Instructor of PSC 3001

b. Report on Plan for 2011-2012 Academic Year

The following needs to be addressed in the upcoming academic year based on this year's assessment.

University Goal:

I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate on another's contribution to the team.
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Table 1: Assessment Plan for the Molecular and Cell Biology Program

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Evaluate knowledge and expertise gained in their field.	ETS National Exam	50% of graduates score at or above 75th percentile (two-year running average) Alignment of curriculum with exit exam questions; identification of weak points.	Annually, late spring.	Annual At least once every four years starting in Fall 2013.
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Students must individually and successfully use instrumentation available in the department. Course work in: Students must individually and successfully use instrumentation available in the department. BIO 2323, BIO 4813	Direct assessment of student assignments with rubric. Course objectives	Faculty judgment based on rubrics. 80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual Annual	Annual Annual
II. 1. Graduates will be literate and skilled in written and oral communication.	Evaluation of written work including papers and laboratory reports. Students will write a paper as part of BIO 2323. Laboratory reports will be evaluated using rubric, including standards for organization, language, and visual communication (tables and graphs). BIO 1221, 1231, and 4811	Direct assessment of student assignments with rubric Direct assessment of student assignments with rubric WPE	80% "satisfactory" or "superior" performance. 80% "satisfactory" or "superior" performance. Pass the WPE	Annual Annual Annual	Annual Annual Continuous by University

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					
II. 3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.					
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Students will analyze and present a paper from the literature to a panel of faculty and students as part of BIO 4813. Selected courses will include laboratory exercises in which students must plan experiments and understand results with minimal assistance. BIO 1221 and BIO 4813	Direct assessment of student assignments with rubric Direct assessment of student assignments with rubric	80% "satisfactory" or "superior" performance by the senior year. 80% "satisfactory" or "superior" performance.	Annual Annual	Annual Annual

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Students will evaluate their experiences.	Course objectives	80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual	Annual
		Chair evaluation – survey on paper	80% "satisfied" or "very satisfied" with their preparation.	Annual	Annual
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.					
III. 5. Graduates will have had experiences that promote a global and societal perspective.					

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop-Closing Timeline
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. BIO 1221 and 1231 Opportunities to develop leadership skills will be provided in extracurricular professional activities (such as Michigan Biology student section).	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. BIO 1221 and 1231	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	On team laboratory exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork. BIO 1221 and 1231	Instructor and team –self evaluation	Faculty judgment based on rubrics.	Annual	Annual
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Students will recognize and develop knowledge in integrity and professional ethics. PSC 3001	Course objectives	80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual	Annual

BS in Physics

1. Assessment Plan - Physics

See Table 5.

2. Action Plan (Loop-Closing) for Physics

a. Report on 2010-2011 Academic Year

University Goal:I. 1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.

Objective: Evaluate knowledge and expertise gained in their field by meeting outcomes on national field exam.
Assessment: ETS National Exam
Evaluation: 60% of graduates score at or above 75th percentile (three-year running average) Issue: None
Actions: Evaluation completed and goal met.
Responsibility: Tony Sky -Chairperson of the Natural Sciences Department with assistance from NS faculty.

Objective: Evaluate knowledge and expertise gained in their field by meeting outcomes on national field exam.
Assessment: ETS National Exam
Evaluation: Alignment of curriculum with exit exam questions; identification of weak points. Issue: None
Actions: No action taken at this time. Evaluation will begin Fall 2011.
Responsibility: Tony Sky – Chairperson of the Natural Sciences Department with assistance from NS faculty

University Goal : I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.

Objective: Students must individually and successfully use instrumentation available in the department.
Assessment: Direct assessment of student assignments with rubric/checklist.
Evaluation: Faculty judgment based on rubrics. The designation of Qualified/Not Qualified will be given. 80% will receive a "Qualified" designation.
Issue: Data not reported.
Actions: No further action taken at this time.
Responsibility: Instructor of PHY 3661 and PHY 4781

University Goal : II. 1.Graduates will be literate and skilled in written and oral communication.

Objective: Evaluation of written work including papers and laboratory reports.
Assessment: Direct assessment of student assignments with a rubric.
Evaluation: 80% of the students will earn a B+ or better for the presentation of **written reports** for each course. 80% of the students will earn a B+ or better for presentations of **oral reports** for each course
Issue: None
Actions: Goal met. No further action taken at this time.
Responsibility: Instructor of PHY4912, PHY4922, PHY4843 and PHY 3653

University Goal : II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.

Objective: All Physics Lab reports in the PHY3661 and PHY4781 courses will require an analysis section where the student are expected to due a thorough analysis includes data analysis.
Assessment: Direct assessment of student assignments with a rubric.
Evaluation: Give a separate grade for the analysis. Rubrics, based on NIST standards, will be used. 80% of the lab reports will show a B+ or better on the analysis.
Issue: No data reported.
Actions: No further action taken at this time. Responsibility:
Instructor of PHY 3661 and 4781

Objective: The PHY3661 and PHY4781 courses will include laboratory exercises for which no instructions will be provided. Students must plan experiments and understand results.
Assessment: Direct assessment of student assignments with a rubric.
Evaluation: 80% of the students will earn a B+ or better for the lab reports where no instructions will be given.
Issue: No data reported
Actions: No further action taken at this time.
Responsibility: Instructor of PHY 3661 and 4781

University Goal : III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.

Objective: Students will evaluate their experiences.
Assessment: Course objectives and Exit Survey
Evaluation: 80% “somewhat confident” and “very confident” overall of their mastery of the course objectives and 80% “satisfied” or “very satisfied” with their physics preparation.
Issue: None
Actions: Goal met. No further action taken at this time.
Responsibility: Tony Sky or Bill Madden and Instructors of program’s courses

University Goal : IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.

Objective: Identify team member roles in team exercises. Some sections of PHY2413/2423 will implement team concepts into course work. Identify team member roles in team exercises.
Assessment: Instructor and team –self evaluation
Evaluation: Team process check survey will be used that identify the student roles in the team project. 80% of responses with always satisfied or frequently satisfied to the team process survey which will also include peer evaluation to assess team member contributions.
Issue: No data reported.
Actions: No action taken.
Responsibility: Instructor of PHY 2413 and 2423

University Goal : IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate on another's contribution to the team.

