August 31, 2001

Professor Ernest May  
Secretary  
Faculty Senate  
University of Massachusetts  
Amherst, MA 01003

Dear Professor May:

On behalf of the faculty and departments whose endorsements appear here, and on behalf of the UMass Information Technology Task Force, I am pleased and honored to forward this proposal for a University-wide Minor in Information Technology.

The proposal represents the culmination of at least three years of organized effort on our campus, thousands of hours of faculty and staff energy -- and the hopes of higher education leaders who have committed funding to make UMass Amherst the lead campus in the Commonwealth Information Technology Initiative (CITI). We, in this document, formalize a proposal we believe will have a lasting, beneficial impact on our students, our University, and the Commonwealth.

While we believe the proposal to be substantially complete, there will, no doubt, be additions and corrections to be made. Following your advice, we’ve chosen to make this filing now, to enable the Senate’s earliest possible consideration and deliberation. In the meantime, we will be prepared to file supplemental materials.

We thank you, and the Senate, for considering this proposal, and look forward to the collegial process of its review.

Best wishes,

Bill Israel  
Assistant Professor and Chair,  
University Information Technology Task Force
UNIVERSITY OF MASSACHUSETTS AT AMHERST
OFFICE OF THE SECRETARY
THE FACULTY SENATE

PROGRAM REVISION SIGNATURE SHEET

Proposed Revision: Information Technology

Please check: Graduate ___ Undergraduate X

Programmatic change X Name change ___ New concentration ___ New certificate fewer than 30 credits ___ New Minor ___

Department: _____________________________ College/School: _____________________________

The following signatories certify approval of the attached proposal:

1. Department Curriculum Committee Chairperson:
   /ss/ _____________________________ Date: 8/29/01

2. Department Head/Chairperson:
   /ss/ _____________________________ Date: 8/29/01

3. College/School Curriculum Committee Chairperson:
   /ss/ _____________________________ Date: __________

4. Dean of the College/School:
   /ss/ _____________________________ Date: __________

5. Dean of the Graduate School (for revisions to graduate degree programs):
   /ss/ _____________________________ Date: __________

6.a. Graduate Council Chairperson (for revisions to graduate degree programs):
   /ss/ _____________________________ Date: __________

6.b. Academic Matters Council Chairperson (for revisions to undergraduate degree programs):
   /ss/ _____________________________ Date: __________

7. Program & Budget Council Chairperson (if appropriate):
   /ss/ _____________________________ Date: __________

8. Academic Priorities Council Chairperson (if appropriate):
   /ss/ _____________________________ Date: __________

9. Faculty Senate Secretary:
   /ss/ _____________________________ Date: __________

10. Provost/Vice Chancellor for Academic Affairs:
    /ss/ _____________________________ Date: __________

   Proposer;
   Faculty Senate Secretary, 105 Hampshire House;
   Schedule Office, 213 Whitmore Building

   3
August 24, 2001

Professor Seshu Desu
Chair, Curriculum Committee
Information Technology Task Force
Department of Electrical and Computer Engineering

RE: Proposed Minor in Information Technology

Dear Professor Desu:

The Department of Resource Economics enthusiastically lends its support to the IT Task Force’s proposed undergraduate minor in Information Technology. Applied economics consists of searching for information on a problem, formulating an approach, gathering and analyzing data, and reporting on the conclusions of the study. We teach these skills at both undergraduate and graduate level and have, without actually using the label, been teaching applications of information technology for many years. Courses have evolved as computing availability, power, and software applications have become more common, more user-friendly and more affordable.

At the undergraduate level we aim to prepare students primarily for careers in business, secondarily for advanced degrees and careers in government service. Many entry-level jobs expect applicants to possess current IT skills, some demand more, other less. We require all majors to take a technical course, RES EC 197A, Computing: Foundations to Frontiers and we encourage our students to take this course early in their program since it teaches them techniques they will be expected to use in required or elective applications courses. Depending on their interest in computation and IT, some of our students would be well served by additional courses in IT. We are developing one such course, RES EC 390A Economics of Contemporary Information Technology, a course about the role of IT in the economy, and problems in information production, distribution and consumption.

