

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Office of the Provost and Vice Chancellor
for Academic Affairs

Swanlund Administration Building
601 East John Street
Champaign, IL 61820



April 14, 2000

Raymond M. Leuthold, Chair
Senate Committee on Educational Policy
Office of the Senate
228 English Building, MC-461

Dear Professor Leuthold:

Enclosed are copies of a proposal from the College of Commerce and Business Administration and the College of Engineering to establish a new Minor in Technology and Management.

This proposal has been approved by both colleges; it now requires Senate review.

Sincerely,

A handwritten signature in cursive script that reads "Karen M. Carney".

Karen M. Carney
Assistant Provost

KMC/cd

C: S. Gonzo
R. Herman
F. L. Neumann
W. R. Schowalter
H. Thomas

TITLE: Proposal for the Establishment of a Minor in Technology and Management in the College of Engineering and the College of Commerce and Business Administration

SPONSORS: Professor George Monahan, 333-8270
College of Commerce and Business Administration

Professor Russ Jamison, 265-8048
College of Engineering

BRIEF DESCRIPTION: The Technology and Management Minor is an undergraduate course of study in which undergraduate students in the College of Engineering and the College of Commerce and Business Administration learn together in an integrated program without sacrificing disciplinary depth in their major fields of study. The focus is on developing cross-disciplinary knowledge, interdisciplinary team skills, and business awareness. The following twenty-two credit hours of required courses comprise the core of the program:

Courses taken by engineering students only:

<u>HOURS</u>	<u>REQUIRED COURSES</u>	
3	ACCY 200	Fundamentals of Accounting
3	FIN 254	Corporate Finance
3	BADM 251	New Product Marketing

Courses taken by business students only:

<u>HOURS</u>	<u>REQUIRED COURSES</u>	
3	MATSE 101	Materials in Today's World
3	TAM 201	Intro. to Mechanics for Tech. & Mgmt.
3	ECE 217	Intro. to Electrical and Computer Engineering for Tech. & Mgmt.

Courses taken by engineering and business students together:

<u>HOURS</u>	<u>REQUIRED COURSES</u>	
3	T&M 211	Strategic Mgt. of Innovation and Technology
3	T&M 212	New Product Development
3	T&M 221	Business Process Modeling
4	T&M 222	Integrated Project

JUSTIFICATION: Industry leaders, college advisory boards, and recent graduates have articulated the need for such a program. Companies need engineers who understand market forces and the financial implications of technology investment. They need business majors who understand the technical aspects of process and product development as well as the capabilities and constraints of engineering disciplines. The Technology and Management Minor addresses these needs by providing undergraduate students a working knowledge of the fundamental elements of their cross-disciplines and the opportunity to exercise this knowledge by working together on project teams which mirror those found in most companies today.

BUDGETARY AND STAFF IMPLICATIONS:

- a. **Additional staff and dollars needed.** The Provost has provided two new faculty lines (one in each college) to support the administration of this program. External funding to develop the program has been provided by corporate sponsors and individual gifts. The continued financial viability of the program is a priority of the deans of both the College of Commerce and the College of Engineering. We will continue to develop sources of external funding by building a base of sustaining corporate affiliates and individual sponsors.
- b. **Internal reallocations.** Seven new courses have been created to establish the curriculum. Courses in Accounting (ACCY 200) and Finance (FIN 254) required for engineering students in the program are existing courses.

One ACCY 200 section is restricted to students in the program. The finance course is not restricted. The course in Materials Science (MATSE 101) required for business students in the program is also an existing course. This course is also not restricted. Funds to provide release time for faculty who teach the new or restricted courses are provided to the appropriate academic departments by the Technology and Management Program.

- c. **Effect on course enrollments in other departments and explanations of discussions with representatives of those departments.** Course enrollments in FIN 254, ACCY 200, and MATSE 101 increase by approximately twenty-four students each for one semester each year as a result of this program. The other courses in the program are new offerings. Release time for faculty to teach these additional courses are provided by the offering department and funded by the Technology and Management Program. Heads of affected departments have reported minimal impact of these additional requirements on other course offerings or enrollment during the pilot phase of the program. No additional dollars are required for existing courses. See supporting documentation.
- d. **Impact on library, computer use, laboratory use, equipment, etc.** Existing resources are adequate to accommodate the requirements of the program.

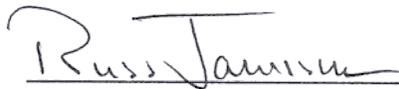
GUIDELINES FOR UNDERGRADUATE EDUCATION: Each undergraduate student who successfully completes the program of study and is awarded the Minor in Technology and Management will have been required to demonstrate the ability to think critically about real world problems of significant breadth and complexity, to write and speak coherently about the process and outcome of developing solutions to these problems, and to do so in an environment of diverse intellectual viewpoints and approaches.