Objective: On team exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: 80% of responses with always satisfied or frequently satisfied to the team process survey check.
Issue: No data reported.
Actions: No action taken.
Responsibility: Instructor of PHY 2413 and 2423

University Goal : IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.

Objective: On team exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.
Assessment: Instructor and team –self evaluation
Evaluation: 80% of responses with always satisfied or frequently satisfied to the team process survey check.
Issue: No data reported.
Actions: No action taken.
Responsibility: Instructor of PHY 2413 and 2423

University Goal : V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Objective: Students will recognize and develop knowledge in integrity and professional ethics.
Assessment: Course Objectives
Evaluation: 80% "confident" and "very confident" overall of their mastery of the course objectives.
Issue: Course objectives need to be redefined to meet this goal.
Actions: Goal met but questionable. No further action taken.
Responsibility: Instructor of PSC 3001

b. Report on Plan for 2011-2012 Academic Year

The following needs to be addressed in the upcoming academic year based on this year's assessment.

University Goal:

II.1.Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate on another's contribution to the team.
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics

Table 1: Assessment Plan for the Physics Program

University Undergraduate Goals	**Supporting Program Objective/Outcome**	**Assessment Tools**	**Metrics/Indicators**	**Administration Timeline**	**Loop- Closing Timeline**
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Evaluate knowledge and expertise gained in their field.	ETS National Exam	60% of graduates score at or above 75th percentile (three-year running average) Alignment of curriculum with exit exam questions; identification of weak points.	Annually, late spring.	Annual At least once every four years. Fall 2011
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Students must individually and successfully use instrumentation available in the department. Take the Physics Lab courses: - PHY3661 - Contemporary Physics Lab - PHY4781 – Optics, Lasers & Micro Lab Twice a semester , a peer assessment will be performed (with Instructor input). The subject of the assessment will be the use of instrumentation in these labs.	Direct assessment of student assignments with rubric/checklist.	Faculty judgment-Rubric The designation of Qualified/Not Qualified will be given. 80% will receive a "Qualified" designation	Every semester	Annual

University Undergraduate Goals	**Supporting Program Objective/Outcome**	**Assessment Tools**	**Metrics/Indicators**	**Administration Timeline**	**Loop- Closing Timeline**
II. 1. Graduates will be literate and skilled in written and oral communication.	Evaluation of written work including papers and laboratory reports. The student who will take the Physics Project courses PHY4912 & PHY4922 will write reports and make oral presentations; evaluation by rubric. Physics 3653 will give a book or literature report. Also, PHY 4843.	Direct assessment of student assignments with rubric WPE	80% of the students will earn a B+ or better for the presentation of written reports for each course 80% of the students will earn a B+ or better for presentations of oral reports for each course. Pass the WPE	Annual Annual Annual	Annual Annual Continuous by University
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					
II. 3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.					

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop- Closing Timeline
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	All Physics lab reports in the PHY3661 and PHY4781 courses will require an analysis section where the student are expected to do a thorough analysis includes data analysis	Direct assessment of student assignments with rubric	Give a separate grade for the analysis. Rubrics, based on NIST standards, will be used. 80% of the Lab reports will show a B+ or better on the analysis.	Annual	Annual
	The PHY3661 and PHY4781 courses will include laboratory exercises for which no instructions will be provided. Students must apply knowledge to plan experiments and understand results.	Direct assessment of student assignments with rubric	80% of the students will earn a B+ or better for the lab reports where no instructions will be given.	Annual	Annual
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Students will evaluate their experiences.	Course objectives	80% "somewhat confident" and "very confident" overall of their mastery of the course objectives.	Annual	Annual
		Chair evaluation – survey on paper	80% "satisfied" or "very satisfied" with their Physics preparation.	Annual	Annual
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					

University Undergraduate Goals	**Supporting Program Objective/Outcome**	**Assessment Tools**	**Metrics/Indicators**	**Administration Timeline**	**Loop- Closing Timeline**
III.3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III.4. Graduates will have been made aware of the importance of lifelong learning.					
III.5. Graduates will have had experiences that promote a global and societal perspective.					
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Identify team member roles in team exercises. Some sections of PHY2413/2423 will implement team concepts into course work. Opportunities to develop leadership skills will be provided in extracurricular activities in student organizations(participation in SPS).	Instructor and team –self evaluation	Team process check survey will be used that identify the student roles in the team project. 80% of responses with always satisfied or frequently satisfied to the team process survey which will also include pier evaluation to assess team member contributions.	Every semester	Annual

University Undergraduate Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/Indicators	Administration Timeline	Loop- Closing Timeline
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	On team exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.	Instructor and team –self evaluation	80% of responses with always satisfied or frequently satisfied to the team process survey check.	Annual	Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	On team exercises, require recording and reporting each team member's contribution; evaluation includes criteria for effective teamwork.	Instructor and team –self evaluation	80% of responses with always satisfied or frequently satisfied to the team process survey check.	Annual	Annual
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Students will recognize and develop knowledge in integrity and professional ethics. PSC 3001	Course objectives	80% "confident" and "very confident" overall of their mastery of the course objectives.	Annual	Annual

College of Engineering

BS in Architectural Engineering

Not Submitted

BS in Biomedical Engineering

1. **Assessment Plan**

   See Table 1 below.

2. **Action Plan (Loop-Closing)**

   a. Report on 2010-2011 Academic Year

During the BME program loop-closing meeting for the 2010-2011 academic year, the following outcomes were reviewed:

Outcome c: *Design an engineering component, system or process to meet desired project needs*

Assessment: Faculty evaluation, indirect and direct assessment of student senior/capstone projects, and alumni survey.

Evaluation: Assessment results indicate a 3.8 for the level of achievement on a 5.0 scale.

Issue: One student team did not reach the target level of attainment in their senior design project partially because of insufficient coordination among team members.