We believe that the courses we require of our majors are what all well-trained managerial economists should have encountered. Students with interests more oriented towards IT would benefit from more courses than the two listed above. A formal minor in IT identifies a set of suitable courses and establishes requirements that constitute a balanced program. We are happy to contribute the above courses and those of our applications courses with suitable content to a minor in IT, though it will take courses from other departments to create a viable minor. Not every one of our majors will be interested in pursuing an IT minor, but we believe a noticeable proportion will.

Please let me know if there is anything else I can do to move this proposal forward.

Sincerely yours,

P. Geoffrey Allen
Chair
August 24, 2001

RE: Proposed minor in Information Technology

To whom it may concern:

I have taught an introductory computing class directed at non-IT majors for the last seven years. Based on my experience with this course, I wholeheartedly endorse the creation of an IT minor on campus.

Many of my students, enthused by their new IT proficiencies, look for more advanced IT courses to further build their skills. Until the IT initiative on campus spurred the creation of meaty IT courses for such students, the only choices seemed to be highly specialized courses that were a little too narrowly defined for many non-IT students. Most students recognize the value of an IT education and seek it out, but have different goals in mind. I am always surprised by how many graduates we hear from that have settled into IT careers with no more formal IT education than one introductory course. Less surprising but probably more significant is the value of IT education to those who stay in their disciplines. Students often credit their IT competence for early success in their careers. Entry-level jobs often seem particularly well served by IT skills.

The quality of the courses created under the IT initiative is high, and the comments I have heard from enrolled students have been enthusiastic. The faculty involved in both course development and the effort to create an IT minor are an impressive bunch; their energy and high standards are sure to produce a program that will make the University proud.

Sincerely,

Glenn Caffery
Department of Resource Economics
Among our existing courses, our introductory programming course (CMPSCI 121) is projected as a "technical core" course of the new minor. With help from CITI and the CCBIT center (an educational technology laboratory located within our department), we have been exploring methods to increase the size of CMPSCI 121 and make it more accessible to less specialized students.

We have three other introductory courses for non-majors (CMPSCI 102, 105, and 120) and each of these may also have a role in the minor program. (For example, 102 and 105 are similar to the "gateway course" described in the proposal.)

The two new courses are as follows. "Representing, Storing, and Retrieving Information" (eventually CMPSCI 145) is a projected "technical core" course of the IT minor and was developed by Professor William Verts originally for Fall 2000. "Image Processing" (eventually CMPSCI 370) is a projected elective course for students mostly in science and engineering. It is being developed by Prof. Schultz for an initial offering this coming semester. Each of these courses was developed using CITI funding, and the initial offering of CMPSCI 145 was also partially funded by Commonwealth College, but department resources are also being used.

As you can see, we are putting considerable department effort into expanding our service mission, particularly as it applied to a potential IT minor. At the same time, we are seeing increasing demands upon our primary undergraduate educational mission, our major program. (For example, our FTE load has increased by 65% over the last four years, and the number of Computer Science majors has doubled). We have had to handle these increased demands with essentially no increase in University support. We cannot and will not take resources away from the major program in the long run.

Although we believe our first responsibility is to provide a high quality educational experience for our undergraduate majors, we still believe our efforts in the service direction are justified. We strongly believe that in the long run new resources will become available for IT education, given the priority placed on this area by political and industrial leaders. We also believe that an IT minor is very much "the right thing to do" for our students. We have used much of our own resources in beginning the journey towards an IT minor because it is necessary to exercise such leadership and invest "ahead of the curve" when beginning such a process. (This is also our responsibility as part of the flagship campus of the public higher education system and as a leading research department in computer science.)

