Program Outcomes Assessment

BS in Technology Management

Created on: 01/27/2010 02:05:00 PM CDT
Last Modified: 06/19/2014 08:47:01 AM CDT

Table of Contents

General Information (Program Outcomes Assessment)

Standing Requirements

Mission Statement

The Technology Management degree program at Indiana State University strives to provide graduates who are both knowledgeable and experienced in the processes and technologies of current industry operations and the management of both technology and the workforce. Teaching is integrated with experiential learning in a challenging environment to prepare technology management professionals for Indiana and the world.

Outcomes Library

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

Outcome	Mapping
SLO A.1: Apply fundamental technical principles Students will demonstrate the ability to apply fundamental technical principles	No Mapping
SLO A.2: Plan/execute activities Students will demonstrate ability to plan and execute activities	No Mapping
SLO A.3: Utilize computers and software in the industry Students will demonstrate mastery of this technical skill	No Mapping

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

Outcome	Mapping
SLO B.1: Exhibit good verbal communication skills Students will demonstrate good verbal communication skills	**Foundational Studies:** 10. Express themselves effectively, professionally, and persuasively both orally and in writing.
SLO B.2: Demonstrate fluency in written communication Students will provide clear and concise information in writing.	**Foundational Studies:** 10. Express themselves effectively, professionally, and persuasively both orally and in writing.
SLO B.3: Formal presentations using appropriate technology Students will deliver formal presentations using appropriate technology.	**Foundational Studies:** 10. Express themselves effectively, professionally, and persuasively both orally and in writing.

C. Solve problems individually and as a member of a team

The student will demonstrate the ability to solve problems individually and as a member of a team.

Outcome	Mapping
SLO C.1: Use accepted methods to solve problems Students will demonstrate accepted methods to solve problems.	**Foundational Studies:** 2. Critically evaluate the ideas of others.

SLO C.2: Use management principles to solve problems Students will demonstrate management principles to solve problems.	**Foundational Studies:** 2. Critically evaluate the ideas of others.
SLO C.3: Interact with team members to communicate Interact with team members to communicate and solve problems Students will work in teams to prepare formal presentation.	**Foundational Studies:** 10. Express themselves effectively, professionally, and persuasively both orally and in writing.

D. Make management related decisions

The student will demonstrate the ability to make management related decisions.

Outcome	Mapping
SLO D.1: Planning Students will demonstrate management planning skills.	No Mapping
SLO D.2: Organizing Students will demonstrate management organization skills.	No Mapping
SLO D.3: Controlling Students will demonstrate management controlling skills.	No Mapping

E. Demonstrate appropriate professional and ethical behavior

The student will demonstrate appropriate professional and ethical behavior.

Outcome	Mapping
SLO E.1: Exhibit professional behavior in their work environ Students will demonstrate professional behavior in their work environment	No Mapping
SL0 E.2: Display ethical behavior in their work environment Students will demonstrate ethical behavior in their work environment	No Mapping
SLO E.3: Model socially responsible behavior Model socially responsible behavior in their work environment	No Mapping

Curriculum Map

Active Curriculum Maps

BS in Technology Management Curriculum Map (See appendix)
Alignment Set: BS in Technology Management Outcome Set
Created: 04/06/2012 6:59:44 am CDT
Last Modified: 05/16/2013 10:17:21 am CDT

Communication of Outcomes

Student learning outcomes for the BS in Technology Management are posted on the program's web site and distributed to the Advisory Board.

Archive (This area is to be used for archiving pre-TaskStream assessment data and for current documents.)

Archive

File Attachments:

1. **BS in Technology Management Objectives and Standards** (See appendix)
2. **Self-Study Report- March 2010** (See appendix)
   Accreditation Self-Study Report (Sections I-III). Responses to ATMAE Standards.
3. **Technology Management** (See appendix)
   Technology Management Assessment Plan
4. **Technology Management Standards** (See appendix)
   Standards for Accreditation

2011-2012 Assessment Cycle

Assessment Plan

Outcomes and Measures

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.3: Utilize computers and software in the industry

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.1: Exhibit good verbal communication skills

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

E. Demonstrate appropriate professional and ethical behavior

The student will demonstrate appropriate professional and ethical behavior.

SLO E.1: Exhibit professional behavior in their work environ

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

SL0 E.2: Display ethical behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

SLO E.3: Model socially responsible behavior

Model socially responsible behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

Assessment Findings

Finding per Measure

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.3: Utilize computers and software in the industry

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

Findings for Professional Internship Supervisor's Evaluation

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as follows: On this SLO, 100% of the supervisors responded that TM students were either Above Average or Outstanding in their ability to utilize computers and software in the industry. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 71% indicating Strongly Agree/Agree; of the 16 alumni responding, 94% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor.
(Action Plan; 2011-2012 Assessment Cycle)

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.1: Exhibit good verbal communication skills

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

Findings for Professional Internship Supervisor's Evaluation

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as follows: On this SLO, 72% of the supervisors responded that TM students were either Above Average or Outstanding with the remaining 28% responding Average regarding good verbal communication skills. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 72% indicating Strongly Agree/Agree; of the 16 alumni responding, 94% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor
(Action Plan; 2011-2012 Assessment Cycle)

E. Demonstrate appropriate professional and ethical behavior

The student will demonstrate appropriate professional and ethical behavior.

SLO E.1: Exhibit professional behavior in their work environ

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

Findings for Professional Internship Supervisor's Evaluation

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as follows: On this SLO, 89% of the supervisors responded that TM students were either Above Average or Outstanding with the remaining 11% responding Average regarding exhibiting professional behavior in the work environment. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor.
(Action Plan; 2011-2012 Assessment Cycle)

SL0 E.2: Display ethical behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

Findings for Professional Internship Supervisor's Evaluation

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as follows: On this SLO, 89% of the supervisors responded that TM students were either Above Average or Outstanding with the remaining 11% responding Average regarding displaying ethical behavior in the work environment. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor.
(Action Plan; 2011-2012 Assessment Cycle)

SLO E.3: Model socially responsible behavior

Model socially responsible behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation

Implementation Plan (timeline): Fall 2011

Responsible Individual(s): TM Program Coordinator

Findings for Professional Internship Supervisor's Evaluation

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as follows: On this SLO, 89% of the supervisors responded that TM students were either Above

Average or Outstanding with the remaining 11% responding Average. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 100% indicating Strongly Agree/Agree; of the 16 alumni responding, 94% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor.
(Action Plan; 2011-2012 Assessment Cycle)

Overall Recommendations

No text specified

Overall Reflection

No text specified

Action Plan

Actions

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.3: Utilize computers and software in the industry

Action: Continue to monitor.

This Action is associated with the following Findings

Findings for Professional Internship Supervisor's Evaluation
(Assessment Plan and Assessment Findings; 2011-2012 Assessment Cycle)

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as follows: On this SLO, 100% of the supervisors responded that TM students were either Above Average or Outstanding in their ability to utilize computers and software in the industry. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 71% indicating Strongly Agree/Agree; of the 16 alumni responding, 94% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded.

If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.1: Exhibit good verbal communication skills

Action: Continue to monitor

This Action is associated with the following Findings

Findings for Professional Internship Supervisor's Evaluation
(Assessment Plan and Assessment Findings; 2011-2012 Assessment Cycle)

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as follows: On this SLO, 72% of the supervisors responded that TM students were either Above Average or Outstanding with the remaining 28% responding Average regarding good verbal communication skills. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 72% indicating Strongly Agree/Agree; of the 16 alumni responding, 94% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded. If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

E. Demonstrate appropriate professional and ethical behavior

The student will demonstrate appropriate professional and ethical behavior.

SLO E.1: Exhibit professional behavior in their work environ

Action: Continue to monitor.

This Action is associated with the following Findings

Findings for Professional Internship Supervisor's Evaluation
(Assessment Plan and Assessment Findings; 2011-2012 Assessment Cycle)

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as follows: On this SLO, 89% of the supervisors responded that TM students were either Above Average or Outstanding with the remaining 11% responding Average regarding exhibiting professional behavior in the work environment. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded. If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

SL0 E.2: Display ethical behavior in their work environment

Action: Continue to monitor.

This Action is associated with the following Findings

Findings for Professional Internship Supervisor's Evaluation
(Assessment Plan and Assessment Findings; 2011-2012 Assessment Cycle)

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as follows: On this SLO, 89% of the supervisors responded that TM students were either Above Average or Outstanding with the remaining 11% responding Average regarding displaying ethical behavior in the work environment. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded. If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

SLO E.3: Model socially responsible behavior

Model socially responsible behavior in their work environment

Action: Continue to monitor.

This Action is associated with the following Findings

Findings for Professional Internship Supervisor's Evaluation
(Assessment Plan and Assessment Findings; 2011-2012 Assessment Cycle)

Summary of Findings: A total of 18 supervisors responded to the survey. The results are as

follows: On this SLO, 89% of the supervisors responded that TM students were either Above Average or Outstanding with the remaining 11% responding Average. As a supplement to this indirect measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 100% indicating Strongly Agree/Agree; of the 16 alumni responding, 94% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded. If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status Report

Action Statuses

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.3: Utilize computers and software in the industry

Action: Continue to monitor.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded. If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor.

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information:

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.1: Exhibit good verbal communication skills

Action: Continue to monitor

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded. If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information:

E. Demonstrate appropriate professional and ethical behavior

The student will demonstrate appropriate professional and ethical behavior.

SLO E.1: Exhibit professional behavior in their work environ

Action: Continue to monitor.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded. If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor.

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information:

SL0 E.2: Display ethical behavior in their work environment

Action: Continue to monitor.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded. If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor.

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information:

SLO E.3: Model socially responsible behavior

Model socially responsible behavior in their work environment

Action: Continue to monitor.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement, but there was discussion to consider a direct measure to further substantiate and support the findings. The program team will investigate some direct measures that might possibly be used.

Implementation Plan (timeline): The program team will investigate and discuss some direct measures beginning fall, 2013 semester.

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The program team will meet and discuss possible options and minutes will be recorded.

If the team decides on a direct measure, the data will be collected and analyzed to determine if the student learning objective target is being met.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor.

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information:

Status Summary

No text specified

Summary of Next Steps

No text specified

2012-2013 Assessment Cycle

Assessment Plan

Outcomes and Measures

BS in Technology Management Outcome Set

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.3: Formal presentations using appropriate technology

Students will deliver formal presentations using appropriate technology.

Measure: Rubric on presentation
Direct - Student Artifact

Details/Description: Data collected in TMGT 492

Target: Eighty percent (80%) of students in the class will achieve 75% or better on the formal presentation using appropriate technology.

Implementation Plan (timeline): Fall 2012

Responsible Individual(s): TM Program Coordinator

C. Solve problems individually and as a member of a team

The student will demonstrate the ability to solve problems individually and as a member of a team.

SLO C.1: Use accepted methods to solve problems

Students will demonstrate accepted methods to solve problems.

Measure: Grades on Student Assignments and Exams
Direct - Student Artifact

Details/Description: Data collected in TMGT 471

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and writing of the semester case project.

Implementation Plan (timeline): Spring 2013

Responsible Individual(s): TM Program Coordinator

D. Make management related decisions

The student will demonstrate the ability to make management related decisions.

SLO D.1: Planning

Students will demonstrate management planning skills.

Measure: Grades on Student Assignments and Exams
Direct - Student Artifact

Details/Description: Data collected in TMGT 471

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and planning of the semester case project.

Implementation Plan (timeline): Spring 2013

Responsible Individual(s): TM Program Coordinator

SLO D.2: Organizing

Students will demonstrate management organization skills.

Measure: Grades on Student Assignments and Exams
Direct - Student Artifact

Details/Description: Data collected in TMGT 471

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and organization of the semester case project.

Implementation Plan (timeline): Spring 2013

Responsible Individual(s): TM Program Coordinator

SLO D.3: Controlling

Students will demonstrate management controlling skills.

Measure: Grades on Student Assignments and Exams
Direct - Exam

Details/Description: Data collected in TMGT 471

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and management controlling of the semester case project

Implementation Plan (timeline): Spring 2013

Responsible Individual(s): TM Program Coordinator

Assessment Findings

Finding per Measure

BS in Technology Management Outcome Set

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.3: Formal presentations using appropriate technology

Students will deliver formal presentations using appropriate technology.

Measure: Rubric on presentation
Direct - Student Artifact

Details/Description: Data collected in TMGT 492

Target: Eighty percent (80%) of students in the class will achieve 75% or better on the formal presentation using appropriate technology.

Implementation Plan (timeline): Fall 2012

Responsible Individual(s): TM Program Coordinator

Findings for Rubric on presentation

Summary of Findings: A total of 21 students were evaluated. A grading rubric was used to evaluate each student. The results are as follows: On this SLO, 95% of students in the class achieved 75% or better on their ability to deliver a formal presentation using appropriate technology. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 88% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor.
(Action Plan; 2012-2013 Assessment Cycle)

C. Solve problems individually and as a member of a team

The student will demonstrate the ability to solve problems individually and as a member of a team.

SLO C.1: Use accepted methods to solve problems

Students will demonstrate accepted methods to solve problems.

Measure: Grades on Student Assignments and Exams
Direct - Student Artifact

Details/Description: Data collected in TMGT 471

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and writing of the semester case project.

Implementation Plan (timeline): Spring 2013

Responsible Individual(s): TM Program Coordinator

Findings for Grades on Student Assignments and Exams

Summary of Findings: A total of 28 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 78% on assignments and exam questions related to their ability to demonstrate accepted methods to solve problems. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 100% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 67% indicated Strongly Agree/Agree, with the remaining 33% indicating, Neither Agree nor Disagree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor.
(Action Plan; 2012-2013 Assessment Cycle)

D. Make management related decisions

The student will demonstrate the ability to make management related decisions.

SLO D.1: Planning

Students will demonstrate management planning skills.

Measure: Grades on Student Assignments and Exams
Direct - Student Artifact

Details/Description: Data collected in TMGT 471

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and planning of the semester case project.

Implementation Plan (timeline): Spring 2013

Responsible Individual(s): TM Program Coordinator

Findings for Grades on Student Assignments and Exams

Summary of Findings: A total of 28 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 78% on assignments and exam questions related to their ability to demonstrate management planning skills. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded,

100% indicated Strongly Agree/Agree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor.
(Action Plan; 2012-2013 Assessment Cycle)

SLO D.2: Organizing

Students will demonstrate management organization skills.

Measure: Grades on Student Assignments and Exams
Direct - Student Artifact

Details/Description: Data collected in TMGT 471

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and organization of the semester case project.

Implementation Plan (timeline): Spring 2013

Responsible Individual(s): TM Program Coordinator

Findings for Grades on Student Assignments and Exams

Summary of Findings: A total of 28 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 80% on assignments and exam questions related to their ability to demonstrate management organizational skills. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor.
(Action Plan; 2012-2013 Assessment Cycle)

SLO D.3: Controlling

Students will demonstrate management controlling skills.

Measure: Grades on Student Assignments and Exams
Direct - Exam

Details/Description: Data collected in TMGT 471

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and management controlling of the semester case project

Implementation Plan (timeline): Spring 2013

Responsible Individual(s): TM Program Coordinator

Findings for Grades on Student Assignments and Exams

Summary of Findings: A total of 28 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 79% on assignments and exam questions related to their ability to demonstrate management organizational skills. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 58% indicating Strongly Agree/Agree and the remaining 42% indicating Neither Agree nor Disagree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Results: Target Achievement: Met

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Reflections/Notes :

These Findings are associated with the following Actions:

Continue to monitor.
(Action Plan; 2012-2013 Assessment Cycle)

Overall Recommendations

No text specified

Overall Reflection

No text specified

Action Plan

Actions

BS in Technology Management Outcome Set

B. Communicate effectively in the technical environment
The student will be able to communicate effectively in the technical environment.

SLO B.3: Formal presentations using appropriate technology
Students will deliver formal presentations using appropriate technology.

Action: Continue to monitor.

This Action is associated with the following Findings

Findings for Rubric on presentation
(Assessment Plan and Assessment Findings; 2012-2013 Assessment Cycle)

Summary of Findings: A total of 21 students were evaluated. A grading rubric was used to evaluate each student. The results are as follows: On this SLO, 95% of students in the class achieved 75% or better on their ability to deliver a formal presentation using appropriate technology. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 88% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Action Details: The program team is pleased with the results and will continue to monitor this

learning outcome. There are no recommendations for improvement.

Implementation Plan (timeline): Fall, 2012; Fall, 2015; Fall, 2018

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, a presentation grading rubric is used to evaluate each student. This data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

C. Solve problems individually and as a member of a team

The student will demonstrate the ability to solve problems individually and as a member of a team.

SLO C.1: Use accepted methods to solve problems

Students will demonstrate accepted methods to solve problems.

Action: Continue to monitor.

This Action is associated with the following Findings

Findings for Grades on Student Assignments and Exams
(Assessment Plan and Assessment Findings; 2012-2013 Assessment Cycle)

Summary of Findings: A total of 28 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 78% on assignments and exam questions related to their ability to demonstrate accepted methods to solve problems. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 100% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 67% indicated Strongly Agree/Agree, with the remaining 33% indicating, Neither Agree nor Disagree.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Implementation Plan (timeline): Spring, 2013; Spring, 2016; Spring, 2019

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grades on student assignments and exams were used to evaluate each student. Dr. McLeod will be teaching the TMGT 471 class beginning this fall, and he will have significant input to determine what direct measure will be most appropriate to assess this SLO. The data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

D. Make management related decisions

The student will demonstrate the ability to make management related decisions.

SLO D.1: Planning

Students will demonstrate management planning skills.

Action: Continue to monitor.

This Action is associated with the following Findings

Findings for Grades on Student Assignments and Exams
(Assessment Plan and Assessment Findings; 2012-2013 Assessment Cycle)

Summary of Findings: A total of 28 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 78% on assignments and exam questions related to their ability to demonstrate management planning skills. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Implementation Plan (timeline): Spring, 2013; Spring, 2016; Spring, 2019

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grades on student assignments and exams were used to evaluate each student. Dr. McLeod will be teaching the TMGT 471 class beginning this fall, and he will have significant input to determine what direct measure will be most appropriate to assess this SLO. The data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

SLO D.2: Organizing

Students will demonstrate management organization skills.

Action: Continue to monitor.

This Action is associated with the following Findings

Findings for Grades on Student Assignments and Exams
(Assessment Plan and Assessment Findings; 2012-2013 Assessment Cycle)

Summary of Findings: A total of 28 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 80% on assignments and exam questions related to their ability to demonstrate management organizational skills. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 86% indicating Strongly Agree/Agree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Implementation Plan (timeline): Spring, 2013; Spring, 2016; Spring, 2019

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student

learning outcomes being assessed each year. For this particular SLO, grades on student assignments and exams were used to evaluate each student. Dr. McLeod will be teaching the TMGT 471 class beginning this fall, and he will have significant input to determine what direct measure will be most appropriate to assess this SLO. The data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

SLO D.3: Controlling
Students will demonstrate management controlling skills.

Action: Continue to monitor.

This Action is associated with the following Findings

Findings for Grades on Student Assignments and Exams
(Assessment Plan and Assessment Findings; 2012-2013 Assessment Cycle)

Summary of Findings: A total of 28 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 79% on assignments and exam questions related to their ability to demonstrate management organizational skills. As a supplement to this direct measure, surveys were completed on current students, alumni and employers. Seven current students responded to the survey with 58% indicating Strongly Agree/Agree and the remaining 42% indicating Neither Agree nor Disagree; of the 16 alumni responding, 100% indicated Strongly Agree/Agree and of the three employers who responded, 100% indicated Strongly Agree/Agree.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Implementation Plan (timeline): Spring, 2013; Spring, 2016; Spring, 2019

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grades on student assignments and exams were used to evaluate each student. Dr. McLeod will be teaching the TMGT 471 class beginning this fall, and he will have significant input to determine what direct measure will be most appropriate to assess this SLO. The data will be collected, analyzed and presented to the program team

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status Report

Action Statuses

BS in Technology Management Outcome Set

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.3: Formal presentations using

Action: Continue to monitor.

appropriate technology

Students will deliver formal presentations using appropriate technology.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement.

Implementation Plan (timeline): Fall, 2012; Fall, 2015; Fall, 2018

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, a presentation grading rubric is used to evaluate each student. This data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor.

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information: Will be reassessed in Fall 2015.

C. Solve problems individually and as a member of a team

The student will demonstrate the ability to solve problems individually and as a member of a team.

SLO C.1: Use accepted methods to solve problems

Students will demonstrate accepted methods to solve problems.

Action: Continue to monitor.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Implementation Plan (timeline): Spring, 2013; Spring, 2016; Spring, 2019

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grades on student assignments and exams were used to evaluate each student. Dr. McLeod will be teaching the TMGT 471 class beginning this fall, and he will have significant input to determine what direct measure will be most appropriate to assess this SLO. The data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor.

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information: Will be reassessed in Spring 2016.

D. Make management related decisions

The student will demonstrate the ability to make management related decisions.

SLO D.1: Planning

Students will demonstrate management planning skills.

Action: Continue to monitor.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Implementation Plan (timeline): Spring, 2013; Spring, 2016; Spring, 2019

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grades on student assignments and exams were used to evaluate each student. Dr. McLeod will be teaching the TMGT 471 class beginning this fall, and he will have significant input to determine what direct measure will be most appropriate to assess this SLO. The data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor.

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information: Will be reassessed in Spring 2016.

SLO D.2: Organizing

Students will demonstrate management organization skills.

Action: Continue to monitor.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Implementation Plan (timeline): Spring, 2013; Spring, 2016; Spring, 2019

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grades on student assignments and exams were used to evaluate each student. Dr. McLeod will be teaching the TMGT 471 class beginning this fall, and he will have significant input to determine what direct measure will be most appropriate to assess this SLO. The data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor.

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information: Will be reassessed in Spring 2016.

SLO D.3: Controlling

Students will demonstrate management controlling skills.

Action: Continue to monitor.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement. Due to Dr. Minty's retirement, a different instructor will be teaching the course beginning Fall, 2013. The TM program coordinator will meet with the instructor to determine the direct measure to be used to assess this SLO. The new instructor may wish to choose a different direct measure to assess this student learning outcome.

Implementation Plan (timeline): Spring, 2013; Spring, 2016; Spring, 2019

Key/Responsible Personnel: Program Coordinator, Dr. Jim Smallwood

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grades on student assignments and exams were used to evaluate each student. Dr. McLeod will be teaching the TMGT 471 class beginning this fall, and he will have significant input to determine what direct measure will be most appropriate to assess this SLO. The data will be collected, analyzed and presented to the program team

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor.

Current Status: In Progress

Resource Allocation(s) Status:

Next Steps/Additional Information: Will be reassessed in Spring 2016.

Status Summary

No text specified

Summary of Next Steps

No text specified

2013-2014 Assessment Cycle

Assessment Plan

Outcomes and Measures

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.1: Apply fundamental technical principles

Students will demonstrate the ability to apply fundamental technical principles

Measure: Evaluation of student project
Direct - Student Artifact

Details/Description: Data collected in MFG 370

Target: Eighty percent (80%) of students in the class will achieve 75% or better on the semester student project.

Implementation Plan (timeline): Spring 2014

Responsible Individual(s): Course instructor

SLO A.2: Plan/execute activities

Students will demonstrate ability to plan and execute activities

Measure: Evaluation of student project
Direct - Student Artifact

Details/Description: Data collected in MFG 370

Target: Eighty percent (80%) of students in the class will achieve 75% or better on the semester student project.

Implementation Plan (timeline): Spring 2014

Responsible Individual(s): Course instructor

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.2: Demonstrate fluency in written communication

Students will provide clear and concise information in writing.

Measure: Evaluation of Case Studies and Reflection Papers
Direct - Student Artifact

Details/Description: Data collected in TMGT 492

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and writing of case studies and reflection papers.

Implementation Plan (timeline): Spring, 2014

Responsible Individual(s): Course instructor

C. Solve problems individually and as a member of a team

The student will demonstrate the ability to solve problems individually and as a member of a team.

SLO C.2: Use management principles to solve problems

Measure: Evaluation of Case Studies
Direct - Student Artifact

Students will demonstrate management principles to solve problems.

Details/Description: Data collected in TMGT 492

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and writing of case studies.

Implementation Plan (timeline): Spring 2014

Responsible Individual(s): Course instructor

SLO C.3: Interact with team members to communicate

Interact with team members to communicate and solve problems Students will work in teams to prepare formal presentation.

Measure: Rubric on presentation
Direct - Student Artifact

Details/Description: Data collected in TMGT 492

Target: Eighty percent (80%) of students in the class will achieve 75% or better on the team preparation of the formal presentation using appropriate technology.

Implementation Plan (timeline): Fall 2013

Responsible Individual(s): Course instructor

Assessment Findings

Finding per Measure

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.1: Apply fundamental technical principles

Students will demonstrate the ability to apply fundamental technical principles

Measure: Evaluation of student project
Direct - Student Artifact

Details/Description: Data collected in MFG 370

Target: Eighty percent (80%) of students in the class will achieve 75% or better on the semester student project.