Actions: The faculty will meet in August 2011 before the semester start and discuss the target 'level attained' as well as process improvements to ensure that the students receive adequate support and resources to reach the target 'level attained' for program outcome (c). The senior capstone design sequence will be assessed every year.

Responsibility: E. Meyer

Outcome k: *an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice*

Assessment: Faculty evaluation of student senior/capstone projects, indirect and direct assessment of selected courses, and alumni survey.

Evaluation: Assessment results indicate a 3.8 for the level of achievement on a 5.0 scale.

Issue: The alumni survey indicates the need to strengthen the students' ability to use the techniques, skills, and modern engineering tools.

Actions: The faculty will introduce two biomedical engineering software packages: Mimics and COMSOL (MEMS, AC/DC, Structural, RF modules). These software packages are included on all biomedical engineering students' laptops starting fall2011. Students will be using these tools in the following classes: BME1201 Computer Graphics Lab, BME3301 Biomechanics Lab, BME3101 Bioinstrumentation Lab, BME4013 & BME4022 BME Projects 1 & 2, BME4103 Medical Imaging, and BME4203 & BME4201 Intro to MEMS & Lab. The impact of the implemented changes on the students' level attained for program outcome (k) will be assessed every year in the BME Project sequence, as a minimum. During the coming academic year 2011-2012, all listed courses (lectures & laboratories) will be assessed.

Responsibility: J. Hassan, Y. Li, E. Meyer, A. Stefan

Outcome l: *Understand biology and physiology; apply advanced math, science, and engineering to solve problems at the interface of engineering and biology*

Assessment: Indirect and direct assessment of selected courses, and alumni survey.

Evaluation: Assessment results indicate a 3.8 for the level of achievement on a 5.0 scale.

Issue: Some students did not completely understand the concepts or master the skills needed to answer the questions used in the direct assessment of selected courses.

Actions: The faculty coordinator for will review and revise the course content of BME 4313 as well as the pre-requisite course BME3303 & BME3301 Biomechanics & Lab. In August 2011, before the semester starts, the faculty will be informed which specific actions will be implemented. The availability of COMSOL (MEMS component) on all Biomedical engineering students' laptops will enable the faculty in BME4203 to cover program outcome (l) for students to reach and demonstrate that they have attained the knowledge at L3.

Responsibility: Y. Li, E. Meyer

Outcome m: *the ability to make measurements on and interpret data from living systems, addressing the problems associated with the interaction between living and non-living materials and systems.*

Assessment: Indirect and direct assessment of selected courses, and alumni survey.

Evaluation: Assessment results indicate a 3.8 for the level of achievement on a 5.0 scale.

Issue: In one course (BME 3213 Biomaterials) the students were for the first time introduced to the concept of interaction between living and non-living system from an engineering aspect, and many of them did not reach the level of attainment on the learning objectives mapping this outcome.

Actions: An extra lecture session will be added when the course is offered again to help students gain a deeper understanding of the inflammation and wound healing process as well as to biocompatibility of materials.

Responsibility: Y. Li

The remaining programs outcomes were reviewed in accordance with the BME program assessment plan and no corrective action is necessary based on evaluation of assessment results.

During the Annual University Assessment Day (3rd Friday in September 2011) the faculty will finalize the format for summary reports for direct assessment in lectures and laboratories. Furthermore, the faculty will reevaluate the use of measuring performance based on a of 5-point scale.

At the Life Science Group Fall 2011 Advisory Board Meeting the annual assessment report will be discussed. Furthermore, the board will discuss strategies for capturing suggested revisions to the Program Educational Objectives from the employers and alumni's. A key question is: can the current AB members serve as proxy for employer?

b. Report on Plan for 2011-2012 Academic Year

All program outcomes will be evaluated in accordance with the BME program assessment plan shown in Table 1. In addition, the corrective actions on outcomes *c, k, l* and *m* will be evaluated.

During the Annual University Assessment Day (3rd Friday in September 2011) the faculty will finalize the format for summary reports for direct assessment in lectures and laboratories. Furthermore, the faculty will reevaluate the use of measuring performance based on a of 5-point scale.

At the Life Science Group Fall 2011 Advisory Board Meeting the annual assessment report will be discussed. Furthermore, the board will discuss strategies for capturing suggested revisions to the Program Educational Objectives from the employers and alumni's. A key question is: can the current AB members serve as proxy for employer?

Yawen Li as the member of the university assessment committee and the program assessment coordinator will help all faculty to perform a proper assessment process. She will also manage the data provided by different instructors, analyze them and present the summary and analysis of the results to the department.

Finally, the Biomedical Engineering Program Assessment plan will be modified so the Program Learning Outcomes are mapped to the newly adopted University Learning Outcomes

Table 1: Biomedical Engineering Program Assessment Plan

Goals (University)	Supporting Program Objective/Outcome*	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	*a. Math, science, engn.* *b. Design and conduct experiments* *c. Design* *e. Solve engn. problems* *l. Solve engn problems at the interface of engn and biology* *m. Exp. (interaction between living and non-living materials/systems)*	Direct assessment of student assignments. Faculty evaluation of Sr. Projects Course Objectives Alumni Survey	4.0 4.0 3.9 4.0	Every semester. Every semester Every semester Every 3 years from 2011	Annual Annual Annual
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	*k. Techniques and modern engn. tools.*	Direct assessment of student assignments. Faculty evaluation of Sr. Projects Course Objectives Alumni Survey	4.0 4.0 4.0 3.5	Every semester Spring semester Every semester Every 3 years from 2011	Annual Annual Annual
II. 1. Graduates will be literate and skilled in written and oral communication.	*g. Communication*	Faculty evaluation of senior project presentations. Direct assessment of student assignments. Course Objectives WPE	4.0 4.3 4.0 Pass the WPE	Spring semester Every semester Every semester	Annual Annual Annual Continuous by University