We call upon the campus to exercise leadership as well, and thus to ratify and expand upon the efforts already made by our department, other departments, and the IT Task Force. We can begin this by approving the IT Minor proposal. It is undeniably true that starting this program commits resources that are not currently in hand. But we believe that there are good prospects of securing these resources in the long run, if we move ahead now. If we do not move forward optimistically, we will be committing ourselves to increasing stagnation and decreasing competitiveness in this very important area.
MEMORANDUM

Date: August 27, 2001
To: Whom It May Concern
From: Barry C. Field
Subject: IT Minor

I wish to add my support to those throughout the University who see the advantage of putting in place a minor in Information Technology.

This fall I will be introducing a new course, "The Economics of Contemporary Information Technology," which will be a unique addition to the curriculum available to students choosing the minor. The course was developed with funds from the CITI grant. A minor in IT would be a tremendous addition to the menu of possibilities facing students at the University.

I would appreciate the Faculty Senate considering and passing the proposal for an IT minor.

Barry C. Field
Professor
Resource Economics
MEMORANDUM

To: Glen Gordon, Dean, SBS

From: Jarice Hanson

Date: August 17, 2001

Re: Proposal for the Development of the Information Technology Program

I spoke with Bill Israel on Thursday, August 16, and we discussed the possible development of the Information Technology minor/certificate program with regard to the Department of Communication and Social and Behavioral Sciences. While the Department of Communication is already participating in the new program with two courses taught in fall, 2001 (M. Paredes' and L. Cooks'), there is tremendous potential for future course offerings through the Communication Department, if resources permit.

However, the Global Education Requirement might well benefit from the program. We already have Certificate Options for Latin American Studies, International Relations, etc.; I think that if some administrative method could be found to monitor students' choices, a Global Information Technology sequence could well do what we're trying to do in Global Education. For example, students would still need to take care of the foreign language option, but 3 more culture courses in a "global information technology" area could also help in the contemporary comparative culture realm. Students might have 3 courses including World Politics, Resource Economics, and one course that is industry-related, possibly from Computer Science, Communication, or another policy-related course. In Communication, there are courses on the books in Global Music, World Cinema, and a few others that might fit this option.

I suggest this to you for two reasons. First, the student interest in Information Technology has already been demonstrated. The Advising Office receives many requests for information. Secondly, the program really does offer a truly interdisciplinary approach toward education. The CITI grant has funded some new courses, but I hope they will be supported in the future, too, and that any further discussions of the Global Education Requirement might consider the IT offerings as
August 28, 2001

Bill Israel
Chair, ITT Curriculum Committee
Bartlett Hall

Dear Bill,

I write to support the efforts to develop a university-wide Information Technologies minor or certificate program.

As you know, our Department has participated in the first round of the IT Initiative, developing two courses created for the IT minor: Writing and Emerging Technologies (developed by Prof. Charles Moran) and Information Technology and Written Communication (developed by Prof. John Nelson of English and Steve Reising of Electrical and Computer Engineering). For our English majors, particularly those in our program in Professional Writing and Technical Communication, the IT minor represents an additional opportunity that fits well with their program of studies and career interests.

An IT minor offers an exciting inter-disciplinary option to undergraduates, helping develop the skills and critical perspectives for careers in IT or related fields. It also provides encouragement to faculty for the work they are already doing in incorporating technology into their courses and developing new courses, including courses across disciplines and departments. It capitalizes on existing talents and spurs creative curricular work.

For the University at this point, any new venture has to be considered in light of resources. English, like many other departments, has lost an unprecedented number of faculty in recent years and the future for faculty hiring is uncertain at best. Still, this is an important program, and it may be one for which the University is able to attract financial support from industry that they would not put toward other programs. With this reservation about funding in mind, I support the proposal for a university-wide Information Technologies minor.