Implementation Plan (timeline): Spring 2014

Responsible Individual(s): Course instructor

Findings for Evaluation of student project

Summary of Findings: A total of 24 students were evaluated. The results are as follows: On this SLO, 96% of the students scored an average of 75% or better on lab assigned student projects and demonstrated the ability to apply fundamental technical principles. It is important to note here, many of these students received a lot of instructor or student lab assistant help in order to achieve a score of 75% or better. Many of the students evaluated were international students who have very little knowledge of the technical fundamentals taught in this course.
It is particularly important to note here that around 75% of students in the B.S. Technology Management program enter the program with a two-year technical degree. It has been our observation that these students in particular have achieved this SLO by virtue of their technical degree. They are pursuing this B.S. TM degree as a four-year degree completion. It is generally the other students in the program without the two-year degree that are lacking in this particular SLO.

Results: Target Achievement: Exceeded

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement.

Reflections/Notes : Substantiating evidence: The program team met on Friday, June 13, 2014 at 10am. Those in attendance were Dr. Mike Hayden, Dr. Alister McLeod and Dr. Jim Smallwood. Faculty discussed collecting data from alumni and employers on this SLO as another measure to

supplement the in-class evaluation of the student projects.

These Findings are associated with the following Actions:

Continue to monitor
(Action Plan; 2013-2014 Assessment Cycle)

SLO A.2: Plan/execute activities

Students will demonstrate ability to plan and execute activities

Measure: Evaluation of student project
Direct - Student Artifact

Details/Description: Data collected in MFG 370

Target: Eighty percent (80%) of students in the class will achieve 75% or better on the semester student project.

Implementation Plan (timeline): Spring 2014

Responsible Individual(s): Course instructor

Findings for Evaluation of student project

Summary of Findings: A total of 24 students were evaluated. The results are as follows: On this SLO, 96% of the students scored an average of 75% or better on lab assigned student projects and demonstrated the ability to apply fundamental technical principles. It is important to note here, many of these students received a lot of instructor or student lab assistant help in order to achieve a score of 75% or better. Many of the students evaluated were international students who have very little knowledge of the technical fundamentals taught in this course.
It is particularly important to note here that around 75% of students in the B.S. Technology Management program enter the program with a two-year technical degree. It has been our observation that these students in particular have achieved this SLO by virtue of their technical degree. They are pursuing this B.S. TM degree as a four-year degree completion. It is generally the other students in the program without the two-year degree that are lacking in this particular SLO.

Results: Target Achievement: Exceeded

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There is one recommendation for improvement. A discussion with the instructor of the course revealed that more emphasis needs to be placed on the planning of activities and he has agreed to investigate ways to incorporate more planning of activities into this course.

Reflections/Notes : Substantiating evidence: The program team met on Friday, June 13, 2014 at 10am. Those in attendance were Dr. Mike Hayden, Dr. Alister McLeod and Dr. Jim Smallwood. Faculty discussed collecting data from alumni and employers on this SLO as another measure to supplement the in-class evaluation of the student projects.

These Findings are associated with the following Actions:

Incorporate more planning of activities
(Action Plan; 2013-2014 Assessment Cycle)

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.2: Demonstrate fluency in written communication

Students will provide clear and concise information in writing.

Measure: Evaluation of Case Studies and Reflection Papers
Direct - Student Artifact

Details/Description: Data collected in TMGT 492

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and writing of case studies and reflection papers.

Implementation Plan (timeline): Spring, 2014

Responsible Individual(s): Course instructor

Findings for Evaluation of Case Studies and Reflection Papers

Summary of Findings: A total of 26 students were evaluated. The results are as follows: On this SLO, 85% of the students scored an average of 75% or higher on their ability to demonstrate fluency in written communication. At least three students did not submit one or more of the case studies or reflection papers which resulted in a score of zero and brought the percentage down. The case studies and reflection papers they did submit were well written and demonstrated they are able to provide clear and concise information in writing.

Results: Target Achievement: Exceeded

Recommendations : The program team will continue to monitor this learning outcome. The instructor of the course will continue to strongly encourage students to submit all case studies and reflection papers. At this time, there is no recommendation for improvement.

Reflections/Notes : Substantiating evidence: The program team met on Friday, June 13, 2014 at 10am. Those in attendance were Dr. Mike Hayden, Dr. Alister McLeod and Dr. Jim Smallwood. Faculty discussed collecting data from alumni and employers on this SLO as another measure to supplement the in-class evaluation of the case studies and reflection papers.

These Findings are associated with the following Actions:

Continue to monitor
(Action Plan; 2013-2014 Assessment Cycle)

C. Solve problems individually and as a member of a team

The student will demonstrate the ability to solve problems individually and as a member of a team.

SLO C.2: Use management principles to solve problems

Students will demonstrate management principles to solve problems.

Measure: Evaluation of Case Studies
Direct - Student Artifact

Details/Description: Data collected in TMGT 492

Target: Eighty percent (80%) of students in the class will achieve 75% or better on interpretation and writing of case studies.

Implementation Plan (timeline): Spring 2014

Responsible Individual(s): Course instructor

Findings for Evaluation of Case Studies

Summary of Findings: A total of 26 students were evaluated. The results are as follows: On this SLO, 69% of the students scored an average of 75% or higher on their ability to demonstrate management principles to solve problems. At least seven students did not submit one or more of the case studies which resulted in a score of zero and brought the percentage down. The case studies they did submit were well written and demonstrated they can apply management principles to solve problems.

Results: Target Achievement: Not Met

Recommendations : The program team will continue to monitor this learning outcome. The instructor of the course will continue to strongly encourage students to submit all case studies.

Reflections/Notes : Substantiating evidence: The program team met on Friday, June 13, 2014 at 10am. Those in attendance were Dr. Mike Hayden, Dr. Alister McLeod and Dr. Jim Smallwood. Faculty discussed collecting data from alumni and employers on this SLO as another measure to supplement the in-class evaluation of the case studies.

These Findings are associated with the following Actions:

Encourage students to submit all case studies
(Action Plan; 2013-2014 Assessment Cycle)

SLO C.3: Interact with team members to communicate

Interact with team members to communicate and solve problems Students will work in teams to prepare formal presentation.

Measure: Rubric on presentation
Direct - Student Artifact

Details/Description: Data collected in TMGT 492

Target: Eighty percent (80%) of students in the class will achieve 75% or better on the team preparation of the formal presentation using appropriate technology.

Implementation Plan (timeline): Fall 2013

Responsible Individual(s): Course instructor

Findings for Rubric on presentation

Summary of Findings: A total of 20 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 75% or higher on their ability to interact with team members to communicate and solve problems. As a supplement to this direct measure, surveys were completed by supervisors on current students completing a professional internship. Twelve supervisors responded to the survey with 76% indicating students have an outstanding ability on SLO C.3. Two supervisors (17%) indicated above average and two supervisors (17%) indicated average.

Results: Target Achievement: Exceeded

Recommendations : The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement

Reflections/Notes : Substantiating evidence: The program team met on Friday, June 13, 2014 at 10am. Those in attendance were Dr. Mike Hayden, Dr. Alister McLeod and Dr. Jim Smallwood. Faculty discussed continuing to analyze data from the supervisors of student interns as another measure to supplement the in-class rubric on the presentation.

These Findings are associated with the following Actions:

Continue to monitor
(Action Plan; 2013-2014 Assessment Cycle)

Overall Recommendations

No text specified

Overall Reflection

No text specified

Action Plan

Actions

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.1: Apply fundamental technical principles

Students will demonstrate the ability to apply fundamental technical principles

Action: Continue to monitor

This Action is associated with the following Findings

Findings for Evaluation of student project
(Assessment Plan and Assessment Findings; 2013-2014 Assessment Cycle)

Summary of Findings: A total of 24 students were evaluated. The results are as follows: On this

SLO, 96% of the students scored an average of 75% or better on lab assigned student projects and demonstrated the ability to apply fundamental technical principles. It is important to note here, many of these students received a lot of instructor or student lab assistant help in order to achieve a score of 75% or better. Many of the students evaluated were international students who have very little knowledge of the technical fundamentals taught in this course.
It is particularly important to note here that around 75% of students in the B.S. Technology Management program enter the program with a two-year technical degree. It has been our observation that these students in particular have achieved this SLO by virtue of their technical degree. They are pursuing this B.S. TM degree as a four-year degree completion. It is generally the other students in the program without the two-year degree that are lacking in this particular SLO.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement.

Implementation Plan (timeline): Spring, 2014; Spring, 2017; Spring, 2020

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grading rubrics are used to evaluate student projects. This data from student projects will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan

Priority: Medium

SLO A.2: Plan/execute activities

Students will demonstrate ability to plan and execute activities

Action: Incorporate more planning of activities

This Action is associated with the following Findings

Findings for Evaluation of student project
(Assessment Plan and Assessment Findings; 2013-2014 Assessment Cycle)

Summary of Findings: A total of 24 students were evaluated. The results are as follows: On this SLO, 96% of the students scored an average of 75% or better on lab assigned student projects and demonstrated the ability to apply fundamental technical principles. It is important to note here, many of these students received a lot of instructor or student lab assistant help in order to achieve a score of 75% or better. Many of the students evaluated were international students who have very little knowledge of the technical fundamentals taught in this course.
It is particularly important to note here that around 75% of students in the B.S. Technology Management program enter the program with a two-year technical degree. It has been our observation that these students in particular have achieved this SLO by virtue of their technical degree. They are pursuing this B.S. TM degree as a four-year degree completion. It is generally the other students in the program without the two-year degree that are lacking in this particular SLO.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There is one recommendation for improvement. A discussion with the instructor of the course revealed that more emphasis needs to be placed on the planning of activities and he has agreed to investigate ways to incorporate more planning of activities into this course.

Implementation Plan (timeline): Spring, 2014; Spring, 2017; Spring, 2020

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grading rubrics are used to evaluate student projects. This data from student projects will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.2: Demonstrate fluency in written communication

Students will provide clear and concise information in writing.

Action: Continue to monitor

This Action is associated with the following Findings

Findings for Evaluation of Case Studies and Reflection Papers
(Assessment Plan and Assessment Findings; 2013-2014 Assessment Cycle)

Summary of Findings: A total of 26 students were evaluated. The results are as follows: On this SLO, 85% of the students scored an average of 75% or higher on their ability to demonstrate fluency in written communication. At least three students did not submit one or more of the case studies or reflection papers which resulted in a score of zero and brought the percentage down. The case studies and reflection papers they did submit were well written and demonstrated they are able to provide clear and concise information in writing.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement.

Implementation Plan (timeline): Spring, 2014; Spring, 2017; Spring, 2020

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, a grading rubric is used to evaluate the case studies and reflection papers of each student. This data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

C. Solve problems individually and as a member of a team

The student will demonstrate the ability to solve problems individually and as a member of a team.

SLO C.2: Use management principles to solve problems

Students will demonstrate management principles to solve problems.

Action: Encourage students to submit all case studies

This Action is associated with the following Findings

Findings for Evaluation of Case Studies
(Assessment Plan and Assessment Findings; 2013-2014 Assessment Cycle)

Summary of Findings: A total of 26 students were evaluated. The results are as follows: On this SLO, 69% of the students scored an average of 75% or higher on their ability to demonstrate management principles to solve problems. At least seven students did not submit one or more of the case studies which resulted in a score of zero and brought the percentage down. The case studies they did submit were well written and demonstrated they can apply management principles to solve problems.

Action Details: The program team will continue to monitor this learning outcome. It is recommended that the instructor of the course strongly encourage students to submit all case studies. Those students not submitting a case study receive a score of zero which brings the percentage down.

Implementation Plan (timeline): Spring, 2014; Spring, 2017; Spring, 2020

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, a grading rubric is used to evaluate the case studies of each student. This data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

SLO C.3: Interact with team members to communicate

Interact with team members to communicate and solve problems Students will work in teams to prepare formal presentation.

Action: Continue to monitor

This Action is associated with the following Findings

Findings for Rubric on presentation
(Assessment Plan and Assessment Findings; 2013-2014 Assessment Cycle)

Summary of Findings: A total of 20 students were evaluated. The results are as follows: On this SLO, 100% of the students scored an average of 75% or higher on their ability to interact with team members to communicate and solve problems. As a supplement to this direct measure, surveys were completed by supervisors on current students completing a professional internship. Twelve supervisors responded to the survey with 76% indicating students have an outstanding ability on SLO C.3. Two supervisors (17%) indicated above average and two supervisors (17%) indicated average.

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement.

Implementation Plan (timeline): Fall, 2013; Fall, 2016; Fall, 2019

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, a grading rubric is used to evaluate student interaction with team members to communicate and solve problems. This data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status Report

Action Statuses

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.1: Apply fundamental technical principles

Students will demonstrate the ability to apply fundamental technical principles

Action: Continue to monitor

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement.

Implementation Plan (timeline): Spring, 2014; Spring, 2017; Spring, 2020

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grading rubrics are used to evaluate student projects. This data from student projects will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan

Priority: Medium

Status for Continue to monitor

No Status Added

SLO A.2: Plan/execute activities

Students will demonstrate ability to plan and execute activities

Action: Incorporate more planning of activities

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There is one recommendation for improvement. A discussion with the instructor of the course revealed that more emphasis needs to be placed on the planning of activities and he has agreed to investigate ways to incorporate more planning of activities into this course.

Implementation Plan (timeline): Spring, 2014; Spring, 2017; Spring, 2020

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, grading rubrics are used to evaluate student projects. This data from student projects will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Incorporate more planning of activities

No Status Added

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.2: Demonstrate fluency in written communication

Students will provide clear and concise information in writing.

Action: Continue to monitor

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement.

Implementation Plan (timeline): Spring, 2014; Spring, 2017; Spring, 2020

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, a grading rubric is used to evaluate the case studies and reflection papers of each student. This data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor

No Status Added

C. Solve problems individually and as a member of a team

The student will demonstrate the ability to solve problems individually and as a member of a team.

SLO C.2: Use management principles to solve problems

Students will demonstrate management principles to solve problems.

Action: Encourage students to submit all case studies

Action Details: The program team will continue to monitor this learning outcome. It is recommended that the instructor of the course strongly encourage students to submit all case studies. Those students not submitting a case study receive a score of zero which brings the percentage down.

Implementation Plan (timeline): Spring, 2014; Spring, 2017; Spring, 2020

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, a grading rubric is used to evaluate the case studies of each student. This data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Encourage students to submit all case studies

No Status Added

SLO C.3: Interact with team members to communicate

Interact with team members to communicate and solve problems Students will work in teams to prepare formal presentation.

Action: Continue to monitor

Action Details: The program team is pleased with the results and will continue to monitor this learning outcome. There are no recommendations for improvement.

Implementation Plan (timeline): Fall, 2013; Fall, 2016; Fall, 2019

Key/Responsible Personnel: Program Coordinator

Measures: The assessment cycle plan will be implemented on a three year cycle, with five student learning outcomes being assessed each year. For this particular SLO, a grading rubric is used to evaluate student interaction with team members to communicate and solve problems. This data will be collected, analyzed and presented to the program team.

Resource Allocations: Release time for the program coordinator is essential. At the very least, a lighter teaching load is absolutely necessary for the coordinator to implement the Action Plan.

Priority: Medium

Status for Continue to monitor

No Status Added

Status Summary

No text specified

Summary of Next Steps

No text specified

2014-2015 Assessment Cycle

Assessment Plan

Outcomes and Measures

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.3: Utilize computers and software in the industry

Students will demonstrate mastery of this technical skill

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.1: Exhibit good verbal communication skills

Students will demonstrate good verbal communication skills

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

E. Demonstrate appropriate professional and ethical behavior

The student will demonstrate appropriate professional and ethical behavior.

SLO E.1: Exhibit professional behavior in their work environ

Students will demonstrate professional behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

SL0 E.2: Display ethical behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Students will demonstrate ethical behavior in their work environment

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

SLO E.3: Model socially responsible behavior

Model socially responsible behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

Assessment Findings

Finding per Measure

BS in Technology Management Outcome Set

A. Perform a variety of technical activities

Perform a variety of technical activities the student is likely to manage.

SLO A.3: Utilize computers and software in the industry

Students will demonstrate mastery of this technical skill

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

Findings for Professional Internship Supervisor's Evaluation

No Findings Added

B. Communicate effectively in the technical environment

The student will be able to communicate effectively in the technical environment.

SLO B.1: Exhibit good verbal communication skills

Students will demonstrate good verbal communication skills

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

Findings for Professional Internship Supervisor's Evaluation

No Findings Added

E. Demonstrate appropriate professional and ethical behavior

The student will demonstrate appropriate professional and ethical behavior.

SLO E.1: Exhibit professional behavior in their work environ

Students will demonstrate professional behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

Findings for Professional Internship Supervisor's Evaluation

No Findings Added

SL0 E.2: Display ethical behavior in their work environment

Students will demonstrate ethical behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

Findings for Professional Internship Supervisor's Evaluation

No Findings Added

SLO E.3: Model socially responsible behavior

Model socially responsible behavior in their work environment

Measure: Professional Internship Supervisor's Evaluation
Indirect - Other

Details/Description: Data collected in TMGT 351

Target: Eighty percent (80%) of students in the class will achieve Outstanding, Above Average or Average on the supervisor's evaluation.

Implementation Plan (timeline): Fall 2014

Responsible Individual(s): Course Instructor

Findings for Professional Internship Supervisor's Evaluation

No Findings Added

Overall Recommendations

No text specified

Overall Reflection

No text specified

Action Plan

Status Report

2015-2016 Assessment Cycle

- **Assessment Plan**
- **Assessment Findings**
- **Action Plan**
- **Status Report**

2016-2017 Assessment Cycle

- **Assessment Plan**
- **Assessment Findings**

2017-2018 Assessment Cycle

- **Assessment Plan**
- **Assessment Findings**

2018-2019 Assessment Cycle

- **Assessment Plan**
- **Assessment Findings**

2019-2020 Assessment Cycle

- **Assessment Plan**
- **Assessment Findings**

Appendix

A. **BS in Technology Management Curriculum Map** (Curriculum Map)
B. **BS in Technology Management Objectives and Standards** (Word Document (Open XML))
C. **Self-Study Report- March 2010** (Word Document (Open XML))
D. **Technology Management Standards** (Word Document (Open XML))
E. **Technology Management** (Adobe Acrobat Document)

Standards for Accreditation
Baccalaureate Degree Programs

Technology Management
Department

Technology Management
B.S.

6. Standards for Accreditation – Baccalaureate Degree Programs

The objective of accreditation is to ensure that programs in Industrial Technology which are accredited meet or exceed established standards. Consideration will be given to both the qualitative and quantitative criteria set forth in these standards.

6.1 Preparation of Self-Study Report

Self-Analysis: The Self-Study Report shall follow the guidelines and be completed by a representative portion of the institution's administrative staff, teaching faculty, and students.

Guided by College of Technology faculty and administrators who have participated in the accreditation process at other institutions of higher education, and by a review of the 2004 reaccreditation material, the faculty of the Department of Technology Management planned a course of action to complete the 2010 reaccreditation material.

Those listed below participated in the preparation of the reaccreditation materials.

Dr. Brad Sims, Dean, College of Technology
Dr. Jeff McNabb, Associate Dean, College of Technology
Dr. James Smallwood, Chair, Department of Technology Management
Dr. Marion Schafer, Associate Professor, Department of Technology Management
John Jukes, Student, Department of Technology Management
Other faculty, staff, and students contributed materials as well.
Office of Vice President of Academic Affairs
Office of Vice President of Administrative Affairs
Office of Vice President of Development and Public Affairs

Documents not included in the reaccreditation report are available in the Office of the Dean and/or the Department Chair.

6.2 Philosophy and Objectives

6.2.1 Mission: The department, college, and institutional missions shall be compatible with the approved definition of Industrial Technology.

Within the concept of a university where truth and knowledge are pursued, preserved, and transmitted so that enlightenment may guide the human experience, Indiana State University seeks to fulfill its particular mission.

The University endeavors to provide educational opportunities to all qualified applicants for admission to its several and various undergraduate and graduate programs, in the fulfillment of its role and mission as a general, multi-purpose university. One of the major purposes of the institution is to offer each and every student as broad an opportunity for study and the acquisition of knowledge in the many fields, areas, and disciplines offered by the University as his or her ability, interest, and talent will allow. This purpose includes the imparting to the student of knowledge by an informed, expert faculty and the development of an understanding and appreciation of the role and responsibility of a learned and educated individual in our society. The University serves the academic, intellectual, cultural, and vocational needs of students who possess a wide range of academic preparation, ambitions, goals, and intellectual development.

Technology Management Program
The ISU Technology Management program provides hands-on experiences with community and industry partners to foster creativity and ethics in both individual and team situations to prepare students as professionals in the engineering and management of technology systems.

Technology Management Department
Preamble
The Department of Technology Management consists of the following programs:

- Technology Management
- Construction Management
- Packaging
- Advanced Manufacturing Management
- Human Resource Development
- Career and Technical Education
- Technology and Engineering Education
- Industrial Technology

Mission
Our mission is to instill knowledge and skills from our undergraduate and graduate program areas through experiential learning that enable our graduates to become leaders in education and industry.
Vision
Our department will have the lead programs in the nation to advance teaching, scholarship, research, and innovation in the fields of technology management, education, and training.

College of Technology
The College of Technology will provide exemplary undergraduate and graduate programs, generate solutions and knowledge through research, and serve the technology needs of the State, the nation, and the international community.

Indiana State University Mission Statement
Indiana State University, a doctoral research university, combines a tradition of strong undergraduate and graduate education with a focus on community and public service. We integrate teaching, research, and creative activity in an engaging, challenging, and supportive learning environment to prepare productive citizens for Indiana and the world.

6.2.2 Program Definition: The program of study definition and purpose shall be compatible with the approved definition of Industrial Technology.

The Technology Management program prepares students for careers as technical managers in a variety of fields in technology. The program emphasizes an understanding of the technology utilized in manufacturing and other industrial processes and compliments this technical understanding with practice using the managerial skills necessary in the modern work environment.

6.2.3 Program Acceptance: Each program of study shall be understood and accepted by appropriate individuals and representative groups within the internal university community and the external business and industrial community.

The Technology Management program has a positive working relationship with many other departments and colleges in the University, as well as with many companies in the Terre Haute area.

The program utilizes the College of Arts and Sciences for physics, mathematics,

chemistry, and economics; the College of Business for accounting, and business management; the College of Health and Human Performance for safety management; Department of Electronics, Computer and Mechanical Engineering Technology for DC fundamentals, automation, fluid power and computer aided design classes.

Our graduates are employed by local companies as well as nationally known companies. Many companies continue to develop relationships with our program by making financial or equipment donations. Often, alumni are invited guest speakers in our classes. Example of these companies include the following:

Great Dane Trailer
Tredegar, Inc.
Aisin Brake
SONY - Digital Audio Disc Corporation

6.2.4 Program Goals: Each program of study shall have: (1) clearly written short and long range goals and objectives, which are consistent with the program mission statements; and (2) plans for achieving them.

The Technology Management program places an emphasis on each student developing an understanding of the basic technology utilized in manufacturing and blending this understanding with managerial skills necessary for success in today's work environment.

Short-range goals:

a. Find ways to promote experiential learning in courses.

b. Develop a plan to recruit new students into the program.

c. Review articulation agreements with community colleges,

Long-range goals:

a. Develop new articulation partnerships with more community colleges.

b. Update and enhance distance offerings of hands-on laboratory courses.

c. Seek the support of industry for expanded opportunities in cooperative education/internships.

The short-range goals and long-range goals will be pursued using the following techniques:

Short-range goals:

a. Experiential learning will be promoted by working with faculty to include experiential learning projects in their courses.

b. Recruiting plans will be developed in cooperation with university admissions, the department, and the COT Associate Dean's office.

c. Articulation agreements will be reviewed by technology management faculty and the Associate Dean's office to assure that changes due to the new foundational studies program and any other changes at ISU or the partner institution are still meeting the spirit of the agreements.

Long-range goals:

a. As the program is refined, the program faculty will reach out to new community college partners to develop articulation agreements that will allow

degree completion for transfer students.

b. Faculty will enlist the help of university information technology personnel to develop new methods of delivering hands-on laboratory courses through distance methods in order to better provide the coursework needed to serve the future needs of technology managers.

c. Faculty will enlist the help of program alumni and industry partners to develop internship opportunities for students in the technology management program.

6.3 Program of Study

6.3.1 Program Name: Each program of study and/or program option shall have appropriate titles consistent with the approved ATMAE definition of Industrial Technology.

Technology Management

6.3.2 Program Level: The program of study shall lead to the baccalaureate degree, and not less than the junior and senior years of baccalaureate level study shall be offered by the institution seeking accreditation. Appropriate lower division requirements may be offered by the same institution or may be transferred from other institutions such as community colleges and technical institutes.