Goals (University)	Supporting Program Objective/Outcome*	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.	*h. Global, economic, environmental and social* *j. Contemporary issues*	Exit Interviews Direct Assessment of student assignments Course Objectives Alumni Survey	4.0 4.0 4.0 4.0	At graduation Every semester Every semester Every 3 years from 2011	Annual Annual Annual When needed
II. 3. Graduates will be aware of the foundations and development of American society.		LTU humanities core curriculum			Continuous by College of Arts and Sciences
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	*a. Math, science, engn.* *b. Design and conduct experiments* *e. Solve engn. problems* *l. Solve engn problems at the interface of engn and biology* *m. Exp. (interaction between living and non-living materials/systems)*	Direct assessment of student assignments. Faculty evaluation of Sr. Projects Course Objectives Alumni Survey	3.75-4.20 4.0 3.75-4.2 4.0	Every Semester Every Semester Every Semester Every 3 years from 2011	Annual Annual Annual
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	*e. Solve engn. problems* *l. Solve engn problems at the interface of engn and biology*	Direct assessment of student assignments. Faculty evaluation of Sr. Projects Course Objectives Alumni Survey	3.75-4.2 4 3.5-4.0 4.0	Every semester. Every semester Every semester	Annual Annual Annual

Goals (University)	Supporting Program Objective/Outcome*	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	*f. Professional and ethics*	Direct assessment of student assignments. Exit Interviews Course Objectives Alumni Survey	4.0 5.0 4.0 4.0	Every semester. On graduation Every semester Every 3 years from 2011	Annual
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.	*a. Math, science, engn.* *e. Solve engn. problems* *l. Solve engn problems at the interface of engn and biology*	Direct assessment of student assignments. Evaluation of Sr. Projects Course Objectives Alumni Survey	3.75-4.2 4.0 3.5-4.0 4.0	Every semester Every semester Every semester Every semester	Annual Annual

Goals (University)	Supporting Program Objective/Outcome*	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
III. 4. Graduates will have been made aware of the importance of lifelong learning.	*i. Life-long learning*	Advisory Board Interview	5.0	Spring	
		Direct assessment of student assignments.	4.0	Every semester	Annual
		Evaluation of Sr. Projects	4.0	Every semester	Annual
		Course Objectives	4.0	Every semester	
		Alumni Survey	4.0	Every 3 years from 2011	
III. 5. Graduates will have had experiences that promote a global and societal perspective.	*h. Global, economic, environmental and social*	Exit Interview	4.0	On graduation	
		Direct assessment of student assignments.	Level 3	Every semester	Annual
		Course Objectives	4.0	Every semester	
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	*d.Teams*	Faculty evaluation in senior design.	3.0	Spring Semester	Annual
		Course Objectives	4.0	Every Semester	
		Direct assessment of student assignments	4.5	Spring Semester	Annual
		Alumni Survey	4.0	Every 3 years from 2011	

Goals (University)	Supporting Program Objective/Outcome*	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	*d.Teams*	Faculty evaluation in senior design. Course Objectives Direct assessment of student assignments Alumni Survey	3.0 4.0 4.5 4.0	Spring Semester Every Semester Spring Semester Every 3 years from 2011	Annual Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	*d. Teams*	Faculty evaluation in senior design. Course Objectives Direct assessment of student assignments Alumni Survey	3.0 4.0 4.5 4.0	Spring Semester Every Semester Spring Semester Every 3 years from 2011	Annual Annual
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					

Goals (University)	Supporting Program Objective/Outcome*	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	*f. Professional and ethics*	Direct assessment of student assignments. Exit Interviews Course Objectives Alumni Survey	4.0 5.0 4.0 4.0	Every semester. On graduation Every semester Every 3 years form 2011	Annual

*Program Objectives/Outcomes

a) an ability to apply knowledge of mathematics, science, and engineering
b) an ability to design and conduct experiments, as well as to analyze and interpret data
c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d) an ability to function on multidisciplinary teams
e) an ability to identify, formulate, and solve engineering problems
f) an understanding of professional and ethical responsibility
g) an ability to communicate effectively
h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
i) a recognition of the need for, and an ability to engage in life-long learning
j) a knowledge of contemporary issues
k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
l) an understanding of biology and physiology, and the capability to apply advanced mathematics (including differential equations and statistics), science, and engineering to solve the problems at the interface of engineering and biology;
m) the ability to make measurements on and interpret data from living systems, addressing the problems associated with the interaction between living and non-living materials and systems.

BS in Civil Engineering

1. Assessment Plan
See Table 1 below

2. Action Plan (Loop-Closing)
a. Report on 2010-2011 Academic Year
During the close-the-loop meeting for the 2010-2011 academic year, the Civil Engineering Department (Department) reviewed the following outcomes:

#10 Sustainability
Assessment: Direct assessment of student assignments, labs and tests
Evaluation: Assessment results indicate that the appropriate level of achievement was not attained
Issue: There were no assignments or test questions that specifically addressed sustainability concepts.
Actions: faculty determined that in the short term sustainability was best addressed in the capstone.
Responsibility: L. Mata

#9 Design
Assessment: Direct assessment of student capstone deliverables and student survey responses *Evaluation*: Assessment results indicate that the appropriate level of achievement may not have been attained by a sufficient number of the students
Issue: The various subdiscipline requirements in the capstone were not clearly set forth by faculty; grading rubrics were not provided early enough to properly generate the deliverables *Actions*: Faculty determined that the design subdisciplines should generate a general scope memorandum that is available to students early in the first term; all rubrics would be posted early in the term.
Responsibility: L. Mata/all faculty

#16 Communication
Assessment: Direct assessment of student capstone deliverables, student survey responses *Evaluation*: Assessment results indicate that the appropriate level of achievement may not have been attained by a sufficient number of the students.
Issue: The technical reports had become unfocused and overly long.
Actions: Faculty determined that the technical reports should be better tailored to the particular subdiscipline a general scope memorandum should be available to students early in the first term. Scope was drafted by faculty and distributed in September of 2011.
Responsibility: L. Mata/all faculty

The remaining programs outcomes were reviewed in accordance with the Civil Engineering assessment plan and no corrective action is necessary based on evaluation of assessment results.

b. Report on Plan for 2011-2012 Academic Year
All program outcomes will be evaluated in accordance with the department assessment plan shown in Table 1. In addition, the corrective actions on outcomes #9, #10, and #16 will be evaluated.

