

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

I. Items for consideration in Regent Committees

1. Education Committee - Thursday, February 5, 1998  
1820 Van Hise Hall  
Madison, Wisconsin  
1:00 p.m.

Administrative items:

- a. Approval of the minutes of the December 4, 1997, meeting of the Education Committee.
- b. Report of the Senior Vice President for Academic Affairs:
  - (1) World Wide Web Collaboration: BioWeb;
  - (2) Other.
- c. Authorizations to recruit:

Policy discussion items:

- d. New program authorizations:
  - (1) B.S., Ph.D., Biomedical Engineering, UW-Madison [Implementation];  
[Resolution I.1.d.(1)]
  - (2) Master of Engineering, UW-Madison (initial reading);
  - (3) B.A., German Studies, UW-La Crosse (initial reading);
  - (4) M.S., Applied Leadership for Teaching and Learning, UW-Green Bay (initial reading).
- e. UW Colleges:
  - (1) General Discussion;
  - (2) Presentation on Collaboration.
- f. UW-Extension: K-12 Partnerships and Initiatives.
- g. General Education Report: UW-Platteville.

(Over)

h. Update report:

- (1) Diversity;
- (2) 21<sup>st</sup> Century: Market Research.

Additional items:

- i. Additional items that may be presented to the Education Committee with its approval.

Closed session items:

- j. Closed session to consider personnel matters, as permitted by s. 19.85(1)(c), Wis. Stats. (Possible agenda items: appointment of named professors, UW-Madison, UW-Milwaukee; base salary adjustments resulting in salaries above the Executive Salary Group six maximum, UW-Madison, UW-Milwaukee; authorization to hire at a salary above the Executive Salary Group Six maximum, UW-Madison; revision to Wisconsin Distinguished Professorship, UW-Whitewater.)

New Program Authorization  
B.S., Ph.D., Biomedical Engineering  
University of Wisconsin-Madison

EDUCATION COMMITTEE

Resolution:

That, upon recommendation of the Chancellor of the University of Wisconsin-Madison and the President of the University of Wisconsin System, the Chancellor be authorized to implement the B.S., Ph.D. in Biomedical Engineering.

**NEW PROGRAM AUTHORIZATION  
B.S., Ph.D., BIOMEDICAL ENGINEERING  
UW-MADISON  
(IMPLEMENTATION)**

**EXECUTIVE SUMMARY**

**BACKGROUND**

In accordance with the procedures outlined in Academic Planning and Program Review (ACIS-1.revised), the new program proposal for an interdisciplinary Biomedical Engineering Program (BME) at UW-Madison, offering the B.S. and Ph.D. degrees, is presented to the Board of Regents for implementation. If approved, the program will be subject to a regent-mandated review to begin five years after its implementation. That review will be conducted jointly by the institution and System Administration, and the results will be reported to the board.

A Master of Science degree in BME has existed at UW-Madison since 1974. While inactive for approximately the past six years, the program was previously rated among the top twenty BME programs in the United States, enrolling approximately 50 masters degree students at its peak. A total of 88 master's degrees were awarded between the 1974-75 and 1990-91 academic years. Although the M.S. degree has been unavailable in recent years, BME research has thrived through the efforts of individual faculty. By training graduate students in their own departments, many UW-Madison faculty have attained international reputations and recognition for their BME research, and students have enrolled at UW-Madison for M.S. and Ph.D. degrees in their respective engineering fields with concentrations in BME specializations. Despite these efforts, UW-Madison has not been able to meet the high demand for BME among its students. A faculty review committee determined that the M.S. degree program failed to attract adequately prepared students because UW-Madison lacks an undergraduate degree program in BME. The committee further determined that a formal Ph.D. program is needed to complement faculty research in BME.

**REQUESTED ACTION**

UW System Administration requests that the Chancellor of UW-Madison be authorized to implement the B.S., Ph.D. in Biomedical Engineering.

**Program Goals and Description**

The proposed program will grant the B.S. and Ph.D. degrees, and will be administered by the UW-Madison College of Engineering. It is a "virtual department" whose faculty have tenure homes in their original disciplinary departments. Faculty affiliated with the program will come from the following UW-Madison units: College of Engineering, College of Letters and Science, Medical School, School of Pharmacy, School of Nursing and School of Education. The program will seek accreditation from the Accreditation Board for Engineering and Technology (ABET).

BME is an interdisciplinary profession whose practitioners often work in teams consisting of engineers, physicians, biologists, nurses and therapists.

UW-Madison BME students are trained primarily as engineers, since UW-Madison defines the discipline in terms of using engineering analysis tools for solutions to problems and principles of design for applications in biology and medicine. The teaching mission of the BME program is to educate professionals (practitioners and researchers) who are able to combine the fundamentals of the biomedical sciences with advanced engineering methods in order to contribute to the design of new medical instruments and devices, apply engineering principles for understanding and repairing the human body and other biological systems, and use engineering tools for decision-making and cost containment. The program's research mission is to synthesize new knowledge and train researchers in the field of biomedical engineering.

The proposed BME undergraduate program is designed to fully prepare students for graduate study, medical school and other health care professional degree options. The core Biomedical Engineering undergraduate curriculum is a 120-credit, four-year program satisfying ABET criteria including 15 credits of liberal studies. Because of the multidisciplinary breadth of the undergraduate degree, graduates will be encouraged to continue their studies rather than considering the B.S. in BME as a terminal professional degree. Students who complete this core have the opportunity to fulfill pre-med requirements.

Emphasis is on a five-year B.S./M.S. degree, but the program provides the option to receive a B.S. after four years for those students wishing to pursue an alternative advanced degree in medicine, veterinary medicine, physical therapy, law or business. A significant feature of the program is the ability for an undergraduate to prepare for medical school or other allied-health professions while studying engineering in a four-year B.S. program. There is currently no way for an undergraduate to enroll in engineering and prepare for medical school in four years.

A 24-credit professional M.S. degree option can be completed in one year of study beyond the B.S. degree if the student receives the B.S. degree in BME from UW-Madison or has equivalent training. Students who complete the B.S. degree with an overall GPA of 3.0, or a GPA of 3.25 for the last 60 credits of the B.S. program are eligible to apply for the professional M.S. option, which is intended primarily for students not planning to pursue a Ph.D. degree.

