BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

- I. Items for consideration in Regent Committees
 - 1. Education Committee -

Thursday, November 6, 1997 1820 Van Hise Hall Madison, Wisconsin 1:00 p.m.

Administrative items:

- a. Approval of the minutes of the October 9, 1997, meeting of the Education Committee.
- b. Report of the Senior Vice President for Academic Affairs.
 - (1) Presentation: Achieving Excellence Through Diversity, James Anderson, Vice Provost and Dean of the Division of Undergraduate Studies, North Carolina State University;
 - (2) Other.
- c. Report on Industrial and Economic Development Research Fund, in accordance with s. 36.25(25)(c), <u>Wis. Stats.</u> [Resolution I.1.c.]
- d. Authorizations to recruit:
 - (1) Professor of Finance, School of Business, UW-Milwaukee;
- [Resolution I.l.d.(1)]
 - (2) Professor of International Finance, School of Business, UW-Milwaukee.
- [Resolution I.1.d.(2)]

Policy discussion items:

e. New program authorization:

(1) B.S., Information Resources, UW-Milwaukee. (implementation) [Resolution I.1.e.(1)]

f. General Education report: UW Colleges.

g. Revised Mission Statement, UW-Parkside.
[Resolution I.l.g.]

h. Competency-based Admission.
[Resolution I.l.h.]

i. UW-Stevens Point Board of Visitors [Resolution I.1.i.]

- j. Update reports
 - (1) Diversity;
 - (2) 21st Century.

Additional items:

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

Closed session items:

1. Closed session to consider personnel matters, as permitted by s. 19.85(1)(c), <u>Wis. Stats.</u> (Possible agenda items: appointment of named professors, UW-Madison.)

Report on Industrial and Economic Development Fund

EDUCATION COMMITTEE

Resolution:

That the report on projects undertaken in the UW System during fiscal years 1995-96 and 1996-97 and supported by Industrial and Economic Development Funds be received and approved for transmittal to the Joint Committee on Finance, in accordance with s. 36.25(25)(c), <u>Wis. Stats.</u>

11/07/97

I.1.c.

UNIVERSITY OF WISCONSIN SYSTEM INDUSTRIAL AND ECONOMIC DEVELOPMENT REPORT

EXECUTIVE SUMMARY

BACKGROUND

Section 36.25(25)(c) requires the University of Wisconsin System to report biennially to the Joint Committee on Finance regarding the use, duration, and potential economic benefits of projects funded by Industrial and Economic Development Funds. 1987 Wisconsin Act 27 created the Industrial and Economic Development Research Fund and provided an appropriation of \$800,000. By fiscal year 1996-97, annual funding had grown to \$1,406,027. The fund is intended to promote technology transfer and/or collaborative projects that have the potential to stimulate economic development in Wisconsin.

REQUESTED ACTION

Approval of resolution I.1.c., accepting the report for transmittal to Joint Committee on Finance.

DISCUSSION AND RECOMMENDATIONS

Information was collected on each new project within the UW System that was supported with Industrial and Economic Development Funds during the 1995-96 and 1996-97 fiscal years. Total funds expended during this period were \$1,403,390 in 1995-96, of which \$424,543 was administered system wide through the Applied Research Grants Program and \$1,406,027 in 1996-97, of which \$410,109 was administered system wide.

The Center for Dairy Profitability uses multi-disciplinary and interdisciplinary resources to develop and deliver high quality educational programs designed to integrate dairy production, financing and marketing into management systems. The goal of these efforts is to improve profitability within this \$16 billion industry that is the largest source of agricultural income in Wisconsin.

The Industrial and Economic Development Research projects and Applied Research Program projects are described separately within the report. These projects have resulted in numerous collaborative activities with Wisconsin industries and significant economic benefits for the Wisconsin economy. Project specific summaries are included in appendices, and complete project reports are available from the UW System Office of Academic Affairs, upon request.

RELATED REGENT POLICIES

There are no related Regent policies. Section 36.25(25) (c), <u>Wisc. Stats.</u>, requires biennial submission of this report.

Industrial and Economic Development Research Fund 1995 - 97 Biennial Report

This program has been developed to enhance the relationship between research at UW System institutions and Wisconsin industry practices in an effort to promote growth in the state's economy.

The following report is broken into three sections. The Center for Dairy Profitability is an on-going UW-Extension and UW-Madison project that addresses continuing needs of the Wisconsin economy. The UW-Madison University-Industry Relations (UIR) administers that campus' Industrial and Economic Development Research Program. The Applied Research Program projects are administered by the UW System Office of Academic Affairs.

For the latter two programs, grants are awarded on a competitive basis. Proposals are encouraged that are technically innovative, of interest to a broad economic sector, and have high potential to benefit Wisconsin's industrial and economic development in the near term.

Summaries of the accomplishments of the Industrial and Economic-Development Fund projects follow inthe next sections of this report. These projects served a large number of Wisconsin businesses and industries in various fields. In the long run, many of these funded projects are expected to improve the competitive position of Wisconsin firms.

A. Center for Dairy Profitability (UW-Extension/UW-Madison)

Dairy is the primary source of agricultural income in Wisconsin, representing more than two-thirds of the state's farm income. Dairy's total impact on Wisconsin's economy has been estimated to be nearly \$16 billion annually. Given dairy's importance, it follows that the state would be willing to invest in institutions and programs that would enhance the economic vitality of dairy in Wisconsin. One such investment is the University of Wisconsin Center for Dairy Profitability (CDP).

Because management decisions are key to dairy's long-run economic success, the CDP stresses educational programs that enhance the management skills and decision-making abilities of dairy producers and others who assist farmers in management decisions. The CDP develops, coordinates, and delivers interdisciplinary educational programs and emphasizes integrated production, financing, and marketing management systems to foster improved dairy profitability. To provide aid in this ever-changing and increasingly competitive industry, the Center's over-riding goal is to improve the competitiveness of Wisconsin's dairy industry by focusing on issues concerned with Wisconsin's market share and by assessing opportunities for expansion and growth.

Programs and accomplishments of the CDP include:

MANAGEMENT EDUCATION PROGRAMS

Agribusiness Executive Management Program

This program is the product of a partnership among UW-Extension, the UW Madison School of Business, and the College of Agriculture and Life Sciences of the UW-Madison. The purpose of this program is to

help producers, processors, and agribusiness professionals improve management skills and address the many issues facing today's agriculture.

While the program was initially set to begin in January of 1997, low enrollments caused the kick-off to be re-scheduled for December of 1997, with nearly 30 people signed up thus far. The four learning modules to be included are managing capital and financial resources, human resource management, structure and organization of agricultural markets, and management. AEMP is a fee based program that has a cost of \$500 per module.

AgVentures

Through this program, agricultural producers gain knowledge of management concepts and learn how to apply their knowledge to problems they face in their own farm operations.

Producers who participate in this program will take modules that address various topics, each consisting of 15 hours of instruction. The instruction is spread across three, five-hour days over a span of three weeks. Five topics are addressed by AgVentures: strategic planning, financial management, human resource management, management information systems, and business arrangements and operating agreements. The program is coordinated by county extension agents and much of the instruction is also done by the agents.

In 1996-97, county extension agents delivered several pilot modules of AgVentures: strategic planning, financial management, and human resource management. More offerings are planned for the 1997-98 programming year. The program is run on a fee basis in the range of \$50 to \$100 per module.

Dairy Farm Business Summary

For more than five years, county extension agents in western Wisconsin have been working with over 100 farmers, helping them to evaluate the financial performance of their dairy farm businesses. These participants in the Dairy Farm Business Summary (DFBS) have allowed their financial records to be included in an aggregate data base used to compute performance standards for the program participants.

Four State Dairy Program

The CDP is an active participant in the Four State Dairy Extension Program which is a joint programming effort with dairy specialists in Iowa, Minnesota, and Illinois. Participation in this partnership is advantageous as it gives the CDP access to educational experts and resources that it would otherwise be unable to obtain. The group annually develops and delivers programs that address management problems of producers in the upper-midwest. They hold four conferences each year.

Dairy Health and Management Certificate Program

This two-year certificate program focuses on providing Wisconsin veterinarians with additional tools and techniques to enhance the services they provide to dairy clientele. Several members of CDP staff are heavily involved in teaching key sections of the program. Gary Frank's method of computing milk production costs is one of the key elements in one of the modules. In addition, Frank's work on farm records data is used extensively in teaching the participating veterinarians key concepts in farm financial management.

Midwest Dairy Management Conference

CDP staff members helped organize the first Midwest Dairy Management Conference held in August of 1996 in Minneapolis. Center faculty and staff were involved in program and implementation committees and were conference speakers. The CDP is involved in planning for the next conference scheduled for August of 1998.

Midwest Banking Institute

CDP staff serve as instructors for the annual Midwest Banking Institute held on the UW-Madison campus each summer. Agricultural loan officers and agricultural extension agents from five states attend this annual program. Staff of the CDP are responsible for the dairy farm case study covered over three days of this one week program that annually attracts 50 to 100 participants.

ECONOMIC PERFORMANCE OF DAIRY FARMS

Farm Financial Management Project

CDP staff are working with the Lakeshore and Fox Valley farm management associations on a project where farm level records are used to analyze the costs, returns, and financial performance of approximately 900 dairy farms in northeast Wisconsin. This work began in 1994 and is expected to continue.

This data set has been used to conduct cost of production studies for the dairy industry and other analyses that were intended to discover how financial performance varies depending on herd size, rolling herd average, debt level, etc. The findings of these analyses were summarized in a publication titled "Dairy Profit Navigator," that appeared as an insert in the *Wisconsin Agriculturalist*. The database is now being employed to analyze dairy farm financial performance over multiple years.

Grazing Survey

For three years, the CDP has been involved in a project intended to shed some light on the costs and returns of Wisconsin producers who have adopted various grazing practices on their dairy farms. Financial data is being collected from approximately 30 farm families who have volunteered to be a part of this study. A preliminary first year report has been issued and the second year report is in progress. The plan is to continue this project to monitor the financial performance of grazing operations over time.

Cooperation with AgSource Dairy Herd Improvement

There is considerable interest in the combining of production and financial information to learn more about the impact of production management practices on profitability. The upper midwest is also in need of benchmarks for comparison. The CDP is now in the process of merging its financial data base with a comprehensive production database maintained by AgSource Dairy Herd Improvement (DHI). This project ties in with work being done in other areas of the country and with the national project currently being worked on by NDHIA.

> به المراجع (المراجع المراجع (الم

MANAGEMENT INFORMATION SYSTEMS FOR DAIRY PRODUCERS

Agricultural Accounting and Information Management System (AAIMS)

The AAIMS is a computerized agricultural accounting system maintained by members of the CDP. The program now has both DOS and Windows versions. Since its latest release in January of 1997, over 300 copies have been sold.

Agricultural Budget Calculation Software

Agricultural Budget Calculation Software (ABCS) is used in evaluating the economics of various croprelated problems. This budget generator is used to estimate the cost of producing various crops under various systems.

Decision Aids

CDP staff have developed a variety of computerized spreadsheets that may be used in making various management decisions. Enterprise budgets are available for dairy, replacement dairy stock, swine, and beef, and there are other spreadsheets that can be used in determining the value of silage, corn, and other feeds.

Interactive Farm Records Database

The Wisconsin Milk Marketing Board (WMMB) awarded the CDP a grant to develop an interactive database that could be accessed via the Internet on the WMMB homepage.

WWW Homepage

The CDP has had a homepage since 1995. It contains a wealth of information of value to dairy producers and professionals. The following is a brief description of some of the information available at the CDP web-site.

CDP Online Resources lists software and CD-ROMs available through the Center. Also included is a section on available papers, publications, and videos.

University of Wisconsin and Extension Internet Sites has links to departments and libraries at UW-Madison as well as other UW System institutions. Also included are several useful UWEX and USDA links.

Agricultural and Dairy Related Internet Sites contains links to a large collection of web-sites. In addition, it links to various datasets, two of which are the 1992 Census of Agriculture and the USDA Economics and Statistics System.

POLICY WORK

The director of the CDP serves on the Wisconsin Farm Land Advisory Council and chairs the subcommittee that is establishing the procedures for computing use-value assessments for Wisconsin farm land. CDP staff has compiled data needed for estimating use-value and assisted in the development of procedures and methods for computing use-values across Wisconsin municipalities. Members of CDP staff will continue to be involved in the implementation of this new method of taxing farm land.