The FE Exam will be reviewed in 2012 in accordance with the normal two-year cycle and results will be discussed at the close the loop meeting.

Finally, the civil engineering outcomes will be mapped to the new University undergraduate learning outcomes for the 2011-12 Annual Report.

Table 1: Assessment Plan for the Department of Civil Engineering

University Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Outcome #13 Project Management	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
		Fundamentals of Engineering Exam	Above national average for Carnegie peer institutions	Every semester	Every two years
	Outcome #14 Breadth in CE Areas	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
		Fundamentals of Engineering Exam	Above national average for Carnegie peer institutions	Every semester	Every two years
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Outcome #15 Technical Specialization	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
		Advisory Board evaluation of senior projects	Rank #4 on technical presentation rubric	Spring semester	Annual
II. 1. Graduates will be literate and skilled in written and oral communication.	Outcome #16 Communication	Advisory Board and faculty evaluation of capstone poster and project presentations	Rank #4 on presentation, poster, and writing on direct assessment rubrics	Spring semester	Annual
		WPE	Pass the WPE	Every semester	Continuous by University

University Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.	Outcome #3 Humanities	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Fall semester	Annual
II. 3. Graduates will be aware of the foundations and development of American society.	Outcome #4 Social Sciences	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Fall semester	Annual
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	Outcome #1 Mathematics	Direct assessment of student assignments Fundamentals of Engineering Exam	Rank #4 on direct assessment rubric Above national average for Carnegie peer institutions	Every semester Every semester	Annual Every two years
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.	Outcome #8 Problem Recognition and Solving	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual

University Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.	Outcome #24 Professional and Ethical Responsibility	Direct assessment of student assignments Fundamentals of Engineering Exam	Rank #4 on direct assessment rubric Above national average for Carnegie peer institutions	Every semester Every semester	Annual Every two years
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.	Outcome #19 Globalization	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.	Outcome #8 Problem Recognition and Solving Outcome #12 Risk and Uncertainty	Direct assessment of student assignments Direct assessment of student assignments (CE and MCS)	Rank #4 on direct assessment rubric	Every semester	Annual
III. 4. Graduates will have been made aware of the importance of lifelong learning.	Outcome #23 Lifelong Learning	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual

University Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
III. 5. Graduates will have had experiences that promote a global and societal perspective.	Outcome #19 Globalization	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Outcome #21 Teamwork	Peer evaluation rubric in capstone project Faculty and Professional rubric evaluation in capstone project	Rank #4 on direct assessment rubric Rank #4 on direct assessment rubric	Spring Semester Spring Semester	Annual Annual
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	Outcome #21 Teamwork	Peer evaluation rubric in capstone project Faculty and Professional rubric evaluation in capstone project	Rank #4 on direct assessment rubric Rank #4 on direct assessment rubric	Spring Semester Spring Semester	Annual Annual
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	Outcome #21 Teamwork	Peer evaluation rubric in capstone project Faculty and Professional rubric evaluation in capstone project	Rank #4 on direct assessment rubric Rank #4 on direct assessment rubric	Spring Semester Spring Semester	Annual Annual

University Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	Not supported	N/A	N/A	N/A	N/A
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Outcome #24 Professional and Ethical Responsibility	Direct assessment of student assignments Fundamentals of Engineering Exam	Rank #4 on direct assessment rubric Above national average for Carnegie peer institutions.	Every semester Every semester	Annual Every two years
No associated University goal	Outcome #2 Natural Sciences	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Annual	Every two years
No associated University goal	Outcome #5 Materials Science	Direct assessment of student assignments Fundamentals of Engineering Exam	Rank #4 on direct assessment rubric Above national average for Carnegie peer institutions.	Every semester Every semester	Annual Every two years

University Goals	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
No associated University goal	Outcome #6 Mechanics	Direct assessment of student assignments Fundamentals of Engineering Exam	Rank #4 on direct assessment rubric Above national average for Carnegie peer institutions.	Every semester Every semester	Annual Every two years
No associated University goal	Outcome #7 Experiments	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Annual	Every two years
No associated University goal	Outcome #9 Design	Direct assessment of student assignments Fundamentals of Engineering Exam	Rank #4 on direct assessment rubric Above national average for Carnegie peer institutions.	Every semester Every semester	Annual Every two years
No associated University goal	Outcome #10 Sustainability	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
No associated University goal	Outcome #11 Contemporary Issues and Historical Perspectives	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
No associated University goal	Outcome #17 Public Policy	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
No associated University goal	Outcome #18 Business and Public Administration	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
No associated University goal	Outcome #20 Leadership	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual
No associated University goal	Outcome #22 Attitudes	Direct assessment of student assignments	Rank #4 on direct assessment rubric	Every semester	Annual

BS in Engineering Technology

1. Assessment Plan

The 2010-2011 plan is presented as Table 1.

2. Action Plan (Loop-Closing) for the BSET Program

a. Report on 2010-2011 Academic Year

In 2010-2011, eight Courses Learning Objectives were assessed. The CLO's of each class are mapped to the Program Learning Outcomes (PLO's) a through k.

Two types of assessment forms were used, direct (by instructor) and indirect (by student).

Both types were meant to assess the same Course Learning Objectives to assure consistency of the assessment from both sides of the aisle, the students and the faculty.

Results of the assessment process has been discussed in the "closing the loop meeting" in the ET department on August 4, 2011.

Based on the results of assessment, the department concluded that the assessed courses met their objectives and the data proved consistency of the assessment results from both the direct and indirect methods of assessment. All program learning outcomes were discussed in this meeting based on the assessment results.

Based on the results of the assessment, the working session focused on the following three outcomes for closing the loop:

Outcome a: *An appropriate mastery of the knowledge, techniques, skills, and modern tools of their disciplines.*

Assessment: CLO's of TIE4115, MCS2323 and MCS2023 were lined up with these two PLO's. Direct and indirect assessment data were studied to assess Outcome a.

Evaluation: Although assessment results are satisfactory, it is noted that individual student Participation in teamwork needs to be improved

Action: Instructors will meet with each team to improve interactivity and equal involvement.