Students interested in pursuing the Ph.D. would take a 30-credit M.S. degree option.

#### Projected Enrollments

An annual enrollment of ten Ph.D. students is projected.

It is expected that the undergraduate program will attract an annual enrollment of 60-100 students. Projected enrollments for the next five years are as follows:

	1997	1998	1999	2000	2001
Program Enrollments	60-100	60-100	60-100	60-100	60-100
Graduates	0	0	0	60-100	60-100

## Advising

Advising is a significant aspect of the proposed program. Students in the undergraduate program take a one-credit hour design project course every semester during the sophomore through senior years. Twelve students are assigned to an individual faculty member, who serves as their advisor/consultant/mentor to guide them through design projects culminating in a capstone design of a real-world project in the senior year. The faculty member assembles an advisory committee for each section, consisting of BME researchers, clinicians and biomedical industry representatives. The committee members serve as resources for students in their project, conduct discussions, and expose students to various aspects of the BME field.

## Program Strengths

One of the program's greatest strengths is the fact that existing faculty in both the Engineering and Medical schools have outstanding reputations as leaders in the field of biomedical engineering. Another strength is the core of outstanding biologists, medical scientists and engineers at UW-Madison who should serve as a major collaborative resource for the proposed program. Finally, the program should benefit from a large pool of federal and private funding, e.g., both the National Science Foundation and the Whitaker Foundation have been generous in supporting programs like the one being proposed.

## Evaluation

Success in achieving program goals and objectives will be evaluated regularly on several levels, including review by an external advisory committee, internal review by university academic governing bodies, and evaluation by students in the BME program. The external review panel, consisting of leaders in BME education and industry, will visit and provide annual assessment and guidance. All BME courses and instructors will be evaluated by students at each offering, and these evaluations will be considered in faculty merit reviews.

## Relation to Institutional Mission and Plans

The program is fully compatible with and supportive of the mission of UW-Madison to provide an environment in which faculty and students can "preserve and transmit knowledge, wisdom and values that will help ensure the survival of future generations with improvement in the quality of life." Specifically, the program supports the mission of developing "broad and balanced academic programs which emphasize high quality and creative instruction," of generating new knowledge "which will provide a basis for solutions to immediate and long-range problems of society," and of "stimulating the development of interdisciplinary opportunities."

## Evaluation from External Consultants

All three external consultants support the program's implementation. One reviewer encourages the program to include more course work in cellular and molecular biology, a development that should occur as part of the program's development. This same reviewer, in stating his support of the program, emphasizes that "its strengths and uniqueness might be its emphasis on engineering and design, possibly a huge . . . interest among your students, [and UW-Madison's] excellent faculty . . . ." Another reviewer

expresses "confidence that this program will be viable, and then some, while observing that "you should anticipate a program that is competitive with others in the country."

#### Need

There is a growing need for engineers trained in the biomedical sciences. According to the American Society for Engineering Education (ASEE), "biomedical engineers are employed in industry, in hospitals, in research facilities of educational and medical institutions, in teaching, and in government regulatory agencies," often serving "a coordinating or interfacing function, using their background in both the engineering and medical fields." According to *U.S. News and World Report*, the number of M.S. and Ph.D. degrees granted by BME programs rose from 260 to 600 between 1987 and 1997.

The creation of this proposed program should attract a diverse student population. National statistics indicate that, of all the engineering disciplines, biomedical engineering attracts the greatest number of women receiving the Ph.D. This also indicates the existence of a substantial pool of potential women faculty.

#### Comparable Programs Elsewhere in Wisconsin

Marquette University and the Milwaukee School of Engineering offer undergraduate and graduate degrees in biomedical engineering. Undergraduate enrollment in biomedical engineering is approximately 250 students annually at Marquette, and 137 annually at the Milwaukee School of Engineering. No public institution in the state of Wisconsin offers a degree program in biomedical engineering.

#### Comparable Programs Outside Wisconsin

Forty-nine undergraduate biomedical engineering programs are in existence outside Wisconsin. In the Big Ten, Illinois, Iowa, Northwestern, Penn State, Ohio State and Michigan offer programs.

#### Resource Needs

Costs for the proposed program will be reallocated by UW-Madison. Estimated annual costs for the first biennium of the undergraduate program are as follows:

CATEGORY	FIRST YEAR	SECOND YEAR	TOTAL
Faculty	\$56,640	\$129,920	\$186,560
Non-instructional Academic Staff	\$ 6,000	\$ 12,000	\$ 18,000
Supplies and Expenses	\$ 5,000	\$ 10,000	\$ 15,000
Other Educational Support		\$ 4,000	\$ 4,000
TOTAL	\$67,640	\$155,920	\$223,560

Estimated annual costs for the first biennium of the Ph.D. program are as follows:

CATEGORY	FIRST YEAR	SECOND YEAR	TOTAL
Faculty	\$70,000	\$ 70,000	\$140,000
Non-instructional Academic Staff	\$ 6,000	\$ 6,000	\$ 12,000
Supplies and Expenses	\$ 5,000	\$ 5,000	\$ 10,000
TOTAL	\$81,000	\$ 81,000	\$162,000

Library and classroom facilities are adequate.

#### RECOMMENDATION

It is recommended that UW-Madison be authorized to implement the B.S., Ph.D. in Biomedical Engineering.

#### RELATED REGENT POLICIES

*University of Wisconsin System Academic Planning and Program Review*  
(November 10, 1995), Academic Informational Series #1 (ACIS-1.revised).



February 6, 1998

Agenda item I.1.d.(2)

**NEW PROGRAM AUTHORIZATION  
MASTER OF ENGINEERING PROGRAM (MEngr)  
UW-MADISON  
(INITIAL READING)**

**EXECUTIVE SUMMARY**

**BACKGROUND**

The UW-Madison College of Engineering proposes to initiate a Master of Engineering (MEngr) program. This initiative will add a Master of Engineering degree to each existing major in the College, including the newly renamed Engineering major (formerly Engineering without designation). Hence this program will involve all departments in the College, either acting on their own or in conjunction with other departments in the case of interdisciplinary degrees. In some instances, other Colleges will also participate.