The Technology Management program is a program of study that leads to a baccalaureate degree. All levels of the program from freshman to senior are offered. Appropriate lower division requirements can be transferred into the program from community colleges and technical institutions.

6.3.3 Program Definition: The program of study may have more than one option, specialization, or concentration; but specific course requirements for each option shall be clearly specified, and the requirements for all program options shall meet or exceed ATMAE standards.

The program of study has an 18-hour block, set aside for a minor, a concentration, or group of courses taken from the College of Technology.

6.3.4 Program Emphasis: Primary emphasis in the program of study shall reflect the current technology and management of industry.

The primary emphasis of the Technology Management program reflects the current technology and management of industry. This is evidenced in the laboratory exercises and teaching methodologies. The faculty, through professional organizations, remains cognizant of current issues and practices in modern technologies and management techniques.

6.3.5 Foundation Requirements: Programs shall be a minimum of 120 semester hours (or equivalent) and must meet the minimum foundation requirements shown in Table 6.1. Programs may exceed the maximum foundation requirements specified in each area, but appropriate justification shall be provided for each program and/or program option that exceeds the maximum limits. A specific list of courses and credit hours that are being counted toward each category shall be included in the Self-Study Report.

Indiana State University requires all students who expect to graduate to complete a minimum of 124 semester hours

Table 6.1 B. S. Degree in **Technology Management**

Course Name	**Course #**	**ISU REQ.**	**ATMAE REQ.**
General Education		**35-44**	**18-36**
English Composition	ENG 101 & 105 or ENG 107	3 - 6	
Technical Writing	ENG 305 T	3	
Communication	COM 101	3	
Physical Education	PE 101 & 101 L	2	
Social/Behavioral Studies	Approved List	6	
Literary/Arts/Philosophical Studies	Approved List	6	
Historical Studies	Approved List	3	
Multicultural Studies	Approved List	6	
Foreign Language	H.S. credit or Approved List	0 - 6	
General Education Capstone	Approved List	3	
Mathematics		**9**	**6 - 18**
College Algebra & Trig	MATH 115	3	
Information Technology Literacy	TMGT 195	3	
Economic Analysis	MET 405	3	
Physical Sciences		**8**	**6 - 18**
Physics	PHYS 105	3	
Physics Lab	PHYS 105 L	1	
Chemistry	CHEM 100	3	
Chemistry Lab	CHEM 100 L	1	
Or Physics	PHYS 106		
Physics Lab	PHYS 106 L		
Management /Professional		**27**	**12 - 24**
Industrial Health & Safety	HLTH 212	3	
Industrial Accident Prevention	HLTH 318	3	
Professional Internship	TMGT 351	3	
Workplace Law for the Tech Mgr	TMGT 429	3	
Production Planning & Control	TMGT 471	3	
Quality Control of Industrial Products	TMGT 473	3	
Industrial Organizations & Functions	TMGT 478	3	
Or Industrial Computer Sys Mgmt	ECT 437		
Industrial Supervision	TMGT 492	3	
Creativity & Ideation Techniques	TMGT 491	3	
Or Problem Solving Techniques	TMGT 497		
Technical		**27**	**24 – 36**
Electronic Fundamentals	ECT 160	3	
Introduction to Technical Graphics	MET 103	3	
Fundamentals of Machine Tool Proc	TMGT 370	3	
Or Mfg Processes & Materials	TMGT 371		
Or Plastics Technology	TMGT 372		
Technical Minor or Concentration pus Technical Electives		18	
Electives		**9 - 18**	**0 – 18**
Grand Total		124	120

6.3.6 Course Sequencing: There shall be evidence of appropriate sequencing of course work in each program of study to ensure that advanced level courses build upon concepts covered in beginning level course work.

The course number system indicates when the student should take the course. Courses that have a number with the first digit of one are freshman level courses. Courses with a first digit of two are sophomore level courses, etc. Faculty expect that concepts from lower division courses are understood by students. The following suggested course sequencing sheet is provided to students in the program. Advisors emphasize to students the importance of taking courses in the appropriate order.

Table 6.2 B. S. Degree in **Technology Management**

FALL		SPRING	
Semester I		Semester II	
ENG 101	3	ENG 105	3
COMM 101	3	CHEM 100 & 100L	4
MATH 115	3	ECT 160	3
PE 101 & L	2	SBS:F	3
MET 103	3	LAPS:F	3
TMGT 195	3		
	17 hrs		16 hrs
Semester III		Semester IV	
Foreign Lang 101	3	Foreign Language 102	3
HLTH 212	3	HS	3
MCS:USD	3	MFG 370 or 371 or 372	3
Physics 105 & 105 L	4	Elective	3
Elective	3	Elective	3
	16 hrs		15 hrs
Semester V		Semester VI	
ENG 305T	3	LAPS:E	3
SBS:E	3	TMGT 351	3
MCS:IC	3	HLTH 318	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
	15 hrs		15 hrs
Semester VII		Semester VIII	
GEN ED Capstone	3	TMGT 492	3
MET 405	3	TMGT 491 or 497	3
TMGT 429	3	Tech Minor or Concentration	3
TMGT 471	3	Tech Minor or Concentration	3
TMGT 473	3	TMGT 478	3
	15 hrs		15 hrs

Table 6.3 B. S. Degree in **Technology Management transfer with A.A.S.**

FALL		SPRING	
Semester V		Semester VI	
ENG 305T	3	LAPS:E	3
SBS:E	3	TMGT 351	3
MCS:IC	3	HLTH 318	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
	15 hrs		15 hrs
Semester VII		Semester VIII	
GEN ED Capstone	3	TMGT 492	3
MET 405	3	TMGT 491 or 497	3
TMGT 429	3	Tech Minor or Concentration	3
TMGT 471	3	Tech Minor or Concentration	3
TMGT 473	3	TMGT 478	3
Tech Minor or Concentration	3		
	18 hrs		15 hrs

Table 6.4 B. S. Degree in **Technology Management transfer with A.S.**

FALL		SPRING	
Semester V		Semester VI	
ENG 305T	3	LAPS:E	3
SBS:E	3	TMGT 351	3
MCS:IC	3	HLTH 318	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
	15 hrs		15 hrs
Semester VII		Semester VIII	
GEN ED Capstone	3	TMGT 492	3
MET 405	3	TMGT 491 or 497	3
TMGT 429	3	Tech Minor or Concentration	3
TMGT 471	3	Tech Minor or Concentration	3
TMGT 473	3	TMGT 478	3
Tech Minor or Concentration	3		
	18 hrs		15 hrs

6.3.7 Application of Mathematics and Science: Appropriate applications of the principles of mathematics and science shall be evident in technical and management course work.

MFG 370: Apply mathematics to determine metal removal rates, power requirements, feeds, speeds, depth of cut, tool angles, measurements and tolerances.

MFG 371: Apply mathematics and science when determining stress-strain calculations, chemistry of metals, metallurgy, bending, forming, and heat treatment.
MFG 372: Apply mathematics and science when determining weight/volume calculations, understanding polymerization and heat transfer.
TMGT 471: Mathematical computations are used to determine schedules and line balancing requirements.
TMGT 473: Requires application of statistical sampling techniques.
TMGT 478: Applications of mathematics and science as necessary for implementation of processes required to complete projects in the capstone course.
ECT 160 and MET 103 are courses where principles of mathematics and science are applied.

6.3.8 **Computer Applications: The program of study shall include instruction on computer application software, and the use of computers for information retrieval and problem solving.**

The program of study includes instruction on computer application software, and the use of computers for information retrieval and problem solving. The following are examples:

MET 103: Computer aided design fundamentals
TMGT 195: Intro to Computer applications. Satisfies the University requirement for IT Literacy. Must be taken in the freshman year, prior to receiving 32 credit hours.
MFG 371: NC and CNC programming oxy-fuel/plasma cutter
TMGT 471: Use of production scheduling applications
TMGT 478: Computerized GANT charts for planning and scheduling; computerized plant layouts; computer generated forms; computer generated drawings; electronically distributed content information.

6.3.9 Communications: Oral presentations and technical report writing shall be evident in both technical and management course requirements.

The General Education curricula focus specifically on communications in the COM 101 course, and includes oral and written work in all courses counted as general education. The ENG 305T is tailored to the needs of the technology students, and emphasis is places on writing technical reports.

The integration of oral presentations and technical report writing is evident in many of the Manufacturing Technology courses as described below.

TMGT 131: In 2001 the curriculum of the introduction to technology course TMGT 131, was revitalized with a focus on the eight dimensions identified as most important in the professional development of the technology student. One of those dimensions was Communication. To this end, students are required to make several technical presentations, are required to use Power Point to enhance the professionalism of their presentation, and are required to accompany their ora presentation with a written technical report. The presentations are video taped and each student is given a CD of his or her presentations. These presentations can then be uploaded to each students' electronic portfolio as a record of their ability to demonstrate communication skills when delivering a technical report.

TMGT 478: Although the catalogue name for this course is Industrial Organization and Function, it is known by everyone as SIMCO, because it simulates a Manufacturing company. Each semester students assume roles as members of the organization in an attempt to make products to specifications within a budget and to a schedule. Students are placed in interest groups and

investigate the functions of an organization, such as the design function, the manufacturing function, the quality function, etc, and make formal technical presentations to the rest of the class. This then becomes the basis for their expertise and their placement in the manufacturing function of the class. The formal technical papers each student writes as part of their presentation, become the resource and the knowledge base for the class. Therefore, each student is dependent on each other student for information and understanding of the functions of the organization. It could be considered a capstone technical writing and presentation experience in the capstone course. The students are each given written and verbal feedback regarding both oral presentation skills and their technical writing skills. The presentations are video taped, and each student is required to view his or her performance and submit a written evaluation of what they did well and what they could do differently to improve.

TMGT 492: As a final project in some 492 classes, students are required to form "Consulting Teams" and work together to make recommendations to a company concerning technical and management concerns. Students practice their team work abilities while planning, practicing, and presenting their conclusions. Each consulting team is required to make a professional presentation using Power Point or other presentation applications. A final written technical report is required of this project.

TMGT 497: The purpose of the class is to give students experience using team problem solving techniques. The class is structured so each student has opportunities to work, first with a partner, then with a team, to investigate and prepare presentations to the rest of the class. The students learn not only problem solving techniques, but how to work in groups and teams, how to make presentations, and how to write technical reports describing the process and their results.

Further evidence of oral presentation and technical report writing can be found in the course resource notebooks.

6.3.10 Industrial Experience: Each program of study shall include appropriate industrial experiences such as industrial tours, work-study options/cooperative education, or senior seminars focusing on problem-solving activities related to industry. Industrial experiences shall be designed to provide an understanding of the industrial environment and what industry expects of students upon employment.

Industrial Tours: Many classes take field trips to local industries to provide the students with exposure to the broad continuum of experiences available to them in the industrial setting. Some examples include:

TMGT 131: Digital Audio Disc Corporation; Bemis Corporation;

Industry Speakers: Many classes invite industry representatives as guest speakers. Often when this occurs, the professor hosting the speaker opens the invitation to the whole College of Technology, so the message can be received by as many students as possible.

Professional Internship Experiences: Industrial experience described to the students as, "One of the most important experiences you can have as a student." In the TMGT 131 class, students who have completed a cooperative education experience are invited to speak to the class and to describe the value of their experience to the incoming freshmen. The Career Center willingly sends a representative to any class to describe the process involved in registering for a cooperative education experience. Each student in the TMGT 131 class is required to complete the forms required for the cooperative education experience. Furthermore, the Career Center stations a representative in the lobby of the new technology building for four to six hours for one week in the beginning of each semester to register students for co-op experiences. The most recent advertisement is the kiosk in the atrium of the technology building. This kiosk gives information, testimonials, and examples of students who have

had a cooperative education experience.

TMGT 351: Every student in the Technology Management major is informed by their advisor that up to six hours of college credit can be earned by enrolling in an approved cooperative education experience and TMGT 351. The student is required to keep a daily journal, write a mid-term and final technical report of their experiences, and the professor of record visits the student's supervisor to insure all goals are being met.

6.3.11 Competency Identification: Student competencies shall be identified for each Program of study, including all options, which are relevant to the employment opportunities available to graduates.

1. Perform a variety of technical activities the student is likely to manage.
2. Communicate effectively in the production/engineering/management environment.
3. Solve technical problems or control the environment.
4. Make technology related decisions.
5. Allocate resources effectively.
6. Operate well in team environments, whether as leader or team member.
7. Operate well in an unsupervised environment.
8. Integrate ethics in all dealings.

6.3.12 Competency Validation: Validation of program of study outcomes/student competencies shall be an on-going process and shall be accomplished through a combination of external experts, industrial advisory committee(s), and follow-up studies of program graduates. Documentation of this validation shall be provided in the Self-Study Report.

Internal Competency Validation:

a. The student's advisor meets with the student to review the goals and expectations and outlines a plan of study to be followed.

b. First year review: For those students who begin the program as freshmen, during the first year, the student is expected to have successfully completed the introductory course TMGT 131, to have fulfilled the requirements for IT literacy (TMGT 195) as well as the first sequence in the requirement for math literacy (MATH 115). The student must maintain a 2.0 GPA.

c. Second year review: For those students who begin the program as freshmen, the student must maintain a GPA of 2.0 or better in program courses.

d. Third year review: For all students, including transfer students, the student must maintain a GPA of 2.0 or better in program courses, plus HLTH 318, and ENG 305T.

e. Fourth year review: Successful completion of the capstone course TMGT 478, Industrial Organization and Functions, exit interview conducted by Advisor. Student is given the opportunity to identify the strengths and areas of needed improvement in the program.

Post Graduation Assessment:

a. Alumni survey: A survey instrument is sent to graduates asking them to evaluate the level of preparation their program gave them.

b. Employer survey: A survey instrument is sent to employers of program graduates asking them to rate the level of satisfaction with the level of skill of recent graduates.

c. Graduate Placement: The University Career Center gathers data regarding placement and salary ranges.

d. Industrial Advisory Board: The Board meets with the TMGT faculty once each semester to give their perspective and point of view regarding program vitality and currency.

6.3.13 Program Development Revision and Evaluation: Program of study development, revision and evaluation shall involve currently enrolled students, faculty, program graduates, and representative employers.

The Technology Management program was revised in 2007. At that time, the program name was changed from Industrial Technology Management to Technology Management. At that time several course prefixes were changed due to a reorganization of the College department structure. The types of courses and basic structure, however, remained basically the same. These changes reflected the recommendations of the Advisory Committee, in response to a survey of past graduates and industry professionals.

The Department of Technology Management employs a four step process in the planning and development of new curriculum areas. The initial step in the process is a review of current literature and existing programs similar in nature across the nation. This review or "needs analysis" is completed by interested faculty members within the Department.

If the initial investigation suggests that a curricular area is warranted, then the second step is for the formation of a formal committee to develop an initial curriculum proposal. During this step, committee members do additional research, both literature and industrial-based, to ascertain the needs of current industry.

Upon completion of the initial curriculum proposal, step three involves a review of the proposal by both industrial consultants and also industrial advisory committees. At this point, the proposal is put into final form for the fourth step in the process.

Step four consists of the required procedures for new curriculum approval at both the University and State level. This involves approval by the College of Technology's Curriculum and Academic Affairs Committee and the Faculty Council. Upon approval at the school level, the proposal is forwarded to the University Curriculum and Academic Affairs Committee, then to the Faculty Senate.

Please refer to the Curriculum Approval Procedures Manual (CAPS) for a complete explanation of the curriculum process.

Programs in the TMGT Department are continually evaluated for relevancy and rigor, to ensure that they meet the needs of students and employers. Programs are evaluated by currently enrolled students through senior exit interviews and surveys as well as general discussion. Individuals responsible for instruction provide feedback for a program based on their research, contacts at conferences, and discussions with employers. Program graduates provide input through surveys.

If major revision becomes necessary, the procedure described for program development is followed.

6.3.14 Transfer Course Work: Institution and/or department policies shall be used to evaluate course work transferred from other institutions. All programs/options, including those with a significant amount of transfer course work, must meet the minimum credit hour foundation course requirements (Table 6.1) in each category.

A growing percentage of the College of Technology student body are transfer students from other four-year institutions, Vincennes University, Ivy Tech Comm. College, and two-year colleges from other states. An initial transfer evaluation (on the basis of instructional accreditation and satisfactory grades) is provided by the Office of Admissions. Department chairs and TMGT faculty then further evaluate the credit for possible acceptance in the program for which the student has applied. Credit is then posted to the student's permanent transcript. Formal agreements with Ivy Tech Comm. College and other schools are continuously being updated.

6.3.15 Upper Division Course Work: Students shall successfully complete a minimum of 15 semester hours of junior and/or senior level major courses at the institution seeking program accreditation.

The University requires a minimum of 124 hours of credit, 30 hours of resident credit, a minimum cumulative grade point average of 2.0 on a 4.0 scale, completion of a minimum of 50 hours at the 300-400 level, and completion of the General Education Program.

The Technology Management program requires the completion of 12 specific courses or 36 hours of 300 – 400 level course work. The additional required 300-400 level course work is taken in the technical minor/concentration/electives category.

6.3.16 Program Publicity – Adequate and Accurate Public Disclosure: Institutions shall broadly and accurately publicize, particularly to prospective students: (a) industrial technology program goals and objectives, (b) preadmission testing or evaluation requirements and standards, (c) assessment measures used to advance students through the program(s), and (e) fees and other charges.

University Effort. A major part of the University recruitment program is organized and administered by the Office of Admissions. Specific goals of this office include:

a. Present information about the University in a manner that will assist prospective students and their parents in making appropriate choices as to which college or university to attend.

b. Develop techniques and programs that will motivate students to seek additional information about the University.

c. Organize and conduct activities that will present the University in the most favorable way to prospective students and feeder school personnel.

d. Organize and conduct activities that will increase the number of new students enrolling at the University.

e. Work cooperatively with other University staff members to ensure maximum efficiency of the recruitment and application processing activities.

The Office of Admissions meets these goals through the following activities.

a. Direct mailing to prospective students

b. On-campus days, interviews, and campus tours

c. New Student Orientation

d. Freshmen follow-up

e. College fairs

f. Student-parent receptions

g. High school visits

h. Special alumni events

i. Phone call program

j. Distribution of posters

College Activities. One of the major functions of the Office of the Associate Dean in the College of Technology is to coordinate undergraduate recruitment activities for the CoT. The Associate Dean oversees the Technology Student Services Center that has the responsibility to conduct recruiting activities. Some of the regular recruitment efforts include:

a. School representative to the Office of Admissions

b. Development and dissemination of brochures

b. Coordinate recruiting activities such Tech Trek, Major's Fair, College Tech Prep, and Hands-on-High Tech

d. Development of all special recruitment programs such as Introduction Programs, College of Technology Career Fairs, etc.

Department Activities: The Department has faculty members who visit high schools for recruitment purposes. Faculty members also meet prospective students and parents when they visit campus. This usually includes tours of the facilities, program information, and initial advisement. The Department has also completed several mailings to counselors at the high school level, across the State, to inform them of the opportunities at Indiana State University. The Department also takes an active role in all school-level recruitment activities such as those listed above. Department faculty are also involved in outreach activities such as the Explorer Program that expose young students to skills and careers in the manufacturing profession.

The institution, the College of Technology, the TMGT Department and even the Technology Student Services Center all have web sites to advertise much of the Information listed in this standard.

6.3.17 Legal Authorization: Only institutions legally authorized under applicable state law to provide degree programs beyond the secondary level and that are recognized

by the appropriate national or regional accrediting agency are considered for ATMAE accreditation.

Indiana State University is a public, state-supported institution, under the general control of a board of trustees, known and designated as the Indiana State University Board of Trustees. Other state boards, offices, and agencies exercise certain statutory controls and have specified duties and responsibilities pertaining to the operation of the University. .

6.4 Instruction

6.4.1 Course Syllabi: Course syllabi must be presented which clearly describe appropriate course objectives, content, references utilized, student activities, and evaluation criteria. Representative examples of student's graded work shall be available for coursework.

Course syllabi are available for each course. Course notebooks have been prepared to clearly describe appropriate course objectives, content, references utilized, student activities, evaluation criteria and evidence showing a range of examples of students' graded work. The notebooks will be made available in the resource room.

6.4.2 Reference Materials: Appropriate reference materials such as periodicals, audio-visual materials, websites and computer application software (when appropriate) shall be utilized for each course or series of courses to supplement textbooks or course packs.

There are many areas where the program can access reference materials appropriate for individual classes. The Cunningham Memorial Library houses books, periodicals, electronic media, and an excellent reference service complete with computerized searches. Research assignments are given, for example, in TMGT 131, and TMGT 478, to mention only two, where students are required to avail themselves of the services offered at the library. There exists a Library Committee in the College of Technology and each year faculty are given the opportunity to request books and periodicals to be purchased and available for student use in the library.

The Office of Information Technology supports multimedia services for all faculty as needed in instructional settings.

Each room in the Myers Technology Building is equipped with state of the art media projection systems. Professors often access the web during class to supplement the information being presented. A variety of appropriate periodicals are available in classrooms for student use.

6.4.3 Program Balance: Appropriate laboratory activity shall be included in the program(s) and a reasonable balance must be maintained in course work between the practical application of "how" and the theoretical/conceptual emphasis of "why".

By definition, the student of industrial technology is one who has a theoretical understanding balanced by "hands-on application." Because the faculty is committed to this balance, classes have theoretical instruction balanced by laboratory demonstrations and student participation. Theoretical underpinnings and laboratory instruction are delivered by the professor of the course. The grading system in each of the classes reflects this same balance between theory and application. Grades are determined by assessment of the theoretical knowledge by examination as well as demonstration of application in laboratory exercises. No single element is more important than the other.

Thus, through instruction and grading practices the message is clear that theory and application are seamlessly integrated and skill with both makes the technologist a valuable resource.

6.4.4 Problem-Solving Activities: Emphasis in instruction shall be focused on problem-solving activities which reflect contemporary industrial applications.

The employers who hire our students tell us that the ability to solve problems is one of the most valued traits in the college graduate. Obviously, laboratory experiments are natural opportunities to apply the ability to solve problems, and more than 50% of the course work towards the degree in Manufacturing Technology has a laboratory component. However, each class offers students opportunities to apply their problem solving skills. There are many instances and examples that could be cited, following are some examples:

TMGT 131: Students identify areas of needed improvement based on the completion of the LASSI inventory. The LASSI has identified a potential problem area, and students are then instructed to discover the systems in place at ISU to help them solve their problem. Students are placed in teams of three, they discover resources, then report to the class the results. The steps of the problem solving process are explained and students are given a "real world" opportunity to implement the process.

TMGT 478: Students are given the problem of manufacturing a specific number of products, within a budget, in a narrow time frame. The students are also tasked with designing an original product which would be marketable to a target population.

TMGT 497: Students are taught, in an interactive format, a specific problem solving method. The class is required to apply the newly learned method to solve a "real world" problem identified at ISU.

Examples of problem solving activities can be found in the course notebooks.

6.4.5 Supervision of Instruction: Appropriate supervision of instruction shall be evident throughout the program.

Faculty members in the Department have been selected and appointed to their positions after careful scrutiny and verification that they possess excellent qualifications for the position. These include both professional and technical qualifications. Careful evaluation of their instruction is conducted by the chairperson and a committee of their peers during their probationary period prior to being granted tenure. Following the granting of tenure, instruction is evaluated less formally except in cases where the faculty member applies for promotion or "above standard" pay increases. In those instances, rather detailed documentation of teaching performance is required.

6.4.6 Scheduling of Instruction: The organization and scheduling of instruction shall allow adequate time for completion of appropriate homework assignments and laboratory problem-solving activities.

Many of the required courses are offered every semester, however, some courses are offered once a year. Students are able to schedule their courses in the suggested sequence and meet the requirements of any prerequisites. By distributing courses throughout the week, students have ample time to complete homework and other "out-of-class" assignments. Most laboratory assignments are scheduled for class time as

very few labs are “open labs”. Professors are aware of the restrictions on student time and are generally conscientious about setting realistic deadlines for any assignments, especially laboratory assignments. Evening classes are offered as necessary. Distance courses are offered to accommodate our distance students in certain programs.

Faculty teaching assignments depend on the departmental schedule requirements, the nature of the courses taught, the combination of undergraduate and graduate courses, and, to a limited extent, non-teaching assignments. The normal teaching load is nine to twelve credit hours of course work per semester. Contact hours for a course load would vary according to what type of course is being taught, i.e., one hour contact per one hour lecture and more contact for a laboratory. Consideration is also given to the number of preparations required of a faculty member. These weights are carefully observed in making faculty teaching assignments.

6.5 Faculty

6.5.1 Full-Time Faculty: Each program of study option shall have an adequate number of full-time faculty.

Currently, the TM program is taught by faculty from several different programs since there are no specific courses unique to the technology management program.