OTHER PROGRAMMING ACTIVITIES

Dairy Farm Family of the Year

The Dairy Farm Family of the Year recognition completed its fifth year. Six regional winners were selected and an overall winner was named at a statewide banquet.

Kraft continues to support this program which is open to any dairy family in Wisconsin. This past year the first scholarships were awarded from the Dairy Farm Family of the Year Scholarship Fund. Approximately 15 young men and women received awards to enroll in dairy management courses taught by institutions within the Wisconsin Technical College System or the UW System.

Dairy Profit Report Newsletter

The Dairy Profit Report (DPR) newsletter is published ten times annually and routinely distributed to over 400 people. It is self-supporting and serves as an outlet to keep people apprised of activities and current areas of work of the CDP and others working in dairy extension throughout the University of Wisconsin System.

B. Industrial and Economic Development Research Funds

The office of University-Industry Relations (UIR) has responsibility for administering the I&EDR research funding program for the University of Wisconsin-Madison. During the 1995-96 competition, the UIR evaluated 31 research proposals requesting a total of \$3,944,813 over a three year period. Of these applications, seven research proposals were approved, totaling \$173,708 for 1995-96 funding.

There was no formal call-for-proposals during the 1996-97 fiscal year. Funding commitments for this fiscal year from the two previous proposal cycles left a balance that was too low to justify administering a call for proposals. Instead, proposals received for the Grants-to-Faculty program for industrial and economic development were considered for funding under I&EDR. Eight research proposals were approved totaling \$120,247 for 1996-97 funding. The various projects and their goals are as follows:

1995-96

1. <u>Transparent, Impermeable Barrier Films for Polymer Packaging Materials</u>. One of the biggest challenges at this time facing Curwood, Inc. of Oshkosh, Wisconsin and other manufacturers of polymeric (plastic) packaging materials is the need to develop flexible polymeric materials with significantly reduced permeability to oxygen, water vapor, flavorants, etc. While there are a number of well-known techniques currently used in the industry to acquire low-permeability polymer substrates, none are considered complete or optimal solutions. The overriding current need is to develop a substrate that combines the high permeation resistance of metals with the optical clarity and reliable adhesion of the polymer coatings. We propose to support Curwood's competitive market position through the research and development of a new Al-Al_2O_3 two-layer technology involving a pure 5-10 nm Al film deposited directly on the polymer substrate and topped by a second thin layer of Al_2O_3.

2. <u>Method to Improve Phosphorus Bioavailability</u>. Feed grade phosphates are known to contain trace elements (i.e. aluminum and iron) that interfere with phosphorus absorption, and can increase fecal phosphorus. A small Wisconsin company (B&B Specialties, Spencer, WI) has developed a method to remove contaminating elements which interfere with phosphorus absorption. Involved in this process is the use of raw materials mined by another WI based company (Great Lakes Calcium, Green Bay, WI). Preliminary field data suggests that 25-50% less of the premium monocalcium phosphate is needed to achieve performance using typical commercial grade phosphates. Thus the objective of this trial is to confirm if premium grade monocalcium phosphate is more biologically available to animals. The potential gross market of such a product exceeds \$100 million per year.

3. <u>Enhanced Performance of Photodiode Devices through Plasma Processing</u>. Conventional solid state Si photodetectors generally have a poor responsivity to UV light. By applying a coating of plasma polymerized methyl methacrylate (PPMMA), the shorter wavelength UV light can be shifted toward the longer wavelength visible region where the Si photodiode has a better response. In a preliminary study, PPMMA coatings have increased the overall photocurrent of photodiodes manufactured by Silicon Sensors, Inc. (Dodgeville, Wisconsin). However, the success rate was less than satisfactory for a commercial process. The research objectives are to maximize photocurrent enhancement of Si photodiodes and to study the photoluminescence (PL) property of plasma polymer films. A statistically designed experiment will be used to investigate the effect of different plasma process parameter levels on the photocurrent and PL responses.

4. <u>Measuring the Dynamic Slip Boundary Condition for Molten Plastics</u>. The dynamics of wall slip in extrusion will be addressed, a central issue in plastics processing. A new theory of dynamic wall slip by Graham (1994) will be used to interpret large amplitude oscillatory shear measurements made in the slip regime. From measured chaotic stress responses, the first measurements of characteristic relaxation time for dynamic slip will be made. Principles of nonlinear dynamics including process identification techniques will be developed for this purpose. The dynamic slip boundary condition will be used to design a commercial die for a Wisconsin company, Extrusion Dies, Inc. (Chippewa Falls).

5. <u>Physiology, Cultivation, and DNA Fingerprinting Techniques in Species Identification for</u> <u>Goldenseal (Hydrastis canadensis L.) and Ginseng (Panax quinquefolium)</u>. This research is designed to aid Wisconsin's \$75 million ginseng industry which is currently facing stiff competition from Canada and subsequent falling product prices. The first objective is to examine the potential of intercropping or rotational cropping goldenseal with ginseng. The value of goldenseal on the world market rivals that of ginseng and thus seems to be an ideal choice for succession cropping, particularly because it is not susceptible to the same diseases as ginseng and is an overall easier more vigorous plant to produce. The second objective is to use DNA fingerprinting to determine distinguishing molecular markets (RAPDs) for American and Asian ginseng to try to put a stop to the illegal mixing of the two species which is costing Wisconsin growers millions of dollars each year.

6. <u>Cost Effective Membrane Bioreactors for Chlorinated Aliphatic Hydrocarbon Removals</u>. Of Wisconsin's 40 sites on the EPA's National Priority List (NPL), approximately 80% involve chlorinated alipaphatic hydrocarbon (CAH) contamination. Existing technologies for remediating CAH-contaminated groundwaters require a continuous supply of costly granular activated carbon (GAC). Since achieving clean-up objectives often requires decades, supplying GAC is a large part of the total remediation cost. Biological treatment of CAHs could be significantly less costly than using GAC; however, several significant problems exist. The goal of the proposed research is to demonstrate that the problems above can be overcome in a bioreactor in which methanotrophic biofilms are grown on gas-permeable silicone tubing. Since methane and oxygen diffuse through silicone without forming bubbles, 100% transfer efficiencies can be achieved. Also, since CAH concentrations will be high and methane concentrations low at outer regions of the biofilms, methane inhibition of MMO-mediated CAH oxidation will be minimal. Conversely, since CAH concentrations will be low and methane concentrations high at inner regions of the biofilms, optimal bacterial growth conditions will exist. Finally, since dead bacteria resulting from toxic CAH metabolites will only occur at the outer regions of the biofilms, they can be easily scoured off the biofilms and removed from the reactor.

7. <u>Passive Measurements of Isotopesto Monitor Health</u>. Currently, no simple method exists for assessing the metabolic state and history of free-ranging, wild animals, domestic animals, or humans. The purpose of this project is to establish our stable isotope process model as the method of choice in applications for the identification and diagnosis of nutritional problems in animals and humans. It is applicable to early diagnosis of kidney and liver problems and cancers, as well as early infection in postoperative or trauma situations in humans. The process can detect infections that develop in domestic livestock reared in enclosures. It can detect exposure to low level toxicants that affect basic metabolic processes. It is the method of choice for monitoring wild animal populations. With this technique, a single, one time sample will provide a nutritional history of the subject over the previous several months.

1996-97

1. <u>Piglets Which Show Extremely High Cholesterol</u>. This project produced piglets which showed extremely high cholesterol. These piglets were transmitted to industry for their determination of how company-proprietary drugs can attenuate the development of arterioschlerosis.

2. <u>Creating Business and Research Opportunities for Wisconsin Companies with France/Europe and</u> <u>Quebec through the Internet</u>. Developed a web page promoting joint Wisconsin and French-speaking country interactions. This web page will be a forum through which questions can be posed, hires can be obtained, products sold, and partnerships sought. Users in both countries will be universities, governmental agencies, and industry.

3. <u>A Field Emission Triode-Dynode Amplifier for Threshold Current Signals</u>. The objective of this study was to investigate the feasibility of constructing a device capable of measuring light intensity in the 650 to 1060 nm (red to infrared) range with both photon counting threshold sensitivity and photomultiplierlike time response. The investigators are seeking to combine the high quantum efficiency of a solid state detector with the speed and low noise of a dynode chain electron multiplier by means of a low noise field emission triode structure. Such a device would find application both in improving research instruments used in many fields of pure and applied research where fast, sensitive red to infrared light detection is required. In particular, a Madison-based small business, Sterling Scientific, Inc., has expressed interest in developing the proposed device for its commercial potential if feasible.

4. <u>Use of the Umbilical Cord in Fetal Gene Therapy</u>. The umbilical cord forms a vascular network between the mother and fetus, making it a very attractive system for delivery of therapeutic factors to developmentally-compromised fetuses. The investigators created allantois (pre-umbilical cord) cells that have been genetically-engineered to express blood-borne therapeutic factors. Then, using microsurgical techniques developed by the investigators, chimeric umbilical cords were constructed to deliver the expressed therapeutic factor to the developmentally-compromised fetus. The significance of this rests on the fact that, at present, the only methods available for introducing the fetus to therapeutic factors are the mother's circulation or intermittent injection into the umbilical cord. However, some substances cannot cross the placental barrier, and injection of substances into the umbilical cord is impractical when the half-life of the factor is extremely short.

5. <u>The Role of Bovine Placental GnRH and GAP Peptides on Secretion of Placental Hormone in</u> <u>Early Gestation</u>. This study examined the role of GnRH and GAP peptides on bovine placental hormone secretion. This project will be the first in "neuropeptide" regulation of bovine placental hormone secretion and as such constituted an entirely new area of ruminant reproductive biology. The information acquired may be applied to invent/improve a number of reproductive technologies already in wide use as well as to form the basis for new diagnostic tests.

6. <u>Real-time Satellite Information</u>. This project received matching money to obtain funding from NSF for the development of a consortium entitled, "Partnership & Innovation in Commercial Applications of Satellite Remote Sensing and Related Geospatial Technologies." If successful, this consortium could provide assistance to Wisconsin companies and state agencies who require real-time satellite information.

7. <u>In-vitro Fertilization with Sexed Sperm</u>. The researchers developed the capacity to alter the sex ratio of cattle by sexing sperm via flow cytometry techniques and used this sperm in an in-vitro fertilization system. As a result, greater control can be placed on the calf output of the some two million Wisconsin cows.

8. <u>Lithium-containing Polysiloxanes as Solid Electrolytes for Rechargeable Lithium Batteries</u>. Lightweight, rechargeable batteries will be essential if electric automobiles are ever to become practical for transportation. Lithium batteries offer the best possibility for providing the required high energy density and low mass. An electrolyte which will transport lithium ions is necessary to separate the anode and cathode. For reasons of safety, a solid electrolyte is desired; the presently available materials are not fully satisfactory. Development of a superior solid electrolyte could lead to favorable economic results in Wisconsin, home of the leading battery manufacturer, Ray-o-Vac.

C. Applied Research Program

Applied Research Program projects are funded through a competitive process administered by the UW System Office of Academic Affairs. All proposals were first evaluated by an institutional review panel before being submitted to UW System Administration.

For 1995-96, a total of 32 proposals requesting approximately \$1.3 million were submitted for review to the UW System and for 1996-97, a total of 33 proposals requesting approximately \$1.65 million were submitted. Each proposal was then reviewed and rated by a UW System review panel comprised of five representatives of UW System institutions, a representative from the Wisconsin Department of Development, and a staff member from the UW System Office of Academic Affairs.

In addition to the quality of the research design and likelihood of successful completion, a major criterion for selection was the potential impact of the project on Wisconsin's economy.

1995-96

1. Integrated Pest Management for the Balsam Twig Aphid and Balsam Gall Midge in Wisconsin Christmas Tree Plantations. This project tested the development of monitoring systems for balsam twig aphid and balsam gall midge populations, the determination of population levels at which application of insecticides is economically necessary, and the impact of integrating silvicultural techniques in the management of Christmas trees to conserve natural enemy populations. Project results suggest that growers' continued reliance on pesticide use will have negative economic impact in the long run. 2. <u>Control of Cryptosporidiosis in Wisconsin Dairy Calves</u>. The objective of this study was to reduce morbidity, mortality, and economic loss due to infection by *Cryptosporidium parvis*. The study investigated the use of experimental vaccines and found that vaccination of adult cows does reduce infection in calves. It was also found that these calves released fewer *C. parvis* spores into the environment, reducing presence of this organism in the environment.