ADVISING: Advising for the Technology and Management Minor is done at three levels. Each student in the program is assigned to a faculty member, who is currently teaching in the program, for advising purposes. In addition, the co-directors of the program serve as advisors. Finally, the Program Administrator is available on a daily basis to assist with scheduling and other routine administrative issues.

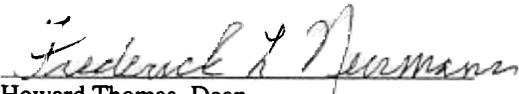
CLEARANCES:



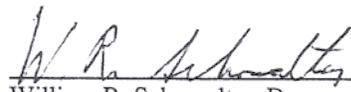
Professor George E. Monahan, Co-Director
College of Commerce and Business Administration



Professor Russ Jamison, Co-Director
College of Engineering



Howard Thomas, Dean
College of Commerce and Business Administration



William R. Schowalter, Dean
College of Engineering

STATEMENT FOR PROGRAMS OF STUDY CATALOG:

MINOR IN TECHNOLOGY AND MANAGEMENT. Successful management of technology-driven businesses today requires that employees work effectively in interdisciplinary teams. Team-based project management requires that each member of the team contribute not only in his or her own area of expertise but in other aspects of the project as well. The better equipped a new employee is to reach this level of competency quickly, the more valuable will be his or her contributions. Moreover an employee having such competency will be better prepared to assume positions of increased responsibility and challenge.

Through the Minor in Technology and Management undergraduate students in the College of Commerce and Business Administration and students in the College of Engineering are enabled to acquire a thorough foundation in their major course of study as well as a comprehensive understanding of the fundamental

elements of a cross-discipline. The course of study leading to a minor in Technology and Management is comprised of three focus areas:

Courses taken by engineering students only:

<u>HOURS</u>	<u>REQUIRED COURSES</u>	
3	ACCY 200	Fundamentals of Accounting
3	FIN 254	Corporate Finance
3	BADM 251	New Product Marketing

Courses taken by business students only:

<u>HOURS</u>	<u>REQUIRED COURSES</u>	
3	MATSE 101	Materials in Today's World
3	TAM 201	Intro. to Mechanics for Tech. & Mgmt.
3	ECE 217	Intro. to Electrical and Computer Engineering for Tech. & Mgmt.

Courses taken by engineering and business students together:

<u>HOURS</u>	<u>REQUIRED COURSES</u>	
3	T&M 211	Strategic Mgt. of Innovation and Technology
3	T&M 212	New Product Development
3	T&M 221	Business Process Modeling
4	T&M 222	Integrated Project

Throughout the program emphasis is placed on an interdisciplinary team approach to the development of comprehensive solutions to real-world problems. In many cases the problems are provided by industry sponsors who, along with business and engineering faculty advisors, provide assistance and guidance to student teams.

Students in either the College of Commerce or the College of Engineering who wish to pursue this minor must apply for admission to the Technology and Management Minor in the spring semester preceding their sophomore or junior year. By decision of the program faculty, enrollment in the minor is limited and admission is usually competitive. Students who wish to apply should provide a letter of interest, a transcript of grades, and a statement of career goals to one of the following program co-directors: Professor George E. Monahan, College of Commerce and Business Administration, 350 Commerce West, MC-706, telephone (217) 333-8270, e-mail gmonahan@uiuc.edu; or Professor Russ Jamison, College of Engineering, 210 Metallurgy and Mining Building, MC-246, telephone (217) 265-8048, e-mail rjamison@uiuc.edu.

EFFECTIVE DATE: Upon approval.

Memorandum

To: Susan Lamb
Chair, Senate Educational Policy Committee

From: Fred Neumann
Associate Dean, College of Commerce and Business Administration

Designated 200 Level Courses for the Minor in Technology & Management

October 16, 2000

This memo attests to the fact that the proposal for a Minor in Technology & Management satisfies the Guideline 3 in the Senate Educational Policy Committee's recommendations for undergraduate minors, which states "At least 6 hours of the minor should be advanced (300-level or designated 200-level advanced courses)." Each of the four of the courses that were developed for the joint class of Engineering and Commerce students are designated 200 advanced level courses. These courses are BA 253/T&M 212 (New Product Development); BA 255/T&M 211 (Management of Innovation and Technology); BA 256/T&M 221 (Business Process Modeling); and BA 254/T&M 222 (Integrated Project). These are substantial, innovative courses that were developed for the T&M Program. Indeed, Tom Conry, the Engineering Co-Director of the T&M Program when these courses were developed and the former Head of General Engineering, indicates that the original rationale for using 200 level numbers for these courses is precisely the reason for designated 200 level courses: this numbering convention prevents graduate students from taking these courses for graduate credit. These four courses constitute 13 credit hours of the Minor.

There is other evidence that these courses are at the 300 level. The Department of Business Administration allows the substitution of BA 256 for BA 314, for example. Indeed, BA 314 is currently being revised along the lines of BA 256. Furthermore, the 4 credit capstone project course was offered as GE 393 until the new numbering change was instituted this semester.