The College of Engineering has offered Master of Science degrees for decades. These have historically been research-oriented degrees, typically requiring a thesis. Increasingly, though, the Master of Engineering is becoming an entry level degree for students interested in preserving the widest possible options throughout their engineering careers. Employers desire students with focused study in specialized areas. It is difficult to supply students with those skills at the Bachelor's level, given other important needs, such as maintaining breadth in the Liberal Arts and to thoroughly cover the fundamentals in math, computer science, chemistry, and physics. Hence, the College of Engineering would serve both students and employers well by providing specific programs focused on practice-oriented Master's degrees. In addition, "high tech" companies are finding that their employees require continuing education to keep up with the latest technology and maintain their competitiveness. To serve these needs, we are proposing to implement a series of Master of Engineering degrees, which will be specialized terminal degrees, following a Bachelor's degree in one of our traditional majors. The topics emphasized by these programs are expected to shift fairly rapidly as the relevant industrial practices evolve.

This proposed degree program fits well with UW-Madison's plans for the future. In his recently published "A Vision for the Future," Chancellor David Ward states that we must update the Wisconsin Idea by viewing the university as a partner with industry.

**REQUESTED ACTION**

This item is presented for initial review. No action is requested at this time.

## DISCUSSION AND RECOMMENDATIONS

### Program Need

Planning for this program began as a result of desires expressed by Wisconsin industries and is an attempt to offer programs consistent with their needs and with our goals for academic excellence. In particular, technical industries within Wisconsin and in neighboring states have expressed a need for more advanced, practice-oriented training for engineers in order to maintain the technical competence of their work force. We propose to meet this need by creating a terminal graduate degree in engineering with a series of options available for advanced specialization that will prepare our students to work in this challenging environment. This degree is designed to meet the needs of this changing environment with options focused on specific areas and with the ability to shift focus as industrial needs change. We currently have three proposals in hand for options under this program and faculty in the College have expressed an interest in approximately six other areas.

Demand for these programs will vary. Each option under the Master of Engineering program will have a different audience and, thus, the class sizes will differ. Typical programs will likely have somewhere between 10-30 students in a graduating class, but this does not preclude the creation of larger programs. Some programs will consist largely of students who begin graduate study immediately after completing their undergraduate work, while others will consist largely of practicing engineers who study part time and work full time as practicing engineers. The focus of the various programs is expected to shift fairly rapidly as technologies and engineering practices evolve.

### Comparable Programs

We are unaware of comparable programs elsewhere in Wisconsin. There are Master of Science programs in Engineering at UW-Milwaukee (UWM) and Marquette University. There are Bachelor of Science programs at UW-Platteville, UWM and UW-Stout. No Wisconsin university or college offers a Master of Engineering degree.

Outside of Wisconsin, there are practice-oriented Master of Engineering programs at the University of Michigan, Massachusetts Institute of Technology (MIT), the University of Minnesota, Rensselaer Polytechnic Institute (RPI), North Carolina State University, and elsewhere. These are all terminal degrees leading to professional practice of the discipline. The programs at RPI and NC State are given both on campus and at a distance. The others are strictly on-campus degrees.

For comparison, the parallel program at the University of Michigan offers Master of Engineering degrees in 12 areas and these programs had an enrollment of 142 students in 1997. At that time, the largest program (Manufacturing) had 49 students and the smallest (Optical Engineering and Ultrafast Technology) had none. The total enrollment in these programs has increased each year, with 85 students enrolled in 1995, 108 in 1996, and 142 in 1997.

### Program Description and Evaluation

The College proposes to add a Master of Engineering degree to all of its majors, including Engineering (formerly Engineering without designation). Initial proposals already prepared are for Master of Engineering degrees in Professional Practice, Technical Japanese, and Polymer Engineering and Science. Each option designed for this program will be customized for the discipline, but they must conform to a template created by the College. The proposed guidelines for all Master of Engineering degrees are outlined below.

A Graduate Program Committee within the College will review proposals for new options and will administer the programs of the graduating students. The Graduate School will approve options as they are proposed by the College. The College will then be allowed to admit students directly to that program and students will not have to file individual programs with the Graduate School. Transcripts will reflect the degree designation, including the option. The diploma will reflect only the degree designation. These degrees should have a separate entry in the Graduate Catalog, alongside the other Engineering degrees.

The template for the Master of Engineering degrees is outlined below. This template establishes minimum requirements; individual programs may be more restrictive but not less restrictive.

- Degree requirements and admissions will be consistent with those in place for the MS degree.
- Students must take a minimum of 24 credits, with at least 12 taken in the College of Engineering.
- No more than 12 credits can be transferred from other universities or colleges.
- At least nine credits must be 500-level or above.
- Students lacking appropriate work experience in their chosen field must include at least six credits of engineering professional practice. The form of this requirement will vary from program to program, but will typically consist of projects carried out in conjunction with Wisconsin industry. The Graduate Program Committee will ensure the consistency of this requirement in collaboration with the program faculty.

Students typically will be expected to complete their course requirements within two semesters of equivalent full-time study. Professional practice requirements often will be completed during the summer months, so a typical degree program will be completed in approximately one calendar year.

Faculty will carry out ongoing assessment of student learning using a variety of written and performance measures. Regular feedback will be solicited from students, graduates and employers to assist the faculty in assessing the overall success of the program.

Below is a sample curriculum taken from the soon-to-be-proposed Master of Engineering in Polymer Engineering and Science:

- Twenty four credits of Approved Polymer Engineering and Science Courses are required beyond the BS degree.
- At least 18 credits must be Formal Lecture or Laboratory Courses.
- At least six credits must be Formal Lecture or Laboratory Courses numbered 600 or higher.
- At least three credits must be Formal Lecture or Laboratory Courses numbered 700 or higher.
- No more than six credits of Independent Study and no more than two credits of Seminar are allowed.
- No transfer credits are allowed.

#### Personnel

Many faculty members will be involved in each of these programs. No new faculty positions are being requested and few new courses would be developed. It is expected that courses will be modified to reflect current practices as different Master of Engineering degree programs are developed. The College will create a Graduate Program Committee to oversee the creation and management of each of the Master of Engineering programs. No new academic or classified positions will be necessary. An office already administering M.S. degrees in the College will administer each program.

#### Academic Support Services

In general, no additional load will be placed on the library, computing, laboratory or audio-visual infrastructures already in place in the College. In some cases, programs provided via distance education will require assistance with the delivery technologies and with funding the delivery mechanisms. Those programs will have to procure such funding before they will be approved.