3. <u>Development of a Prototype Mountain Bike Rim of a Novel Design</u>. This study investigated how the use of alloys and manufacturing technology could improve the performance of bicycle rims. Prototypes produced in the course of this project did offer significant improvement in stiffness, strength, wearability and fracture resistance. Trek Bicycle Company, which cosponsored this project, has adopted the use of the new alloys and production techniques.

4. <u>Using Near-Infrared Reflectance Spectroscopy to Screen Alfalfa Germplasm for Resistance to</u> <u>Fungal Pathogens</u>. Near-infrared reflectance spectroscopy (NIRS) has been utilized as a tool for characterizing complex organic substances. This study investigated the use of NIRS to identify patterns of resistance to infection in alfalfa. Results indicate that NIRS can identify resistance, and that application of these findings can accelerate the development of new cultivars by the alfalfa industry.

5. <u>Cloning Xenorhabdus Insecticidal Protein Toxin.</u> Following the successful engineering of the insecticidal bacterial toxin Cry genes from Bacillus thuringiensis (Bt) into plants, many crops will soon be planted as insect resistant transgenic varieties (e.g. corn, potatoes, cotton). The central problems with this strategy are that a) Bt genes show a limited spectrum of toxicity, b) few new genes are currently being discovered and c) with a large range of planting, resistance seems inevitable. The central aim of this project is to provide a new toxin gene from Photorhabdus, with a different mode of action and toxicity spectrum, to replace or be used in conjunction with Bt toxins. This toxin will also provide a safe alternative to the declining number of conventional insecticides marketed in the United States. The potential market for this toxin gene is approximately \$100-200 million per year.

6. <u>Human Supernumerary Chromosome to be Used for Gene Transfer.</u> The goal of this project is to isolate and re-engineer a tiny supernumerary human chromosome containing non-essential DNA, so that this mini-chromosome could be used as a vector for gene therapy. This research, if successful, will aid in the patentability of the mini-chromosome which could be used as a vector for stable and efficacious integration of specific genes of interest in therapeutic applications. This research would provide a significant economic benefit to diverse segments of Wisconsin's human health care industry.

7. <u>A New Class of Antiproliferative Agents</u>. Polyamines are ubiquitous cell components essential for normal growth. Compounds interfering with polyamine biosynthesis have considerable potential for use as therapeutic agents. They may also be useful chemopreventative and antineoplastic agents. Polyamine analogs have potent antiproliferative activity and are promising agents for the treatment of cancer. This project will provide the synthetic back-up for this polyamine research for the design and preparation of new polyamine analogs of therapeutic value. The proposed work could lead to the production of compounds that could be licensed by Wisconsin's emerging biotechnology and pharmaceutical industry.

8. <u>Computational/Experimental Modeling of Composite Casting</u>. The objective of this project was to develop a versatile computer code for use by industry in the modeling of castings. Predictions made by the code developed in this project conformed very well to standard benchmark models. Findings of this research have been incorporated into courses offered through the Center for Continuing Education and will be made available to industries in Wisconsin.

9

9. <u>An Energy-Efficient Control Technique to Significantly Improve Indoor Air Quality in Wisconsin</u> <u>Houses</u>. The objective of this research was to field test the effectiveness of an innovative mechanical ventilation system as an energy-efficient control technique to improve indoor air quality (IAQ) by reducing the concentration levels of air pollutants (e.g. NO_x, CO, RSP, VOC's, radon, etc.). A mechanical ventilation system with an air-to-air heat exchanger which recovers waste heat from furnace flue gas and exhausted contaminated indoor air offered an energy-efficient alternative in alleviating the general deterioration of IAQ in many homes that were designed or retrofitted to achieve low air infiltration.

10. <u>Direct Microbial Conversion of Corn and Paper Mill Sludge to Ethanol and By-Product Animal</u> <u>Feed</u>. Corn is used as a raw material in the production of ethanol. This project proposed the use of paper mill sludge as a partial replacement for corn to reduce the cost of ethanol production. Results show that paper mill sludge can replace 1/4 to 1/3 the volume of corn. This study also identified optimal fermentation temperatures, pH and times and demonstrated the cost-effectiveness of bypassing the use of enzymes. The by-product resulting from this process is suitable for use as a cattle feed.

11. <u>Screening for Multiple Disease Resistance in Potato Germplasm</u>. Three potato cultivars were studied to determine the presence of multiple resistance to disease and pests. Results of the study did allow for the identification of patterns of multiple resistance in the clones. On-going study will determine the feasibility of cross-breeding these clones with standard cultivars. The long term goal of this research is to produce cultivars with high levels of disease resistance.

12. <u>Project Clearwater</u>. The goal of this project was to test the hypothesis that various surface water algae and other surface products of excessive water fertility are an effective plant and crop nutrient. The research focused on investigations of filamentous algae applications. The project demonstrated the feasibility of using the algae to produce a mat for enhancing the germination and rooting of grass seed in the planting of new lawn.

13. Integration of Assistive Technology, Operational Management and Human Factors Engineering into the Operation of Assisted Living Facilities. This project developed a basic quality function deployment model to be used by the assisted living industry. Incorporating this model will result in increased operational efficiencies and assurance of quality services for individuals residing in Class C Assisted living facilities. Results of this study have been made available to the assisted living industry in Wisconsin.

1996-97

1. <u>Making Potato Microtuber Bioreactor Technology Commercially Feasible</u>. The goal of this project was to determine whether the quality of microtubers can be improved through the use of a naturallyoccurring inhibitor of the enzyme invertase. Results indicate that the enzyme does have the desired effect. The potential economic impact of a commercially-useable microtuber production is still valid. The microtuber technology explored in this project continues to be the most advanced and promising of any such technology currently existing and is the subject of on-going research.

2. <u>Development of an Assay to Detect Tuberculosis for Wisconsin's Agriculture Industry</u>. Bovine tuberculosis is a deadly disease with significant economic impact on Wisconsin's livestock industry. Current testing takes six to eight weeks for results. Tests developed under this project include a sample preparation protocol, controls to limit false readings, and produces results in two days. The tests will also differentiate strains, reducing the time and costs of contact tracing. Incorporation of this assay will enhance Wisconsin's reputation for livestock of exceptional health and quality.

3. <u>Use of a Natural Phospholipid to Promote Uniform Ripening (color development) and to Prolong</u> <u>Shelf Life of Wisconsin Cranberries</u>. This project investigated the effect of pre-harvested natural lipid on ripening and shelf-life of cranberry fruits intended for fresh and juice markets. Results indicated that shelflife of harvested fruit is increased by the application of the lipid in a post-harvest dip. Application of these results are expected to increase profitability through the reduction of losses due to fruit rot.

4. <u>New Techniques for Machine Vision Inspection of Printed Circuit Boards</u>. The objective of this project was to develop new algorithms and techniques for using machine vision for the inspection of solder joints. The project produced several new two-dimensional algorithms for solder joint inspection as well as techniques for improved reliability of the algorithms. The application of these findings will improve Wisconsin's competitive position in the global machine inspection market.

5. <u>Innovative Devices for Household Appliances</u>. The development of energy efficient housing technology has shown that the domestic gas range is a major pollution source for indoor air. Research conducted under this grant investigated the use of a sealed-container porous matrix burner for natural gas. Results indicate that the use of such burners decrease pollution of indoor air but reduce fuel efficiency. The commercial application of this research is on hold until the cost of electricity is much higher than that of natural gas.

6. <u>Development of Manufacturing Technology for Bricks and Blocks in Wisconsin Utilizing Recycled</u> <u>Materials</u>. The State of Wisconsin currently generates approximately 1.2 million tons of coal ash and 800,000 tons of used foundry sand per year, most of which is landfilled. This project developed technology for the use of ash and foundry sand in the production of concrete blocks, bricks and paving stones. Application of this recycling technology will reduce production costs of concrete blocks, brick and paving stones and significantly reduce the costs and ecological impact of by-product disposal.

7. <u>Performance Study of an Innovative Burner System for Paper Mills</u>. The main work of this project was to evaluate the effectiveness of the proposed porous media burner as a heating system for paper production companies. The results of this research indicate that the use of porous media burners can reduce the cost of paper drying when compared to technologies currently in use.

8. <u>A New Microbial Product with Diverse Applications for Wisconsin Industries</u>. The bacterium *Microcystis flos-aquae* produces a substance called "capsule," which is used as an industrial texturizer, thickener, gelling agent and binder. The research conducted under this project defined the conditions that cause capsule suspension to thicken or gel. This research indicates that capsule is an attractive alternative to several thickening and gelling agents that are currently used, particularly in enzyme preparations that require metal activation.

9. <u>Assessing the Effectiveness of a PCR Assav to Monitor Populations of Phytoplasma-Infected</u> <u>Leafhoppers in Potato Fields</u>. The results of this project suggest that PCR assay can be developed as a quicker, more reliable technique to monitor phytoplasma in leafhoppers than the current technologies. In particular, the findings show that the practice of pooling leafhopper samples may be unwise. The development of this assay technique is the subject of on-going research.

10. <u>Manufacturing Process Improvement Through Supercomputer Simulation</u>. The goal of this project was to optimize the use of a supercomputer in modeling the injection molding process. Results obtained from this research show that a supercomputer provides processing speed 20 to 40 times faster than a leading edge workstation. The supercomputer provided complete and accurate product analysis, ready to

be tooled with 24 iterations in three hours. A high speed workstation would require about 40 hours to complete four iterations. These findings have been shared with many Wisconsin companies.

والاراب المحمد وتواعده والمعاصر والمعاصر والمراجع

12

.

Appendix A

New Industrial and Economic Development Research Awards for 1995-96

the second second second

<u>Principal Investigator</u> <i>Title</i>	<u>Department</u>	<u>Period</u> (years)	<u>1995-96</u> <u>Budget</u>	<u>Total</u> Budget	
J. H. Booske	Eng Res Ctr	3	\$30,059	\$85,370	
Transparent, Impermeable Barrier Films for Polymer Packaging Materials	Plasma-Aided Manufacturing				
M. Cook	Animal	2	\$6,709	\$14,575	
Method to Improve Phosphorus Bioavailability	Sciences				
D. Denton	Eng Res Ctr	3	\$32,041	\$93,301	
Enhanced Performance of Photodiode Devices through Plasma Processing	Plasma-Aided Manufacturing				
A. J. Giacomin	Mechanical	3	\$25,193	\$123,398	
Measuring the Dynamic Slip Boundary Condition for Molten Plastics	Engineering				
H. Harrison	Horticulture	2	\$28,366	\$50,214	
Physiology, Cultivation, and DNA Fingerprinting Techniques in Species Identification for Goldenseal (Hydrastis canadensis L.) and Ginseng (Panax quinquefolium)					
J. K. Park	Civil &	2	\$31,340	\$58,586	
Cost Effective Membrane Bioreactors for Chlorinated Aliphatic Hydrocarbon Removals	Environmental Engineering				
W. Porter	Zoology	2	\$20,000	\$33,198	

Passive Measurements of Isotopesto Monitor Health

Appendix B

New Industrial and Economic Development Research Awards

for 1996-97

	• • • • • • • • • • • • • • • • • • • •	. .		
<u>Principal Investigator</u> <i>Title</i>	<u>Department</u>	<u>Period</u> (years)	<u>1996-97</u> <u>Budget</u>	<u>Total</u> <u>Budget</u>
A. Attie	Biochemistry	1	\$14.040	\$14,040
Piglets Which Show Extremely High Cholesterol				
G. Bousquet	French &	1	\$12,953	\$12,953
Creating Business and Research Opportunities for Wisconsin Companies with France/Europe and Quebec through the Internet	Italian			
D. DenHartog	Physics	2	\$10,270	\$16,158
A Field Emission Triode-Dynode Amplifier for Threshold Current Signals				
K. Downs	Anatomy	1	\$14,998	\$14,998
Use of the Umbilical Cord in Fetal Gene Therapy				
T. Duello	Obstetrics &	2	\$21,970	\$54,416
The Role of Bovine Placental GnRH and GAP Peptides on Secretion of Placental Hormone in Early Gestation	Gynecology			
T. Lillesand	Environmental	1	\$19,632	\$19,632
Real-time Satellite Information	Remote Sensing Ctr.	·		
J. Rutledge	Meat &	1	\$23,384	\$23,384
In-vitro Fertilization with Sexed Sperm	Animal Sci.			
R. West	Chemistry	3.	\$3,000	\$66,794
Lithium-containing Polysiloranes as Solid				

Lithium-containing Polysiloxanes as Solid Electrolytes for Rechargeable Lithium Batteries

.