Sincerely,

Anne Herrington
Chair, Department of English
August 23, 2001

To Whom It May Concern:

I write to support establishing an Information Technology Minor on our campus this academic year. Professor Norman Sims has already expressed support on behalf of our department.

Thanks to the help of seven participating colleagues and the CITI program, I am this fall coordinating a course entitled "Information Technology in Social and Historical Perspective (Journ 397T)." With only minor changes, I believe it stands the potential to become a staple of the IT program, with minimal expense to the university, my college, or my department beyond the development costs already borne by CITI.

I would appreciate the Faculty Senate considering and approving an IT minor this year. I will work to make the program a credit to the University of Massachusetts, Amherst, and to the Commonwealth.

Thank you for your consideration.

Sincerely,

Bill Israel
Assistant Professor
Journalism Department
Bill Israel
Chair, ITT Curriculum Committee
Bartlett
Campus

Dear Bill,

I write in support of the university-wide Information Technologies minor that you and your group are proposing. I think this a good idea for a number of reasons.

First, the minor will serve our students well. Just this side of certification, the minor signals the potential employer that this person knows something about information technology.

Second, the minor will serve our faculty well. Many of us have incorporated substantial technology in our courses; many of us have thought and written substantially about the impact of technology on our field and on human life generally. The existence of the minor will give this group of faculty a set of templates for the design of courses that incorporate substantial working with, and thinking about, new technologies.

Third and last, the minor will serve the Commonwealth well. By encouraging the study of technology and its applications, the University of Massachusetts at Amherst will lead the state system in making sure that our students are prepared to live ethical and productive lives as citizens of this state.

My only reservation about the proposal has to do with the question of resources. This minor, and the new courses that it will occasion, will require resources, particularly in the areas of teaching and administration. Where will these resources come from? The University is already strapped. Retiring faculty are not being replaced, buildings are not being maintained, and we hear from the President's office that the Boston campus is going to receive special attention, and, of course, funding, in the near future. I worry that the IT minor will become, as the Commonwealth College is becoming, a substantial unfunded mandate.

I will hope that the Board of Higher Education, the President's Office, and perhaps private industry will get behind this minor program and fund it as it must be funded. If the IT minor is perceived across campus as drawing funds from other programs, like yours and mine, it will not be enthusiastically supported by students or faculty and will have a short, unhappy life.

Yours,

Charles Moran
Professor of English

cc: Anne Herrington, Chair, English Department
August 27, 2001

Professor Seshu Desu
Chair, Curriculum Committee
Information Technology Task Force
Department of Electrical and Computer Engineering

Dear Professor Desu:

The Department of Natural Resources Conservation would like to join with other departments and the UMass Amherst IT Task Force in asking Faculty Senate to approve an Information Technology minor or certificate program. Our program like many in the US and throughout the world has grown to rely very heavily on computer-based information acquisition and management. We have a long commitment to Information Technology in our major and require a core course in Spatial Information Analysis, and our Geographic Information Systems courses are always enrolled to capacity. As a result, we believe the IT minor offers our students a substantial opportunity.

In consideration of our joining the effort in Faculty Senate, we ask that our participating students be granted priority entry into the courses needed to satisfy the minor's requirements. We will try to identify students who intend to complete the minor this fall semester.

We have several courses that could contribute to the IT minor:

NRC 290S Introduction to Spatial Information Technologies
Forestry/WFCON 577 Ecosystem Modeling and Simulation
Forestry/WFCON 587 Introduction to Digital Remote Sensing
Forestry/WFCON 592G Geographic Information Systems
BMATWT 290A Building Materials Computing and Telecommunications

Given the needs to balance the needs for our majors and the needs for IT students, we would try to provide preference for IT minor students attempting to register for these courses. I look forward to working with you. Please let me know what needs to be done next and how I can help.