Responsibility: Ken Cook, Senior Project instructor, and Sabah Abro, statistical methods instructor and assessment coordinator.

Outcome b: A*bility to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology*

Assessment: TME4103 and TIE4115 assessment results from direct and indirect methods.
Evaluation: Students will benefit from exposure to new applications and the entrepreneurial mindset.

Action: Allocate class time to lectures on new applications and entrepreneurial mindset.

Responsibility: Ken Cook, Senior Project instructor, and Pat Shamamy, Engineering Materials instructor.

Outcome f: *An ability to identify, analyze and solve technical problems*

Assessment: TIE assessment results from direct and

indirect methods. Evaluation: Course needs to be

upgraded to expand contents.
Action: Department is upgrading the course to a junior level to meet program learning

outcome Responsibility: Pat Shamamy and Jerry Cuper.

A further discussion and evaluation process took place in the department about the mapping of the Course Learning Objectives to the Program Learning Outcomes leading to the University Goals.
This was on the university assessment day afternoon working session.

b. Report on Plan for 2011-2012 Academic Year

At the end of academic year closing the loop department meeting, it was decided that all BSET program course objectives will be assessed both directly and indirectly starting fall 2011.

Sabah Abro as the member of the university assessment committee and the department assessment coordinator will help all faculty to perform a proper assessment process.

Sabah will manage the data provided by different instructors, analyze them and present the summary and analysis of the results to the department.

The Engineering Technology Assessment plan will be modified so the Program Learning Outcomes will be mapped to the newly adopted University Learning Outcomes

Table 1: Engineering Technology Assessment Plan

Goals (University)	***Supporting Program Learning Outcomes**	**Assessment Tools**	**Metrics/Indicators**	**Admin Timeline**	**Loop/Close Timeline**
I. 1. Graduates will demonstrate knowledge and expertise in applying this knowledge , in their fields	A & C	Direct and Indirect Courses learning objectives	Means and std. deviations for quizzes and tests	Every Offering of the course	Every two years
1. 2. Graduates will demonstrate effective use of technology and the ability to apply is in their fields	B & D	Senior project demonstrable product	Assessment of effectiveness of product function	Every Offering of the course	Every two years
II. 1. Graduates will be literate and skilled written and oral communication	G	COM3000, Assignments, papers	Pass the Written Prof. Exam	Every Offering of the course	Every two years

Goals (University)	***Supporting Program Learning Outcomes**	**Assessment Tools**	**Metrics/Indicators**	**Admin Timeline**	**Loop/Close Timeline**
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities	I & J	Direct and Indirect Courses learning objectives	Assessment of course material	Every Offering of the course	Every two years
II. 3. Graduates will be aware of the foundations and development of American society	I	LTU core curriculum	Assessment of course material	Every Offering of the course	Every two years
II.4. Graduates will demonstrate competence in mathematics in the use of the scientific method and laboratory technique	B	Direct and Indirect Courses learning objectives	Quality of analysis of product development	Every Offering of the course	Every two years

Goals (University)	***Supporting Program Learning Outcomes**	**Assessment Tools**	**Metrics/Indicators**	**Admin Timeline**	**Loop/Close Timeline**
II.5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills constituent with the technological focus of the University.	C & F	Direct and Indirect Courses learning objectives	Assess Innovativeness of product	Every Offering of the course	Every two years
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsibility, decision making, confidence in approaching opportunities	I	Senior project demonstrable product	Advisory Board evaluation of product presentation and demonstration	Every Offering of the course	Every two years
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.	J	Direct and Indirect Courses learning objectives	Observed student behavior in classroom and campus settings	Every Offering of the course	Every two years
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.	F	Senior project demonstrable product	Assess student behavior in class and evaluate product plan of action	Every Offering of the course	Every two years

Goals (University)	***Supporting Program Learning Outcomes**	**Assessment Tools**	**Metrics/Indicators**	**Admin Timeline**	**Loop/Close Timeline**
III. 4. Graduates will have been made aware of the importance of lifelong learning.	H	Direct and Indirect Courses learning objectives	Feedback from alumni surveys	Every Offering of the course	Every two years
III. 5. Graduates will have had experiences that promote a global and societal perspective .	J	LTU core curriculum	Feedback from alumni surveys	Every Offering of the course	Every two years
IV. 1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	E	Senior project demonstrable product	Instructor and peer evaluation of student participation in team effort	Every Offering of the course	Every two years
IV. 2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as the team's product, and evaluate one another's contribution to the team.	E	Senior project demonstrable product	Instructor and peer evaluation of student participation in team effort	Every Offering of the course	Every two years

Goals (University)	***Supporting Program Learning Outcomes**	**Assessment Tools**	**Metrics/Indicators**	**Admin Timeline**	**Loop/Close Timeline**
IV. 3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	E	Direct and Indirect Courses learning objectives	Instructor and peer evaluation of student actions in team	Every Offering of the course	Every two years
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	I	Student exposed to many courses and classroom situations	Feedback from alumni surveys	Every Offering of the course	Every two years
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	I	Direct and Indirect Courses learning objectives	Observed student behavior with other students	Every Offering of the course	Every two years

Program Objectives/Outcomes

A an appropriate mastery of the knowledge, techniques, skills, and modern tools of their disciplines
B an ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology
C an ability to conduct, analyze, and interpret experiments, and apply experimental results to improve processes
D an ability to apply creativity in the design of systems, components, or processes appropriate to program educational objectives
E an ability to function effectively on teams
F an ability to identify, analyze and solve technical problems
G an ability to communicate effectively
H a recognition of the need for, and an ability to engage in lifelong learning
I an ability to understand professional, ethical and social responsibilities
J a respect for diversity and knowledge of contemporary professional, societal and global issues
K a commitment to quality, timeliness, and continuous improvement

BS in Mechanical Engineering

1. Assessment Plan

See Table below.