6.5.2 Minimum Faculty Qualifications: The review of program faculty qualifications shall include current faculty resumes providing clear evidence documenting the extent and currency of: (a) academic preparation, (b) industrial experience at the management/supervisory levels, (c) applied industrial experience related to the program content area(s), (d) current certifications/licensure related to the program content area(s), (e) membership and participation in appropriate professional organizations, and (f) scholarly activities. The minimum academic qualifications for regular tenure track, or full-time, faculty members shall be a graduate degree in a discipline closely related to the instructional assignment.

Resumes of the regular full-time faculty teaching in the Technology Management program are available. The current minimum academic qualification for a tenure track faculty member is a terminal degree in a discipline closely related to the faculty member’s instructional assignment, although there are a few faculty with master’s degrees who are tenured. Varying additional hours of graduate work are required for hiring at academic ranks above the instructor level with the requirement of an earned doctorate for the associate professor and professor rank. Tenure-track faculty are appointed with the expectation that a pre-tenure probationary period will be served.

6.5.3 Academic Preparation of Faculty: A minimum of fifty percent of the regular tenure track, or full-time faculty members assigned to teach in the program of study content area(s) shall have an earned doctorate or appropriately defined terminal degree. Exceptions may be granted to this standard if the institution has a program in place that will bring the faculty demographics into compliance within a reasonable period of time.

At the present time there are 3.5 full-time faculty in the TM Department teaching one or more courses in the TM program. The TM Department chair has the following responsibility: .5 chair, .5 faculty. Two of the faculty hold earned doctorates and one has completed all the course work for the doctorate.

6.5.4 Selection and Appointment Policies: Policies and/or procedures utilized in the selection and appointment of faculty shall be clearly specified and shall be conducive to the maintenance of high quality instruction.

Appointment to the Indiana State University faculty is by the Indiana State University Board of Trustees on the recommendation of the President of the University. The usual procedures for selecting candidates for faculty positions is 1) determine a need, 2) develop a staffing plan, 3) get approval from Academic Affairs, 4) advertise the position, 5) interview potential candidates, and 6) hire an individual.

6.5.5 Tenure and Reappointment Policies: Faculty tenure and/or reappointment policies and procedures shall be comparable to other professional program areas in the institution. Requirements in the areas of teaching, service, and scholarly activity shall be clearly specified for faculty in Industrial Technology.

Faculty tenure and reappointment policies and procedures in the Technology Management Department are comparable to other professional program areas in the institution. Requirements for teaching, service and scholarly activity are clearly specified for all COT faculty and can be reviewed in the COT Promotion and Tenure Standards document.

6.5.6 Faculty Loads: Faculty teaching, advising, and service loads shall be comparable to the faculty in other professional program areas at the institution. Consideration shall be given in faculty teaching load assignments to high contact hours resulting from laboratory teaching assignments.

The University Handbook identifies a normal teaching load as 12 semester credit hours of course work per semester or 24 semester credit hours per academic year.

Teaching loads within the College of Technology depend on the departmental schedule requirements, the nature of the courses taught, and any non-teaching assignments. Graduate courses are weighted more heavily than undergraduate courses. A faculty member teaching a graduate course may have his/her teaching load reduced to nine credit hours.

Faculty service loads are comparable to the faculty in other professional program areas at the institution. TM faculty perform institutional, professional and community service in varying degrees. The service component is only one area upon which faculty are evaluated for reappointment, tenure and promotion. Faculty understand there needs to be a good balance between teaching, service, and scholarly activity. With each year's evaluation for reappointment, TM faculty are reminded to work toward activities in all three areas.

The advising of students is divided equally among the faculty teaching in the TM program. It is understood that advising, when done properly, takes a considerable amount of time. The routine scheduling of classes was shifted a few years ago to the Associate Dean's Office. Currently, Ms. Jo Anne Seybold is providing assistance to some of the AMM students regarding routine scheduling of classes.

6.6 Students

6.6.1 Admission and Retention Standards: Admission and retention standards shall be used to ensure that students enrolled are of high quality. These standards shall compare favorably with the institutional standards. Sources of information may include admission test scores, secondary school rankings, grade point averages, course syllabi, course examinations, written assignments, and oral presentations.

Indiana State University, in affirming its commitment to excellence, recognizes the value of a student population reflecting academic achievement, cultural diversity, and special

talent. The University's admissions policy allows for the individual consideration of each applicant, and helps it service a student population with these characteristics.

The primary criterion for admission is evidence that a candidate is prepared to succeed in a degree program, given the University's limited resources for special assistance.

Admission standards are stated in terms of traditional school and college grading systems. For applicants whose records include either a high proportion of non-traditional grades, or a subject pattern which departs markedly from that normally associated with university study, additional evidence of academic potential in support of their applications, such as entrance examinations, interviews, and letters of recommendation, may be requested. The admission of applicants who are older than the traditional college age will be determined individually with special attention given to employment experience and motivation.

Individuals may seek exceptions to any of the requirements by petitioning the Admissions Committee to consider additional factors that may indicate college potential. A limited number of students may be admitted on condition that they agree to follow a prescribed course of study and advisement.

6.6.2 Scholastic Success of Students: Students in Industrial Technology shall have scholastic success comparable to those in other professional curricula in the institution. Grading practices in Industrial Technology courses shall be comparable to other departments and/or programs in the institution.

Students graduating from the College of Technology, and particularly the TM Department, have scholastic success comparable to those in other curricula in the institution.

6.6.3 Placement of Graduates: The initial placement, job titles, job descriptions, and salaries of graduates shall be consistent with the program(s) goals and objectives. Industry's reaction to graduates as employees must be favorable. Follow-up studies of graduates shall be conducted every two to five years. Summary statistics relating to follow-up studies of graduates shall be made available to the visiting team. These statistics shall include placement rates as well as salary levels of program graduates.

The initial placement of graduates of the TM program have enjoyed the same favorable reception by industry as graduates of similar programs around the country.

The ultimate goal of the program is to prepare our graduates with the proper skills to be successful in their career. The TM faculty work closely with the advisory board and other technology professionals to help ensure that the TM program will prepare students to gain initial employment and then advance in their career.

6.6.4 Graduate Studies: If an objective of the program(s) is to prepare students for graduate studies, then the success of Industrial Technology graduates in graduate programs shall be tracked and confirmed.

No data is currently available on the number of graduates from the TM program that entered or completed graduate degree programs. Students graduating with a degree in Technology Management generally do not pursue an advanced degree until after they have gained several years of work experience because some companies will pay for part or all of their graduate expenses. Most students who pursue an advanced degree enroll in industrial technology type degree programs, such as the MSIT program at ISU.

6.6.5 Student Evaluation of Program(s): Evaluations of the Industrial Technology program(s) shall be made by its graduates on a regular basis (two to five years). Reactions and recommendations shall be considered in program revisions.

Students in the TM program have a few opportunities to evaluate the program. Each student will have an exit interview just prior to graduation. Students also complete a senior survey with the Career Center. Every few years, survey letters are sent to alumni and employees to further evaluate programs in the TM Department.

6.6.6 Student Enrollment: Enrollment shall be adequate in each program area to operate the program(s) efficiently and effectively. The level of available financial and facility resources shall be considered as a constraint on the maximum number of qualified students to be admitted to the program(s). Enrollment trends shall be tracked, and factors affecting enrollment patterns shall be identified and analyzed. Enrollment projections shall be made which relate closely to short and long-range goals as well as financial and physical resource needs.

Enrollments (both undergraduate and graduate) in the College of Technology have remained steady since 1998. Enrollments in the TM program have been growing significantly since modifying the program and developing articulation agreements with other schools.

6.6.7 Advisory and Counseling Services: Adequate and timely advising and counseling services shall be available for students.

All students who have not declared a major area of study (non-preference students) and all non-degree students are advised in the Student Academic Services Center. The Center serves as the designated "school" of enrollment for these students until an official major has been declared.

The purposes of the Student Academic Services Center are: (1) to help freshmen adjust more easily to the academic processes of the University; (2) to assist in selecting academic majors, in choosing wisely the specific courses needed to attain these goals; (3) to coordinate the participation of faculty in the advisement of students; and (4) to function as a resource center for materials and information concerning undergraduate curricula and general education requirements.

Primarily, the Student Academic Services Center serves freshmen and sophomores. Students are provided an opportunity to discuss academic concerns in confidence with counselors, and arrangements are made for students to confer with faculty members concerning career opportunities in various academic areas.

When a student chooses a major area of study, his/her records are transferred to the chosen College and department. A faculty advisor is then assigned to the student.

<u>Faculty Academic Advising</u>

When the student has chosen an area of specialization, he/she is referred to a regular faculty member who serves as the academic advisor. Data including the student's personal biography, high school rank, and rating on the freshman orientation and achievement examinations are supplied to the advisor. The advisor will assist the student in planning the use of his/her time in acquiring good study methods and in referring the student to special services on campus as the need arises.

The advisor, in cooperation with various University agencies, will assist the student in

scheduling his/her successive programs of study. At the first mid-semester, the end of each semester thereafter, and such other times as advising sessions are needed, the academic advisor will confer with the student regarding the progress in relationship to his/her own natural level of learning and to the academic standards of the University.

Faculty in the Department of Technology Management advise students who are enrolled in either the TM program.

Student Participation in Program Planning

Each student enrolled in the University is expected to read carefully and to understand the contents of the University Catalog that are applicable. This includes the awareness of the University general policies and regulations for academic achievement necessary for continued enrollment as well as for graduation, in addition to those regulations identified by Student Services relating to his/her social and campus conduct.

The students are also responsible for familiarizing themselves with any requirements special to the academic discipline of their choice which must be a condition of their qualifying for graduation.

Each student should assume at the earliest moment possible the initiative for preparing the semester schedule of classes. The academic advisor is available to offer suggestions and to verify the accuracy of course choices in meeting curricular patterns, but the primary responsibility for knowing the requirement of the academic program and proceeding to satisfy those requirements in an orderly and sequential manner remains with the student.

6.6.8 Ethical Practices: Ethical practices shall be fostered, including reasonable student refund policies and nondiscriminatory practices in admissions and student employment.

Indiana State University is unequivocally pledged to principles of nondiscrimination, assuming fair and equitable treatment of all persons. The University has given assurance of compliance with national, state and local civil rights legislation and enactments.

Indiana State University reaffirms its present policy of nondiscrimination and equal employment opportunity with respect to recruitment, hiring, training, promotion, and treatment of persons. The organizations, services, and programs under the legal control of the Trustees of Indiana State University shall be maintained on a nondiscriminatory basis in regard to race, sex, religion, handicap, veteran status, age, or national origin at all times.

Indiana State University will continue to take positive actions to ensure against discrimination directed to any persons. All members of the faculty and staff are expected to give full support to the University's commitment to equal opportunity and affirmative action.

The tuition refund policy and withdrawal policy can be found in the Undergraduate Catalog.

6.7 Administration

6.7.1 Program Administration: Programs in Industrial Technology are expected to have an identifiable, qualified individual with direct responsibility for program coordination and curriculum development. This individual should be a full-time

employee of the institution.

The Technology Management program is lead by three professors in the Technology Management Department. The coordinator position is conferred by faculty consensus upon the faculty member best capable of providing leadership for the program. The faculty of the department have the primary authority and responsibility for curriculum development.

6.7.2 Administration Leadership: Individuals assigned to administer Industrial Technology programs must demonstrate effective leadership and a high level of support for Industrial Technology

The Department chair serves as the head coach and cheerleader for the department. The chair is the spokesperson for the department and is the primary liaison between the department and the rest of the University community. The chair is responsible for reporting and record keeping requirements. For most activities, such as curriculum decisions, faculty evaluations, and program administration, the chair as one entity and the rest of the departmental faculty as another share equal authority. In these matters, the chair is required to seek faculty input. The chair has discretionary authority concerning only budgeting and scheduling. The Dean of the College of Technology has been very supportive of all programs housed within the College. The respect the College of Technology has achieved within the University, within the community, and within the region, in part, can be attributed to the past three Dean's.

6.7.3 Administrative Support: There must be appropriate support for Industrial Technology from the personnel holding leadership positions in the departments and colleges where Industrial Technology is administratively located.

The Chair and the Dean support the concept of shared participation which has been utilized in student recruitment, curricular matters, instructional evaluation and service and scholarly activities. Committees are utilized to develop policies the Chair may use in regard to personnel matters, budget development, supply and equipment expenditures, repairs and curriculum matters.

Both of the Deans and the TM Department Chair support the Industrial Technology programs. All of these individuals have been long-time members of ATMAE (NAIT). Most of these individuals attend the yearly ATMAE/NAIT Conference and a few are actively involved in the organization.

6.8 Facilities and Equipment

6.8.1 Adequacy of Facilities and Equipment: Physical facilities and equipment, which are suitable to serve the goals and objectives of the program(s), shall be available for each program option. Where facilities and equipment appear to be minimal to support a quality program(s), comparisons with support levels for other professional programs at the institution will be made by the visiting team.

The $18.5 million, 120,000 sq.ft. Myers Technology Center, opened in 1998, provides a 21st century learning environment.

At the present time there are four major lab areas associated with the TM program. They are (1) Machine Tool Processing Lab, (2) Manufacturing Lab, and (3) SIMCO lab.

6.8.2 Support for Facilities and Equipment: Facility and equipment needs shall be reflected in the long range goals and objectives for the program(s), and option(s)

and sources of potential funding shall be identified.

One of the long-range goals is to continue to update equipment and enhance laboratories in the TM program.

The TM Department receives a budget for equipment each year. These monies are then distributed to the various programs by a process whereby individual faculty submit requests to a departmental committee. The committee reviews the requests and submits a list of recommended purchases to the Department Chair for purchase. The system is deemed fair and equitable and the available monies adequate to maintain program integrity.

Additional support for the programs through donations of equipment and supplies from outside sources is constantly being sought and has been very successful.

6.8.3 Appropriateness of Equipment: Equipment shall be appropriate to reflect contemporary industry. Student use of equipment reflecting current technology practices shall be evident.

An underlying philosophy held by the faculty involved in the technology management program has been to secure equipment that is representative of that used by industry. Whenever this is not possible, table top models or units are considered for purchase. Essentially all equipment is used by the students in laboratory situations.

6.9 Computer Systems

6.9.1 Availability of Computer Systems: Appropriate and current computer systems and software shall be available to both students and faculty. These systems must cover appropriate functions and applications in each program area. These systems may be on or off-site as long as the systems are accessible to students and faculty.

Campus wide, there are several thousand computers in approximately 400 laboratory settings. The COT has hundreds of computers. One such lab, the Student Computing Center, is open 24 hours a day, has 100 computers and several laser printers available for student use, and always has a computer consultant available to help students with concerns or problems.

6.9.2 Utilization of Computer Systems: Evidence shall be available which indicates that students and faculty are making significant use of computer systems related to program curricula.

Evidence indicating that students and faculty are making adequate and appropriate use of computer systems begins with on-line registration and is evident through many class assignments and ends with the on-line designation of grades. ISU has enacted an interactive computer system called: MYISU. Students determine what classes are available, register for classes, drop and add, find out their grades, and communicate with their professors and fellow students through use of the Portal.

Faculty use computer systems for advisement by downloading Degree Audit Reports, for reporting attendance by electronically inputting absences after the sixth and tenth weeks of the semester, and for electronically reporting grades at mid-term and end of term. Faculty use the computing systems to email, make assignments, and send electronic attachments to all class members, thus eliminating the need to make hard copy and distribute during class.

6.10 Financial Resources

6.10.1 Financial Support: The budget for the Industrial Technology program(s) shall be adequate to support program objectives. When judging sufficiency, the visiting team shall make comparisons with the support levels given to other professional programs at the institution.

Each year the Department received an operating budget based on the previous year's expenditures. Over the years, the operating budget hasn't changed much until the most recent budget crises where the department lost some supply funds. Generally, if operating expenses exceed the budget, a request is made to the Dean for financial support. This rarely happens as the chair and faculty work to stay within the budget.

In addition to the operating budget, equipment budgets are also given to each department. The allocation of these equipment budgets is based on the laboratory needs of each department. Each department also receives a portion of the Distance Delivery dollars that are generated by distance courses. The TM department currently receives approximately $13,000/year that can be used to support distance financial endeavors.

Faculty salaries are determined upon initial appointment. After initial appointment salary increases are based on standard across the board raises or sometimes upon below standard increases, standard increases, or above standard increases. The level of increase which each faculty may receive is based on their level of activity in the areas of Teaching Effectiveness, Service, and Scholarly Activities.

Faculty also receive increases in base pay upon earning advanced degrees and also in the case of promotion to higher ranks.

Control of expenditures is solely within the Department. An initial allocation of operational funding is given to each program in the form of a supply and a student wages account. All equipment purchases are approved by a departmental finance committee which ranks and approves requests for capital equipment purchases.

6.10.2 External Financial Support: There shall be evidence of external support for the programs(s) in Industrial Technology. However, this external support shall be treated as supplementary support and is to be used to achieve and maintain a high level of program excellence. This external support shall not be used to displace funding support normally provided by the institution.

External financial support is regularly sought from industry partners and from individual supporters to finance activities and purchases beyond those required for normal operations.

6.11 Library Services

6.11.1 Library and Internet Resources: The administrative unit containing the Industrial Technology program(s) and/or the institutional library shall have access to technology resources, literature and reference materials adequate to meet the curriculum and research needs of students and faculty

Library resources are quite adequate. The COT has a library budget comparable to other units on campus. The library responds readily to requests for books and periodicals needed for COT programs. Adequate books, periodicals, and computer-based materials are available for reference and for circulation. A growing number of internet and CD resources and search aids are available on-line through the Cunningham Memorial website.

6.11.2 Utilization of Library and Internet Resources: Evidence shall be available which indicates that students and faculty are making adequate and appropriate use of library and reference resources.

Students are making adequate and appropriate use of the Library. Most courses include technical reports, term papers, and other class presentations where the Library houses the necessary information.

Evidence of these requirements may be found in the syllabi found in the course resource notebooks.

The faculty have identified no accurate techniques to measure the extent to which faculty are making adequate and appropriate use of library resources.

6.12 Support Personnel

Support Personnel: Personnel such as teaching assistants, student workers, office professionals, and laboratory technicians shall be adequate to support program objectives.

The following personnel provide support for the TM Program:

1. Administrative Assistant – The Department has one full-time Administrative Assistant. She must handle the work from all members of the Technology Management Department.

2. Technicians – The College of Technology has an electronics technician and a mechanical technician available to assist faculty with projects and repairs.

3. Graduate Assistants – The TM programs have seven graduate assistants presently assigned who are being utilized as teaching assistants. The Department also has one Ph.D. fellow working with the Department faculty.

4. Student Workers – Student workers provide support for all TM programs. Students are used to help organize, clean and set up the labs, and assist the Lab coordinators. Money is available in the operating budget to hire Student workers.

6.13 Placement Services

6.13.1 Placement Services: Appropriate services shall be available to assist with the placement of program graduates. Placement of graduates shall be tracked and the effectiveness of placement services shall be evaluated by the administrative unit containing the Industrial Technology program(s).

Although the Career Center helps students find suitable summer and part-time employment, the focus of its activities is on placement of seniors, graduates, and alumni. Career Center services are viewed as an integral part of the academic program of any student to fulfill the University's educational objectives.

6.13.2 Cooperative Education/Internship: If cooperative education or internship is either a required or an elective part of the program, then appropriate services shall be provided to assist with the placement and supervision of cooperative education students.

Cooperative education/Internship is required in the TM program. As stated earlier in this document, students receive credit for co-op through a course numbered TMGT 351 in their major. Some students take repeated co-op positions and can receive TMGT 351 credit for a total of six semester hours.

Employers are contacted about their possible interest in co-op through several activities. Faculty make many contacts with industry professionals and the Career Center sponsors career fairs for companies interested in co-op students.

Students are made aware of co-op opportunities through a variety of activities. Career Center personnel make presentations in many College of Technology classes. Students also attend meetings of professional organizations, and participate in many other student-centered activities including IOPP meetings, SME meetings, Women in Technology Meetings, the Career Fair, and other activities.

6.14 Industrial Advisory Committee(s)

6.14.1 Program Advisory Committee(s): An industrial advisory committee shall assist in the validation of program content. If more than one program of study or program option is available, then appropriately qualified industrial representatives shall be added to the committee or more than one committee shall be maintained. Policies shall be presented to indicate the: (a) procedures used in selecting members, (b) length of appointment, (c) organization of the committee, (d) committee responsibilities, (e) frequency of meetings, and (f) methods of conducting business.

The industry advisory committee assists the Technology Management and the Advanced Manufacturing Management programs in many ways. They help with validation of content, provide their expertise and that of the companies they represent and make suggestions that will help improve the program.

Since there are many similarities between the Technology Management program and the Advanced Manufacturing Management program, one industrial advisory committee is utilized for both programs. After the last NAIT re-accreditation in 2004 a constitution and by-laws document were created to guide the activities of the industrial advisory board. It addresses all of the items in this standard and is included here for the visiting team to review.

CHARTER CONSTITUTION AND BY-LAWS

Advisory Board for the Manufacturing Programs
at
Indiana State University

Approved: April 20, 2006
Revised June 10, 2008

Preamble

We, the members of the Advisory Board for the Manufacturing Programs at Indiana State University, do hereby adopt and establish the following Constitution and By-Laws.

Name

This organization shall be known as the Advisory Board for the Manufacturing Programs at Indiana State University (or briefly, the Advisory Board).

Purpose

The purpose of the Advisory Board shall be to advise, support, and promote the Manufacturing Programs (MP) at Indiana State University so that the student's learning experience upon graduation will more effectively support the practical development of future leaders in the manufacturing industry.

Other objectives of the Advisory Board shall be to:

- **Provide regular critiques of the Program's curriculum.**
- **Suggest course offerings that would benefit MP students.**
- **Provide strategic planning assistance to help meet future needs of graduates and the manufacturing industry.**
- **Provide input to the MP graduate programs.**
- **Assist in the establishment of MP certificate programs.**
- **Assist in providing cooperative education/internship experiences for students, placement of MP graduates, and professional development for faculty.**
- **Support fund-raising.**

Membership

The number of Advisory Board members will be a minimum of eight (8) and a maximum of twenty (20) plus ex officio (nonvoting) members:

- **Dean of the College of Technology.**
- **Chair of the Department of Technology Management (TM).**
- **Manufacturing Programs (MP) faculty.**

Procedures used in selecting members:

- **Advisory Board members shall be selected from professions and trades related to the manufacturing industry.**
- **The Advisory Board members shall be nominated by the MP faculty to the Chair of the TM Department. The Chair shall schedule a meeting of the MP faculty to make a final decision.**
- **Each appointment to the Advisory Board shall be for three (3) years, except when the appointment is to fill an unexpired term.**
- **Approximately two-thirds of the members will be retained each year with none serving more than three (3) successive years, unless reappointed by the Manufacturing Programs faculty.**
- **The term of a new Board member shall begin on January 1.**

Any member may resign his or her membership in the Advisory Board by submitting a signed resignation to the chairperson of the TM Department.

Any member missing two consecutive meetings without due cause shall be considered uninterested and eliminated from membership.

Board Policies

The Advisory Board for the Manufacturing Programs is based upon the principles of equality of all its members regardless of sex, race, creed, or color.

All members shall strive to fulfill in good faith the objectives of the Advisory Board and the obligations assumed by them in accordance with this constitution.

Finances

The necessary expenses of this organization shall be paid from the operating expenses of the TM Department.

No dues shall be required of any Advisory Board members.

Amendments

Amendments to the Constitution or By-Laws shall be ratified by three-fourths affirmative vote of the active members.

BY-LAWS

Officers

The Advisory Board shall have two officers—President and President-Elect. The Chair of the TM Department shall serve in an advisory role with duties listed below. Elections will be held once a year during the spring meeting. Nominations can be taken from the floor. Officers shall serve for a term of one (1) year.

The duties of the President shall be as follows:

Provide a focus for the membership and preside at each meeting.

Coordinate all administrative responsibilities of the Advisory Board.

Schedule meetings.

Prepare agendas.

The President-Elect shall assist the President as necessary and prepare to serve as the next President.

The Chair of the TM Department shall assist the President as follows:

Serve as the liaison between the Advisory Board and the Manufacturing Programs faculty.

Write and distribute meeting minutes.

Prepare, update, and distribute a Board directory.

Coordinate meetings and prepare agendas.

Assist in the selection of new members.

Board Committees

The President shall appoint committees as deemed necessary.

Board Meetings

The Advisory Board shall meet at least once a year.

Special meetings of the Board may be called by the President as deemed necessary.

A quorum shall consist of one half of the active members of the Board. If there shall be less than a quorum present, those present may either adjourn or act on the matters before it, subject to ratification at the next meeting which constitutes a quorum.

(End of Document)

6.14.2 Advisory Committee Meetings: The Industrial advisory committee(s) shall meet at least once each year, and minutes shall be kept of these meetings showing agenda items, actions taken, and recommendations made.