#### Facilities and Equipment

Again, no significant equipment will be required for these courses. Proposed programs having such requirements must procure funding before the Graduate Program Committee will approve the program.

#### Finance

No funding is requested for these new programs. For on-campus Master of Engineering degrees, we do not plan to create any new courses. Thus, there are no additional costs incurred as a result of the creation of the Master of Engineering degrees. We will have an increased enrollment in these courses, but the cost will be offset by the increased tuition.

For the options offered primarily at a distance, we do expect to incur costs associated with course development and delivery. In these cases, proposals for new programs will have to develop business plans and show mechanisms for supporting these costs before the program will be approved by the College Graduate Program Committee.

**RECOMMENDATION**

No action is requested at this time.

**RELATED REGENT POLICIES**

*University of Wisconsin System Academic Planning and Program Review*  
(November 10, 1995), Academic Informational Series #1 (ACIS-1.revised).

**NEW PROGRAM AUTHORIZATION  
B.A., GERMAN STUDIES  
UW-LA CROSSE  
(INITIAL READING)**

**EXECUTIVE SUMMARY**

**BACKGROUND**

In accordance with the procedures outlined in Academic Planning and Program review (ACIS-1.revised), the new program proposal for a Bachelor of Arts in German Studies is presented to the Board of Regents for initial review. The proposed program reflects major changes in the study of German over the past twenty years and is the result of the combined efforts of faculty from several disciplines. As stipulated by ACIS-1, revised, this program proposal will be on the agenda for the March 1998 meeting for a second review, at which time System Administration will recommend that the board take action authorizing the chancellor to implement the program. If approved, the program will be subject to a regent-mandated review to begin five years after its implementation. That review will be conducted jointly by the institution and System Administration, and the results will be reported to the board.

UW-La Crosse requests authorization to offer a major program in German Studies for a number of reasons: (1) to offer a multidisciplinary and interdisciplinary program of study in German area studies; (2) to offer a program of language study which meets the needs and interests of today's students; (3) to provide instruction in German which will result in the highest level of linguistic and cultural proficiency possible; (4) to allow UW-La Crosse students in German to complete their degrees at La Crosse; and (5) to create a German program that responds to the challenges of higher education in a time of fiscal constraints.

**REQUESTED ACTION**

No action is requested at this time.

**DISCUSSION AND RECOMMENDATIONS**

**Program Goals and Objectives**

The goal of the proposed program is to meet the needs of contemporary students who desire to gain proficiency in the German language, study the contemporary German-speaking world from cultural, historical, economic, literary and political perspectives, and who wish to experience life in a German-speaking country.

Upon completion of the Bachelor of Arts in German Studies, students will be able to communicate effectively with native speakers of German, and will be familiar with the educational, political, business and social structures in German-speaking countries as well as with the major historical events that have shaped these societies. Graduates will be equipped to do graduate work in German or in German Studies, to teach German in the public schools, and to work in areas such as international business, journalism or government. Graduates will have sufficient cultural proficiency to live and work successfully in a German-speaking environment.

## Program Description

The proposed German Studies major at UW-La Crosse will be housed in the Department of Foreign Languages in the College of Liberal Studies. It will be a broad-based program designed to enhance the study of foreign languages and the international studies component of the curriculum. The multidisciplinary and interdisciplinary nature of the program is reflected in the fact that the instructional core of the proposed program will include two professors of German in the Department of Foreign Languages, one half-time teaching Academic Staff in Foreign Languages, and faculty from the departments of History, Geography and Earth Science, and Political Science. In addition to courses taken in these departments at UW-La Crosse, students are required to have either an approved work experience or an approved study experience in a German-speaking country and to meet well-defined levels of proficiency. Students will earn academic credit toward the major during their approved study or work experience abroad.

The major requires the completion of 36 credits, 27 in German language courses at the 300-400 level and nine in history, geography and political science. Students will be expected to demonstrate proficiency in German at the Intermediate High level, as defined by the guidelines of the American Council on the Teaching of Foreign Languages. Students must also complete a student portfolio and have a cumulative Grade Point Average of 2.75.

Students who begin their study of German at the university can complete degree requirements in eight semesters by taking two or three courses each semester in the major and by carefully planning their experience abroad. Students who study at UW-La Crosse's exchange university in Oldenburg, Germany will receive from 12 to 20 credits in German. Students electing to do an internship would also receive academic credit toward the major. The nine credits required outside the Department of Foreign Languages have no prerequisites.

## Need

Interest in German at UW-La Crosse is strong, as reflected in enrollment data for the German minor. Participation in the German minor program has grown from 16 students in 1992 to 29 in 1997. German is strong enough to expand the program to a major.

Projected enrollments for the next five years are as follows:

	Majors	Minors	Graduates in GS major
Year 1:	15	15	1
Year 2:	17	15	3
Year 3:	20	18	8
Year 4:	20	20	10
Year 5:	22	20	12

## Strengths And Unique Features

The German Studies major contributes to the curriculum through the development of German Across the Curriculum. To do this, the program requires three courses in departments outside the Department of Foreign Languages and requires students to do complementary readings in German on history, political

science and geography while taking the courses outside the Department of Foreign Languages. Also, where faculty in history, political science and geography have German language skills, students will have the option of writing papers and doing research in German. In addition, two courses in the German curriculum have interdisciplinary aspects. One course is a survey of German geography, history and political life, while the other focuses on the German business community. Students studying in Oldenburg have the opportunity to use their German skills to take courses in business, the liberal arts and the sciences.

The required work or study experience in a German-speaking country is essential to the program. Students will gain proficiency in German along with academic credits in German. The linguistic and cultural knowledge gained by this experience cannot be duplicated in the classroom. This requirement is in accord with the current requirement by the Department of Public Instruction for certification to teach a foreign language.

Internship experiences offered through the Office of Career Services, the Office of International Education and the Council on International Educational Exchange will provide students with opportunities to gain work experience in a German-speaking environment. The Council on International Educational Exchange is a non-profit organization that enjoys the approval and the support of the German government. The program allows U.S. students with German skills to obtain work in Germany for a period of three to six months. German faculty and the Director of the Office of International Education must approve any work-study experience.