Sincerely,

William McComb, Head

Cc: C. Schweik
C. Willis
J. Marcum
August 27, 2001

To the Faculty Senate:

I write to express my support for the effort to establish an Information Technology Minor at U. Mass. Amherst during the academic year of 2001-2002. Professor Anne Herrington has already expressed support on behalf of our department.

Thanks to the help of Professor Stephen Reising of E.C.E. and the CITI program, I will team-teach a course titled "Information Technology and Written Communications" during the Spring 2002 semester.

I would appreciate the Faculty Senate’s consideration of the proposal for an IT minor.

Sincerely,

John R. Nelson, Jr.
Director
Professional Writing and Technical Communication
August 24, 2001

To Whom May It Concern:

I am writing in support of the effort to establish an Information Technology Minor at the University of Massachusetts, Amherst.

As you may know, information technology is the key component of the infrastructure that currently supports the manufacturing and service sectors of our state and national economy. Since IT cuts across various sectors in the real world, it makes sense to develop an interdisciplinary IT minor that integrates the various related courses offered throughout the UMass/Amherst campus. Many students in the Department of Communication have expressed interest in the area of information technology and are frequently requesting for more courses that converge together the areas of media, telecommunication and IT dynamics.

I am teaching a course titled “History of Electronic Media and Information Technology” that attempts to bring together the various areas of media and telecommunications as well as provide a historical context for the emergence of IT. Thanks to CITI, I was able to redevelop this course and increase the enrollment to 300. My hope is to offer Comm 234 every fall and establish the course as important building block for the IT Minor.

I believe an IT Minor would greatly enhance the educational vigor of our university and would surely benefit the Commonwealth of Massachusetts. I encourage the Faculty Senate to seriously consider and pass the proposal for the IT Minor at UMass/Amherst. Let us not forget that the future lies in visionary actions of today.

Please contact my office if the Faculty Senate has questions or address any concerns.

Sincerely,

Mari Castañeda Paredes
Assistant Professor
Communication Department
Machmer Hall - 311
413-545-1307
paredes@comm.umass.edu
Date: August 27, 2001
To: Faculty Senate
From: Dan Lass
Re: IT Minor Proposal

I encourage you to support the Information Technology (IT) Minor proposal submitted by the IT Task Force. Our discipline is highly quantitative and relies heavily on information technology. We integrate IT into our coursework to the degree that time allows. Many of our students seek IT expertise beyond this baseline and would likely pursue an IT minor. An IT education would complement their studies in Resource Economics and serve them well as they establish their careers.

Sincerely:

[Signature]

Daniel Lass
Professor
Resource Economics
To Whom It May Concern:

I am a faculty with a joint appointment with the Center for Public Policy and Administration in the College of Social and Behavioral Sciences and the Department of Natural Resource Conservation in the College of Food and Natural Resources. I write you to express my support for the development of an Information Technology minor on campus.

I teach students in the public policy program and in the programs offered by the Natural Resource Conservation department. I therefore represent faculty interests of not one, but two colleges on campus. I think an IT minor is vital so students get an opportunity to gain knowledge about and skills in Information Technology to complement their majors.

I also think establishing this minor will help to make UMass Amherst a leader in this area. With my colleague Bill Israel in journalism, we have written several short papers on what this minor is trying to accomplish and have developed a program website (www.umass.edu/itprogram) with the help of Copper Gilouth in OIT. Because of these papers and the website, not only have I received a number of emails from students interested in the program (a sign of the demand to come for it), I have received several requests for information on the program from academics from other campuses asking for more information. This IT program is something that other universities are interested in and are beginning, and we are a little ahead of the game at this point. The established minor will help us keep this leadership role and will bring, I believe, positive attention to UMass.

I hope the Faculty Senate will embrace this initiative and approve the minor. It is vital for the future of many of our students.