Appendix C

Applied Research Program Research Awards 1995-96

				-	9 m m m . n	~ •
--	--	--	--	---	-------------	-----

Principal Investigator	<u>Campus</u>	Award	<u>Title</u>
P. Kleintjes	UW-Eau Claire	\$34,743	Integrated Pest Management for the Balsam Twig Aphid and Balsam Gall Midge in Wisconsin Christmas Tree Plantations.
S. McGuirk, P. Lunn	UW-Madison	\$42,071	Control of Cryptosporidiosis in Wisconsin Dairy Calves.
F. Worzala	UW-Madison	\$35,230	Development of a Prototype Mountain Bike Rim of a Novel Design.
C. R. Grau	UW-Madison	\$37,643	Using Near-Infrared Reflectance Spectroscopy to Screen Alfalfa Germplasm for Resistance to Fungal Pathogens.
R. ffrench-Constant	UW-Madison	\$24,165	Cloning Xenorhabdus Insecticidal Protein Toxin
L. Meisner	UW-Madison	\$40,147	Human Supernumerary Chromosone to be Used for Gene Transfer
L. Marton	UW-Madison	\$20,703	A New Class of Antiproliferative Agents
S. Garimella	UW-Milwaukee	\$39,000	Computational/Experimental Modeling of Composite Casting.
K. Renken	UW-Milwaukee	\$12,966	An Energy-Efficient Control Technique to Significantly Improve Indoor Air Quality
C. McDermott	UW-Oshkosh	\$29,952	Direct Microbial Conversion of Corn and Paper Mill Sludge to Ethanol and By- Product Animal Feed.
S. H. Jansky	UW-Stevens Point	\$30,705	Screening for Multiple Disease Resistance in Potato Germplasm
C. E. Yost	UW-Stout	\$35,635	Project Clearwater.
P. Schwartz, S. Kumar	UW-Stout	\$41,583	Integration of Assistive Technology, Operational Management and Human Factors Engineering into the Operation of Assisted Living Facilities.

.

Appendix D

Applied Research Program Research Awards 1996-97

Principal Investigator	<u>Campus</u>	<u>Award</u>	Title
B. H. McCown	UW-Madison	\$42,318	Making Potato Microtuber Bioreactor Technology Commercially Feasible.
G. A. Splitter	UW-Madison	\$50,000	Development of an Assay to Detect Tuberculosis for Wisconsin's Agriculture Industry.
J. P. Palta	UW-Madison	\$29,066	Use of a Natural Phospholipid to Promote Uniform Ripening (color development) and to Prolong Shelf Life of Wisconsin Cranberries.
J. Zhang	UW-Milwaukee	\$49,633	New Techniques for Machine Vision Inspection of Printed Circuit Boards.
S. H. Chan	UW-Milwaukee	\$49,817	Innovative Devices for Household Appliances.
T. R. Naik	UW-Milwaukee	\$47,590	Development of Manufacturing Technology for Bricks and Blocks in Wisconsin Utilizing Recycled Materials.
R. S. Amano	UW-Milwaukee	\$49,995	Performance Study of an Innovative Burner System for Paper Mills.
D. L. Parker	UW-Oshkosh	\$43,666	A New Microbial Product with Diverse Applications for Wisconsin Industries.
K. Mogen	UW-River Falls	\$16,642	Assessing the Effectiveness of a PCR Assay to Monitor Populations of Phytoplasma-Infected Leafhoppers in Potato Fields.
J. Amoapim	UW-Stout	\$47,975	Manufacturing Process Improvement Through Supercomputer Simulation.

Note: As part of the 1996-97 UW System budget reduction reported to the Joint Committee on Finance, the Industrial and Economic Development Fund was reduced. Awards totaling \$426,702 were awarded prior to this 1996-97 budget reduction. The awarded amounts were held harmless and the difference from budget was funded from other sources.

Authorization to recruit: Professor, Finance School of Business Administration University of Wisconsin-Milwaukee

EDUCATION COMMITTEE

Resolution:

That, upon recommendation of the Chancellor of the University of Wisconsin-Milwaukee and the President of the University of Wisconsin System, the Chancellor be authorized to recruit for a Professor of Finance, School of Business Administration, at a salary that exceeds the Executive Salary Group Six maximum.

The University of Wisconsin System

FORMAT A

Request for Authorization to Recruit

University of Wisconsin-Milwaukee

For Board of Regent Consideration on: November 6-7,1997

Request must be filed with the Chancellor's office, <u>three weeks before</u> the date of the Regent meeting at which request is to be considered; it should be filed with the President's office ten working days prior to such meeting.

Type of Request: [Check appropriate box(es)]

[X] 1. Tenure involved

Institution:

- [] 2. Proposed salary between \$ and Group 6 maximum*
- [X] 3. Proposed salary above Group 6 maximum*
- 1. Official University Title of Position: Sheldon Lubar Professor in Finance
- 2. Division/College/School Department/Project: Academic Affairs, School of Business Admin.
- 3. Description of Duties: See Attached

4. Recommended Salary Range: \$105,000.00 - \$125,000.00

5. Source of Funds: 101 (GPR) & 133 (Endowment)

6. New Position _____ Replacement X . If replacement, indicate name and salary of previous person: ______ Arthur Warga (name) \$125,321 (C-Basis)

(salary)

Date:

7. Brief justification of Salary Range: See Attached

8. Approved b Dean/Director) Date:

ncellor)

9. Authorization to Recruit (Approved) (Denied) by the Regents/Vice President's Office on

(care)



Provost and Vice Chancellor

23 October 1997

MEMORANDUM

TO David J Ward, Senior Vice President for Academic Affairs The University of Wisconsin System

FR Kenneth L Watters, Provost & Vice Chancellor

I am forwarding a Request for Authorization to Recruit (UWS Format A) for the listed position at UW-Milwaukee:

Sheldon Lubar Professor in Finance

I am asking that this authorization be placed on the 6-7 November 1997 meeting agenda of the Board of Regents. Attached you will find the Format A and comparative salary data. You will note that the salary range we are recommending is consistent with AACSB (American Association of Colleges and Schools of Business) member schools in the field of Finance. Please let me or Assistant Vice Chancellor-Personnel Erika Sander know if you need additional information.

Thank you for your attention.

c: John H Schroeder, Chancellor Gary Alexander, UW System-Academic Affairs Judith Temby, Secretary, UWS Board of Regents Erika Sander, Assistant Vice Chancellor-Personnel

[promo\uwsfrma.slp]

UNIVERSITY MILWAUKEE

Dean

School of Business Administration

MEMORANDUM

- To: Kenneth L. Watters Provost and Vice Chancellor
- From: Charles O. Kroncke $\mathcal{O}/4$ Dean

Re: Recruitment – Position #2072, Sheldon Lubar Professor

Date: October 20, 1997

For 1998-99 I am seeking approval of the Chancellor and the Regents to recruit position #2072 a ranked faculty position in the area of finance. We will be recruiting across all three ranks of faculty, Assistant Professor, Associate Professor or Professor, in an attempt to find an outstanding individual to fill the gap left by the resignation of Professor Arthur Warga. The salary requirement for these ranks as created by the market for finance faculty are:

Assistant Professor	75,000 - 85,000
Associate Professor	85,000 - 105,000
Professor	105,000 - 125,000

To support the expected salary levels I have excerpted a portion of the 1996-97 AACSB Salary Survey document related to new hires last year. The expected salary rates for 1997-98 will be higher based upon the extremely tight labor market and upon my discussions with CIC Deans.

PARTICIPATING AACSB MEMBER SCHOOLS
(all salary values in 000's)
FINANCE

Rank	Range	Mean
-NEW HIRE-	PUBLIC ACC	CREDITED
PROFESSOR	70.2-165.0	104.5
ASSOCIATE PROFESSOR	60.0-120.0	84.3
ASSISTANT PROFESSOR	50.0-105.0	68.5
INSTRUCTOR	23.0-89.0	49.8
NEW DOCTORATE	50.0-97.0	71.8
ABD	50.0-73.0	59.6

If the position is filled at the full professor level it will likely also be named the Sheldon Lubar Professor, a named professorship vacancy created by the departure of Dr. Warga.

COK:bh ckiii:/faculty/finance/shel lubar professorship #2072



Authorization to recruit: Professor, International Finance School of Business Administration University of Wisconsin-Milwaukee

EDUCATION COMMITTEE

Resolution:

That, upon recommendation of the Chancellor of the University of Wisconsin-Milwaukee and the President of the University of Wisconsin System, the Chancellor be authorized to recruit for a Professor of International Finance, School of Business Administration, at a salary that exceeds the Executive Salary Group Six maximum.

The University of Wisconsin System

FORMAT A

Request for Authorization to Recruit

University of Wisconsin-Milwaukee Institution: November 6-7, 1997 For Board of Regent Consideration on: _ Request must be filed with the Chancellor's office, three weeks before the date of the Regent meeting at which request is to be considered; it should be filed with the President's office ten working days prior to such meeting. Type of Request: [Check appropriate box(es)] [X] 1. Tenure involved [] 2. Proposed salary between \$ and Group 6 maximum* [X] 3. Proposed salary above Group 6 maximum* Hans Storr Professor of International Finance 1. Official University Title of Position: Academic Affairs, School of Business Admin. 2. Division/College/School - Department/Project: 3. Description of Duties: See Attached 4. Recommended Salary Range: \$125,000.00 (C-Basis) 5. Source of Funds: <u>101 (GPR) & 133 (Endowment)</u> 6. New Position X Replacement . If replacement, indicate name and salary of previous person: (name) (salary) See Attached 7. Brief justification of Salary Range: 8. Approved b hancellor) Director) Date: 20 Date:

9. Authorization to Recruit (Approved) (Denied) by the Regents/Vice President's Office on

(clase)

"For 19 the Executive Salary Group 6 Maximum is \$ 102,476.00 (Effective 9-26-97)

UNIVERSITY MILWAUKEE

Provost and Vice Chancellor

23 October 1997

MEMORANDUM

TO David J Ward, Senior Vice President for Academic Affairs The University of Wisconsin System

FR Kenneth L Watters, Provost & Vice Chancellor

I am forwarding a Request for Authorization to Recruit (UWS Format A) for the listed position at UW-Milwaukee:

Hans Storr Professor of International Finance

I am asking that this authorization be placed on the 6-7 November 1997 meeting agenda of the Board of Regents. Attached you will find the Format A and comparative salary data. You will note that the salary range we are recommending is consistent with AACSB (American Association of Colleges and Schools of Business) member schools in the field of Finance. Please let me or Assistant Vice Chancellor-Personnel Erika Sander know if you need additional information.

Thank you for your attention.

c: John H Schroeder, Chancellor Gary Alexander, UW System-Academic Affairs Judith Temby, Secretary, UWS Board of Regents Erika Sander, Assistant Vice Chancellor-Personnel

[promo\uwsfrma.hsp]

Chapman Hall • PO Box 413 • Milwaukee, WI 53201

414 229-4501 FAX 414 229-2347



PARTICIPATING AACSB MEMBER SCHOOLS (all salary values in 000's) FINANCE

Rank	Range	Mean
-NEW HIRE	PUBLIC	ACCREDITED
PROFESSOR	70.2-165.0	104.5

New Program Authorization: B.S., Information Resources University of Wisconsin-Milwaukee

EDUCATION COMMITTEE

Resolution:

That, upon recommendation of the Chancellor of the University of Wisconsin-Milwaukee and the President of the University of Wisconsin System, the Chancellor be authorized to implement the B.S. in Information Resources.

NEW PROGRAM AUTHORIZATION B.S., INFORMATION RESOURCES UW-MILWAUKEE (IMPLEMENTATION)

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 Science in Information Resources is presented to the Board of Regents for final review. 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.

The proposed program will be housed in the School of Library and Information Science (SLIS). It has three predecessors, all of which still exist and which demonstrate that the SLIS can market its offerings to undergraduates: (a) the Master of Library and Information Science program (MLIS); (b) stand-alone 100/200 level courses; and (c) the Certificate in Library and Information Science.