Students studying at the exchange university in Oldenburg, Germany will take courses in German for foreign students as well as general courses in the university. The exchange coordinator in the Center for U.S. and Canadian Higher Education oversees a number of support services for UW-La Crosse students while in Oldenburg. Innovations such as the Buddy Program ensure that UW-La Crosse students have support and immersion in the German culture. One of the unique features of Oldenburg is that American students share rooms or apartments with German university students. Other support programs in Oldenburg offer opportunities for international students to meet and talk with German students and to participate in clubs, sports, and religious and cultural activities.

#### Collaboration

Collaboration with the Departments of History, Political Science, and Geography and Earth Science is an integral part of the German Studies major. Collaboration with the university in Oldenburg is already underway and an official document outlining the responsibilities of both universities has been signed.

#### External Review

Two consultants have reviewed the proposal and discussed it with representatives of the program at UW-La Crosse. Both have fully endorsed the program as excellent.

One reviewer requested clarification of the interdisciplinary aspect of the proposed program. The institution's response pointed out that German Across the Curriculum involves the use of German in non-language courses.



A second concern had to do with the absence of any Business courses in the program. The concern was satisfied by making clear the possibility for students to minor in International Business and by indicating that a course on business German is currently available to students. One reviewer asked for and received assurance that everything needed to place students in internships abroad is already in place at UW-La Crosse.

#### Comparable Programs

The proposed program would be the only major in German available to students in west central Wisconsin. German programs at other UW-System universities, including UW-Eau Claire, UW-Green Bay, UW-Milwaukee, and UW-Oshkosh, reflect in large part traditional programs of study, with emphasis on literature and survey courses in culture. The German major at UW-Madison offers three concentrations. The concentration in Cultural Studies comes closest to the UW-La Crosse proposal, since it offers three courses in German cultural history. UW-Parkside offers a German Studies program, with courses outside the Foreign Language Department available with permission of the student's advisor. The multidisciplinary nature of the program as well as the emphasis on German Across the Curriculum make the German Studies major at UW-La Crosse unique.

#### Resource Needs

Costs for the proposed program will be reallocated by UW-La Crosse. Estimated annual costs are as follows:

CATEGORY	ESTIMATED ANNUAL COST
Faculty	\$ 106,576
.50 FTE, New Ad Hoc Instructor	\$ 19,767
.33 FTE secretarial support	\$ 9,300
Supplies and Expenses	\$ 3,385
Total	\$ 139,028

#### RECOMMENDATION

No action is requested at this time.

#### RELATED REGENT POLICIES

*University of Wisconsin System Academic Planning and Program Review*  
(November 10, 1995), Academic Informational Series #1 (ACIS-1.revised).

February 6, 1998

Agenda item I.1.d.(4)

**NEW PROGRAM AUTHORIZATION  
M.S., APPLIED LEADERSHIP FOR TEACHING AND LEARNING  
UW-GREEN BAY  
(INITIAL READING)**

**EXECUTIVE SUMMARY**

**BACKGROUND**

In accordance with Governor Thompson's expressed support for national certification for Wisconsin's teachers (1998 State-of-the-State-Address) and the procedures outlined in Academic Planning and Program Review (ACIS-1 revised), the new program for a Master of Science (M.S.) in Applied Leadership for Teaching and Learning is presented to the board for initial review. As stipulated by ACIS-1 revised, this program proposal will be on the agenda for the March meeting for a second review, at which time UW System Administration will recommend that the board take action authorizing the chancellor to implement the program. If approved, the program will be subject to regent-mandated review to begin five years after its implementation. The review will be conducted jointly by the institution and System Administration, and the results will be reported to the board.

UW-Green Bay requests authorization to offer a Master's degree in order to meet the growing demands in our region. While Northeastern Wisconsin is one of the fastest growing regions in our state, according to many area administrators there are no programs that provide a high-quality, cohesive graduate experience for the over 7,000 PK-12 educators.

According to the National Commission on Teaching and America's Future, a "blue-ribbon" group of 25 nationally recognized leaders funded by the Rockefeller Foundation and Carnegie Corporation, the key to improving and transforming schools is to improve and transform the preparation and ongoing development of teachers. In 1995, representatives from the University of Wisconsin-Green Bay entered into discussions with administrators from the Green Bay Area School District. These interactions evolved over the next year and resulted in the establishment of a formal partnership: Partnership for Learning. Membership in this Partnership expanded to include representatives from business and community groups as well as the 37 school districts in the CESA 7 region.

As an evolution of the Partnership for Learning activities, other discussion groups emerged. One group, made up of local district administrators and UW-Green Bay faculty and administrators, began to discuss establishing a formal partnership between the university and local schools for the purpose of improving student learning through the restructuring of teacher preparation.

This proposal is the result of work conducted during the summer and fall of 1997 by a core working group, composed of two area teachers and three UW-Green Bay faculty and an advisory group of over 40 individuals, with representatives from business, area school districts, and the community.

## REQUESTED ACTION

This item is presented for initial review. No action is requested at this time.

## DISCUSSION AND RECOMMENDATIONS

### Program Goals

The M.S. in Applied Leadership is an innovative, competency-based program for teachers working in PK-16 educational settings. The courses and experiences offered within this program are designed to provide teachers with the critical knowledge, skills, and dispositions necessary to promote effective educational reforms that result in quality teaching and learning.

The National Board of Professional Teaching Standards (NBPTS) was established in 1987 as the first professional body to set standards for teachers. These standards, based on current research on effective teaching, have been explicitly supported by our own Governor and will be used as a foundation for the development of the program's curriculum and associated competencies. One external consultant stated: "The strengths of this design are its foundation in the National Board for Professional Teaching Standards and its vision of an individualized, competency-based program to meet the diverse requirements of the prospective teachers in the Green Bay region."

### Program Description

The M.S. in Applied Leadership for Teaching and Learning is designed for individuals who are actively teaching within PK-16 educational settings. The degree will require a minimum of 30 credits. Twenty-one credits will be required within the "*Common Core*." In addition, teachers will select a nine-credit focused "*Area of Emphasis*."

This degree will have a heavy emphasis on research-based practices. Each teacher participating in this program will design, implement, and evaluate a classroom- or school-based research project. The purpose of this systematic line of inquiry, commonly referred to as "action research," is to allow teachers to gain the knowledge and skills necessary to make data-based decisions about improving instructional practices. This research project will become the focus for the thesis that is required for the Master's degree.