Thanks for your efforts,

Charlie Schweik
Assistant Professor
cschweik@pubpol.umass.edu
545-1824

August 28, 2001
August 10, 2001

Professor Seshu Desu
Chair, Curriculum Committee
Information Technology Task Force
Department of Electrical and Computer Engineering

Dear Professor Desu:

The Journalism Department would like to join next month with other departments and the UMass Amherst IT Task Force in asking Faculty Senate to approve an Information Technology minor or certificate program.

Journalism was perhaps the first major American industry to become computerized. We’ve had a long commitment to Information Technology in our major. As a result, we believe the IT minor offers our students a substantial opportunity.

I would like to arrange an agreement with you, if possible. In consideration of our joining the effort in Faculty Senate, I would appreciate it if our participating students could be granted priority entry to the courses needed to satisfy the minor’s requirements. Naturally, we would extend the same courtesy to other participating students in early-proposing departments. This would be simplified if a mechanism could be developed to identify students who intend to complete the minor and might turn out to be as simple as a list.

The Journalism Department currently has one course that was created for the IT minor. It is Journ 397T — Information Technology in Social and Historical Perspective, taught by Prof. Bill Israel. The department regularly teaches several other courses that might be considered for inclusion in the IT minor. If the right arrangements are made, we could provide preference for IT minor students attempting to register for these courses, but I have to caution that non-major enrollment in these classes
is quite small—maybe one or two students per section. The germane courses, in addition to Journ 397T, are:

Journ 391R Travel Writing and Photojournalism, which emphasizes visual design, web development, PhotoShop, and writing.

Journ 392M Wired Reporting, on online course offered through Continuing Education. It focuses on Web research, primary and secondary sources, critical analysis, and story development from idea to layout.

Journ 392R Future of Online Journalism, which teaches Internet use, conceptual inquiry, and an analysis of current practices.

Journ 393C Computer-Assisted Reporting, which emphasizes writing, database use, and analysis.

Journ 397P Photojournalism, which includes instruction in PhotoShop, Web development, visual design, ethics, and history. It is taught digitally.

Journ 397W Introduction to Web Journalism, focusing on Web design, analysis of contemporary Web sites and the content they provide, visual literacy, and ethics.

Beginning this fall, we are offering our students the option of using the IT courses as a sequence attached to their major. In effect, we are using IT as a minor before Faculty Senate approves it, which is entirely appropriate and permitted by the structure of our major.

I look forward to working with you. Please let me know what needs to be done next and how I can help.

Best wishes,

Norman Sims
Chair
August 28, 2001

To Whom It May Concern:

I write to express my support for the effort to establish an Information Technology Minor on our campus this academic year. Professor Jim Smith will be expressing support on behalf of our department.

I am new to the faculty this year. In Industry we strongly favored candidates for employment who had backgrounds in Information Technology. Many schools now have minor programs. As part of the University's commitment to relevant training for its students an Information Technology Minor is long overdue. Information Technology is the largest industry in the United States. Massachusetts has the highest percentage of Information Technology works of any State.

I would appreciate the Faculty Senate considering and passing the proposal for an IT minor this year. I would be pleased to work to make the program a credit to the University of Massachusetts, Amherst, and to the Commonwealth.

Sincerely,

Dr. Norman Sondheimer
Lecturer, Dean’s Executive Professor
Isenberg School of Management
Department of Accounting and Information Systems
To: Faculty Senate  
From: Cleve Willis  
Re: IT Minor  
Date: August 27, 2001

I enthusiastically support the establishment of an Information Technology (IT) minor. Many departments in the College of Food and Natural Resources (FNR) have recognized the importance of IT in their disciplines and to the future success of their students. While they have been making some progress integrating IT education into their curricula, we must do more. Expertise does not (and should not) need to exist in individual departments in order to teach needed IT courses. I welcome the campus-wide effort to create high-quality IT courses directed toward our students, and encourage you to endorse the organization of these courses into a minor.

IT education is important for FNR departments. An IT minor would be a worthwhile, and, I suspect, popular option for our students.

Sincerely,

Cleve Willis, Dean  
Food and Natural Resources