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

College of Commerce and Business Administration
Office of the Dean
260 Commerce West Building
1206 South Sixth Street
Champaign, IL 61820-6980

RECEIVED

MAR 09 2000

OFFICE of the PROVOST

February 10, 2000

TO: Susan Gonzo
Associate Provost
Swanlund Admin Bldg.
604 E. John
MC-304

FROM Frederick L. Neumann 
Associate Dean for Academic Affairs

SUBJ: "Request for Approval of a Minor in Technology and Management"

The College of Commerce and Business Administration requests approval of the "Request for Approval of a Minor in Technology and Management." A copy of the course outline, proposed by Professors George Monahan and Russ Jamison, approved and forwarded to the Dean's Office for further approvals, is enclosed.

This proposal has been reviewed by the appropriate committees at the department and college levels and approval has been recommended. Dean Schowalter and Dean Thomas also recommend approval.

If you have any questions please call me (3-2747).

/kls

Enclosure

cc: Howard Thomas, Dean
William Schowalter, Dean
Richard Engelbrecht-Wiggans, Chair, CBA, Educational Policy Committee
Huseyin Leblebici

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UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

The Technology and Management Program
1304 West Green Street
Urbana, IL 61801



Memorandum

To: Dr. Susan T. Gonzo
Associate Provost

From: Russ Jamison and George Monahan
Co-Directors, Technology and Management Program

Re: Request for Approval of a Minor in Technology and Management

Cc: Dean William Schowalter
Dean Howard Thomas

Date: January 31, 2000

Faculty committees and the deans in both the Colleges of Engineering and Commerce and Business Administration have approved the proposal for a Minor in Technology and Management. We now seek the approval of the minor by the University Senate and the Provost's office.

The request to approve the new courses that constitute part of the minor is being forwarded separately to the Provost's office. Copies of the relevant course data sheets are included here so they are available for the Senate in the event they wish to review them.

The following documents are attached:

Proposal to the Senate Committee on Educational Policy for the Establishment of a Minor in Technology and Management

Course Data Sheets and Syllabi for New Courses in the Minor:

BADM 255/T&M 211	Management of Innovation and Technology
BADM 256/T&M 221	Business Process Modeling
BADM 251/T&M 205	New Product Marketing
BADM 253/T&M 212	New Product Development
BADM 254/T&M 222	Integrated Project
TAM 201	Intro to Mechanics for Tech & Mgmt
ECE 217	Intro to Electrical & Computer Eng for Tech & Mgmt

We would greatly appreciate anything your office might be able to do to assist us in expediting the processing of this minor. If possible, we would like to get the consideration of this minor on the agenda of the March 20, 2000 Senate Meeting in order that this year's graduates of the program can be awarded this designation.

Please contact either of us if any additional supporting documentation is required.

Russ Jamison
Dept. of Materials Science and Engineering
College of Engineering
265-8048
rjamison@uiuc.edu

George Monahan
Dept. of Business Administration
College of Commerce & Bus Admin
333-8270
gmonahan@uiuc.edu

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Executive Committee
College of Engineering
2-114 Engineering Sciences Building, MC-266
1101 West Springfield Avenue
Urbana, IL 61801

January 25, 2000

Dr. Susan T. Gonzo
Associate Provost
Swanlund Administration Building
MC-304

Via: Dean W. R. Schowalter, Engineering College

Dear Dr. Gonzo:

The College of Engineering Executive Committee has reviewed and approved the following:

**New Course: ECE217 Intro to Electrical and Computer Engineering for
Technology Management**

Enclosed is a copy of the request.

Sincerely yours,



M. B. Salamon, Secretary
Executive Committee

Approval Recommended:

 1/26/00
W. R. Schowalter, Dean Date
College of Engineering

Enclosures

Cc: S. M. Kang, Department Head of ECE
✓ Tom Conry, Sub-committee Chair
Mark J. Kushner Vice-Chair of the Executive Committee
Binnie Trimble

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Department of Business Administration
College of Commerce and Business Administration
350 Commerce West Building
1206 South Sixth Street
Champaign, IL 61820-6980

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Commerce & Bus. Admin.

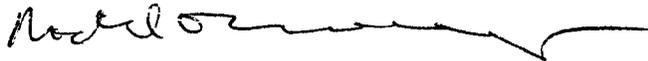
November 23, 1999

Dean Fred Neumann
260 Commerce West
MC-706

Dear Dean Neumann,

The Educational Policy Committee reviewed the "Proposal for the Establishment of a Minor in Technology and Management" dated November 16, 1999. At its November 16, 1999 meeting, the Committee unanimously approved this proposal.

Sincerely yours,



Richard Engelbrecht-Wiggans
Chair, Educational Policy Committee

cc: George Monahan