2. Action Plan (Loop-Closing)

a. Report on 2010-2011 Academic Year

Discussions on assessment conducted during the department meetings revealed weakness in the following goal:

I. 2) An ability to use modern techniques, skills, and tools of mechanical engineering.

Goal:	To increase the use of modern tools (software) in the program and to assess their effectiveness.
Assessment:	No formal collection of assessment results was completed. Data was gathered in some course sections.
Evaluation:	Closing the loop did not occur. Details of how to evaluate assessment results are being developed.
Actions:	Currently Matlab, Excel and Catia are being used in the ME curriculum. To increase the use of modern software, Abaqus is being considered for use in EME 4003. Once this software is introduced in the curriculum, a rubric will be developed to assess the ability of students to effectively use software that they have learned in the program.

Responsibility: Projects and Computers committee

In accordance with the ME program assessment plan (see plan below), the remaining program outcomes were not reviewed and no corrective action was taken.

b. Report on Plan for 2011-2012 Academic Year

- Administer standard annual assessment tools from established ABET reporting criteria assessment. In the past, the data collection schedule and closing the loop was somewhat non-formalized. Assistant chair established a semester by semester schedule so that the ABET assessment is appropriately distributed and formalized. Closing the loop on the collected data will occur at the conclusion of each academic year.

Map program learning goals to revisions in the university's undergraduate learning outcomes.

Table 1. Mechanical Engineering Assessment Plan

Goals (University)	ME ABET Outcomes	Assessment Tools	Indicators	Administration Timeline	Loop-Closing Timeline
I.1 Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	Outcome a,c,e	FE style questions on final exams in EME3003, EME3034, EME3043 Quiz on design technique in EGE1012, EME3011, EME4212, EME4222 Graded problems based on rubric in EGE2013, EME3013, EME4003, EGE3003, EME3024, EME4013	70% of students receive a score of 60% or higher 70% of students receive a score Of 50%, 70%, 80%, and 87%, respectively, or higher 50% of students receive a score of 70% or higher	Every Semester Every Semester Every Semester Every Semester	Every three semesters, beginning Spring 2013 Every three semesters, beginning Spring 2013
I. 2 Graduates will demonstrate effective use of technology and the ability to apply it in their fields.	Outcome k	Evaluation of coursework in EGE1012, EGE1102, EME2012, EME3033	In progress	Every Semester	Every three semesters, beginning Spring 2013
II. 1. Graduates will be literate and skilled in written and oral communication.	Outcome g	Writing rubric will be used in EME 3043, EME4013, EME 4412 Oral presentation Rubric will be used in EME 2011	In progress	Every Semester	Every three semesters, beginning Spring 2013

II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					
II.3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.	Outcome a,b	FE style questions on final exams in EME3003, EME3034, EME3043 Exam questions on laboratory technique in EME4412	70% of students receive a score of 60% or higher 70% of students receive a score of 60% or higher	Every Semester	Every three semesters, beginning Spring 2013

II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.					
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.					
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					

III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					
III. 4. Graduates will have been made aware of the importance of lifelong learning.	Outcome i	Alumni Survey Seminars (with exit survey) on contemporary engineering topics in EME4212, EME4222	TBD Required attendance and completion of survey	Once every year	Every two semesters, beginning Fall 2012
III. 5. Graduates will have had experiences that promote a global and societal perspective.					
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.	Outcome d	Peer evaluations of teamwork projects in EGE1012, EME4412, EME222	70% of students achieve a score of 68%, 78%, and 89%, respectively, or higher		Every three semesters, beginning Spring 2013

IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.	Outcome d	Peer evaluations of teamwork projects in EGE1012, EME4412, EME4222	70% of students achieve a score of 68%, 78%, and 89%, respectively, or higher		Every three semesters, beginning Spring 2013
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.	Outcome d	Peer evaluations of teamwork projects in EGE1012, EME4412, EME4222	70% of students achieve a score of 68%, 78%, and 89%, respectively, or higher	Every Semester	Every three semesters, beginning Spring 2013
V.1. Graduates will have had opportunities to learn the value of contributing to their community and to society.	Outcome h	Seminars (with exit survey) on contemporary engineering topics in EME4212, EME4222	Required attendance and completion of survey	Every Semester	Every three semesters, beginning Spring 2013
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.	Outcome i	Ethics quiz (T/F) in EGE1012, EME3011 and EME4222 Ethics quiz (multiple choice) in EGE1012 and EME4222	70% of students achieve a score of 70%, 80%, and 90%, respectively, or higher 50% and 70%, respectively, of students will achieve a score of 50% and 70%, respectively, or higher	Every Semester	Every three semesters, beginning Spring 2013

College of Management

BS in Business Management

1. **Assessment Plan for BSBM**

See table 2. below.

2. **Action Plan (Loop-Closing) for BSBM**

a. Report on 2010-2011 Academic Year

Outcome: Students will gain practical experience in a work place, learning the process, and applying theoretical tools and concepts taught in their program of study.

Assessment: Students were placed on Internships as part of the course MGT3053 and MGT 4053. The assessment was be done by the student supervisor using a rubric that has been developed for this purpose.

Evaluation: 85% of the students passed with a score of 90% or better, thereby exceeding the target set for this outcome.

Issue: Since the target was met there is no issue of concern. However, on polling the students and the student supervisors the following recommendations were compiled to improve the assessment activity:
1. Continue the Internships as the students find the experience very informative and useful.
2. The LTU supervisor should visit with the company supervisor to get their perspective.
3. Develop some joint-metrics with the company supervisor that can be added to the current set.

Actions: Follow through on the recommendations listed above.

Responsibility: The program director, Ms. Karen Evans, Esq. along with assistance by The MBA Director, Dr. Nadia Shuyato.

General comment: General comments: While not an outcome, the extent to which the student's learning objectives were met by the BSBM program was also tested by administering a graduating student survey. Of the many questions in the survey, one of them specifically asked the student to evaluate the extent to which program met the student's learning objectives. On a scale of 1 – 4 (higher is better), the average score was 4.00. While that is good, it also raises some eyebrows. We should note that the sample size was extremely small, 3. To get a meaningful feedback, we need to find ways to increase the number of students taking the graduating survey.

b. Report on Plan for 2011-2012 Academic Year

Since the target for the previous year was met, we can raise the bar to 85% of the students scoring 90% or better, from the existing 80%. Also, follow through on the recommendations are and incorporate any new outcomes or metrics into the 2011-2012 assessment plan. At the Annual assessment meeting of the College, the University Coordinator suggested reviewing and updating the outcomes of the program along with an assessment instrument for each outcome. This would

be done by appointing a committee to consider these suggestions.