REQUESTED ACTION

UW System Administration requests that the Chancellor of UW-Milwaukee be authorized to implement the B.S. in Information Resources.

DISCUSSION AND RECOMMENDATION

Program Goals and Description

Information Science, from which the program derives, is the study of the organization, storage, retrieval, dissemination and use of information. Information Technology is the collection of tools that make it possible to access and use information. The proposed B.S. in Information Resources prepares graduates who will help individuals and organizations effectively use information and technology. Graduates of the program will be able to do the following: (1) describe the role of information and information sources, services and technologies to retrieve information needed by users; (3) train others in the use of information sources, services and technologies to create systems for the retrieval of information; and (5) communicate effectively with individuals in all sectors of the information society.

The proposed major includes a minimum of 51 credits, 36 required and 15 area electives. Including major and distribution requirements, 120 total credits are required for graduation. A full-time student can reasonably expect to graduate in four years. Students who meet the standard UW-Milwaukee admission requirements are admissible to the School of Library and Information Science. It is expected that the undergraduate program will initially attract an annual enrollment of approximately 20 students. Projected enrollments for the next five years are as follows:

	1998-99	1999-2000	2000-01	2001-02	2002-03
Admissions	10	15	20	25	30
Graduates	0	0	2	10	15

Strengths and Unique Features

Two features are unique about this program: (1) it studies information technology from the perspective of users of information and technology; (2) it includes two capstone courses and field work involving at least nine credits and one year of marketable experience.

Collaboration with Other UW Institutions

Cooperation between the proposed Information Resources program and the UW Colleges is vital to attracting students into the program. Through articulation agreements, the School of Library and Information Science would enable students with UW College associate degrees to be eligible to apply for direct admission to the B.S. in Information Resources major. The School of Library and Information Science currently offers selected courses in its master's degree program to the UW-Fox Valley campus using on-site instruction and distance education technology. Other UW College campuses, such as UW-Washington County and UW-Waukesha, will be contacted to develop ways to increase course accessibility. Selected courses are also offered at one comprehensive campus, UW-Eau Claire, using on-site and distance education instruction.

Evaluation

The program will be subject to ongoing assessment in addition to individual assessments of each student in each course. Its objectives will be assessed on at least an annual basis. Evaluation criteria will be comparable to those currently in place for the school's Master of Library and Information Science program. Data collected will include total credit hours taken, and full- and part-time enrollment figures. Survey instruments and focus groups will be used to determine: (1) student/graduate satisfaction with their educational experience; (2) employer satisfaction with student field workers and graduates; and (3) placement figures for field workers and graduates.

Relation to Institutional Mission and Plans

The proposed program is consistent with UW-Milwaukee's mission to provide innovative "quality undergraduate . . . education programs," in particular because it would be one of the few undergraduate Information Resources programs in the country. Its fieldwork component will promote "productive relationships with appropriate public and private organizations" and links with the UW Colleges will "encourage others . . . to seek benefit from the University's research and educational resources."

Evaluation from External Consultants

Three external consultants reviewed the proposal and all support its implementation. Said one, "the proposal defines a quality program which

should appeal to a wide range of undergraduates," adding that "there certainly is sufficient [faculty] expertise to mount an undergraduate program." Another notes that the program's objectives "are well developed" and the required courses "provide a clear indication of the focus of the program." The third observes that "overall, the program holds strong promise of being successful and meeting a real need for employers and potential students."

The consultants raised two concerns: (1) Two reviewers observed that the program is likely to enjoy greater success than projected in the initial proposal, which would place pressure on available resources. UW-Milwaukee is prepared to support the program as it expands. (2) One reviewer noted that the school should clarify for prospective students the fact that the program is not a technical computer science program. In response to this concern, the program's name has been changed from "Information Science" to "Information Resources." Links with the School of Business's Management Information Systems program and the College of Engineering and Applied Science's Computer Science program have been established. Students are required to take an elective course from each of these programs as part of their degree requirements.

Need

It is difficult to document employment data for positions that are too new to be categorized by the U.S. Bureau of Labor Statistics. The bureau does, however, project that employment in information services will grow from 800,000 in 1990 to 1.4 million in 2005. The U.S. Global Trade Outlook 1995-2000 notes that creating information superhighways "in the United States and elsewhere . . . will require professional services to plan, design, and build the infrastructure." Further, with "an average growth rate of 13 percent, the U.S. information services industry is one of the healthiest segments of the economy." The Encyclopedia of Careers and Vocational Guidance reports that "there should be employment opportunities in all sectors of the computer industry" for "information scientists" trained to "design systems for collecting, organizing, interpreting, classifying, and retrieving information stored in a computer." Finally, consultants and trainers will be needed to work with organizations that incorporate new technologies into their everyday operations. In short, the rapid expansion of, and established reliance on, technology in education, government and business have created a solid market for individuals trained in the management and retrieval of information, including the organization, production, dissemination, storage and even behavior of information.

Comparable Programs Elsewhere in Wisconsin

The proposed program is unique in Wisconsin. Related programs at UW-Green Bay and Alverno College, while involving some study of information, are both closer to being computer science than information science programs. For example, UW-Green Bay's program prepares programmers and other computer scientists, as well as information professionals, while the proposed Information Resources program focuses exclusively on information professionals.

Comparable Programs Outside Wisconsin

The proposed program is also unique nationally. A program at Drexel University is similar to the one proposed by UW-Milwaukee. However, the Drexel program, which graduated approximately 45 students in 1993-94, is explicitly a computer science program. Two Minnesota schools offer related

3

programs, the College of St. Catherine and St. Cloud State University. St. Catherine's program has a strong computer science component and the St. Cloud program covers only information technology. By comparison, the proposed program focuses on information resources.

Resource Needs

UW-Milwaukee will reallocate funds to support the proposed program. Estimated annual costs for the first biennium of the program are as follows:

CATEGORY	FIRST YEAR	SECOND YEAR	Total
Faculty	\$ 38,000	\$ O	\$38,000
Non-instructional Academic Staff	\$ 14,000	\$ O	\$14,000
Supplies and Expenses	\$ 6,000	\$ 6,500	\$12,500
Support Personnel	\$ 0	\$13,000	\$13,000
TOTAL	\$ 58,000	\$19,500	\$77,500

Library and classroom facilities are adequate.

RECOMMENDATION

It is recommended that UW-Miwaukee be authorized to implement the B.S. in Information Resources.

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 COLLEGES

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

The UW Colleges' select mission states in part that the institution is "the freshman/sophomore, liberal arts transfer institution of the University of Wisconsin System, entitled to offer a general education associate degree." In May 1994, a General Education Task Force was established and charged both to review the Associate Degree and to create an assessment plan for evaluating it. The Task Force developed a revised AAS degree, implemented in Fall 1997, that seeks to provide students with a breadth and balance of disciplinary perspectives, as well as a set of proficiencies that are embedded in the content of its courses. Courses fulfilling breadth requirements are grouped in the following areas: (1) Fine Arts and Humanities, (2) Mathematical and Natural Sciences, and (3) Social Sciences. In addition to these breadth requirements, students are required to do course work in the following areas: (1) Application and Performance, (2) Ethnic Studies, and (3) Interdisciplinary Studies.

Specific proficiencies, deemed essential to a student's development, are embedded in the required course work. These proficiencies are grouped into the following categories: (1) Clear and Logical Thinking, (2) Effective Communication, and (3) Aesthetic Response. A full list of the proficiencies is found in the attached *Statement of Educational Principles and Proficiencies*.

The UW Colleges has developed an assessment plan that focuses on the evaluation of student academic achievement at both the course and program/degree levels. At the course level, assessment will occur in two-year cycles. During each cycle, each department will specify academic outcomes for at least two courses and their associated proficiencies. An interim report will be produced at the end of the first year of a cycle. On the basis of that report, activities will be initiated to improve student learning in both areas during the subsequent academic year. At the program/degree level, in addition to current studies of student performance conducted after students transfer to UW baccalaureate institutions, the Colleges will produce crossdepartment summaries on student performance for the first and second years of each assessment cycle. Finally, in order to determine whether students are exposed to all the proficiencies, proficiency audits will be completed beginning in Summer 1999.

RELATED REGENT POLICIES

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

INSTITUTIONAL REPORT ON GENERAL EDUCATION PROGRAM UW COLLEGES

I. INTRODUCTION

In addition to the UW System mission, the UW Colleges has a select mission which states in part that the UW Colleges is "...the freshman/sophomore, liberal arts transfer institution of the University of Wisconsin System, entitled to offer a general education associate degree. Its programs aim to provide qualified students of all ages and backgrounds with the proficiencies and breadth of knowledge that prepare them for baccalaureate and professional programs, for lifelong learning, and for leadership, service, and responsible citizenship." (See Appendix 1 for the Select Mission and Goals of the UW Colleges.)

The General Education Task Force, which began its work in May of 1994 with the charge to review the Associate Degree as well as to develop an assessment plan in relation to proficiencies for students in our program, kept this mission in the forefront throughout its work. Task Force members saw, as did the Regents in approving our mission, that knowledge and proficiencies were necessarily related in the development of a coherent and educationally sound general education curriculum.

From 1994 to 1996, the Task Force worked on these intertwined tasks taking care to ensure that both initiatives received wide department, campus, and Vice Chancellor input and review. Their work resulted in a revised AAS degree, implemented in fall, 1997, which addresses requirements in core and breadth of knowledge areas; and the accompanying <u>Statement of Educational Principles and Proficiencies</u> which delineates proficiencies of primary importance in the education of our students. Together, they create a cohesive academic program that we believe will be effective in the promotion of student academic achievement.

II. PHILOSOPHY

In the <u>Yale Report</u> of 1828, which began with a general discussion of the primary purposes of a university education, it was asserted that "the two great points to be gained in intellectual culture are the <u>discipline</u> and the <u>furniture</u> of the mind; expanding its powers and storing it with knowledge."

When we, in the UW Colleges, undertook a reexamination of our own general education mission and the goals and requirements of our associate degree, we too engaged in a general philosophical discussion of purposes. In fact, we wrestled with divergent views and conflicting interests and only after some considerable struggling did we achieve a sense of clarity and condition of agreement. But we willingly took that on, because we all wished to build a stronger foundation for the more complete education of our students, so they, in turn, might go farther and faster to greater heights and depths in their own journeys of life-long learning.
When it came to knowing, we wanted them to see and admire the big picture before becoming emersed in the details, and to sense and feel and be amazed at the interconnectedness of all fields of learning before specializing in just one. Furthermore, we were determined to design and deliver an associate degree program which focused on the students rather than upon disciplines, departments, or a politically acceptable array and arrangement of course options and academic trade-offs. The students would have to know that they mattered and mattered most, and that it was their growth, development, and intellectual empowerment which was the whole point and purpose of all our endeavors.

When we were done we had created a much better, more integrated and imaginative way of bringing about their cultural literacy, and giving them the discipline, confidence, and sense of direction to move on and up and make it in the world. We took subject matter and reintegrated it into an educational whole, combining poetry and physics, history and computer science, music and mathematics in ways that made connections between ideas, among people, within our small and highly personal communities of learning where individuals could come to know themselves by better coming to know one another and the whole wide world. But it was not just knowledge we wanted for them. We also insisted that they do: that they fashion and perform and engage in writing, calculating, experimenting, analyzing, exercising, arguing, evaluating, and explaining with well trained skills and disciplined methods which would constantly be assessed and improved upon in every course as an integral part of the special way in which he UW Colleges go about expanding the powers of the mind and richly storing it with knowledge.

III. OVERVIEW OF DEGREE AND PROFICIENCIES

ASSOCIATE OF ARTS AND SCIENCE DEGREE

By requiring students to take courses in each of the traditional divisions of the liberal arts, Fine Arts, Humanities, Mathematics, Natural Sciences, and Social Sciences we seek to provide students with a breadth of knowledge that will expose them to a variety of intellectual perspectives and disciplines. (See Appendix 2 for Associate of Arts and Science Degree Requirements.) As we conceptualized these areas, we set the following goals for students and so for ourselves:

FINE ARTS AND HUMANITIES

Students must acquire knowledge of ideas, beliefs, and abiding concerns pertaining to the human condition as represented in literature, philosophy and cultural history. They must acquire a level of aesthetic appreciation of the human imagination as expressed in the fine arts, and appreciation of the impact of the arts upon the quality and character of human life.