The IAC has been very helpful in making suggestions that have benefited the Manufacturing programs.

Following are two examples of minutes from IAC meetings. Some of the recommendations made and actions taken are evidenced in the minutes.

Technology Management Department
Technology Management program (BS)
Technology Management (BS)
Industrial Technology Program (MS)
Minutes of Advisory Board Meeting
March 27, 2008

ATTENDEES:

Bob Brown	Tri Aerospace	Gordon Minty	ISU
John DiCenso	Raybestos Power Train	Wes Richardson	Quality Council/IN
Beth Fauber	ISU	Jim Smallwood	ISU
Tad Foster	ISU	Mark Deady	Aisin Brake
David Lynch	PDF Controls	Marvin Miller	Unison Engine
Jeff McNabb	ISU	Mike Johnson	Novelis

I. Welcome and Introductions

II. Agenda Additions

III. Approval of Minutes (April 12, 2007) – Approved as submitted.

IV. Dean's Report, Dr. W. Tad Foster – Dean Foster spoke to the following issues:
1. Project with Landstone (Compression and Absorption)
2. COT Reorganization
3. Enrollments (undergrad and grad)
4. Project Lead the Way

V. Verify Address, Phone, E-Mail

VI. Discussion Items (New Business)

A. General Announcements
1. Ivy Tech – Articulation agreements will be updated and signed in April.
2. Meeting canceled last fall due to so many conflicts.
3. How you have helped the ISU faculty and programs.

B. Election of President & President-Elect – Elected for the 2008-2009 year were: President – Wes Richardson; President-Elect – John DiCenso.

C. COT Reorganization – J. Smallwood just added to what the Dean spoke about the reorganization by relating how the changes would affect the Board.

D. TM Dept. Programs – J. Smallwood distributed information about all programs in the new TM department.

E. Curriculum Update – B. Fauber and G. Minty discussed the changes that were made to the manufacturing programs. Information was shared (checksheets, suggested 4 yr. course sequence, etc..)

F. NAIT Reaccreditation – Wes Richardson requested this be added to the agenda. There was discussion about the next team visit and what we needed to do now to get prepared.

G. Action Items from last meeting:
1) Bob Brown gave the WVAMC video to Sajid but somehow it didn't get to J. Smallwood. We will follow up to see what happened.
2) There was some discussion on how to market manufacturing programs through the WVAMC and WIB. More discussion on this topic at a future meeting.

H. Actions Items for Next Meeting (Fall 2008):

1) **Send** constitution and by-laws to Mark Deady.
Person in Charge: Jim Smallwood
2) **Send** an updated list of the activities to the advisory board.
Person in Charge: Jim Smallwood
3) **Contact** Archie Kappel and Jim Kern to see if they want to continue on the advisory board**. Person in Charge**: Jim Smallwood
4) **Update** the Constitution and By-Laws to reflect the new TM department**.**
Person in Charge: Jim Smallwood.

Meeting adjourned.

Technology Management Department
Technology Management program (BS)
Technology Management (BS)
Industrial Technology Program (MS)
Minutes of Advisory Board Meeting
October 30, 2008

ATTENDEES:

Bob Brown Tri Aerospace
John DiCenso RayBestos PowerTrain
Beth Fauber ISU
Ann Case Tredegar
Mike Hayden ISU
Gordon Minty ISU
Wes Richardson Quality Council/IN
Jim Smallwood ISU
Jeff McNabb ISU

I. Welcome and Introductions

II. Agenda Additions

III. Approval of Minutes (March 27, 2008) – Approved as submitted.

IV. Dean's Report, Dr. Jeff McNabb – Dr. McNabb spoke to the following issues:
1. Enrollment and Retention
2. Searches in the COT
3. NAIT
4. Project Lead the Way
5. Capital Campaign
6. Tech Trek

V. Verify Address, Phone, E-Mail

VI. Discussion Items (New Business)

A. General Announcements

1. Action Items completed from last spring.
2. Dean's Search committee is being assembled.
3. Dr. Smallwood will be on Sabbatical Leave in the spring.
4. New faculty in TMGT dept.

B. NAIT re-accreditation – The NAIT visiting team will come in Spring, 2010 to review programs for re-accreditation. There was discussion on what needs to be done to get prepared for their visit.

C. Student Learning Outcomes – There was discussion on the Student Learning Outcomes for the Advanced Manufacturing Mgt. program. The advisory board provided some input and is being asked to provide additional feedback to Professor Fauber.

D. Mission and Vision – The TM dept. is currently working on the mission and vision statements for the new department. The advisory board provided some input.

E. Strategic Planning - Strategic planning is underway for the manufacturing related programs. The advisory board is being asked to provide input.

F. Action Items from last meeting: Dr. Smallwood completed the four action items from the spring advisory board meeting.

G. Actions Items for Next Meeting (Spring, 2009):

1) Provide input to Professor Fauber on a) Mission and Vision, b) Student Learning Outcomes for the AMM program, c) Strategic Plan.
Person in Charge: All Advisory Board Members and ISU faculty.

Meeting adjourned.

6.15 Educational Innovation

Educational Innovation: There shall be evidence that program objectives are based upon long-range planning related to the industries being served. Program content must be current in both content and delivery of instruction.

Input is gathered from the Industrial Advisory Council and other industry professionals through professional association meetings, internships, field-trips, projects and many other techniques. Through all of these efforts the faculty have a good understanding of current manufacturing practices, both technical and management. The program objectives in the TM program are constantly reviewed for relevance. As you will see in standard 6.16 the faculty have established an assessment plan for the program that will review all of the outcomes/student competencies twice over a six year period. This long range plan will allow us the opportunity to confirm what we do in the TM program or to make decisions about curricular changes where necessary.

Teaching methods are changing as faculty identify and develop the best method to use in meeting objectives of each course. Several Department members have completed Distance Delivery training and are transforming classes to be offered via distance education methodologies or improving classes which are currently offered

through distance measures. Several faculty use the course management software Blackboard to supplement their on-campus courses. Some faculty use a combination of delivery which includes in-class and synchronous distance education by using the Eluminate and Tegrity software. This is something new for us since ISU is slowly getting away from the old IHETS system. Several faculty in the department have attended training sessions on both of these software and delivery techniques. The TM faculty have made a good effort to stay current in learning the different options available for delivery of instruction.

Results of these innovations and new technologies are disseminated in published papers and conference presentations.

6.16 Assessment

Assessment Plan and Integration: An assessment plan shall be comprised of, but not limited to, the following for each program: (1) program mission statement, (2) program outcomes/student competencies, (3) evidence that the program incorporates these outcomes/student competencies, (4) assessment measures used to evaluate student mastery of the student competencies stated, (5) compilation of the results of the assessment measures, and (6) evidence that these results are used to improve the program.

(1) Program Mission Statement

The ISU Technology Management program provides hands-on experiences with community and industry partner to foster creativity and ethics in both individual and team situations to prepare students as professionals in the engineering and management of technology systems.

(2) Program Outcomes/student competencies

Program Outcome # 1: The student will demonstrate mastery of the knowledge and tools of the technology management profession.

Program Outcome # 2: The student will be able to apply technical knowledge in conducting experiments to solve problems.

Program Outcome # 3: The student will use creativity in designs and applications for experiments to resolve problems.

Program Outcome # 4: The student will function in teams to solve problems.

Program Outcome # 5: The student will present research findings in oral and written form.

(3) Evidence that the program incorporates these outcomes/student competencies

COURSE #	A demonstrate mastery of the knowledge and tools of the technology management profession	B apply technical knowledge in conducting experiments to solve problems	C use creativity in designs and applications for experiments to resolve problems	D function in teams to solve problems	E present research findings in oral and written form
TMGT 131	Introduced			I	I
MET 103	Practiced	I	I		
ECT 160	I	I			
MFG 370	P	P	P		P
MFG 371	P	P	P		P
TMGT 351	Reinforced	R	R	R	R
TMGT 471	P	R	R	R	R
TMGT 473	R	R	P		R
TMGT 478	R	R	R	R	R
TMGT 492		R	R	P	R
TMGT 497			R	R	R
HLTH 318				I	

(4) assessment measures used to evaluate student mastery of the student competencies stated

Stakeholder Involvement

Stakeholders: (Rating – 2 beginning stage of implementation)

1. Students
2. Graduates
3. Employers
4. Other professionals

Primary Stakeholders are involved in identifying/affirming program educational objectives: (Rating – 2 beginning stage of implementation)

1. Students fill out SIRs for each course
2. Graduates are surveyed
3. Employers are represented through the Advisory Board and internship evaluations
4. Other professionals are represented in the ATMAE accreditation

Primary Stakeholders are involved in periodic evaluation of educational objectives: (Rating – 2 beginning stage of implementation)

1. Students fill out SIRs for each course
2. Graduates are surveyed periodically
3. Employers are represented through the Advisory Board and internship evaluations
4. Other professionals are represented in the ATMAE accreditation

Sustained partnerships with stakeholders are developed: (Rating – 5 implemented, evaluated and at least one cycle of improvement)

1. The Technology Management program has utilized the department advisory board, but is in the process of developing a programmatic advisory board.
2. The Technology Management program through its predecessor program (Industrial Technology) has been accredited by ATMAE/NAIT for at least 5 years

.

Program Educational Objectives

Objectives are defined: (Rating 3 – In place and implemented)

1. Perform a variety of technical activities the student is likely to manage.

2. Communicate effectively in the production/engineering/management environment.

3. Solve technical problems or control the environment.

4. Make technology related decisions.

5. Allocate resources effectively.

6. Operate well in team environments, whether as leader or team member.

7. Operate well in an unsupervised environment.

8. Integrate ethics in all dealings.

Number of objectives are manageable: (Rating 3 – In place and implemented)
Eight objectives is a very reasonable and manageable number.

Objectives are aligned with department/program mission statement: (Rating 3 – In place and implemented)
These objectives are aligned with the intent of the mission statements

Objectives are periodically assessed to determine achievement: (Rating 2 – Beginning stage of implementation)
Assessment of these objectives has not yet been completed.

Objectives are periodically evaluated for currency: (Rating 2 – Beginning stage of implementation)
While it is believed that all the objectives are current, a formal evaluation has not yet been completed.

(5) compilation of the results of the assessment measures

Student Learning Outcomes

Student learning outcomes are identified: (Rating 3 – In place and implemented)

1. Master knowledge and tools of the technology management profession
2. Apply technical knowledge in conducting experiments to solve problems
3. Use creativity in designs and applications for experiments to resolve problems
4. Function in teams to solve problems
5. Present research findings in oral and written form

Number of outcomes manageable: (Rating 3 – In place and implemented)
Five outcomes is a very reasonable and manageable number.

Outcomes are publicly documented: (Rating 2 – Beginning stage of implementation)
These outcomes will be included in future documentation.

Outcomes are linked to educational objectives: (Rating 3 – In place and implemented)
These outcomes were written to fit well with the educational objectives of this program.

Outcomes are defined by a manageable number of measurable performance indicators (performance criteria): (Rating 2 – Beginning stage of implementation) Measureable performance indicators are being refined.

Measurable Performance Criteria

Student learning outcome 1:
Master knowledge and tools of Technology Management profession
1. Student can pass standard exit exam
2. Student can manage a given technological system

Student learning outcome 2:
Apply technical knowledge in conducting experiments to solve problems
1. Scientific method and standard test procedures are used
2. Test plan correct for the situation

Student learning outcome 3:
Use creativity in designs and applications for experiments to resolve problems
1. New ideas are developed
2. Concepts are evaluated

Student learning outcome 4:
Function effectively in teams to solve problems
1. Team produces quality results
2. Team members favorable in evaluation

Student learning outcome 5:
Present research findings in oral and written form
1. Oral skills are clear and effective
2. Written skills are clear and effective

Student Learning Outcomes Aligned With Educational Practices

Desired outcomes are mapped to curricular practices and/or strategic (e.g., courses/teaching methodology, internship): (Rating 2 – Beginning stage of implementation)

Practices/strategies are systematically evaluated using outcomes assessment data: (Rating 1 – Beginning stage of development) The data are not yet available

Where necessary, educational practices are modified based on evaluation of assessment data: (Rating 1 – Beginning stage of development) The data are not yet available

Assessment Processes

Assessment is on-going and systematic at the program level: (Rating 2 – Beginning stage of implementation) The data are not yet available

Multiple methods are used to measure each outcome: (Rating 2 – Beginning stage of implementation)
Multiple methods are in use

Both direct and indirect measures of student learning are used to measure outcomes: (Rating 2 – Beginning stage of implementation) Both direct and indirect measures are being used

Assessment processes are reviewed for effectiveness and efficiency: (Rating 2 – Beginning stage of implementation) The data are not yet available for review

When needed, assessment methods are modified based on evaluation processes: (Rating 2 – Beginning stage of implementation) Assessment methods will be modified as evaluation indicates it is necessary

Evaluation

Assessment data are systematically reviewed: (Rating 2 – Beginning stage of implementation) Assessment data are not yet complete

Evaluation of results is done by those who can effect change: (Rating 2 – Beginning stage of implementation) Evaluation of results is done by program leaders

Evaluation of assessment data is linked to curricular practices/strategies: (Rating 2 – Beginning stage of implementation)

Evaluation leads to decision making/action: (Rating 2 – Beginning stage of implementation)

(6) evidence that these results are used to improve the program.

BS in Technology Management

Matrix of Program Outcomes and Assessment Methods				
	Exam[i]	Follow-up Survey[ii]	Survey of Graduating Seniors	Portfolio [iii]
#1 Perform a variety of technical activities the student is likely to manage.		X	X	X[iv]
#2 Communicate effectively in the production/engineering/management environment.		X	X	X[v]
#3 Solve technical problems or control the environment.	X	X	X	X[4]
#4 Make technology related decisions.	X	X	X	X[4]

#5 Allocate resources effectively.	X	X	X	
#6 Operate well in team environments, whether as leader or team member.		X	X	X[4]
#7 Operate well in an unsupervised environment.		X	X	X[4]
#8 Integrate ethics in all dealings.		X	X	

[i] Professional exam to be taken in senior year. The intention is to use the or the ATMAE exam or another appropriate professional exam.

[ii] Follow-up survey of alums and their supervisors. The intent is to do this no later than every 5 years (the period specified by most accrediting associations). Currently, the program is accredited by ATMAE, which requires outcomes assessment.

[iii] The intent is to keep a range of student's graded work (a) of a written report required in the production planning course and (b) of experiential laboratory assignments (when the student is not a transfer student).

[iv] This will be evidenced by the student having completed an internship in a packaging environment.

[v] TMGT 471 Production Planning and Control.

INDIANA STATE UNIVERSITY

COLLEGE OF TECHNOLOGY

ACCREDITATION SELF-STUDY REPORT

March 2010

INDIANA STATE UNIVERSITY

COLLEGE OF TECHNOLOGY

ACCREDITATION SELF-STUDY REPORT

SECTION I

Requests for Re-Accreditation and Accreditation

SECTION II

General Information

SECTION III

Responses to ATMAE Standards From:

Advanced Manufacturing Management, BS
Automotive Technology Management, BS
Computer Engineering Technology, BS
Electronics Technology, BS
Packaging, BS
Safety Management, BS
Technology Management, BS
Health & Safety (Occupational Safety Management), MS

March 2010

TABLE OF CONTENTS

Appendices

Section III **Major Programs – Compliance with Standards**

Automotive Technology Management, BS

Computer Engineering Technology, BS

Electronics Technology, BS

Advanced Manufacturing Management, BS

Packaging, BS

Technology Management, BS

Safety Management, BS

Health & Safety (Occupational Safety Management), MS

The Association of Technology, Management, and Applied Engineering

ATMAE
LEAD • INNOVATE • COLLABORATE

Formally NAIT

COPY

Request for Initial Accreditation or Reaccreditation Visit

Please Type Information

1. **Institution** Indiana State University
   Institution Address Terre Haute, IN 47809
2. **Head of Institution** Dr. Daniel Bradley Title President
   Telephone 812-237-4000 Fax 812-237-7948
3. **Head of Program** Dr. Bradford Sims Title Dean
   Telephone 812-237-3166 Fax 812-237-3733
4. **Contact Person** Dr. Jeffrey McNabb Title Assoc. Dean
   Mailing Address ISU College of Technology, Terre Haute, IN 47809
   Telephone 812-237-2987 Fax 812-237-2823
   Email Address jmcnabb@indstate.edu

5. **Type of Visit Requested:**
   [ ] Initial Accreditation [x] Reaccreditation [ ] 2-Year Follow-Up

6. **Program Level:** [x] Associate [x] Baccalaureate [ ] Master

7. **List Industrial Technology Program(s) (including options, concentrations, and specializations) to be considered** (Note: All options, specializations, and concentrations in a degree program MUST be reviewed. Reference standards 5.3.3 and 6.3.3).

Degree	Program Name	Option, Concentration, or Specialization
SEE ATTACHED SHEET		

(Attach additional sheet if necessary)

8. **Billing Address:**
   Dean, College of Technology, Indiana State University
   Terre Haute, IN 47809

9. **Regional Accrediting Agency:** North Central Association of Colleges & Secondary Schools

10. **Proposed Dates for Visit** (Note: a minimum of two full days are required for the visit plus a travel day).
    First Choice: March 28, 29, 30, 2010 Second Choice: April 4, 5, 6, 2010

11. **Recommended Team Member Lodging** (include name, address, and telephone number).
    Hilton Garden Inn, 750 Wabash Ave.
    Terre Haute, IN 47807 812-234-8900

12. **Authorized Signatures:**
    Head of Institution: [signature] Date: 7/20/09
    Head of Program: [signature] (Interim Dean) Date: 7/21/09
    Institution Contact Person: [signature] Date: 7/21/09

Mail this form to: Executive Director, The Association of Technology, Management, and Applied Engineering, 3300 Washtenaw Avenue, Suite 220, Ann Arbor, MI 48104-4200. Telephone 734-677-0720. Fax 734-677-0046. Email atmae@atmae.org

G:\UCIDATA\UCI\NAIT\Accreditation\Forms&Certificates\wordaccreditationrequest.doc

2009
Indiana State University
College of Technology
Programs Requesting Reaccreditation

Programs from the Electronics, Computer, and Mechanical Engineering Technology Department

- Automotive Technology Management, B.S.
- Electronics and Computer Technology, A.S.
- Electronics Technology, B.S.

Programs from the Technology Management Department

- Advanced Manufacturing Management, B.S. (previously Manufacturing Technology)
- Packaging, B.S.
- Technology Management, B.S. (previously Industrial Technology)

Indiana State University
More. From day one.

College of Technology,
Office of Associate Dean

Terre Haute, Indiana 47809
812-237-2987
888-478-7003
Fax 812-237-2823

COPY

November 24, 2009

Rick Coscarelli, Executive Director
The Association of Technology Management and Applied Engineering
3300 Washtenaw Ave., Suite 220
Ann Arbor, MI 48104-4200

Dear Dr. Coscarelli:

As we have discussed over the phone, Indiana State University would like to make some changes in our list of programs to be accredited by ATMAE in 2010. (Our original request is attached.) Below is our altered request.

Programs from the Electronics, Computer, and Mechanical Engineering Technology Department, College of Technology

- Automotive Technology Management, B.S.
- Electronics Technology, B.S.

Programs from the Technology Management Department, College of Technology

- Advanced Manufacturing Management, B.S. (previously Manufacturing Technology)
- Packaging, B.S.
- Technology Management, B.S. (previously Industrial Technology)

Programs from the Safety Management Department of the College of Nursing, Health, and Human Services

- Safety Management, B.S.
- Health and Safety (Occupational Safety Management), M.S.

Yours truly,

Jeffrey McNabb

Dr. Jeffrey McNabb, Associate Dean
College of Technology,
Indiana State University

Indiana State University
More. From day one.

COPY

College of Technology,
Office of Associate Dean

Terre Haute, Indiana 47809
812-237-2987
888-478-7003
Fax 812-237-2823

December 9, 2009

Rick Coscarelli, Executive Director
The Association of Technology Management and Applied Engineering
3300 Washtenaw Ave., Suite 220
Ann Arbor, MI 48104-4200

Dear Dr. Coscarelli:

Indiana State University would like to make some changes in our list of programs to be accredited by ATMAE in 2010.

We request that the six programs in the Electronics, Computer, and Mechanical Engineering Technology Department and in the Technology Management Department be evaluated using the traditional standard model.

Programs from the Electronics, Computer, and Mechanical Engineering Technology Department, College of Technology

- Automotive Technology Management, B.S.
- *Computer Engineering Technology, B.S.* *
- Electronics Technology, B.S.

* We would like to include Computer Engineering Technology although it is also seeking TAC-ABET accreditation. Formerly known as Computer Hardware Technology, this program has had only minor revisions to its curriculum, and we therefore are asking for its reaccreditation rather than an initial accreditation.

Programs from the Technology Management Department, College of Technology

- Advanced Manufacturing Management, B.S. (previously Manufacturing Technology)
- Packaging, B.S.
- Technology Management, B.S. (previously Industrial Technology)

We would like the two programs below to be evaluated using the outcomes assessment model.

Programs from the Safety Management Department of the College of Nursing, Health, and Human Services

- Safety Management, B.S.
- Health and Safety (Occupational Safety Management), M.S.

If, due to these changes, it is deemed necessary to add another accrediting team member, we will understand and cover the additional cost.

Yours truly,

Jeffrey McNabb

Dr. Jeffrey McNabb, Associate Dean
College of Technology,
Indiana State University

JGM/re

Robert Eberwein

From: Jeffrey McNabb
Sent: Monday, December 21, 2009 9:00 AM
To: Rick Coscarelli at ATMAE/NAIT
Cc: Robert Eberwein
Subject: RE: ATMAE - 2010 Visit to Indiana State University

Thanks Rick,

Everything you have mentioned looks right. Jeff

From: Rick Coscarelli at ATMAE/NAIT [mailto:rcoscarelli@atmae.org]
Sent: Monday, December 14, 2009 3:08 PM
To: Jeffrey McNabb
Cc: ConnorSG@appstate.edu; mac13@indstate.edu
Subject: ATMAE - 2010 Visit to Indiana State University

Jeff and Malcolm,

Thanks for the update on your Programs/Options and that of the Safety Management Department.

I have made the necessary changes to our database to reflect the Master Program in Health and Safety as an Initial Accreditation and have revived the "Computer Hardware Technology" Program which will now be renamed "Computer Engineering Technology" and considered a reaccreditation.

Sid will be working on setting up the Team. It will have a fourth Team member to handle the Master program and the Safety Management Program. You institution will be billed for the additional member per our policy:
Accreditation Visits - Fee for Extra Team Members / Extra Days on Campus:
Fee: Based on a proportionate share of actual expenses.
Fee Calculation: If the Accreditation Personnel Committee determines that more than three team members are required for any visit, or that more than three (3) on-campus days are required for the visit, or if a follow-up on-site visit is required, then the institution will be billed for actual travel costs for the extra team member(s) or additional visit days, or for the follow-up visit. "Actual travel costs" for each extra team member will be determined by dividing the total travel costs by the number of team members. Actual travel costs for each additional visit day will be determined by dividing the total travel costs by the number of on-campus days required for the visit.
Billing: The fee for extra team members / extra days on campus will be billed immediately upon calculation of all direct expenses related to the visit.
Due: The invoice for the Extra Team members / Extra Days on Campus Fee is due and payable 30 days after receipt.
(See 2009 Accreditation Handbook 3.6.3)

Also Jeff, per your request, your Programs will be evaluated using the Traditional 2009 Standards and Malcolm's Programs, both B.S. and M.S. will be using the Outcomes Assessment Model.

Let me know if you see anything that needs changing or update.

Thanks.

Rick

Rick Coscarelli
Executive Director, ATMAE formally NAIT
3300 Washtenaw Ave., Suite 220
Ann Arbor, MI 48104
734-677-0720 voice
734-677-0046 fax
rcoscarelli@nait.org

Robert Eberwein

From: Rick Coscarelli at ATMAE/NAIT [rcoscarelli@atmae.org]
Sent: Monday, December 21, 2009 4:14 PM
To: Jeffrey McNabb; Robert Eberwein
Cc: ConnorSG@appstate.edu
Subject: ATMAE - Initial and Reaccreditation Visit - Indiana State University
Attachments: TEAMASSN Indiana State Univ.DOC; Institution Personnel ISUIT.pdf; Institution Personnel ISUSafety.pdf; Contact&TeamChairChecklist.doc

Importance: High

Jeff,

Indiana State University
Initial and Reaccreditation Visit - March 28-30, 2010

Attached is the "Notification of Team Assignments and Visitation Dates" form for you to sign and get back to me ASAP.

Also, please find out who the contact person should be for Safety. I would like to make sure my records are correct. I understand that you will be the point person for our Team and coordinate activities with the Safety Department, thanks.

You will not receive any hard copy of this notification.

Thanks.