The graduating student survey should be continued and monitored. Ways to increase the participation of the students in this survey should be explored and implemented.

Both these tasks will be the responsibility of the Program Director, Ms. Karen Evans, Esq. along with the assistance of the MBA program Director, Dr. Nadia Shuyato.

Table 1: Assessment Plan for the BSBM Program

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	(i) Students will gain practical experience in a work place, learning the process, and applying theoretical tools and concepts taught in their program of study.	(i) Internships as part of the course MGT3053 and MGT 4053. The assessment will be done by the student supervisor using a rubric that has been developed for this purpose .	(i) 80% of the students should score 90% or better.	(i) Once a year	(i) Annual
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.					
II. 1. Graduates will be literate and skilled in written and oral communication.					

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					
II. 3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.					
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.					

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.					
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
III. 4. Graduates will have been made aware of the importance of lifelong learning.					
III. 5. Graduates will have had experiences that promote a global and societal perspective.					
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.					
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.					

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.					
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.					

BS in Information Technology

1. **Assessment Plan for BSIT**

See table 1. below.

2. **Action Plan (Loop-Closing) for BSIT**

a. Report on 2010-2011 Academic Year

Outcome: Develop a broad business and real world perspective;

Outcome: Plan, design, and implement IT solutions that enhance business performance;

Outcome: Develop strong analytical and critical thinking skills;

Assessment: All three outcomes were assessed by using the single instrument, the ICCP exam. The exam was administered to 16 students during the 2010-11 academic year.

Evaluation: 7 students passed at the ACP level, giving us a 44% pass rate compared to a target of 80%. There seems to be a large gap between the target and the results achieved.

Issues:
1. Either we are enrolling very poor students in the program or the program coverage of topics/concepts has a large variance from what is expected from the way the ICCP exam is designed. A complete review of the BSIT program is required to make sure that we are teaching what is tested in the ICCP exam.

2. During the annual meeting with all the program directors and the University Assessment Coordinator, the Coordinator recommended developing separate instruments for each of the three outcomes. At a minimum, questions in the ICCP exam should be grouped into three sets, each set addressing one of the outcomes.

Action: Follow through on conducting the review of the BSIT program and using the ICCP exam as the instrument to evaluate the three outcomes. If relevant, develop new outcomes and the instruments to evaluate the same.

Responsibility: The program director, Ms. Karen Evans, Esq., with the help of a discipline expert like Dr. Vernon Hoffner and/or Dr. Richard Bush.

Outcome: Develop interpersonal communication and team skills.

Assessment: This outcome was incorrectly combined with outcome (iii) in the plan and hence was not assessed.

Evaluation: Since the outcome was not assessed, there are no results to evaluate.
Issues: The main issue here is that there is no instrument to assess this outcome.
Action: To develop an appropriate instrument to assess the communication and team work skills of the student.

Responsibility: The program director, Ms. Karen Evans, Esq., with the help of a discipline expert like Dr. Vernon Hoffner and/or Dr. Richard Bush.

General comments: While not an outcome, the extent to which the student's learning objectives were met by the BSIT program was also tested by administering a graduating student survey. Of the many questions in the survey, one of them specifically asked the student to evaluate the extent to which program met the student's learning objectives. On a scale of 1 – 4 (higher is better), the average score was 4.00. While that is good, it also raises some eyebrows. We should note that the sample size was extremely small, 3. To get a meaningful feedback, we need to find ways to increase the number of students taking the graduating survey.

b. Report on Plan for 2011-2012 Academic Year

As early as possible in the academic year, an individual or committee must be appointed to review the BSIT program and bring it in compliance with the objectives and focus of the ICCP exam. Also, the outcomes for the program should be reviewed and updated along with a separate instrument to evaluate each one of them.

The graduating student survey should be continued and tracked. Ways to increase the number of students taking the survey should be explored and implemented.

The responsibility for both these tasks would be Karen Evans, the Program Director, along with the help of the College Assessment Coordinator.

Table 1: Assessment Plan for the BSIT Program

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
I. 1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.	(i) Develop a broad business and real world perspective; (ii) Plan, design, and implement IT solutions that enhance business performance; (iii) Develop strong analytical and critical thinking skills.	(i) The ICCP Exam. (ii) The ICCP Exam . (iii) The ICCP Exam	(i) 80% of students attempting the ACP certification will score 50% or higher. 50% of students attempting the CCP certification will score 70% or higher. 80% of students attempting either certification will achieve passing scores.	(i) Once a year (ii) Once a year (iii) Once a year	(i) Annual (ii) Annual (iii) Annual
I. 2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.					
II. 1. Graduates will be literate and skilled in written and oral communication.	(iv) Develop interpersonal communication and team skills.	No tool at present			

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
II. 2. Graduates will be aware of the diverse basis of our culture and will demonstrate both breadth and depth in the arts and the humanities.					
II. 3. Graduates will be aware of the foundations and development of American society.					
II. 4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.					
II. 5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem solving skills consistent with the technological focus of the University.					

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
III. 1. Graduates will have had experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities.					
III. 2. Graduates will have had experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills.					
III. 3. Graduates will have had experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.					

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
III. 4. Graduates will have been made aware of the importance of lifelong learning.					
III. 5. Graduates will have had experiences that promote a global and societal perspective.					
IV.1. Graduates will have had defined roles in teamwork experiences in which both process and progress are monitored.					
IV.2. Graduates will have had team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team's product, and evaluate one another's contribution to the team.					

Goals (University)	Supporting Program Objective/Outcome	Assessment Tools	Metrics/ Indicators	Administration Timeline	Loop-Closing Timeline
IV.3. Graduates will have had team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.					
V. 1. Graduates will have had opportunities to learn the value of contributing to their community and to society.					
V. 2. Graduates will have had opportunities to develop personal values as the foundation of integrity and professional ethics.					