MATHEMATICAL AND NATURAL SCIENCES

Students must know of the nature and workings of the physical universe. They must understand scientific method, the functions of numerical data and the solving of problems through mathematical and statistical computations, as well as the application of the scientific method in laboratory and experimental work. For this, an appropriate level of computer literacy is required.

Students must also be aware of environmental conditions and challenges, the interrelationships of life forms and ecosystems, and the impact of human activities upon natural environments.

SOCIAL SCIENCES

Students must understand the nature and dynamics of human social systems and how and why people organize their lives and resources. In doing so, students will learn about both their own and diverse cultures to acquire a historical perspective on long-term characteristics and consequences of social change and an informed understanding of the variety of human conditions and the interrelationships of nations, regions, peoples and individuals.

In addition to the divisions of general education that traditionally prepare students for baccalaureate and professional programs, the UW Colleges has expressed its concern for the lifelong learning, leadership, service and responsible citizenship of our students as directed by our mission. To those ends, in addition of the breadth requirements above, the institution has added the following:

APPLICATION AND PERFORMANCE

Students must demonstrate an understanding of concepts, theory and knowledge through the application of their skills and understanding to specific problems and activities.

ETHNIC STUDIES

Students must become aware of and sensitive to diversity issues and problems. Courses fulfilling this requirement will have a substantial emphasis on cultural diversity in Wisconsin, the United States or the world.

INTERDISCIPLINARY STUDIES

Students must acquire an appreciation for the multiple dimensions of any given subject by applying the content, methods and assumptions of two or more disciplines. Students will learn to integrate knowledge from across the curriculum. A course is an interdisciplinary studies course if instructors from two or more disciplines teach the course.

Students continue to be required to meet writing and mathematics core requirements that do not meet breadth requirements. For the writing requirement, students must take Composition II. For the core requirement in Mathematics, students must take College Algebra or a newly devised Quantitative Reasoning course. The new course is intended to develop analytic reasoning as well as the ability to solve quantitative problems.

PROFICIENCIES

In its <u>Statement of Educational Principles and Proficiencies</u>, the UW Colleges delineates three major categories of proficiencies to be essential to the developmental progress of our students: Clear and Logical Thinking, Effective Communication, and Aesthetic Response. These three categories encompass twelve proficiency areas:

<u>Clear and Logical Thinking</u> Analytical Skills Quantitative Skills Creative Thought Socially Responsible Thought Self Assessment

Effective Communication Listening, Reading, and Observing Writing Speaking Using Interpersonal and Small Group Skills Using Resources

Aesthetic Response Curiosity and Creativity Awareness and Appreciation

Each of the areas above has specific outcome statements associated with it. Currently proficiencies have been assigned by departments to 211 courses. Since these proficiencies permeate our courses, we expect that students will have taken at least one course, and in most cases, several, that will address each proficiency by the time they have earned an Associate Degree. (See Appendix 3 for Statement of Principles and Proficiencies.)

IV. STRENGTHS OF THE GENERAL EDUCATION CURRICULUM

The revised Associate of Arts and Science Degree and the proficiencies associated with the courses in that degree serve to provide students with a general education curriculum that has a number of advantages.

It is coherent and educationally sound. It provides a logical melding of the assessment of knowledge in the discipline and the assessment of general education proficiencies. It promotes collaborative efforts across the curriculum. It acknowledges the significance of the application of concepts, theory, and knowledge.

It acknowledges the significance of the application of concepts, theory, and knowledge It facilitates students' ability to transfer by retaining traditional breadth of knowledge categories.

V. Assessment of General Education

The revision of the AAS Degree and the establishment of proficiencies reflect the reemphasis throughout higher education and the UW System on setting clear outcomes for student learning. The UW Colleges has now completed a Plan for the Assessment of Student Academic Achievement and Institutional Effectiveness that will meet Board of Regents and NCA guidelines. (See Appendix 4, "Assessment Lite" for a summary.) The UW Colleges plan for the assessment of student learning began with and grew out of the efforts of the General Education Task Force. The focus of the assessment plan is the evaluation of student academic achievement in the breadth of knowledge and proficiency components of general education at both the course and the program/degree levels.

While assessment has occurred in every course taught, it will occur in a more organized and goal-directed manner as the proficiencies have been articulated and are tied to instructional methods, assessment methods, and performance criteria.

Course Level Assessment

Assessment of breadth of knowledge and proficiencies at the course level will occur in two-year cycles. During each cycle, each department will specify academic outcomes for at least two courses and their associated proficiencies. Departments will review assessment results following year one of the cycle and will produce an interim report.

Based on that report, the department will determine activities which will be initiated to improve student learning on the breadth of knowledge and proficiency outcomes in the next academic year. Those activities, in turn, will be evaluated for their impact on student learning. This is a dynamic process in which what is learned about student performance in one year will impact activities in the next. The Senate Assessment Committee and the Office of the Provost and Vice Chancellor will be responsible for monitoring department assessment activities.

The institution will have a proficiency focus for each two-year cycle. For 1997-99 that focus is Clear and Logical Thinking. Therefore each department must assess student performance on this proficiency.

Program/Degree Level Assessment

In addition to the discipline-based knowledge and proficiency assessment that occurs in courses, the institution will continue to assess student learning over the entire program of study in the UW Colleges. Currently, studies of student performance after transfer to UW baccalaureate institutions are conducted. In addition to those, we will produce cross-department summaries on student performance for the 1st and 2nd years of each cycle. We are piloting ACT's new Critical Thinking Assessment Battery this fall to determine its usefulness for our program/degree assessment.

In order to determine whether students are exposed to all the proficiencies in the courses they choose to take to complete an associate degree, proficiency audits will be completed beginning in the summer of 1999. This is when the first group of students will have completed the new AAS degree. For these audits, transcripts of a random sample of students who received the degree the previous spring will be reviewed. (Appendix 4, summary of assessment plan).

VI. SUMMARY

The UW Colleges has general education as its mission; its focus is on the acquisition of breadth of knowledge and proficiency components of general education. The program seeks to provide students with a breadth and balance of disciplinary perspectives and with a set of proficiencies embedded in content. We seek to provide our students with some choice in general education so that they can prepare appropriately for majors and pre-professional programs; but we focus those choices to provide a broad and firm base for the educational experiences to follow.

We will continue to assess whether we are achieving our goals and, based on data, will continue to attempt to improve student learning and teaching.

Select Mission of the University of Wisconsin Colleges

In addition to the UW System mission, the University of Wisconsin Colleges has the following select mission:

The University of Wisconsin Colleges, as part of the University of Wisconsin System, shares the University's overall responsibility to disseminate knowledge, expand information, enrich our culture, and to provide outreach services. These activities are carried out at the 13 locally-owned campuses which, collectively, are the freshman-sophomore, liberal arts transfer institution of the University of Wisconsin System, entitled to offer a general education associate degree. Its programs aim to provide qualified students of all ages and backgrounds with the proficiencies and breadth of knowledge that prepare them for baccalaureate and professional programs, for lifelong learning, and for leadership, service, and responsible citizenship.

To carry out its select mission, the University of Wisconsin Colleges commits itself to the following goals:

a)	To plan and to deliver the freshman-sophomore years of baccalaureate programs and
	professional studies.

- b) To place major emphasis on teaching excellence.
- c) To support the development, testing, and use of effective teaching methods.
- d) To expect scholarly activity, including research, scholarship and creative endeavor, that supports its programs at the associate degree level.
- e) To serve the citizens in the University of Wisconsin Colleges' service areas by (1) promoting the integration of the extension function and encouraging faculty and staff to participate in outreach activity through, for example, providing continuing education programs, (2) facilitating the delivery of programs offered by other University of Wisconsin System institutions.
- f) To participate in inter-institutional relationships including but not limited to private colleges, public schools, other University of Wisconsin institutions, and the WTC System in order to maximize educational opportunity and resources for the citizens of the University of Wisconsin Colleges' service areas.
- g) To serve the special needs of minority, disadvantaged, disabled and nontraditional students, especially those in immediate service areas.
- h) To provide opportunities for cultural enrichment in the service area of each University of Wisconsin Colleges' campus.
- i) To make available, as a service to business, industry, and the general public, the unique professional expertise of the faculty and staff.

UNIVERSITY OF WISCONSIN COLLEGES ASSOCIATE OF ARTS AND SCIENCE DEGREE

Degree Requirements

- 1. A minimum of 60 credits must be fulfilled.
- 2. The UW Colleges General Education Requirements must be fulfilled.
- 3. At least 24 of the 60 credits must be completed within the UW Colleges, or at least 12 of the last 24 credits, must be earned within the UW Colleges.
- 4. A student must have a cumulative grade point average (GPA) of 2.0 earned at the UW Colleges and 2.0 overall GPA in credits applied to the Associate of Arts and Science Degree.
- 5. Students must be enrolled at a UW College campus during the semester in which the degree requirements are completed or have earned 60 degree credits prior to transferring from a UW College campus to a baccalaureate degree granting institution.

General Education Requirements

I. Core Requirements

Grade of C or better in or exemption from the following:

- WRITING ENG 102 (3 credits)
- MATHEMATICS MAT 108 or MAT 110

The writing and mathematics requirements and their prerequisites may not be used to satisfy a breadth requirement when used to satisfy a core requirement.

II. Breadth Categories

Fine Arts and Humanities

A student must earn a minimum of 9 credits with at least one course designated as Fine Arts and at least one course designated as Humanities.

Mathematical and Natural Sciences

A student must earn a minimum of 11 credits in this category. A minimum of 8 of these credits must be in at least two disciplines of the Natural Sciences and must include one laboratory science course.

Social Sciences

A student must earn a minimum of 9 credits in this category. These courses must be selected from at least two disciplines.

Application and Performance

A student must earn a minimum of 3 credits in courses designated as Application and Performance.

Ethnic Studies

A student must earn a minimum of 3 credits in courses designated as Ethnic Studies. Ethnic Studies courses may also be counted toward another breadth category.

Interdisciplinary Studies

A student must earn a minimum of 3 credits in courses designated as Interdisciplinary Studies. Interdisciplinary Studies courses may also be counted toward another breadth category.

Electives

A student who has met the core requirements and the other breadth category minimums may complete the 60 credit minimum requirement with courses in this category.

The breadth categories in the degree are defined as follows:

FINE ARTS AND HUMANITIES

Students must acquire knowledge of ideas, beliefs, and abiding concerns pertaining to the human condition as represented in literature, philosophy and cultural history. They must acquire a level of aesthetic appreciation of the human imagination as expressed in the fine arts, and appreciation of the impact of the arts upon the quality and character of human life.

MATHEMATICAL AND NATURAL SCIENCES

Students must know of the nature and workings of the physical universe. They must understand scientific method, the functions of numerical data and the solving of problems through mathematical and statistical computations, as well as the application of the scientific method in laboratory and experimental work. For this, an appropriate level of computer literacy is required. Students must also be aware of environmental conditions and challenges, the interrelationships of life forms and ecosystems, and the impact of human activities upon natural environments.

SOCIAL SCIENCES

Students must understand the nature and dynamics of human social systems and how and why people organize their lives and resources. In doing so, students will learn about both their own and diverse cultures to acquire a historical perspective on long-term characteristics and consequences of social change and an informed understanding of the variety of human conditions and the interrelationships of nations, regions, peoples and individuals.

APPLICATION AND PERFORMANCE

Students must demonstrate an understanding of concepts, theory and knowledge through the application of their skills and understanding to specific problems and activities.

ETHNIC STUDIES

Students must become aware of and sensitive to diversity issues and problems. Courses fulfilling this requirement will have a substantial emphasis on cultural diversity in Wisconsin, the United States or the world.

INTERDISCIPLINARY STUDIES

Students must acquire an appreciation for the multiple dimensions of any given subject by applying the content, methods and assumptions of two or more disciplines. Students will learn to integrate knowledge from across the curriculum. A course is an interdisciplinary studies course if instructors from two or more disciplines teach the course.