Applicants to the program who have successfully completed relevant graduate course work elsewhere could transfer a maximum of nine credits into the UW-Green Bay program. Relevant courses would be those that parallel the competencies included in the required *Common Core* and/or within an approved *Area of Emphasis*. Successful completion would include official transcripts with a minimum GPA of 3.0.

To earn the Master's degree, learners will be expected to demonstrate their competence within all areas of the *Common Core*. Assessment will include a variety of authentic, performance-based measures, as well as the summative requirements of a thesis and professional portfolio. The thesis will provide

the scientific, written documentation of the classroom or school-based action research study that was designed, implemented, and evaluated by the learner. The portfolio will contain representative work samples from program course offerings and related experiences which demonstrate the learner's ability to apply knowledge for the purpose of improving the learning of his/her students.

A variety of program assessment tools will be developed to evaluate the effectiveness of the program in facilitating the attainment of learner outcomes. For example, the use of exit interviews with graduates and students who may leave the program before completion will be conducted by representatives from the university placement office. Alumni survey instruments, employer surveys, grade analysis, pre-post tests, and other measures (such as the National Board of Professional Teaching Standards assessment) will also be employed in an effort to assess the effectiveness of the program. Throughout the program, formative assessment procedures will be used to provide feedback which will allow for continuous improvement of the program.

#### Need

The service area of the University of Wisconsin-Green Bay encompasses 20 percent of the population of Wisconsin. Characteristics of the region which promote the student demand for the M.S. in Applied Leadership in Teaching and Learning include:

- Northeastern Wisconsin, one of the fastest growing regions of the state, currently employs 7,000 PK-12 educators (CESA 7 region). All teachers in the area are required to engage in graduate studies and many wish to pursue a Master's degree to enhance their skills and move them ahead in their career. Teachers in the CESA 6 and 8 service areas may also be a likely audience for this program, since no other local programs serve their needs.
- School districts throughout the Northeast region expect significant retirements among classroom teachers within the next five years, with some districts calculating a loss of 20-30 percent of all teachers. Teachers hired as replacements will include many new baccalaureate graduates who will begin seeking advanced studies and graduate degrees shortly after their initial employment.
- Regional administrators have explicitly expressed their desire to have a quality Master's degree program in the region. It is their belief that many of the graduate offerings which have been "brought in" by various public and private institutions do not offer the rigor or the coherence consistent with a quality Master's degree level of professional development.

#### Uniqueness of Program

The UW-Green Bay program has a decidedly unique structure that includes:

- an emphasis on learner-centered competencies (grounded on the NBPTS standards);
- flexible scheduling;

- site-based learning;
- action research;
- a commitment to diversity manifest throughout the curriculum, and in the recruitment of students and faculty; and
- broadly conceived partnerships.

In its content and form, the proposed program adds the distinct aspect of examining organizational behavior for the

purpose of changing the very structure of our educational institutions. An external evaluator concluded, "as more and more schools, districts, and states are embracing reform, the understanding and incorporation of change will become an intricate part of the teacher's role in the classroom and education community. The teachers who understand the fundamental needs for change, the professional development required, and the management of reform in the classroom will be the true educational leaders in the 21<sup>st</sup> Century."

#### Projected Enrollment

Year	Cohorts Admitted (20 students per cohort)	Total Students Enrolled
1 (1998-1999)	1	20
2 (1999-2000)	3	80
3 (2000-2001)	3 (Spring 2001)*	120
4 (2001-2002)	3 (Spring 2002)**	160

\*first graduating class

\*\*first semester offerings available; maximum enrollment 160 (8 cohorts)

#### Revenue Generated and Projected Direct Cost

No new funds are required since this program is supported through base-budget reallocation. The projected direct costs reflect only the cost of operating the graduate program, which is but one component of the Institute for Learning.

#### Projected Direct Cost

FTE	Salary	Clerical Salary	Faculty Fringe	Clerical Fringe	S&E Total	Student Help/LTE	TOTAL
1	\$45,000	\$10,000	\$15,850	\$3,300	\$5,000	\$5,000	\$83,150
2	\$90,000	\$10,000	\$29,700	\$3,300	\$10,000	\$10,000	\$153,00
3	\$135,000	\$10,000	\$45,550	\$3,300	\$15,000	\$10,000	\$217,850

Library and classroom facilities are adequate.

#### RECOMMENDATION

No action is requested at this time.

**RELATED REGENT POLICIES**

*University of Wisconsin System Academic Planning and Program Review*  
(November 10, 1995), Academic Informational Series #1 (ACIS-1.revised).

**REPORT TO THE UNIVERSITY OF WISCONSIN SYSTEM  
BOARD OF REGENTS ON THE GENERAL EDUCATION PROGRAM  
UNIVERSITY OF WISCONSIN-PLATTEVILLE**

**EXECUTIVE SUMMARY**

**BACKGROUND**

In Spring 1991, the Board of Regents engaged in a series of public hearings on the state of undergraduate education in the UW System. They identified general education as a key area for policy consideration. The following summer, they formed a Working Group on Academic Programs, which further explored the topic. The group studied state and national trends in general education, interviewed faculty members and administrators from UW System institutions, and considered current policies and practices regarding general education.

In September 1991, the Working Group reported to the full board, which charged System Administration with developing an appropriate means for presentations on general education philosophy and curriculum from each UW institution to the board. In its summary findings and recommendations, adopted by the board at the September 1991 meeting, the Working Group stated that it wished to: (1) improve the focus upon and the level of specificity of reporting on general education; (2) understand institutional philosophies of general education, including explanations for institutional and/or college-level requirements; gain insight into the reasons for the relative emphasis on skills and content; and focus on integration and coherence among general education requirements and the total undergraduate educational experience; (3) acquire information concerning students' completion of basic proficiency courses in general education requirements prior to study in the major, especially as affecting time-to-degree; and (4) provide an appropriate formal method of focusing substantial public attention on general education, by scheduling specific occasions for detailed reports, including institutional presentations, to the board.

In its report, "The Undergraduate Imperative" (December 1991), System Administration recommended, and the Board of Regents adopted, a policy requiring that institutions report to the board, on a seven-year cycle (or less), on major reviews of their general education programs. That reporting cycle was revised in April 1997, placing it on a ten-year schedule that coincides with each institution's North Central Accreditation Review.