Rick

Rick Coscarelli
Executive Director, ATMAE formally NAIT
3300 Washtenaw Ave., Suite 220
Ann Arbor, MI 48104
734-677-0720 voice
734-677-0046 fax
rcoscarelli@nait.org

The Association of Technology, Management, and Applied Engineering
Notification of Team Assignments and Visitation Dates

ATMAE LEAD • INNOVATE • COLLABORATE

A. General Information:

				X	Master Level
X	Initial Accreditation		Associate Level		Consultant Visit
X	Reaccreditation	X	Baccalaureate Level		Visit (follow-up)

Contact Person:	**Dr. Jeff McNabb, Associate Dean IT**
Institution:	Indiana State University
Address 1:	ISU, College of Technology
Address 2:	
City, State, & Zip Code:	Terre Haute, IN 47809
Telephone Number:	812-237-2987
Email Address:	jmcnabb@indstate.edu

Jeff McNabb will coordinate with Safety

B. Tentative Team Assignments: (Traditional 2009 Standards for IT Dept. – Outcomes Assessment for Safety BS and Master)

Team Chair:	**Dr. Verna M. Fitzsimmons**	**Team Member 2:**	Mr. Todd Myers
Employer:	Kent State University	Employer:	Ohio University
Address 1:	Applied Business & Technology	Address 1:	Rm 124B, Stocker Center
Address 2:	P. O. Box 5190	Address 2:	
City, State, & Zip:	Kent, OH 44242	City, State, & Zip:	Athens, OH 45701-2979
Home Telephone:		Home Telephone:	
Business Telephone:	330-672-7064	Business Telephone:	(740) 593-1455
Email Address:	vfitzsim@kent.edu	Email Address:	myerst2@ohio.edu

Additional Cost if 4 or more Team Members see section 3.6.3 of Handbook

Team Member 3	Dr. Mandara Savage, CSIT	**Team Member 4:**	Dr. Jess Godbey
Employer:	Southern Illinois Univ-Carbondale	Employer:	Jacksonville State Univ.
Address 1:	Technology	Address 1:	134 Ayers Hall
Address 2:	Mailcode 6603	Address 2:	700 Pelham Road North
City, State, & Zip:	Carbondale, IL 62901-6603	City, State, & Zip:	Jacksonville, AL 36265
Home Telephone:		Home Telephone:	
Business Telephone:	618-536-3396	Business Telephone:	(256) 782-5080
Email Address:	msavage@engr.siu.edu	Email Address:	jgodbey@jsu.edu

C. The following dates have been selected for the on-site visit: **March 28-30, 2010**

D. A copy of your Self-Study Report must be sent to each team member by: **February 26, 2010**

If the above team member assignments and visitation dates are acceptable to your institution, please sign below, return the original to the Executive Director, and ***forward copies to your institution head and program head.***

Institution Contact Person Jeff McNabb **Date** 12-22-09

Mail this form to: Executive Director, The Association of Technology, Management, and Applied Engineering, 3300 Washtenaw Avenue, Suite 220, Ann Arbor, MI 48104-4200. Tel: 734-677-0720. Fax: 734-677-0046. Email:atmae@atmae.org.

G:\UCIDATA\UCI\NAIT\Accreditation\Forms&Certificates\TEAMASSN.DOC

Standards for Accreditation
Baccalaureate Degree Programs

Technology Management
Department

Technology Management
B.S.

6. Standards for Accreditation – Baccalaureate Degree Programs

The objective of accreditation is to ensure that programs in Industrial Technology which are accredited meet or exceed established standards. Consideration will be given to both the qualitative and quantitative criteria set forth in these standards.

6.1 Preparation of Self-Study Report

Self-Analysis: The Self-Study Report shall follow the guidelines and be completed by a representative portion of the institution's administrative staff, teaching faculty, and students.

Guided by College of Technology faculty and administrators who have participated in the accreditation process at other institutions of higher education, and by a review of the 2004 reaccreditation material, the faculty of the Department of Technology Management planned a course of action to complete the 2010 reaccreditation material.

Those listed below participated in the preparation of the reaccreditation materials.

Dr. Brad Sims, Dean, College of Technology
Dr. Jeff McNabb, Associate Dean, College of Technology
Dr. James Smallwood, Chair, Department of Technology Management
Dr. Marion Schafer, Associate Professor, Department of Technology Management
John Jukes, Student, Department of Technology Management
Other faculty, staff, and students contributed materials as well.
Office of Vice President of Academic Affairs
Office of Vice President of Administrative Affairs
Office of Vice President of Development and Public Affairs

Documents not included in the reaccreditation report are available in the Office of the Dean and/or the Department Chair.

6.2 Philosophy and Objectives

6.2.1 Mission: The department, college, and institutional missions shall be compatible with the approved definition of Industrial Technology.

Within the concept of a university where truth and knowledge are pursued, preserved, and transmitted so that enlightenment may guide the human experience, Indiana State University seeks to fulfill its particular mission.

The University endeavors to provide educational opportunities to all qualified applicants for admission to its several and various undergraduate and graduate programs, in the fulfillment of its role and mission as a general, multi-purpose university. One of the major purposes of the institution is to offer each and every student as broad an opportunity for study and the acquisition of knowledge in the many fields, areas, and disciplines offered by the University as his or her ability, interest, and talent will allow. This purpose includes the imparting to the student of knowledge by an informed, expert faculty and the development of an understanding and appreciation of the role and responsibility of a learned and educated individual in our society. The University serves the academic, intellectual, cultural, and vocational needs of students who possess a wide range of academic preparation, ambitions, goals, and intellectual development.

Technology Management Program
The ISU Technology Management program provides hands-on experiences with community and industry partners to foster creativity and ethics in both individual and team situations to prepare students as professionals in the engineering and management of technology systems.

Technology Management Department
Preamble
The Department of Technology Management consists of the following programs:

- Technology Management
- Construction Management
- Packaging
- Advanced Manufacturing Management
- Human Resource Development
- Career and Technical Education
- Technology and Engineering Education
- Industrial Technology

Mission
Our mission is to instill knowledge and skills from our undergraduate and graduate program areas through experiential learning that enable our graduates to become leaders in education and industry.
Vision
Our department will have the lead programs in the nation to advance teaching, scholarship, research, and innovation in the fields of technology management, education, and training.

College of Technology
The College of Technology will provide exemplary undergraduate and graduate programs, generate solutions and knowledge through research, and serve the technology needs of the State, the nation, and the international community.

Indiana State University Mission Statement
Indiana State University, a doctoral research university, combines a tradition of strong undergraduate and graduate education with a focus on community and public service. We integrate teaching, research, and creative activity in an engaging, challenging, and supportive learning environment to prepare productive citizens for Indiana and the world.

6.2.2 Program Definition: The program of study definition and purpose shall be compatible with the approved definition of Industrial Technology.

The Technology Management program prepares students for careers as technical managers in a variety of fields in technology. The program emphasizes an understanding of the technology utilized in manufacturing and other industrial processes and compliments this technical understanding with practice using the managerial skills necessary in the modern work environment.

6.2.3 Program Acceptance: Each program of study shall be understood and accepted by appropriate individuals and representative groups within the internal university community and the external business and industrial community.

The Technology Management program has a positive working relationship with many other departments and colleges in the University, as well as with many companies in the Terre Haute area.

The program utilizes the College of Arts and Sciences for physics, mathematics,

chemistry, and economics; the College of Business for accounting, and business management; the College of Health and Human Performance for safety management; Department of Electronics, Computer and Mechanical Engineering Technology for DC fundamentals, automation, fluid power and computer aided design classes.

Our graduates are employed by local companies as well as nationally known companies. Many companies continue to develop relationships with our program by making financial or equipment donations. Often, alumni are invited guest speakers in our classes. Example of these companies include the following:

Great Dane Trailer
Tredegar, Inc.
Aisin Brake
SONY - Digital Audio Disc Corporation

6.2.4 Program Goals: Each program of study shall have: (1) clearly written short and long range goals and objectives, which are consistent with the program mission statements; and (2) plans for achieving them.

The Technology Management program places an emphasis on each student developing an understanding of the basic technology utilized in manufacturing and blending this understanding with managerial skills necessary for success in today's work environment.

Short-range goals:

a. Find ways to promote experiential learning in courses.

b. Develop a plan to recruit new students into the program.

c. Review articulation agreements with community colleges,

Long-range goals:

a. Develop new articulation partnerships with more community colleges.

b. Update and enhance distance offerings of hands-on laboratory courses.

c. Seek the support of industry for expanded opportunities in cooperative education/internships.

The short-range goals and long-range goals will be pursued using the following techniques:

Short-range goals:

a. Experiential learning will be promoted by working with faculty to include experiential learning projects in their courses.

b. Recruiting plans will be developed in cooperation with university admissions, the department, and the COT Associate Dean's office.

c. Articulation agreements will be reviewed by technology management faculty and the Associate Dean's office to assure that changes due to the new foundational studies program and any other changes at ISU or the partner institution are still meeting the spirit of the agreements.

Long-range goals:

a. As the program is refined, the program faculty will reach out to new community college partners to develop articulation agreements that will allow

degree completion for transfer students.

b. Faculty will enlist the help of university information technology personnel to develop new methods of delivering hands-on laboratory courses through distance methods in order to better provide the coursework needed to serve the future needs of technology managers.

c. Faculty will enlist the help of program alumni and industry partners to develop internship opportunities for students in the technology management program.

6.3 Program of Study

6.3.1 Program Name: Each program of study and/or program option shall have appropriate titles consistent with the approved ATMAE definition of Industrial Technology.

Technology Management

6.3.2 Program Level: The program of study shall lead to the baccalaureate degree, and not less than the junior and senior years of baccalaureate level study shall be offered by the institution seeking accreditation. Appropriate lower division requirements may be offered by the same institution or may be transferred from other institutions such as community colleges and technical institutes.

The Technology Management program is a program of study that leads to a baccalaureate degree. All levels of the program from freshman to senior are offered. Appropriate lower division requirements can be transferred into the program from community colleges and technical institutions.

6.3.3 Program Definition: The program of study may have more than one option, specialization, or concentration; but specific course requirements for each option shall be clearly specified, and the requirements for all program options shall meet or exceed ATMAE standards.

The program of study has an 18-hour block, set aside for a minor, a concentration, or group of courses taken from the College of Technology.

6.3.4 Program Emphasis: Primary emphasis in the program of study shall reflect the current technology and management of industry.

The primary emphasis of the Technology Management program reflects the current technology and management of industry. This is evidenced in the laboratory exercises and teaching methodologies. The faculty, through professional organizations, remains cognizant of current issues and practices in modern technologies and management techniques.

6.3.5 Foundation Requirements: Programs shall be a minimum of 120 semester hours (or equivalent) and must meet the minimum foundation requirements shown in Table 6.1. Programs may exceed the maximum foundation requirements specified in each area, but appropriate justification shall be provided for each program and/or program option that exceeds the maximum limits. A specific list of courses and credit hours that are being counted toward each category shall be included in the Self-Study Report.

Indiana State University requires all students who expect to graduate to complete a minimum of 124 semester hours

Table 6.1 B. S. Degree in **Technology Management**

Course Name	**Course #**	**ISU REQ.**	**ATMAE REQ.**
General Education		**35-44**	**18-36**
English Composition	ENG 101 & 105 or ENG 107	3 - 6	
Technical Writing	ENG 305 T	3	
Communication	COM 101	3	
Physical Education	PE 101 & 101 L	2	
Social/Behavioral Studies	Approved List	6	
Literary/Arts/Philosophical Studies	Approved List	6	
Historical Studies	Approved List	3	
Multicultural Studies	Approved List	6	
Foreign Language	H.S. credit or Approved List	0 - 6	
General Education Capstone	Approved List	3	
Mathematics		**9**	**6 - 18**
College Algebra & Trig	MATH 115	3	
Information Technology Literacy	TMGT 195	3	
Economic Analysis	MET 405	3	
Physical Sciences		**8**	**6 - 18**
Physics	PHYS 105	3	
Physics Lab	PHYS 105 L	1	
Chemistry	CHEM 100	3	
Chemistry Lab	CHEM 100 L	1	
Or Physics	PHYS 106		
Physics Lab	PHYS 106 L		
Management /Professional		**27**	**12 - 24**
Industrial Health & Safety	HLTH 212	3	
Industrial Accident Prevention	HLTH 318	3	
Professional Internship	TMGT 351	3	
Workplace Law for the Tech Mgr	TMGT 429	3	
Production Planning & Control	TMGT 471	3	
Quality Control of Industrial Products	TMGT 473	3	
Industrial Organizations & Functions	TMGT 478	3	
Or Industrial Computer Sys Mgmt	ECT 437		
Industrial Supervision	TMGT 492	3	
Creativity & Ideation Techniques	TMGT 491	3	
Or Problem Solving Techniques	TMGT 497		
Technical		**27**	**24 – 36**
Electronic Fundamentals	ECT 160	3	
Introduction to Technical Graphics	MET 103	3	
Fundamentals of Machine Tool Proc	TMGT 370	3	
Or Mfg Processes & Materials	TMGT 371		
Or Plastics Technology	TMGT 372		
Technical Minor or Concentration pus Technical Electives		18	
Electives		**9 - 18**	**0 – 18**
Grand Total		124	120

6.3.6 Course Sequencing: There shall be evidence of appropriate sequencing of course work in each program of study to ensure that advanced level courses build upon concepts covered in beginning level course work.

The course number system indicates when the student should take the course. Courses that have a number with the first digit of one are freshman level courses. Courses with a first digit of two are sophomore level courses, etc. Faculty expect that concepts from lower division courses are understood by students. The following suggested course sequencing sheet is provided to students in the program. Advisors emphasize to students the importance of taking courses in the appropriate order.

Table 6.2 B. S. Degree in **Technology Management**

FALL		SPRING	
Semester I		Semester II	
ENG 101	3	ENG 105	3
COMM 101	3	CHEM 100 & 100L	4
MATH 115	3	ECT 160	3
PE 101 & L	2	SBS:F	3
MET 103	3	LAPS:F	3
TMGT 195	3		
	17 hrs		16 hrs
Semester III		Semester IV	
Foreign Lang 101	3	Foreign Language 102	3
HLTH 212	3	HS	3
MCS:USD	3	MFG 370 or 371 or 372	3
Physics 105 & 105 L	4	Elective	3
Elective	3	Elective	3
	16 hrs		15 hrs
Semester V		Semester VI	
ENG 305T	3	LAPS:E	3
SBS:E	3	TMGT 351	3
MCS:IC	3	HLTH 318	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
	15 hrs		15 hrs
Semester VII		Semester VIII	
GEN ED Capstone	3	TMGT 492	3
MET 405	3	TMGT 491 or 497	3
TMGT 429	3	Tech Minor or Concentration	3
TMGT 471	3	Tech Minor or Concentration	3
TMGT 473	3	TMGT 478	3
	15 hrs		15 hrs

Table 6.3 B. S. Degree in **Technology Management transfer with A.A.S.**

FALL		SPRING	
Semester V		Semester VI	
ENG 305T	3	LAPS:E	3
SBS:E	3	TMGT 351	3
MCS:IC	3	HLTH 318	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
	15 hrs		15 hrs
Semester VII		Semester VIII	
GEN ED Capstone	3	TMGT 492	3
MET 405	3	TMGT 491 or 497	3
TMGT 429	3	Tech Minor or Concentration	3
TMGT 471	3	Tech Minor or Concentration	3
TMGT 473	3	TMGT 478	3
Tech Minor or Concentration	3		
	18 hrs		15 hrs

Table 6.4 B. S. Degree in **Technology Management transfer with A.S.**

FALL		SPRING	
Semester V		Semester VI	
ENG 305T	3	LAPS:E	3
SBS:E	3	TMGT 351	3
MCS:IC	3	HLTH 318	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
Tech Minor or Concentration	3	Tech Minor or Concentration	3
	15 hrs		15 hrs
Semester VII		Semester VIII	
GEN ED Capstone	3	TMGT 492	3
MET 405	3	TMGT 491 or 497	3
TMGT 429	3	Tech Minor or Concentration	3
TMGT 471	3	Tech Minor or Concentration	3
TMGT 473	3	TMGT 478	3
Tech Minor or Concentration	3		
	18 hrs		15 hrs

6.3.7 Application of Mathematics and Science: Appropriate applications of the principles of mathematics and science shall be evident in technical and management course work.

MFG 370: Apply mathematics to determine metal removal rates, power requirements, feeds, speeds, depth of cut, tool angles, measurements and tolerances.

MFG 371: Apply mathematics and science when determining stress-strain calculations, chemistry of metals, metallurgy, bending, forming, and heat treatment.
MFG 372: Apply mathematics and science when determining weight/volume calculations, understanding polymerization and heat transfer.
TMGT 471: Mathematical computations are used to determine schedules and line balancing requirements.
TMGT 473: Requires application of statistical sampling techniques.
TMGT 478: Applications of mathematics and science as necessary for implementation of processes required to complete projects in the capstone course.
ECT 160 and MET 103 are courses where principles of mathematics and science are applied.

6.3.8 **Computer Applications: The program of study shall include instruction on computer application software, and the use of computers for information retrieval and problem solving.**

The program of study includes instruction on computer application software, and the use of computers for information retrieval and problem solving. The following are examples:

MET 103: Computer aided design fundamentals
TMGT 195: Intro to Computer applications. Satisfies the University requirement for IT Literacy. Must be taken in the freshman year, prior to receiving 32 credit hours.
MFG 371: NC and CNC programming oxy-fuel/plasma cutter
TMGT 471: Use of production scheduling applications
TMGT 478: Computerized GANT charts for planning and scheduling; computerized plant layouts; computer generated forms; computer generated drawings; electronically distributed content information.

6.3.9 Communications: Oral presentations and technical report writing shall be evident in both technical and management course requirements.

The General Education curricula focus specifically on communications in the COM 101 course, and includes oral and written work in all courses counted as general education. The ENG 305T is tailored to the needs of the technology students, and emphasis is places on writing technical reports.

The integration of oral presentations and technical report writing is evident in many of the Manufacturing Technology courses as described below.

TMGT 131: In 2001 the curriculum of the introduction to technology course TMGT 131, was revitalized with a focus on the eight dimensions identified as most important in the professional development of the technology student. One of those dimensions was Communication. To this end, students are required to make several technical presentations, are required to use Power Point to enhance the professionalism of their presentation, and are required to accompany their ora presentation with a written technical report. The presentations are video taped and each student is given a CD of his or her presentations. These presentations can then be uploaded to each students' electronic portfolio as a record of their ability to demonstrate communication skills when delivering a technical report.

TMGT 478: Although the catalogue name for this course is Industrial Organization and Function, it is known by everyone as SIMCO, because it simulates a Manufacturing company. Each semester students assume roles as members of the organization in an attempt to make products to specifications within a budget and to a schedule. Students are placed in interest groups and

investigate the functions of an organization, such as the design function, the manufacturing function, the quality function, etc, and make formal technical presentations to the rest of the class. This then becomes the basis for their expertise and their placement in the manufacturing function of the class. The formal technical papers each student writes as part of their presentation, become the resource and the knowledge base for the class. Therefore, each student is dependent on each other student for information and understanding of the functions of the organization. It could be considered a capstone technical writing and presentation experience in the capstone course. The students are each given written and verbal feedback regarding both oral presentation skills and their technical writing skills. The presentations are video taped, and each student is required to view his or her performance and submit a written evaluation of what they did well and what they could do differently to improve.

TMGT 492: As a final project in some 492 classes, students are required to form "Consulting Teams" and work together to make recommendations to a company concerning technical and management concerns. Students practice their team work abilities while planning, practicing, and presenting their conclusions. Each consulting team is required to make a professional presentation using Power Point or other presentation applications. A final written technical report is required of this project.

TMGT 497: The purpose of the class is to give students experience using team problem solving techniques. The class is structured so each student has opportunities to work, first with a partner, then with a team, to investigate and prepare presentations to the rest of the class. The students learn not only problem solving techniques, but how to work in groups and teams, how to make presentations, and how to write technical reports describing the process and their results.

Further evidence of oral presentation and technical report writing can be found in the course resource notebooks.

6.3.10 Industrial Experience: Each program of study shall include appropriate industrial experiences such as industrial tours, work-study options/cooperative education, or senior seminars focusing on problem-solving activities related to industry. Industrial experiences shall be designed to provide an understanding of the industrial environment and what industry expects of students upon employment.

Industrial Tours: Many classes take field trips to local industries to provide the students with exposure to the broad continuum of experiences available to them in the industrial setting. Some examples include:

TMGT 131: Digital Audio Disc Corporation; Bemis Corporation;

Industry Speakers: Many classes invite industry representatives as guest speakers. Often when this occurs, the professor hosting the speaker opens the invitation to the whole College of Technology, so the message can be received by as many students as possible.

Professional Internship Experiences: Industrial experience described to the students as, "One of the most important experiences you can have as a student." In the TMGT 131 class, students who have completed a cooperative education experience are invited to speak to the class and to describe the value of their experience to the incoming freshmen. The Career Center willingly sends a representative to any class to describe the process involved in registering for a cooperative education experience. Each student in the TMGT 131 class is required to complete the forms required for the cooperative education experience. Furthermore, the Career Center stations a representative in the lobby of the new technology building for four to six hours for one week in the beginning of each semester to register students for co-op experiences. The most recent advertisement is the kiosk in the atrium of the technology building. This kiosk gives information, testimonials, and examples of students who have

had a cooperative education experience.

TMGT 351: Every student in the Technology Management major is informed by their advisor that up to six hours of college credit can be earned by enrolling in an approved cooperative education experience and TMGT 351. The student is required to keep a daily journal, write a mid-term and final technical report of their experiences, and the professor of record visits the student's supervisor to insure all goals are being met.

6.3.11 Competency Identification: Student competencies shall be identified for each Program of study, including all options, which are relevant to the employment opportunities available to graduates.

1. Perform a variety of technical activities the student is likely to manage.
2. Communicate effectively in the production/engineering/management environment.
3. Solve technical problems or control the environment.
4. Make technology related decisions.
5. Allocate resources effectively.
6. Operate well in team environments, whether as leader or team member.
7. Operate well in an unsupervised environment.
8. Integrate ethics in all dealings.

6.3.12 Competency Validation: Validation of program of study outcomes/student competencies shall be an on-going process and shall be accomplished through a combination of external experts, industrial advisory committee(s), and follow-up studies of program graduates. Documentation of this validation shall be provided in the Self-Study Report.

Internal Competency Validation:

a. The student's advisor meets with the student to review the goals and expectations and outlines a plan of study to be followed.

b. First year review: For those students who begin the program as freshmen, during the first year, the student is expected to have successfully completed the introductory course TMGT 131, to have fulfilled the requirements for IT literacy (TMGT 195) as well as the first sequence in the requirement for math literacy (MATH 115). The student must maintain a 2.0 GPA.

c. Second year review: For those students who begin the program as freshmen, the student must maintain a GPA of 2.0 or better in program courses.

d. Third year review: For all students, including transfer students, the student must maintain a GPA of 2.0 or better in program courses, plus HLTH 318, and ENG 305T.

e. Fourth year review: Successful completion of the capstone course TMGT 478, Industrial Organization and Functions, exit interview conducted by Advisor. Student is given the opportunity to identify the strengths and areas of needed improvement in the program.

Post Graduation Assessment:

a. Alumni survey: A survey instrument is sent to graduates asking them to evaluate the level of preparation their program gave them.

b. Employer survey: A survey instrument is sent to employers of program graduates asking them to rate the level of satisfaction with the level of skill of recent graduates.

c. Graduate Placement: The University Career Center gathers data regarding placement and salary ranges.

d. Industrial Advisory Board: The Board meets with the TMGT faculty once each semester to give their perspective and point of view regarding program vitality and currency.

6.3.13 Program Development Revision and Evaluation: Program of study development, revision and evaluation shall involve currently enrolled students, faculty, program graduates, and representative employers.

The Technology Management program was revised in 2007. At that time, the program name was changed from Industrial Technology Management to Technology Management. At that time several course prefixes were changed due to a reorganization of the College department structure. The types of courses and basic structure, however, remained basically the same. These changes reflected the recommendations of the Advisory Committee, in response to a survey of past graduates and industry professionals.

The Department of Technology Management employs a four step process in the planning and development of new curriculum areas. The initial step in the process is a review of current literature and existing programs similar in nature across the nation. This review or "needs analysis" is completed by interested faculty members within the Department.

If the initial investigation suggests that a curricular area is warranted, then the second step is for the formation of a formal committee to develop an initial curriculum proposal. During this step, committee members do additional research, both literature and industrial-based, to ascertain the needs of current industry.

Upon completion of the initial curriculum proposal, step three involves a review of the proposal by both industrial consultants and also industrial advisory committees. At this point, the proposal is put into final form for the fourth step in the process.

Step four consists of the required procedures for new curriculum approval at both the University and State level. This involves approval by the College of Technology's Curriculum and Academic Affairs Committee and the Faculty Council. Upon approval at the school level, the proposal is forwarded to the University Curriculum and Academic Affairs Committee, then to the Faculty Senate.