Abbreviation Key for Degree Designations

- FA Fine Arts
- HU Humanities
- MS Mathematical Science
- NS Natural Science
- LS Laboratory Science
- SS Social Science
- AP Application and Performance
- ES Ethnic Studies
- IS Interdisciplinary Studies
- EL Elective

Academic Affairs 10/1/97

A STATEMENT OF EDUCATION PRINCIPLES AND PROFICIENCIES THE UNIVERSITY OF WISCONSIN COLLEGES

The introduction to the Select Mission of the University of Wisconsin Colleges states:

The University of Wisconsin Colleges, as part of the University of Wisconsin System, shares the University's overall responsibility to disseminate knowledge, expand information, enrich our culture, and to provide outreach services. These activities are carried out at the 13 locally-owned campuses which, collectively, are the freshman-sophomore, liberal arts transfer institution of the University of Wisconsin System, entitled to offer a general education associate degree. Its programs aim to provide qualified students of all ages and backgrounds with the proficiencies and breadth of knowledge that prepare them for baccalaureate and professional programs, for lifelong learning, and for leadership, service, and responsible citizenship.

To accomplish this mission, the UW Colleges creates challenging and supportive environments designed to facilitate the ongoing intellectual, personal, cultural, and social development of each student. Guided by the principles that a love of learning and a sense of identity, integrity, truth, beauty, and community benefit both the students and society, the UW Colleges regards the following proficiencies as basic to the developmental process.

STATEMENT OF PROGRAM PROFICIENCIES

As a part of its Select Mission the University of Wisconsin Colleges is to "provide qualified students of all ages and backgrounds with the <u>proficiencies and breadth of knowledge</u> that prepare them for baccalaureate and professional programs, for lifelong learning, and for leadership, service, and responsible citizenship." To fulfill that mission we have identified the following areas of proficiency to be of primary importance in the proper education of our students.

I. Clear and Logical Thinking

The informed and disciplined use of rational thought in collecting, evaluating, and synthesizing information, and in framing and addressing "problems," as well as constructing and supporting logical arguments has long been and must remain a fundamental goal of higher education. Achieving that goal requires a high degree of proficiency in the following areas:

A. Analytical Skills. Students must acquire and demonstrate the ability to evaluate and analyze information and ideas, and to assess evidence and test arguments so as to distinguish knowledge, values, beliefs, and opinions. In this process, students must be able to select and apply scientific and other appropriate methodologies.

B. *Quantitative Skills*. Students must also acquire and demonstrate a proficient ability to engage in mathematical and quantitative analysis and problem-solving methods, including the making and interpretation of graphs, tables, and diagrams and the appropriate and accurate use of statistics in the analysis of scientific and social issues.

C. Creative Thought. Students must be able to integrate knowledge and experience in order to develop creative solutions.

D. Socially Responsible Thought. Students must also develop and demonstrate a sense of social responsibility, as well as the ability to evaluate situations and make decisions and choices with a clear and informed understanding of the moral and ethical issues and implications involved.

E. Self Assessment. In order to grow independently, students must develop an ability to analyze their own work and to express accurately both the strengths and weaknesses inherent in their own products.

II. Effective Communication

Students must develop and demonstrate proficiency in sharing knowledge with other people.

A. Listening, Reading, and Observing. Students must be able to listen carefully and critically with deliberate purpose in order to identify important points, understand the use of hypotheses, and recognize fallacies and inconsistencies in arguments. Also, they must read critically and perceptively, as well as watch films, television, and other visual presentations in an active, analytical manner, and by so doing come to appreciate the power, precision, and art of the spoken and written word.

B. Writing. Students need to acquire a large, rich, and varied vocabulary (including specialized and technical terminologies), as well as the ability to use language skillfully, in a clear, accurate, and well-organized manner. Students should also recognize and be able to use a variety of communication forms and styles, e.g., narratives, essays, research reports, and memoranda.

C. Speaking. Students also need to be skillful in using language orally. They should be able to demonstrate a variety of oral communication forms including arguments, discussions, debates, and extemporaneous speeches.

D. Using Interpersonal and Small Group Skills. Students need to demonstrate the ability to work collaboratively – to work, think, and communicate as part of a team – and to acquire abilities to understand and communicate with people different from themselves.

E. Using Resources. For the enhancement of clear communication, students need to acquire the ability to make informed use of library resources, to perform a variety of basic functions on computers, and effectively employ interactive technologies to assist learning and problem-solving. Students should be able to learn independently.

III. Aesthetic Response

For an enhanced awareness and appreciation of art and the power and importance of creativity in human life, students need to develop and demonstrate aesthetic understanding and skill.

A. Curiosity and Creativity. Students should expand their imaginations and should sensitively engage in creative expression and performance.

B. Awareness and Appreciation. Students should have both an awareness of and a critical appreciation for the aesthetic aspects of the natural world and various forms of creative expression.

CORE LIST OF PROFICIENCIES

I. Clear and Logical Thinking Students must be able to:

- A. Analyze, synthesize, evaluate and interpret information and ideas.
 Construct and support hypotheses and arguments.
 Distinguish knowledge, values, beliefs and opinions.
 Select and apply scientific and other appropriate methodologies.
- B. Solve quantitative and mathematical problems.
 Interpret graphs, tables, and diagrams.
 Use statistics appropriately and accurately.
- C. Integrate knowledge and experience to arrive at creative solutions.
- Evaluate situations of social responsibility.
 Make decisions based on an informed understanding of the moral and ethical issues involved.
- E. Articulate accurately strengths and weaknesses of one's own work.

II. Effective Communication

Students must be able to:

- Read and listen with comprehension and critical perception.
 Recognize fallacies and inconsistencies.
 Respond to the media actively and analytically.
- B. Write clearly, precisely and in a well organized manner.
 Develop a large and varied vocabulary.
 Recognize and use a variety of written communication forms and styles.
- C. Transmit information effectively through skillful speech delivery. Respond orally to questions and challenges. Recognize and use a variety of oral communication forms and styles.
- D. Work collaboratively as part of a team. Understand and communicate with people different from themselves.
- E. Gather information from printed sources, electronic sources, and observation. Use computer technologies for communication and problem solving. Learn independently, stimulating and satisfying intellectual curiosity.

III. Aesthetic Response

Students must be able to:

- A. Employ and expand the imagination. Engage in creative expression.
- B. Respond to the natural world and creative expression with knowledge and sensitivity.

Attachment 4



A Newsletter of Assessment Activities at the University of Wisconsin Colleges Fall, 1997 Volume 2, Number 1

SENATE APPROVES ASSESSMENT PROGRAM FOR UW COLLEGES

In fall, 1996, the Assessment Initiation Working Group (AIWG), formed by the Senate, was charged with finalizing the UW Colleges' assessment plan as well as continuing implementation and evaluation of that plan. On **September 20**, the plan was approved by the Senate. NOTE: The Executive Summary, institutional profile and history, and appendices to the plan are not included here; your dean will have a copy of the entire document.

UNIVERSITY OF WISCONSIN COLLEGES Plan for and Initial Implementation of the Assessment of Student Academic Achievement and Institutional Effectiveness

Introduction: As prescribed by the North Central Accreditation Association in the NCA Handbook of Accreditation, the UW Colleges Plan for Assessment of Student Academic Achievement aims at the documentation of:

- -> mastery of the level of knowledge appropriate to the degree attained;
- -> proficiency in skills and competencies essential for all college-educated adults; and
- -> completion of an identifiable and coherent undergraduate level general education component.

The plan addresses assessment of student academic achievement of breadth of knowledge (content) requirements and proficiencies at three levels to be discussed below:

- -> course;
- -> program/degree; and
- -> institutional effectiveness.

An organizational flow chart has been developed for the assessment process as it involves the UW Colleges' Strategic Plan, the Provost/Vice Chancellor's Office, the Faculty/Staff Senate and Senate Assessment Committee, and the department assessment coordinators, chairs and members. (See Appendix 4.) Assessment activity responsibilities for the Institutional Assessment Coordinator (Associate Vice Chancellor), the Senate Assessment Committee, and the department assessment coordinators can be found in Appendix 5.

Appendix 6 contains an Assessment Timeline and Activity Matrix detailing the timing of assessment projects from fall, 1994 to spring. 2001.

I. Assessment of Student Academic Achievement at the Course Level According to the UW Colleges' mission, the institution is to provide students with the proficiencies and breadth of knowledge to prepare them for further education and lifelong learning. In order to evaluate whether the institution

Assessment Initiation Working Group

Margaret Armstrong, Co-chair Psychology, Richland Roger Rigterink, Co-chair Philosophy, Fond du Lac Karl Schmid, Dept. Chair Mathematics, Barron Roland Baldwin, Dean Manitowoc Margaret Cleek, Assoc. Vice Chancellor, Central Admin. is succeeding in this mission, proficiencies and breadth of knowledge components are being assessed at the course level by departments. The assessment process occurs in two-year cycles. Each department has an assessment coordinator, reporting to the department chair, who is responsible for the assessment activities in the two-year cycle. (See Appendix 5 for department assessment coordinator responsibilities.)

Department Model: Major Steps

- 1. Departments have chosen at least two courses, with the proficiencies assigned to those courses, for evaluation in the two-year cycle. (For the initial two-year cycle, departments will assess at least one course with assigned proficiencies in the category of Clear and Logical Thinking. This proficiency will be an institutional focus for 1997-99.)
- 2. Each department assessment coordinator submits a detailed assessment plan to the Senate Assessment Committee and the department including outcome statements for the breadth of knowledge components and proficiencies for the courses.
- 3. Following year one of the cycle, each department assessment coordinator compiles the assessment results from the department and produces an interim report with recommendations on changes the department could make to improve student learning in the second year of the two-year cycle. The assessment coordinator submits the interim report to the Senate Assessment Committee and to the department.
- 4. The Senate Assessment Committee makes recommendations to the department assessment

For the initial two-year cycle, departments will assess at least one course with assigned proficiencies in the category of Clear and Logical Thinking. This proficiency will be an institutional focus for 1997-99. coordinators, as needed, on assessment activities of the department. The Senate Assessment Committee could suggest alternative assessment methods, measurement instruments, reference sources relevant to department activities, etc..

5. Each department discusses the interim assessment report and any recommendations from the Senate Assessment Committee and, with direction and assistance from the department assessment coordinator, determines activities which will be initiated to improve student learning on the breadth of knowledge and proficiency outcomes in the next

academic year. A summary of these conclusions is submitted to the Senate Assessment Committee.

- 6. The Senate Assessment Committee produces an annual report of the previous year's assessment activities in the UW Colleges and summarizes student learning outcomes.
- 7. Departments implement their planned improvements in the second year of the two-year cycle and continue to collect assessment data.
- 8. Each assessment coordinator submits the department's two-year assessment report to the Senate Assessment Committee. Included in that material will be the improvements the department made in the courses following the first year of the cycle and the results of those improvements. The department would also submit at the same time, its plan for the following two years, concentrating on the proficiency category (Clear and Logical Thinking, Effective Communication, or Aesthetic Response) chosen by the Senate Assessment Committee as the institutional focus for that cycle.

A detailed timeline for departments for the first two-year cycle (1997-99) as well as an ongoing timeline for assessment activities can be found in Appendix 7.

Department Model: Components of Assessment

Assessment of Breadth of Knowledge: Assessment of student learning begins with the assessment of discipline-based knowledge. This type of assessment has always been done in the institution and will continue to be done in each course and in each semester. Surveys of faculty and teaching academic staff have indicated that this assessment is <u>currently</u> conducted via a variety of measures: tests, quizzes, course portfolios, essays/compositions, presentations, speeches, performances, interviews, group/peer evaluation, daily assignments/homework, oral participation, lab manual completion, analytical papers, cooperative testing, etc.. These methods of assessment are ongoing but data will be collected across the department and summarized. Faculty will continue to investigate new methods of knowledge assessment associated with their stated outcomes and incorporate them into their assessment plan where appropriate.

In addition, the effectiveness of the transmission of discipline-based knowledge in courses will continue to be assessed across the department in several ways:

Institutional reports provided to deans and department chairs indicating student "success rates" within courses (usually defined as a grade of 'C' or better). Information on success rates in subsequent courses is also available. While this measure does not provide information on student learning of specific course content, it does provide an overview, along with a review of syllabi and exams, of how well the material is being learned.

Sample syllabi and exams reviewed by departments during faculty merit and promotion exercises. At these times the appropriateness of the course coverage of material is assessed by the department.

<u>Random surveys</u> of 100 former students conducted at the time of tenure review. These surveys request information about the course difficulty and applicability of courses to further learning in the academic area. Although these surveys are used primarily for personnel decisions, they provide valuable feedback to departments regarding the preparation students are receiving for later course work.