**REQUESTED ACTION**

This item is for information only.

**DISCUSSION**

**Program Description**

In its 1996 evaluation of the General Education Program, the North Central Association visitation team described the program's design as "thoughtful and directly supportive of the campus mission," with "clearly

defined criteria" and "good stipulation of criteria and performance evaluation for program input." The program is divided into two areas: (1) Competencies and University Requirements and (2) Liberal Studies. The University Undergraduate Curriculum Commission monitors all areas of the curriculum while the Basic Skills Committee is specifically responsible for reviewing competencies in writing, speech and mathematics. Beyond these competencies, a student must satisfy requirements in wellness assessment and physical activity, and a foreign language requirement.

The Competencies and University Requirements component accounts for 13-21 credits of each student's total coursework, while the Liberal Studies component accounts for 30-39 credits. The Liberal Studies component includes additional requirements in Ethnic Studies, Gender Studies and International Education.

#### Assessment

In 1994-95, the University Undergraduate Curriculum Committee re-evaluated every course approved for General Education credit to guarantee that each adhered to established guidelines. An Assessment Oversight Committee was created in 1996, placing increased emphasis on evaluation of both General Education and individual academic programs. Further, UW-Platteville has elected to administer the ACT-CAAP tests in writing, mathematics and critical thinking every two years, as well as develop its own assessment instruments in mathematics and other areas. One goal of these tools is to provide more direct feedback for curricular decision-making within the General Education Program.

In summary, the UW-Platteville's General Education Program is a dynamic component of the institution's educational mission. Ongoing assessment has resulted in a coherent program that provides appropriate focus in competency areas of composition, mathematics and speech, as well as flexibility in the liberal studies area.

#### RELATED REGENT POLICIES

University of Wisconsin System Academic Planning and Program Review (November 10, 1995); Academic Information Series #1 (ACIS-1.revised).



UNIVERSITY OF WISCONSIN-PLATTEVILLE  
GENERAL EDUCATION PROGRAM

OVERVIEW

The current General Education Program at UW-Platteville was designed by the University Undergraduate Curriculum Commission (UUCC) during the 1987-90 academic years. The structure and content of General Education have been reviewed on a regular basis, resulting in minor changes and adjustments over the years.

Assessment activities and changes in the General Education Program are reported to the Faculty Senate and university administration on an annual basis.

PROGRAM STRUCTURE

UW-P's General Education Program is divided into two areas: (1) Competencies and University Requirements and (2) Liberal Studies. While the UUCC monitors *all* areas of curriculum, the subordinate Basic Skills Committee is specifically responsible for reviewing competencies in writing, speech and mathematics. (For additional information on evaluation of General Education, see the "Assessment" section of this report.)

Within the Competency Requirements, all students must complete an 11-credit core of coursework: six credits of composition, two credits of public speaking and three credits of mathematics beyond College Algebra. Advanced Placement (AP) exams and test-out procedures may modify these requirements for some students.

In addition, all academic programs require evidence of writing competency at the junior or senior level (e.g., a "C" in Business Communication or Technical Writing). And many programs (e.g., engineering, natural sciences, education) require additional mathematics coursework appropriate to their discipline. Many students must take prerequisite classes before satisfying the math requirement.

Education students satisfy the speech requirement with a special three-credit course designed for teachers.

Beyond these competencies, students must also satisfy several University Requirements within the General Education Program. Among these are two credits for wellness (i.e., fitness) assessment and physical activity (e.g., basketball, aerobics, golf, cycling, tennis, scuba diving, racquetball, volleyball).

Students must also satisfy a foreign language requirement before graduating. Most students (81%) meet this requirement with two years of high school foreign language coursework ("C" or better) before they enter UW-Platteville. Some foreign language coursework may be used to satisfy Humanities requirements within the Liberal Studies component of General Education.

The Competencies and University Requirements component of General Education accounts for 13-21 credits of each student's total coursework (excluding prerequisites, remedial coursework, Advanced Placement credit, etc.).

The Liberal Studies component of the General Education Program accounts for 30-39 credits of each student's total coursework, depending on how many classes--if any--overlap with requirements in Ethnic Studies, Gender Studies and International Education. Most students are able to "double-count" selected courses which meet requirements in more than one area (e.g., "Black Literature in America" satisfies requirements in both Humanities and Ethnic Studies, and "World Regional Geography" satisfies requirements in both Social Sciences and International Education).

The Liberal Studies component is divided into three broad areas, with additional requirements in Ethnic Studies, Gender Studies and International Education. As noted above, some classes may be counted in more than one area, but not more than two classes from any one program may be counted toward Liberal Studies.

Without UUCC permission, academic programs are not allowed to count coursework within their major toward Liberal Studies (e.g., students majoring in psychology cannot count psychology courses toward the Social Science requirement).

Within the Liberal Studies component, 12 credits are required in the area of Humanities, Fine Arts and Historical Perspectives. Students must complete at least three credits in each of these three areas and an additional three credits within one of these areas. Humanities coursework includes classes in literature, foreign language, philosophy and women's studies. Fine Arts coursework includes classes in music appreciation, theatre and art. And Historical Perspectives coursework consists primarily of classes in history.

Nine credits are required within the Social Sciences. These credits must represent at least two disciplines, with a minimum of six credits in one discipline. Social Sciences coursework includes classes in communication, criminal justice, economics, geography (non-laboratory), political science, psychology, sociology and women's studies.

Nine credits are required within the Natural Sciences. These credits must represent at least two disciplines. Natural Sciences coursework includes classes in biology, chemistry, geography, geology, physics and physical sciences. Courses meeting the Natural Science requirement must include a laboratory experience.

Beyond the 30 credits required in the Humanities, Fine Arts and Historical Perspectives (12), Social Sciences (9) and Natural Sciences (9), additional requirements are mandated by the University of Wisconsin System (e.g., ethnicity) and the UUCC (gender studies). As noted earlier, some classes meet requirements for more than one area. As a result, students are allowed to "double-count" credits for Ethnic Studies, Gender Studies and International Education whenever feasible.

## ASSESSMENT

The introduction of the Assessment Oversight Committee (AOC) two years ago placed more emphasis on evaluation of General Education as well as individual academic programs. Additional assessment activities are conducted by the Basic Skills Committee (in the competency areas) and the University Undergraduate Curriculum Commission. Whenever possible, these efforts have been designed to feed back into curricular decision-making.