Please refer to the Curriculum Approval Procedures Manual (CAPS) for a complete explanation of the curriculum process.

Programs in the TMGT Department are continually evaluated for relevancy and rigor, to ensure that they meet the needs of students and employers. Programs are evaluated by currently enrolled students through senior exit interviews and surveys as well as general discussion. Individuals responsible for instruction provide feedback for a program based on their research, contacts at conferences, and discussions with employers. Program graduates provide input through surveys.

If major revision becomes necessary, the procedure described for program development is followed.

6.3.14 Transfer Course Work: Institution and/or department policies shall be used to evaluate course work transferred from other institutions. All programs/options, including those with a significant amount of transfer course work, must meet the minimum credit hour foundation course requirements (Table 6.1) in each category.

A growing percentage of the College of Technology student body are transfer students from other four-year institutions, Vincennes University, Ivy Tech Comm. College, and two-year colleges from other states. An initial transfer evaluation (on the basis of instructional accreditation and satisfactory grades) is provided by the Office of Admissions. Department chairs and TMGT faculty then further evaluate the credit for possible acceptance in the program for which the student has applied. Credit is then posted to the student's permanent transcript. Formal agreements with Ivy Tech Comm. College and other schools are continuously being updated.

6.3.15 Upper Division Course Work: Students shall successfully complete a minimum of 15 semester hours of junior and/or senior level major courses at the institution seeking program accreditation.

The University requires a minimum of 124 hours of credit, 30 hours of resident credit, a minimum cumulative grade point average of 2.0 on a 4.0 scale, completion of a minimum of 50 hours at the 300-400 level, and completion of the General Education Program.

The Technology Management program requires the completion of 12 specific courses or 36 hours of 300 – 400 level course work. The additional required 300-400 level course work is taken in the technical minor/concentration/electives category.

6.3.16 Program Publicity – Adequate and Accurate Public Disclosure: Institutions shall broadly and accurately publicize, particularly to prospective students: (a) industrial technology program goals and objectives, (b) preadmission testing or evaluation requirements and standards, (c) assessment measures used to advance students through the program(s), and (e) fees and other charges.

University Effort. A major part of the University recruitment program is organized and administered by the Office of Admissions. Specific goals of this office include:

a. Present information about the University in a manner that will assist prospective students and their parents in making appropriate choices as to which college or university to attend.

b. Develop techniques and programs that will motivate students to seek additional information about the University.

c. Organize and conduct activities that will present the University in the most favorable way to prospective students and feeder school personnel.

d. Organize and conduct activities that will increase the number of new students enrolling at the University.

e. Work cooperatively with other University staff members to ensure maximum efficiency of the recruitment and application processing activities.

The Office of Admissions meets these goals through the following activities.

a. Direct mailing to prospective students

b. On-campus days, interviews, and campus tours

c. New Student Orientation

d. Freshmen follow-up

e. College fairs

f. Student-parent receptions

g. High school visits

h. Special alumni events

i. Phone call program

j. Distribution of posters

College Activities. One of the major functions of the Office of the Associate Dean in the College of Technology is to coordinate undergraduate recruitment activities for the CoT. The Associate Dean oversees the Technology Student Services Center that has the responsibility to conduct recruiting activities. Some of the regular recruitment efforts include:

a. School representative to the Office of Admissions

b. Development and dissemination of brochures

b. Coordinate recruiting activities such Tech Trek, Major's Fair, College Tech Prep, and Hands-on-High Tech

d. Development of all special recruitment programs such as Introduction Programs, College of Technology Career Fairs, etc.

Department Activities: The Department has faculty members who visit high schools for recruitment purposes. Faculty members also meet prospective students and parents when they visit campus. This usually includes tours of the facilities, program information, and initial advisement. The Department has also completed several mailings to counselors at the high school level, across the State, to inform them of the opportunities at Indiana State University. The Department also takes an active role in all school-level recruitment activities such as those listed above. Department faculty are also involved in outreach activities such as the Explorer Program that expose young students to skills and careers in the manufacturing profession.

The institution, the College of Technology, the TMGT Department and even the Technology Student Services Center all have web sites to advertise much of the Information listed in this standard.

6.3.17 Legal Authorization: Only institutions legally authorized under applicable state law to provide degree programs beyond the secondary level and that are recognized

by the appropriate national or regional accrediting agency are considered for ATMAE accreditation.

Indiana State University is a public, state-supported institution, under the general control of a board of trustees, known and designated as the Indiana State University Board of Trustees. Other state boards, offices, and agencies exercise certain statutory controls and have specified duties and responsibilities pertaining to the operation of the University. .

6.4 Instruction

6.4.1 Course Syllabi: Course syllabi must be presented which clearly describe appropriate course objectives, content, references utilized, student activities, and evaluation criteria. Representative examples of student's graded work shall be available for coursework.

Course syllabi are available for each course. Course notebooks have been prepared to clearly describe appropriate course objectives, content, references utilized, student activities, evaluation criteria and evidence showing a range of examples of students' graded work. The notebooks will be made available in the resource room.

6.4.2 Reference Materials: Appropriate reference materials such as periodicals, audio-visual materials, websites and computer application software (when appropriate) shall be utilized for each course or series of courses to supplement textbooks or course packs.

There are many areas where the program can access reference materials appropriate for individual classes. The Cunningham Memorial Library houses books, periodicals, electronic media, and an excellent reference service complete with computerized searches. Research assignments are given, for example, in TMGT 131, and TMGT 478, to mention only two, where students are required to avail themselves of the services offered at the library. There exists a Library Committee in the College of Technology and each year faculty are given the opportunity to request books and periodicals to be purchased and available for student use in the library.

The Office of Information Technology supports multimedia services for all faculty as needed in instructional settings.

Each room in the Myers Technology Building is equipped with state of the art media projection systems. Professors often access the web during class to supplement the information being presented. A variety of appropriate periodicals are available in classrooms for student use.

6.4.3 Program Balance: Appropriate laboratory activity shall be included in the program(s) and a reasonable balance must be maintained in course work between the practical application of "how" and the theoretical/conceptual emphasis of "why".

By definition, the student of industrial technology is one who has a theoretical understanding balanced by "hands-on application." Because the faculty is committed to this balance, classes have theoretical instruction balanced by laboratory demonstrations and student participation. Theoretical underpinnings and laboratory instruction are delivered by the professor of the course. The grading system in each of the classes reflects this same balance between theory and application. Grades are determined by assessment of the theoretical knowledge by examination as well as demonstration of application in laboratory exercises. No single element is more important than the other.

Thus, through instruction and grading practices the message is clear that theory and application are seamlessly integrated and skill with both makes the technologist a valuable resource.

6.4.4 Problem-Solving Activities: Emphasis in instruction shall be focused on problem-solving activities which reflect contemporary industrial applications.

The employers who hire our students tell us that the ability to solve problems is one of the most valued traits in the college graduate. Obviously, laboratory experiments are natural opportunities to apply the ability to solve problems, and more than 50% of the course work towards the degree in Manufacturing Technology has a laboratory component. However, each class offers students opportunities to apply their problem solving skills. There are many instances and examples that could be cited, following are some examples:

TMGT 131: Students identify areas of needed improvement based on the completion of the LASSI inventory. The LASSI has identified a potential problem area, and students are then instructed to discover the systems in place at ISU to help them solve their problem. Students are placed in teams of three, they discover resources, then report to the class the results. The steps of the problem solving process are explained and students are given a "real world" opportunity to implement the process.

TMGT 478: Students are given the problem of manufacturing a specific number of products, within a budget, in a narrow time frame. The students are also tasked with designing an original product which would be marketable to a target population.

TMGT 497: Students are taught, in an interactive format, a specific problem solving method. The class is required to apply the newly learned method to solve a "real world" problem identified at ISU.

Examples of problem solving activities can be found in the course notebooks.

6.4.5 Supervision of Instruction: Appropriate supervision of instruction shall be evident throughout the program.

Faculty members in the Department have been selected and appointed to their positions after careful scrutiny and verification that they possess excellent qualifications for the position. These include both professional and technical qualifications. Careful evaluation of their instruction is conducted by the chairperson and a committee of their peers during their probationary period prior to being granted tenure. Following the granting of tenure, instruction is evaluated less formally except in cases where the faculty member applies for promotion or "above standard" pay increases. In those instances, rather detailed documentation of teaching performance is required.

6.4.6 Scheduling of Instruction: The organization and scheduling of instruction shall allow adequate time for completion of appropriate homework assignments and laboratory problem-solving activities.

Many of the required courses are offered every semester, however, some courses are offered once a year. Students are able to schedule their courses in the suggested sequence and meet the requirements of any prerequisites. By distributing courses throughout the week, students have ample time to complete homework and other "out-of-class" assignments. Most laboratory assignments are scheduled for class time as

very few labs are “open labs”. Professors are aware of the restrictions on student time and are generally conscientious about setting realistic deadlines for any assignments, especially laboratory assignments. Evening classes are offered as necessary. Distance courses are offered to accommodate our distance students in certain programs.

Faculty teaching assignments depend on the departmental schedule requirements, the nature of the courses taught, the combination of undergraduate and graduate courses, and, to a limited extent, non-teaching assignments. The normal teaching load is nine to twelve credit hours of course work per semester. Contact hours for a course load would vary according to what type of course is being taught, i.e., one hour contact per one hour lecture and more contact for a laboratory. Consideration is also given to the number of preparations required of a faculty member. These weights are carefully observed in making faculty teaching assignments.

6.5 Faculty

6.5.1 Full-Time Faculty: Each program of study option shall have an adequate number of full-time faculty.

Currently, the TM program is taught by faculty from several different programs since there are no specific courses unique to the technology management program.

6.5.2 Minimum Faculty Qualifications: The review of program faculty qualifications shall include current faculty resumes providing clear evidence documenting the extent and currency of: (a) academic preparation, (b) industrial experience at the management/supervisory levels, (c) applied industrial experience related to the program content area(s), (d) current certifications/licensure related to the program content area(s), (e) membership and participation in appropriate professional organizations, and (f) scholarly activities. The minimum academic qualifications for regular tenure track, or full-time, faculty members shall be a graduate degree in a discipline closely related to the instructional assignment.

Resumes of the regular full-time faculty teaching in the Technology Management program are available. The current minimum academic qualification for a tenure track faculty member is a terminal degree in a discipline closely related to the faculty member’s instructional assignment, although there are a few faculty with master’s degrees who are tenured. Varying additional hours of graduate work are required for hiring at academic ranks above the instructor level with the requirement of an earned doctorate for the associate professor and professor rank. Tenure-track faculty are appointed with the expectation that a pre-tenure probationary period will be served.

6.5.3 Academic Preparation of Faculty: A minimum of fifty percent of the regular tenure track, or full-time faculty members assigned to teach in the program of study content area(s) shall have an earned doctorate or appropriately defined terminal degree. Exceptions may be granted to this standard if the institution has a program in place that will bring the faculty demographics into compliance within a reasonable period of time.

At the present time there are 3.5 full-time faculty in the TM Department teaching one or more courses in the TM program. The TM Department chair has the following responsibility: .5 chair, .5 faculty. Two of the faculty hold earned doctorates and one has completed all the course work for the doctorate.

6.5.4 Selection and Appointment Policies: Policies and/or procedures utilized in the selection and appointment of faculty shall be clearly specified and shall be conducive to the maintenance of high quality instruction.

Appointment to the Indiana State University faculty is by the Indiana State University Board of Trustees on the recommendation of the President of the University. The usual procedures for selecting candidates for faculty positions is 1) determine a need, 2) develop a staffing plan, 3) get approval from Academic Affairs, 4) advertise the position, 5) interview potential candidates, and 6) hire an individual.

6.5.5 Tenure and Reappointment Policies: Faculty tenure and/or reappointment policies and procedures shall be comparable to other professional program areas in the institution. Requirements in the areas of teaching, service, and scholarly activity shall be clearly specified for faculty in Industrial Technology.

Faculty tenure and reappointment policies and procedures in the Technology Management Department are comparable to other professional program areas in the institution. Requirements for teaching, service and scholarly activity are clearly specified for all COT faculty and can be reviewed in the COT Promotion and Tenure Standards document.

6.5.6 Faculty Loads: Faculty teaching, advising, and service loads shall be comparable to the faculty in other professional program areas at the institution. Consideration shall be given in faculty teaching load assignments to high contact hours resulting from laboratory teaching assignments.

The University Handbook identifies a normal teaching load as 12 semester credit hours of course work per semester or 24 semester credit hours per academic year.

Teaching loads within the College of Technology depend on the departmental schedule requirements, the nature of the courses taught, and any non-teaching assignments. Graduate courses are weighted more heavily than undergraduate courses. A faculty member teaching a graduate course may have his/her teaching load reduced to nine credit hours.

Faculty service loads are comparable to the faculty in other professional program areas at the institution. TM faculty perform institutional, professional and community service in varying degrees. The service component is only one area upon which faculty are evaluated for reappointment, tenure and promotion. Faculty understand there needs to be a good balance between teaching, service, and scholarly activity. With each year's evaluation for reappointment, TM faculty are reminded to work toward activities in all three areas.

The advising of students is divided equally among the faculty teaching in the TM program. It is understood that advising, when done properly, takes a considerable amount of time. The routine scheduling of classes was shifted a few years ago to the Associate Dean's Office. Currently, Ms. Jo Anne Seybold is providing assistance to some of the AMM students regarding routine scheduling of classes.

6.6 Students

6.6.1 Admission and Retention Standards: Admission and retention standards shall be used to ensure that students enrolled are of high quality. These standards shall compare favorably with the institutional standards. Sources of information may include admission test scores, secondary school rankings, grade point averages, course syllabi, course examinations, written assignments, and oral presentations.

Indiana State University, in affirming its commitment to excellence, recognizes the value of a student population reflecting academic achievement, cultural diversity, and special

talent. The University's admissions policy allows for the individual consideration of each applicant, and helps it service a student population with these characteristics.

The primary criterion for admission is evidence that a candidate is prepared to succeed in a degree program, given the University's limited resources for special assistance.

Admission standards are stated in terms of traditional school and college grading systems. For applicants whose records include either a high proportion of non-traditional grades, or a subject pattern which departs markedly from that normally associated with university study, additional evidence of academic potential in support of their applications, such as entrance examinations, interviews, and letters of recommendation, may be requested. The admission of applicants who are older than the traditional college age will be determined individually with special attention given to employment experience and motivation.

Individuals may seek exceptions to any of the requirements by petitioning the Admissions Committee to consider additional factors that may indicate college potential. A limited number of students may be admitted on condition that they agree to follow a prescribed course of study and advisement.

6.6.2 Scholastic Success of Students: Students in Industrial Technology shall have scholastic success comparable to those in other professional curricula in the institution. Grading practices in Industrial Technology courses shall be comparable to other departments and/or programs in the institution.

Students graduating from the College of Technology, and particularly the TM Department, have scholastic success comparable to those in other curricula in the institution.

6.6.3 Placement of Graduates: The initial placement, job titles, job descriptions, and salaries of graduates shall be consistent with the program(s) goals and objectives. Industry's reaction to graduates as employees must be favorable. Follow-up studies of graduates shall be conducted every two to five years. Summary statistics relating to follow-up studies of graduates shall be made available to the visiting team. These statistics shall include placement rates as well as salary levels of program graduates.

The initial placement of graduates of the TM program have enjoyed the same favorable reception by industry as graduates of similar programs around the country.

The ultimate goal of the program is to prepare our graduates with the proper skills to be successful in their career. The TM faculty work closely with the advisory board and other technology professionals to help ensure that the TM program will prepare students to gain initial employment and then advance in their career.

6.6.4 Graduate Studies: If an objective of the program(s) is to prepare students for graduate studies, then the success of Industrial Technology graduates in graduate programs shall be tracked and confirmed.

No data is currently available on the number of graduates from the TM program that entered or completed graduate degree programs. Students graduating with a degree in Technology Management generally do not pursue an advanced degree until after they have gained several years of work experience because some companies will pay for part or all of their graduate expenses. Most students who pursue an advanced degree enroll in industrial technology type degree programs, such as the MSIT program at ISU.

6.6.5 Student Evaluation of Program(s): Evaluations of the Industrial Technology program(s) shall be made by its graduates on a regular basis (two to five years). Reactions and recommendations shall be considered in program revisions.

Students in the TM program have a few opportunities to evaluate the program. Each student will have an exit interview just prior to graduation. Students also complete a senior survey with the Career Center. Every few years, survey letters are sent to alumni and employees to further evaluate programs in the TM Department.

6.6.6 Student Enrollment: Enrollment shall be adequate in each program area to operate the program(s) efficiently and effectively. The level of available financial and facility resources shall be considered as a constraint on the maximum number of qualified students to be admitted to the program(s). Enrollment trends shall be tracked, and factors affecting enrollment patterns shall be identified and analyzed. Enrollment projections shall be made which relate closely to short and long-range goals as well as financial and physical resource needs.

Enrollments (both undergraduate and graduate) in the College of Technology have remained steady since 1998. Enrollments in the TM program have been growing significantly since modifying the program and developing articulation agreements with other schools.

6.6.7 Advisory and Counseling Services: Adequate and timely advising and counseling services shall be available for students.

All students who have not declared a major area of study (non-preference students) and all non-degree students are advised in the Student Academic Services Center. The Center serves as the designated "school" of enrollment for these students until an official major has been declared.

The purposes of the Student Academic Services Center are: (1) to help freshmen adjust more easily to the academic processes of the University; (2) to assist in selecting academic majors, in choosing wisely the specific courses needed to attain these goals; (3) to coordinate the participation of faculty in the advisement of students; and (4) to function as a resource center for materials and information concerning undergraduate curricula and general education requirements.

Primarily, the Student Academic Services Center serves freshmen and sophomores. Students are provided an opportunity to discuss academic concerns in confidence with counselors, and arrangements are made for students to confer with faculty members concerning career opportunities in various academic areas.

When a student chooses a major area of study, his/her records are transferred to the chosen College and department. A faculty advisor is then assigned to the student.

<u>Faculty Academic Advising</u>

When the student has chosen an area of specialization, he/she is referred to a regular faculty member who serves as the academic advisor. Data including the student's personal biography, high school rank, and rating on the freshman orientation and achievement examinations are supplied to the advisor. The advisor will assist the student in planning the use of his/her time in acquiring good study methods and in referring the student to special services on campus as the need arises.

The advisor, in cooperation with various University agencies, will assist the student in

scheduling his/her successive programs of study. At the first mid-semester, the end of each semester thereafter, and such other times as advising sessions are needed, the academic advisor will confer with the student regarding the progress in relationship to his/her own natural level of learning and to the academic standards of the University.

Faculty in the Department of Technology Management advise students who are enrolled in either the TM program.

Student Participation in Program Planning

Each student enrolled in the University is expected to read carefully and to understand the contents of the University Catalog that are applicable. This includes the awareness of the University general policies and regulations for academic achievement necessary for continued enrollment as well as for graduation, in addition to those regulations identified by Student Services relating to his/her social and campus conduct.

The students are also responsible for familiarizing themselves with any requirements special to the academic discipline of their choice which must be a condition of their qualifying for graduation.

Each student should assume at the earliest moment possible the initiative for preparing the semester schedule of classes. The academic advisor is available to offer suggestions and to verify the accuracy of course choices in meeting curricular patterns, but the primary responsibility for knowing the requirement of the academic program and proceeding to satisfy those requirements in an orderly and sequential manner remains with the student.

6.6.8 Ethical Practices: Ethical practices shall be fostered, including reasonable student refund policies and nondiscriminatory practices in admissions and student employment.

Indiana State University is unequivocally pledged to principles of nondiscrimination, assuming fair and equitable treatment of all persons. The University has given assurance of compliance with national, state and local civil rights legislation and enactments.

Indiana State University reaffirms its present policy of nondiscrimination and equal employment opportunity with respect to recruitment, hiring, training, promotion, and treatment of persons. The organizations, services, and programs under the legal control of the Trustees of Indiana State University shall be maintained on a nondiscriminatory basis in regard to race, sex, religion, handicap, veteran status, age, or national origin at all times.

Indiana State University will continue to take positive actions to ensure against discrimination directed to any persons. All members of the faculty and staff are expected to give full support to the University's commitment to equal opportunity and affirmative action.

The tuition refund policy and withdrawal policy can be found in the Undergraduate Catalog.

6.7 Administration

6.7.1 Program Administration: Programs in Industrial Technology are expected to have an identifiable, qualified individual with direct responsibility for program coordination and curriculum development. This individual should be a full-time

employee of the institution.

The Technology Management program is lead by three professors in the Technology Management Department. The coordinator position is conferred by faculty consensus upon the faculty member best capable of providing leadership for the program. The faculty of the department have the primary authority and responsibility for curriculum development.

6.7.2 Administration Leadership: Individuals assigned to administer Industrial Technology programs must demonstrate effective leadership and a high level of support for Industrial Technology

The Department chair serves as the head coach and cheerleader for the department. The chair is the spokesperson for the department and is the primary liaison between the department and the rest of the University community. The chair is responsible for reporting and record keeping requirements. For most activities, such as curriculum decisions, faculty evaluations, and program administration, the chair as one entity and the rest of the departmental faculty as another share equal authority. In these matters, the chair is required to seek faculty input. The chair has discretionary authority concerning only budgeting and scheduling. The Dean of the College of Technology has been very supportive of all programs housed within the College. The respect the College of Technology has achieved within the University, within the community, and within the region, in part, can be attributed to the past three Dean's.

6.7.3 Administrative Support: There must be appropriate support for Industrial Technology from the personnel holding leadership positions in the departments and colleges where Industrial Technology is administratively located.

The Chair and the Dean support the concept of shared participation which has been utilized in student recruitment, curricular matters, instructional evaluation and service and scholarly activities. Committees are utilized to develop policies the Chair may use in regard to personnel matters, budget development, supply and equipment expenditures, repairs and curriculum matters.

Both of the Deans and the TM Department Chair support the Industrial Technology programs. All of these individuals have been long-time members of ATMAE (NAIT). Most of these individuals attend the yearly ATMAE/NAIT Conference and a few are actively involved in the organization.

6.8 Facilities and Equipment

6.8.1 Adequacy of Facilities and Equipment: Physical facilities and equipment, which are suitable to serve the goals and objectives of the program(s), shall be available for each program option. Where facilities and equipment appear to be minimal to support a quality program(s), comparisons with support levels for other professional programs at the institution will be made by the visiting team.

The $18.5 million, 120,000 sq.ft. Myers Technology Center, opened in 1998, provides a 21st century learning environment.

At the present time there are four major lab areas associated with the TM program. They are (1) Machine Tool Processing Lab, (2) Manufacturing Lab, and (3) SIMCO lab.

6.8.2 Support for Facilities and Equipment: Facility and equipment needs shall be reflected in the long range goals and objectives for the program(s), and option(s)

and sources of potential funding shall be identified.

One of the long-range goals is to continue to update equipment and enhance laboratories in the TM program.

The TM Department receives a budget for equipment each year. These monies are then distributed to the various programs by a process whereby individual faculty submit requests to a departmental committee. The committee reviews the requests and submits a list of recommended purchases to the Department Chair for purchase. The system is deemed fair and equitable and the available monies adequate to maintain program integrity.

Additional support for the programs through donations of equipment and supplies from outside sources is constantly being sought and has been very successful.

6.8.3 Appropriateness of Equipment: Equipment shall be appropriate to reflect contemporary industry. Student use of equipment reflecting current technology practices shall be evident.

An underlying philosophy held by the faculty involved in the technology management program has been to secure equipment that is representative of that used by industry. Whenever this is not possible, table top models or units are considered for purchase. Essentially all equipment is used by the students in laboratory situations.

6.9 Computer Systems

6.9.1 Availability of Computer Systems: Appropriate and current computer systems and software shall be available to both students and faculty. These systems must cover appropriate functions and applications in each program area. These systems may be on or off-site as long as the systems are accessible to students and faculty.

Campus wide, there are several thousand computers in approximately 400 laboratory settings. The COT has hundreds of computers. One such lab, the Student Computing Center, is open 24 hours a day, has 100 computers and several laser printers available for student use, and always has a computer consultant available to help students with concerns or problems.

6.9.2 Utilization of Computer Systems: Evidence shall be available which indicates that students and faculty are making significant use of computer systems related to program curricula.

Evidence indicating that students and faculty are making adequate and appropriate use of computer systems begins with on-line registration and is evident through many class assignments and ends with the on-line designation of grades. ISU has enacted an interactive computer system called: MYISU. Students determine what classes are available, register for classes, drop and add, find out their grades, and communicate with their professors and fellow students through use of the Portal.

Faculty use computer systems for advisement by downloading Degree Audit Reports, for reporting attendance by electronically inputting absences after the sixth and tenth weeks of the semester, and for electronically reporting grades at mid-term and end of term. Faculty use the computing systems to email, make assignments, and send electronic attachments to all class members, thus eliminating the need to make hard copy and distribute during class.