During the 1994-95 academic year, the UUCC undertook the task of re-evaluating every course approved for General Education credit to guarantee that each was adhering to the guidelines established five years earlier. As a result of this evaluation, some classes were removed from the General Education Program; others were altered to better address General Education requirements.

In 1996 an *ad hoc* task force comprised of AOC members and other faculty and staff administered the ACT-CAAP tests in writing, mathematics and critical thinking. Although the Board of Regents has mandated use of ACT-CAAP in writing and math every five years, UW-P has elected to administer these tests every two years (a recommendation of the AOC). In 1998, administration of the ACT-CAAP will be conducted by the Basic Skills Committee.

AOC members performed regression analyses of the 1996 ACT-CAAP data. A summary of statistically significant relationships (academic major, placement test scores, gender, prior course enrollments, etc.) was provided to the UUCC, academic deans, et al., as input for curricular decision-making. Similar analyses in 1998 will aid the Basic Skills Committee and UUCC in setting goals for future performance, as measured by ACT-CAAP and other instruments.

UW-P faculty have been working on the creation and refinement of "home grown" assessment instruments in

mathematics and other areas. One of the goals of these tools is to provide a more direct method of feedback for curricular decision-making within the General Education Program.

Finally, in its 1996 evaluation of UW-P's General Education Program and assessment efforts, the visitation team from the North Central Association (NCA) noted that the General Education mission "is clearly stated in the undergraduate catalogue ... and in the new undergraduate handbook."

The NCA reported that the design of UW-P's General Education Program is "... thoughtful and directly supportive of the campus mission," with "clearly defined criteria" and "good stipulation of criteria and performance evaluation for program input."

### CONCLUSION

In summary, UW-P's General Education Program exists as a dynamic component of the institution's educational mission. On-going assessment by the University Undergraduate Curriculum Commission and other governance groups has resulted in a coherent program which provides appropriate focus in competency areas of composition, mathematics and speech, as well as flexibility in the liberal studies area.

Questions regarding UW-P's General Education Program may be addressed to the Chair of the University Undergraduate Curriculum Commission or the Vice Chancellor for Academic Affairs.

(Please find attached a summary of UW-P's General Education Program, including typical courses within each area.)

# GENERAL EDUCATION PROGRAM

CATEGORY	CREDITS	TYPICAL COURSES	CREDITS
<b>COMPETENCIES &amp; UNIVERSITY REQUIREMENTS: 21 CREDITS</b>			
COMPOSITION	6	15-113 FRESHMAN COMPOSITION I 15-123 FRESHMAN COMPOSITION II	3 3
SPEECH	2	20-101 PUBLIC SPEAKING 20-102 SPEECH COMMUNICATION FOR TEACHERS	2 3
MATHEMATICS	3	35-163 FINITE MATH WITH APPLICATIONS 35-233 MATHEMATICS OF FINANCE 35-243 ELEMENTARY STATISTICS	3 3 3
FOREIGN LANGUAGE	8	23-104 ELEMENTARY FRENCH I 23-114 ELEMENTARY FRENCH II (TWO YEARS OF HIGH SCHOOL FOREIGN LANGUAGE WITH "C" AVERAGE SATISFIES REQUIREMENT.) 24-124 ELEMENTARY GERMAN I 24-134 ELEMENTARY GERMAN II 27-184 ELEMENTARY SPANISH I 27-194 ELEMENTARY SPANISH II	4 4 4 4 4 4
PHYSICAL EDUCATION	1	81-114 BASKETBALL 81-131 SCUBA DIVING 81-144 VOLLEYBALL	1 1 1
WELLNESS	1	81-100 FITNESS ASSESSMENT	1

## HUMANITIES, FINE ARTS & HISTORICAL PERSPECTIVES: 12 CREDITS

SELECT ONE COURSE FROM EACH AREA AND A SECOND COURSE IN ONE DISCIPLINE.

HUMANITIES	3	15-263 WORLD LITERATURE 15-113 INTRODUCTION TO PHILOSOPHY	3 3
FINE ARTS	3	19-113 INTRODUCTION TO THEATRE 37-123 MUSIC APPRECIATION 18-243 ART APPRECIATION	3 3 3
HISTORICAL PERSPECTIVE	3	33-102 WORLD CIVILIZATION II	3

## SOCIAL SCIENCES: 9 CREDITS

SELECT A TOTAL OF THREE COURSES FROM TWO DIFFERENT AREAS.

COMMUNICATION	58-163 INTRODUCTION TO THE MASS MEDIA	3
CRIMINAL JUSTICE	13-113 INTRODUCTION TO CRIMINAL JUSTICE	3
ECONOMICS	66-213 PRINCIPLES OF MACRO ECONOMICS	3
GEOGRAPHY	30-133 WORLD REGIONAL GEOGRAPHY	3
POLITICAL SCIENCE	45-123 INTRO. TO AMERICAN GOVERNMENT	3
PSYCHOLOGY	47-113 GENERAL PSYCHOLOGY	3
SOCIOLOGY	49-103 PRINCIPLES OF SOCIOLOGY	3
WOMEN'S STUDIES	51-113 INTRO. TO WOMEN'S STUDIES	3

## NATURAL SCIENCES: 9 CREDITS

BIOLOGY	09-115 GENERAL BIOLOGY	5
CHEMISTRY	11-105 GENERAL CHEMISTRY	5
GEOGRAPHY	30-104 SURVEY OF PHYSICAL GEOGRAPHY	4
GEOLOGY	31-104 GENERAL GEOLOGY	4
PHYSICAL SCIENCES	42-134 INTRODUCTORY ASTRONOMY	5
PHYSICS	43-114 INTRODUCTORY PHYSICS	5

## ETHNIC STUDIES: 3 CREDITS\*

ETHNIC STUDIES	17-103 RACE, GENDER & CLASS IN AMERICA 17-213 THE NATIVE AMERICAN EXPERIENCE	3 3
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## GENDER STUDIES: 3 CREDITS\*

## INTERNATIONAL EDUCATION: 3 CREDITS\*

\*MAY OVERLAP WITH OTHER GENERAL EDUCATION COURSES APPROVED FOR ETHNIC STUDIES, GENDER STUDIES OR INTERNATIONAL EDUCATION