6.10 Financial Resources

6.10.1 Financial Support: The budget for the Industrial Technology program(s) shall be adequate to support program objectives. When judging sufficiency, the visiting team shall make comparisons with the support levels given to other professional programs at the institution.

Each year the Department received an operating budget based on the previous year's expenditures. Over the years, the operating budget hasn't changed much until the most recent budget crises where the department lost some supply funds. Generally, if operating expenses exceed the budget, a request is made to the Dean for financial support. This rarely happens as the chair and faculty work to stay within the budget.

In addition to the operating budget, equipment budgets are also given to each department. The allocation of these equipment budgets is based on the laboratory needs of each department. Each department also receives a portion of the Distance Delivery dollars that are generated by distance courses. The TM department currently receives approximately $13,000/year that can be used to support distance financial endeavors.

Faculty salaries are determined upon initial appointment. After initial appointment salary increases are based on standard across the board raises or sometimes upon below standard increases, standard increases, or above standard increases. The level of increase which each faculty may receive is based on their level of activity in the areas of Teaching Effectiveness, Service, and Scholarly Activities.

Faculty also receive increases in base pay upon earning advanced degrees and also in the case of promotion to higher ranks.

Control of expenditures is solely within the Department. An initial allocation of operational funding is given to each program in the form of a supply and a student wages account. All equipment purchases are approved by a departmental finance committee which ranks and approves requests for capital equipment purchases.

6.10.2 External Financial Support: There shall be evidence of external support for the programs(s) in Industrial Technology. However, this external support shall be treated as supplementary support and is to be used to achieve and maintain a high level of program excellence. This external support shall not be used to displace funding support normally provided by the institution.

External financial support is regularly sought from industry partners and from individual supporters to finance activities and purchases beyond those required for normal operations.

6.11 Library Services

6.11.1 Library and Internet Resources: The administrative unit containing the Industrial Technology program(s) and/or the institutional library shall have access to technology resources, literature and reference materials adequate to meet the curriculum and research needs of students and faculty

Library resources are quite adequate. The COT has a library budget comparable to other units on campus. The library responds readily to requests for books and periodicals needed for COT programs. Adequate books, periodicals, and computer-based materials are available for reference and for circulation. A growing number of internet and CD resources and search aids are available on-line through the Cunningham Memorial website.

6.11.2 Utilization of Library and Internet Resources: Evidence shall be available which indicates that students and faculty are making adequate and appropriate use of library and reference resources.

Students are making adequate and appropriate use of the Library. Most courses include technical reports, term papers, and other class presentations where the Library houses the necessary information.

Evidence of these requirements may be found in the syllabi found in the course resource notebooks.

The faculty have identified no accurate techniques to measure the extent to which faculty are making adequate and appropriate use of library resources.

6.12 Support Personnel

Support Personnel: Personnel such as teaching assistants, student workers, office professionals, and laboratory technicians shall be adequate to support program objectives.

The following personnel provide support for the TM Program:

1. Administrative Assistant – The Department has one full-time Administrative Assistant. She must handle the work from all members of the Technology Management Department.

2. Technicians – The College of Technology has an electronics technician and a mechanical technician available to assist faculty with projects and repairs.

3. Graduate Assistants – The TM programs have seven graduate assistants presently assigned who are being utilized as teaching assistants. The Department also has one Ph.D. fellow working with the Department faculty.

4. Student Workers – Student workers provide support for all TM programs. Students are used to help organize, clean and set up the labs, and assist the Lab coordinators. Money is available in the operating budget to hire Student workers.

6.13 Placement Services

6.13.1 Placement Services: Appropriate services shall be available to assist with the placement of program graduates. Placement of graduates shall be tracked and the effectiveness of placement services shall be evaluated by the administrative unit containing the Industrial Technology program(s).

Although the Career Center helps students find suitable summer and part-time employment, the focus of its activities is on placement of seniors, graduates, and alumni. Career Center services are viewed as an integral part of the academic program of any student to fulfill the University's educational objectives.

6.13.2 Cooperative Education/Internship: If cooperative education or internship is either a required or an elective part of the program, then appropriate services shall be provided to assist with the placement and supervision of cooperative education students.

Cooperative education/Internship is required in the TM program. As stated earlier in this document, students receive credit for co-op through a course numbered TMGT 351 in their major. Some students take repeated co-op positions and can receive TMGT 351 credit for a total of six semester hours.

Employers are contacted about their possible interest in co-op through several activities. Faculty make many contacts with industry professionals and the Career Center sponsors career fairs for companies interested in co-op students.

Students are made aware of co-op opportunities through a variety of activities. Career Center personnel make presentations in many College of Technology classes. Students also attend meetings of professional organizations, and participate in many other student-centered activities including IOPP meetings, SME meetings, Women in Technology Meetings, the Career Fair, and other activities.

6.14 Industrial Advisory Committee(s)

6.14.1 Program Advisory Committee(s): An industrial advisory committee shall assist in the validation of program content. If more than one program of study or program option is available, then appropriately qualified industrial representatives shall be added to the committee or more than one committee shall be maintained. Policies shall be presented to indicate the: (a) procedures used in selecting members, (b) length of appointment, (c) organization of the committee, (d) committee responsibilities, (e) frequency of meetings, and (f) methods of conducting business.

The industry advisory committee assists the Technology Management and the Advanced Manufacturing Management programs in many ways. They help with validation of content, provide their expertise and that of the companies they represent and make suggestions that will help improve the program.

Since there are many similarities between the Technology Management program and the Advanced Manufacturing Management program, one industrial advisory committee is utilized for both programs. After the last NAIT re-accreditation in 2004 a constitution and by-laws document were created to guide the activities of the industrial advisory board. It addresses all of the items in this standard and is included here for the visiting team to review.

CHARTER CONSTITUTION AND BY-LAWS

Advisory Board for the Manufacturing Programs
at
Indiana State University

Approved: April 20, 2006
Revised June 10, 2008

Preamble

We, the members of the Advisory Board for the Manufacturing Programs at Indiana State University, do hereby adopt and establish the following Constitution and By-Laws.

Name

This organization shall be known as the Advisory Board for the Manufacturing Programs at Indiana State University (or briefly, the Advisory Board).

Purpose

The purpose of the Advisory Board shall be to advise, support, and promote the Manufacturing Programs (MP) at Indiana State University so that the student's learning experience upon graduation will more effectively support the practical development of future leaders in the manufacturing industry.

Other objectives of the Advisory Board shall be to:

- **Provide regular critiques of the Program's curriculum.**
- **Suggest course offerings that would benefit MP students.**
- **Provide strategic planning assistance to help meet future needs of graduates and the manufacturing industry.**
- **Provide input to the MP graduate programs.**
- **Assist in the establishment of MP certificate programs.**
- **Assist in providing cooperative education/internship experiences for students, placement of MP graduates, and professional development for faculty.**
- **Support fund-raising.**

Membership

The number of Advisory Board members will be a minimum of eight (8) and a maximum of twenty (20) plus ex officio (nonvoting) members:

- **Dean of the College of Technology.**
- **Chair of the Department of Technology Management (TM).**
- **Manufacturing Programs (MP) faculty.**

Procedures used in selecting members:

- **Advisory Board members shall be selected from professions and trades related to the manufacturing industry.**
- **The Advisory Board members shall be nominated by the MP faculty to the Chair of the TM Department. The Chair shall schedule a meeting of the MP faculty to make a final decision.**
- **Each appointment to the Advisory Board shall be for three (3) years, except when the appointment is to fill an unexpired term.**
- **Approximately two-thirds of the members will be retained each year with none serving more than three (3) successive years, unless reappointed by the Manufacturing Programs faculty.**
- **The term of a new Board member shall begin on January 1.**

Any member may resign his or her membership in the Advisory Board by submitting a signed resignation to the chairperson of the TM Department.

Any member missing two consecutive meetings without due cause shall be considered uninterested and eliminated from membership.

Board Policies

The Advisory Board for the Manufacturing Programs is based upon the principles of equality of all its members regardless of sex, race, creed, or color.

All members shall strive to fulfill in good faith the objectives of the Advisory Board and the obligations assumed by them in accordance with this constitution.

Finances

The necessary expenses of this organization shall be paid from the operating expenses of the TM Department.

No dues shall be required of any Advisory Board members.

Amendments

Amendments to the Constitution or By-Laws shall be ratified by three-fourths affirmative vote of the active members.

BY-LAWS

Officers

The Advisory Board shall have two officers—President and President-Elect. The Chair of the TM Department shall serve in an advisory role with duties listed below. Elections will be held once a year during the spring meeting. Nominations can be taken from the floor. Officers shall serve for a term of one (1) year.

The duties of the President shall be as follows:

Provide a focus for the membership and preside at each meeting.

Coordinate all administrative responsibilities of the Advisory Board.

Schedule meetings.

Prepare agendas.

The President-Elect shall assist the President as necessary and prepare to serve as the next President.

The Chair of the TM Department shall assist the President as follows:

Serve as the liaison between the Advisory Board and the Manufacturing Programs faculty.

Write and distribute meeting minutes.

Prepare, update, and distribute a Board directory.

Coordinate meetings and prepare agendas.

Assist in the selection of new members.

Board Committees

The President shall appoint committees as deemed necessary.

Board Meetings

The Advisory Board shall meet at least once a year.

Special meetings of the Board may be called by the President as deemed necessary.

A quorum shall consist of one half of the active members of the Board. If there shall be less than a quorum present, those present may either adjourn or act on the matters before it, subject to ratification at the next meeting which constitutes a quorum.

(End of Document)

6.14.2 Advisory Committee Meetings: The Industrial advisory committee(s) shall meet at least once each year, and minutes shall be kept of these meetings showing agenda items, actions taken, and recommendations made.

The IAC has been very helpful in making suggestions that have benefited the Manufacturing programs.

Following are two examples of minutes from IAC meetings. Some of the recommendations made and actions taken are evidenced in the minutes.

Technology Management Department
Technology Management program (BS)
Technology Management (BS)
Industrial Technology Program (MS)
Minutes of Advisory Board Meeting
March 27, 2008

ATTENDEES:

Bob Brown	Tri Aerospace	Gordon Minty	ISU
John DiCenso	Raybestos Power Train	Wes Richardson	Quality Council/IN
Beth Fauber	ISU	Jim Smallwood	ISU
Tad Foster	ISU	Mark Deady	Aisin Brake
David Lynch	PDF Controls	Marvin Miller	Unison Engine
Jeff McNabb	ISU	Mike Johnson	Novelis

I. Welcome and Introductions

II. Agenda Additions

III. Approval of Minutes (April 12, 2007) – Approved as submitted.

IV. Dean's Report, Dr. W. Tad Foster – Dean Foster spoke to the following issues:
1. Project with Landstone (Compression and Absorption)
2. COT Reorganization
3. Enrollments (undergrad and grad)
4. Project Lead the Way

V. Verify Address, Phone, E-Mail

VI. Discussion Items (New Business)

A. General Announcements
1. Ivy Tech – Articulation agreements will be updated and signed in April.
2. Meeting canceled last fall due to so many conflicts.
3. How you have helped the ISU faculty and programs.

B. Election of President & President-Elect – Elected for the 2008-2009 year were: President – Wes Richardson; President-Elect – John DiCenso.

C. COT Reorganization – J. Smallwood just added to what the Dean spoke about the reorganization by relating how the changes would affect the Board.

D. TM Dept. Programs – J. Smallwood distributed information about all programs in the new TM department.

E. Curriculum Update – B. Fauber and G. Minty discussed the changes that were made to the manufacturing programs. Information was shared (checksheets, suggested 4 yr. course sequence, etc..)

F. NAIT Reaccreditation – Wes Richardson requested this be added to the agenda. There was discussion about the next team visit and what we needed to do now to get prepared.

G. Action Items from last meeting:
1) Bob Brown gave the WVAMC video to Sajid but somehow it didn't get to J. Smallwood. We will follow up to see what happened.
2) There was some discussion on how to market manufacturing programs through the WVAMC and WIB. More discussion on this topic at a future meeting.

H. Actions Items for Next Meeting (Fall 2008):

1) **Send** constitution and by-laws to Mark Deady.
Person in Charge: Jim Smallwood
2) **Send** an updated list of the activities to the advisory board.
Person in Charge: Jim Smallwood
3) **Contact** Archie Kappel and Jim Kern to see if they want to continue on the advisory board**. Person in Charge**: Jim Smallwood
4) **Update** the Constitution and By-Laws to reflect the new TM department**.**
Person in Charge: Jim Smallwood.

Meeting adjourned.

Technology Management Department
Technology Management program (BS)
Technology Management (BS)
Industrial Technology Program (MS)
Minutes of Advisory Board Meeting
October 30, 2008

ATTENDEES:

Bob Brown Tri Aerospace
John DiCenso RayBestos PowerTrain
Beth Fauber ISU
Ann Case Tredegar
Mike Hayden ISU
Gordon Minty ISU
Wes Richardson Quality Council/IN
Jim Smallwood ISU
Jeff McNabb ISU

I. Welcome and Introductions

II. Agenda Additions

III. Approval of Minutes (March 27, 2008) – Approved as submitted.

IV. Dean's Report, Dr. Jeff McNabb – Dr. McNabb spoke to the following issues:
1. Enrollment and Retention
2. Searches in the COT
3. NAIT
4. Project Lead the Way
5. Capital Campaign
6. Tech Trek

V. Verify Address, Phone, E-Mail

VI. Discussion Items (New Business)

A. General Announcements

1. Action Items completed from last spring.
2. Dean's Search committee is being assembled.
3. Dr. Smallwood will be on Sabbatical Leave in the spring.
4. New faculty in TMGT dept.

B. NAIT re-accreditation – The NAIT visiting team will come in Spring, 2010 to review programs for re-accreditation. There was discussion on what needs to be done to get prepared for their visit.

C. Student Learning Outcomes – There was discussion on the Student Learning Outcomes for the Advanced Manufacturing Mgt. program. The advisory board provided some input and is being asked to provide additional feedback to Professor Fauber.

D. Mission and Vision – The TM dept. is currently working on the mission and vision statements for the new department. The advisory board provided some input.

E. Strategic Planning - Strategic planning is underway for the manufacturing related programs. The advisory board is being asked to provide input.

F. Action Items from last meeting: Dr. Smallwood completed the four action items from the spring advisory board meeting.

G. Actions Items for Next Meeting (Spring, 2009):

1) Provide input to Professor Fauber on a) Mission and Vision, b) Student Learning Outcomes for the AMM program, c) Strategic Plan.
Person in Charge: All Advisory Board Members and ISU faculty.

Meeting adjourned.

6.15 Educational Innovation

Educational Innovation: There shall be evidence that program objectives are based upon long-range planning related to the industries being served. Program content must be current in both content and delivery of instruction.

Input is gathered from the Industrial Advisory Council and other industry professionals through professional association meetings, internships, field-trips, projects and many other techniques. Through all of these efforts the faculty have a good understanding of current manufacturing practices, both technical and management. The program objectives in the TM program are constantly reviewed for relevance. As you will see in standard 6.16 the faculty have established an assessment plan for the program that will review all of the outcomes/student competencies twice over a six year period. This long range plan will allow us the opportunity to confirm what we do in the TM program or to make decisions about curricular changes where necessary.

Teaching methods are changing as faculty identify and develop the best method to use in meeting objectives of each course. Several Department members have completed Distance Delivery training and are transforming classes to be offered via distance education methodologies or improving classes which are currently offered

through distance measures. Several faculty use the course management software Blackboard to supplement their on-campus courses. Some faculty use a combination of delivery which includes in-class and synchronous distance education by using the Eluminate and Tegrity software. This is something new for us since ISU is slowly getting away from the old IHETS system. Several faculty in the department have attended training sessions on both of these software and delivery techniques. The TM faculty have made a good effort to stay current in learning the different options available for delivery of instruction.

Results of these innovations and new technologies are disseminated in published papers and conference presentations.

6.16 Assessment

Assessment Plan and Integration: An assessment plan shall be comprised of, but not limited to, the following for each program: (1) program mission statement, (2) program outcomes/student competencies, (3) evidence that the program incorporates these outcomes/student competencies, (4) assessment measures used to evaluate student mastery of the student competencies stated, (5) compilation of the results of the assessment measures, and (6) evidence that these results are used to improve the program.

(1) Program Mission Statement

The ISU Technology Management program provides hands-on experiences with community and industry partner to foster creativity and ethics in both individual and team situations to prepare students as professionals in the engineering and management of technology systems.

(2) Program Outcomes/student competencies

Program Outcome # 1: The student will demonstrate mastery of the knowledge and tools of the technology management profession.

Program Outcome # 2: The student will be able to apply technical knowledge in conducting experiments to solve problems.

Program Outcome # 3: The student will use creativity in designs and applications for experiments to resolve problems.

Program Outcome # 4: The student will function in teams to solve problems.

Program Outcome # 5: The student will present research findings in oral and written form.

(3) Evidence that the program incorporates these outcomes/student competencies

COURSE #	A demonstrate mastery of the knowledge and tools of the technology management profession	B apply technical knowledge in conducting experiments to solve problems	C use creativity in designs and applications for experiments to resolve problems	D function in teams to solve problems	E present research findings in oral and written form
TMGT 131	Introduced			I	I
MET 103	Practiced	I	I		
ECT 160	I	I			
MFG 370	P	P	P		P
MFG 371	P	P	P		P
TMGT 351	Reinforced	R	R	R	R
TMGT 471	P	R	R	R	R
TMGT 473	R	R	P		R
TMGT 478	R	R	R	R	R
TMGT 492		R	R	P	R
TMGT 497			R	R	R
HLTH 318				I	

(4) assessment measures used to evaluate student mastery of the student competencies stated

Stakeholder Involvement

Stakeholders: (Rating – 2 beginning stage of implementation)

1. Students
2. Graduates
3. Employers
4. Other professionals

Primary Stakeholders are involved in identifying/affirming program educational objectives: (Rating – 2 beginning stage of implementation)

1. Students fill out SIRs for each course
2. Graduates are surveyed
3. Employers are represented through the Advisory Board and internship evaluations
4. Other professionals are represented in the ATMAE accreditation

Primary Stakeholders are involved in periodic evaluation of educational objectives: (Rating – 2 beginning stage of implementation)

1. Students fill out SIRs for each course
2. Graduates are surveyed periodically
3. Employers are represented through the Advisory Board and internship evaluations
4. Other professionals are represented in the ATMAE accreditation

Sustained partnerships with stakeholders are developed: (Rating – 5 implemented, evaluated and at least one cycle of improvement)

1. The Technology Management program has utilized the department advisory board, but is in the process of developing a programmatic advisory board.
2. The Technology Management program through its predecessor program (Industrial Technology) has been accredited by ATMAE/NAIT for at least 5 years

.

Program Educational Objectives

Objectives are defined: (Rating 3 – In place and implemented)

1. Perform a variety of technical activities the student is likely to manage.

2. Communicate effectively in the production/engineering/management environment.

3. Solve technical problems or control the environment.

4. Make technology related decisions.

5. Allocate resources effectively.

6. Operate well in team environments, whether as leader or team member.

7. Operate well in an unsupervised environment.

8. Integrate ethics in all dealings.

Number of objectives are manageable: (Rating 3 – In place and implemented)
Eight objectives is a very reasonable and manageable number.

Objectives are aligned with department/program mission statement: (Rating 3 – In place and implemented)
These objectives are aligned with the intent of the mission statements

Objectives are periodically assessed to determine achievement: (Rating 2 – Beginning stage of implementation)
Assessment of these objectives has not yet been completed.

Objectives are periodically evaluated for currency: (Rating 2 – Beginning stage of implementation)
While it is believed that all the objectives are current, a formal evaluation has not yet been completed.

(5) compilation of the results of the assessment measures

Student Learning Outcomes

Student learning outcomes are identified: (Rating 3 – In place and implemented)

1. Master knowledge and tools of the technology management profession
2. Apply technical knowledge in conducting experiments to solve problems
3. Use creativity in designs and applications for experiments to resolve problems
4. Function in teams to solve problems
5. Present research findings in oral and written form

Number of outcomes manageable: (Rating 3 – In place and implemented)
Five outcomes is a very reasonable and manageable number.

Outcomes are publicly documented: (Rating 2 – Beginning stage of implementation)
These outcomes will be included in future documentation.

Outcomes are linked to educational objectives: (Rating 3 – In place and implemented)
These outcomes were written to fit well with the educational objectives of this program.

Outcomes are defined by a manageable number of measurable performance indicators (performance criteria): (Rating 2 – Beginning stage of implementation) Measureable performance indicators are being refined.

Measurable Performance Criteria

Student learning outcome 1:
Master knowledge and tools of Technology Management profession
1. Student can pass standard exit exam
2. Student can manage a given technological system

Student learning outcome 2:
Apply technical knowledge in conducting experiments to solve problems
1. Scientific method and standard test procedures are used
2. Test plan correct for the situation

Student learning outcome 3:
Use creativity in designs and applications for experiments to resolve problems
1. New ideas are developed
2. Concepts are evaluated

Student learning outcome 4:
Function effectively in teams to solve problems
1. Team produces quality results
2. Team members favorable in evaluation

Student learning outcome 5:
Present research findings in oral and written form
1. Oral skills are clear and effective
2. Written skills are clear and effective

Student Learning Outcomes Aligned With Educational Practices

Desired outcomes are mapped to curricular practices and/or strategic (e.g., courses/teaching methodology, internship): (Rating 2 – Beginning stage of implementation)

Practices/strategies are systematically evaluated using outcomes assessment data: (Rating 1 – Beginning stage of development) The data are not yet available

Where necessary, educational practices are modified based on evaluation of assessment data: (Rating 1 – Beginning stage of development) The data are not yet available

Assessment Processes

Assessment is on-going and systematic at the program level: (Rating 2 – Beginning stage of implementation) The data are not yet available

Multiple methods are used to measure each outcome: (Rating 2 – Beginning stage of implementation)
Multiple methods are in use

Both direct and indirect measures of student learning are used to measure outcomes: (Rating 2 – Beginning stage of implementation) Both direct and indirect measures are being used

Assessment processes are reviewed for effectiveness and efficiency: (Rating 2 – Beginning stage of implementation) The data are not yet available for review

When needed, assessment methods are modified based on evaluation processes: (Rating 2 – Beginning stage of implementation) Assessment methods will be modified as evaluation indicates it is necessary

Evaluation

Assessment data are systematically reviewed: (Rating 2 – Beginning stage of implementation) Assessment data are not yet complete

Evaluation of results is done by those who can effect change: (Rating 2 – Beginning stage of implementation) Evaluation of results is done by program leaders

Evaluation of assessment data is linked to curricular practices/strategies: (Rating 2 – Beginning stage of implementation)

Evaluation leads to decision making/action: (Rating 2 – Beginning stage of implementation)

(6) evidence that these results are used to improve the program.

BS in Technology Management

Matrix of Program Outcomes and Assessment Methods				
	Exam[i]	Follow-up Survey[ii]	Survey of Graduating Seniors	Portfolio [iii]
#1 Perform a variety of technical activities the student is likely to manage.		X	X	X[iv]
#2 Communicate effectively in the production/engineering/management environment.		X	X	X[v]
#3 Solve technical problems or control the environment.	X	X	X	X[4]
#4 Make technology related decisions.	X	X	X	X[4]

#5 Allocate resources effectively.	X	X	X	
#6 Operate well in team environments, whether as leader or team member.		X	X	X[4]
#7 Operate well in an unsupervised environment.		X	X	X[4]
#8 Integrate ethics in all dealings.		X	X	

[i] Professional exam to be taken in senior year. The intention is to use the or the ATMAE exam or another appropriate professional exam.

[ii] Follow-up survey of alums and their supervisors. The intent is to do this no later than every 5 years (the period specified by most accrediting associations). Currently, the program is accredited by ATMAE, which requires outcomes assessment.

[iii] The intent is to keep a range of student's graded work (a) of a written report required in the production planning course and (b) of experiential laboratory assignments (when the student is not a transfer student).

[iv] This will be evidenced by the student having completed an internship in a packaging environment.

[v] TMGT 471 Production Planning and Control.

Author: George Maughan
Posted date: Thursday, March 27, 2008 12:50:50 PM EDT
Last modified date: Thursday, March 27, 2008 12:50:50 PM EDT

Draft Goals of PhD in Technology Management Program

The PhD in Technology Management is a research and scholarship oriented degree program. The fundamental student outcomes are:

1. that students obtain knowledge of advanced concepts and processes in technology management and their area of specialization (scholarship).
    a. Core technology
    b. Technology management
    c. Specialization (Construction management, Manufacturing systems, Digital communication, Quality systems, Human Resource Development and Industrial Training)
2. that students obtain knowledge and skill in the consumption, design and execution of advanced research in technology management and their area of specialization (research).
3. that students demonstrate knowledge of academic units and faculty roles in technology study programs in higher education institutions.