Student evaluations, mandated by the Senate, of all courses every third semester. Many faculty conduct such surveys each semester. These surveys are used primarily for purposes of faculty merit evaluation and promotion but provide important feedback to the department on the coverage of course material and on teaching techniques that students have perceived as helpful or as problematic.

The above methods of assessment provide direct feedback to the individual instructor, the department chair, and the campus dean on the course content and student success in acquiring that course content. This feedback will continue to be used to improve content coverage, teaching methods, and assessment methods.

Assessment of Proficiencies: As indicated previously, the proficiencies that are of primary importance in the education of UW Colleges' students fall into three general areas: Clear and Logical Thinking; Effective Communication; and Aesthetic Response. The three proficiency categories encompass twenty-eight specific proficiencies. (See Appendix 2)

Selection of Proficiencies: The seventeen departments have selected proficiencies for their courses from the list of twenty-eight specific statements. The assigned proficiencies for each course are kept on a database record in the Office of the Vice Chancellor and are communicated by faculty to students via syllabi or separate handouts in each course. (See Appendix 8 for a table of proficiencies selected by each department.) Departments determine outcome statements and assessment methods for the proficiencies chosen for their courses as detailed in the two-year cycle activities above.

Review of Proficiencies: The Senate Assessment Committee will conduct its first review

of the <u>Statement of Educational Principles and Proficiencies</u> in spring, 1999 and will do so every other spring thereafter or as needed. Since assessment is a dynamic process resulting in institutional change and improvement, it may well be that the proficiencies will need to be amended to suit more appropriately the goals and practices of the institution.

II. Assessment of Student Academic Achievement at the Program/Degree Level

In addition to the discipline-based knowledge and proficiency assessment that occurs in courses, the institution must also assess student learning over the entire program of study in the UW Colleges. There are a number of indicators that are now used to assess such progress and others that will be initiated to provide additional information.

Assessment of Breadth of Knowledge

Student Academic Achievement after Transfer: Since transfer is critical to the mission of the institution, student academic achievement after transfer is key to the evaluation of the program/degree. An assessment of student academic performance after transfer is done now and will continue to be done every other year to ensure that students are succeeding academically after they leave the institution.

The institution routinely receives information from some UW baccalaureate institutions on students' performance after transfer. The Student Achievement Study, conducted in 1995, followed 1989 Colleges' freshmen and their academic performance after transfer to UW institutions. A follow-up study of post-transfer performance of 1992 freshmen was completed in summer, 1996.

Since a number of students transfer to private institutions within the state, an effort was initiated in the summer of 1996 to get similar information on students' posttransfer success at these colleges. This venture has not been successful due to the state of the records of the private institutions (not computerized in some cases) and their ability and willingness, given limited staffing in many cases, to provide us with this information.

Since transfer is critical to the mission of the institution, student academic achievement after transfer is key to the evaluation of the program/degree.

<u>Cross-department summaries</u>: The department biannual reports will contain data on student academic performance. The Senate Assessment Committee will review the department reports, provide feedback to the departments, and share methods and innovations gleaned from the reports with all departments. The Assessment Committee will produce a consolidated report of department findings which will be shared across the UW Colleges.

Assessment of Proficiencies

ACT-CATB: UW-Richland, one of the College campuses, participated in the pilot of ACT's new Critical Thinking Assessment Battery in fall, 1997. That campus will evaluate the test's usefulness for assessing proficiency attainment of critical thinking and will recommend whether the test should be used across the UW Colleges.

<u>Cross-department summaries</u>: The department biannual reports will contain data on student performance on proficiencies. As indicated above (Breadth of Knowledge– Cross-department summaries) the Senate Assessment Committee will produce a consolidated report of department findings which will be shared across the UW Colleges. <u>Co-curricular transcripts</u>: In order to develop a monitoring system for the development of proficiencies through co-curricular activities, two campuses, UW-Fox Valley and UW-Richland are piloting a co-curricular transcript in which a student's university-related, out-of-class activities are credited on that student's transcript.

A co-curricular data base is also being developed which will indicate what activities are taking place at which of the 13 campuses. The goal is to associate proficiencies with these co-curricular activities and assess them.

In order to determine whether students are exposed to all the proficiencies in the courses they choose to take to complete an associate degree, proficiency audits will be completed by the Institutional Assessment Coordinator. For these audits, the transcripts of a random sample of students who received the degree the previous spring will be reviewed. These audits will begin in the summer of 1999 when the first group of students will have completed the new Associate of Arts and Science Degree, and will be performed each summer thereafter.

III. Evaluation of Institutional Effectiveness

Assessment at the institutional level includes not only the assessment of the academic program and associate degree but the wider goals of the institution.

Study of Transfer Patterns, Practices, and Problems

Given that the UW Colleges is a liberal arts transfer institution, an assessment of the wider goals of the institution must include transfer. In order to evaluate transfer patterns, practices and problems, the first comprehensive UW Colleges' Transfer Study was conducted in 1994-95. The Study report included a description of national trends in transfer, analysis of transfer patterns within the UW System, a review of current practices for facilitating transfer and results of a survey of former UW Colleges' students who transferred to UW baccalaureate institutions. This Study resulted in the continuing activities of a UW Colleges' Transfer Working Group.

Follow-up transfer studies will be done periodically; the next is scheduled for summer, 1998.

Satisfaction Indicators

Student Satisfaction Survey: A Student Satisfaction Survey was conducted in spring, 1996 and will be done every three years covering the following areas: student information, quality of academic advising, course availability, student involvement, services to students, facilities, campus safety, cultural diversity, and overall satisfaction. This survey provides information on areas in which students are not being served as well as they might be leading to greater institutional awareness of problem areas and to institutional improvement. A number of campuses within the institution are conducting their own student satisfaction surveys based on questions raised by the institution-wide survey.

<u>Alumni Satisfaction Survey</u>: Alumni satisfaction surveys will be conducted every three years beginning in spring, 1998. Random samples of former students are now surveyed as part of the tenure process for every faculty member. In addition, some campuses have conducted alumni satisfaction surveys. The institution as a whole has not conducted regular alumni surveys, however, and this is a new initiative.

Retention Measures

Retention Rate Data: The institution regularly measures student retention rates within semesters, between semesters, and between academic years. This data is provided to deans, department chairs, and student services directors and assesses the success of the institution in retaining students for the entire program/degree.

Withdrawal Survey: Reasons for withdrawal are now requested from students and

collected by the Institutional Assessment Coordinator every other fall semester. A summary report of reasons for withdrawal is submitted to deans, department chairs and student services directors. This information provides an assessment of why students decide to withdraw from the institution so that efforts can be made to decrease this number. Numbers of students who withdraw will also be tracked on the same timetable.

Non-returning Student Survey: A Non-returning Student Survey has been completed and will be conducted every other spring semester. A summary report on the completed survey is distributed to deans and student services directors. As with the withdrawal data, this information aids the institution in assessing the value and utility of the program/degree for a particular group of students. In determining why students might leave before completion of the program/degree, the institution can identify and rectify problems. The number of non-returning students for whom grades were a factor in their decision not to return speaks clearly to student academic achievement. Numbers of non-returning students are also tracked.

Image Indicator

Since several of the goals of the institution involve service to the communities in which the 13 campuses are located, in 1996 the institution commissioned two focus group interviews and a telephone survey of approximately 100 randomly selected residents in each of the 13 campus areas to determine public perceptions of the UW Colleges' role, mission and service in their communities. This information was important in order to develop a plan which addresses and improves these perceptions and to define and strengthen the UW Colleges' institutional profile. One result of this survey was the creation of a Marketing Task Force which produced a report to the Chancellor in February, 1997. As a result, a consultant was hired to facilitate the development of a marketing plan and an ad hoc committee was appointed to analyze staff responsibilities in marketing. The purpose of this activity is to improve institutional effectiveness in the service of our constituents.[•] A second image survey is being considered for the summer of 2000 but its implementation will depend on the marketing plan.

Summary

The Assessment Program of the UW Colleges focuses on the acquisition of breadth of knowledge and proficiency components of general education as our mission directs. The aim of the program is clearly evaluation and

The aim of the program is clearly evaluation and improvement of student academic achievement through our special focus on that achievement at the course level. improvement of student academic achievement through our special focus on that achievement at the course level. The assessment program is a clear outgrowth of the evaluation activities we have always conducted in concern for students and their academic success but it will occur in a more organized and goal-directed manner.

We will also continue to implement assessment activities at the program/degree and institutional effectiveness levels as well to ensure that students receive the best education we can provide.

The Institutional Assessment Coordinator, the Senate Assessment Committee, the Department Assessment Coordinators and each faculty member in the institution will be involved in various ways in monitoring the implementation of the program through their course activities, reports, report reviews, surveys, studies, assessment newsletter and so on.

Assessment is, by its very nature, a dynamic process which results in change by way of improvements in student learning, teaching, and institutional effectiveness. It is an

educational process for all involved. Given that, the assessment program of the UW Colleges will itself be improved, refined, and made more effective as it continues to be implemented.

Assessment Lite is published by the Assessment Initiation Working Group, the University of Wisconsin Colleges.

Approval of revised mission statement: UW-Parkside

EDUCATION COMMITTEE

Resolution:

That, upon recommendation of the President of the University of Wisconsin System and the Chancellor of UW-Parkside, the Board of Regents approves the revised UW-Parkside mission statement.

Agenda item I.1.g.

REVISED MISSION STATEMENT THE UNIVERSITY OF WISCONSIN-PARKSIDE (APPROVAL)

EXECUTIVE SUMMARY

BACKGROUND

Chapter 36.09(b), <u>Wis. Stats.</u>, requires that "the Board, after public hearing at each institution, shall establish for each institution a mission statement delineating specific program responsibilities and types of degrees to be granted."

The University of Wisconsin-Parkside requests approval for its newly revised Mission Statement. The proposed revision, approved by all campus governance groups, is an outcome of a campus and community strategic planning process begun a year ago.

The proposed new Select Mission, while not a radical departure from the 1988 Select Mission, offers a much more concise explanation of UW-Parkside's purpose, with a greater emphasis on the objectives to be met in order to fulfill the university's mission. Included in this packet are copies of the revised statement, UW-Parkside's current Select Mission Statement, and the memorandum describing the background for the proposed revision.

UW-Parkside's revised Mission Statement underwent initial review at the July, 1997 meeting of the Education Committee. On September 11, 1997, a public hearing was held on the UW-Parkside campus. A record of that hearing is included with these materials.

REQUESTED ACTION

The board is asked to approve UW-Parkside's revised mission statement.

November 7, 1997

Agenda item I.1.g.

University of Wisconsin-Parkside

MISSION STATEMENT (revised)

April 1997

The University of Wisconsin-Parkside is committed to high quality educational programs, creative and scholarly activities, and services responsive to its diverse student population, and its local, national, and global communities.

OBJECTIVES

- 1. Offer high quality academic programs rooted in the tradition of a liberal education in the arts, sciences, and professions, responsive to the occupational, civic and cultural needs of the region, and actively seek their continual improvement.
- 2. Generate, disseminate, and apply knowledge through research, professional and creative activity that benefits communities throughout the region and the world.
- 3. Attract and retain a diverse and multicultural population of students, faculty, and staff.
- 4. Foster a teaching and learning community that provides opportunities for collaborative faculty, student, and staff interaction in support of excellence.
- 5. Creatively and effectively utilize technology in courses, programs, and services.
- 6. Prepare students to be successful in their professional, civic, and personal lives.
- 7. Provide programs that meet the intellectual and cultural needs of people throughout their lives.
- 8. Provide and share in cultural and intellectual activities in partnership with our local and regional communities.

Select Mission of the University of Wisconsin–Parkside

In addition to the system and core missions, the University of Wisconsin–Parkside has the following select mission:

The University of Wisconsin–Parkside is a regionally based institution of higher education. The mission of the University is to offer undergraduate and graduate programs tailored to the needs of southeastern Wisconsin, a region which is adapting to the economic, political, and social realities of a changing industrial/technological society.

Besides traditional liberal arts programs, the University offers selected professional and preprofessional programs serving the managerial, technological, and social needs of the region. The University also is dedicated to the enhancement of the cultural and economic life of the region it serves.

To fulfill this mission, the University of Wisconsin–Parkside:

(a) Offers the students the opportunity for close, collegial relationships with the faculty and staff in an institution dedicated to excellence in teaching, research, creative activity, and service.

(b) Offers strong academic programs in the liberal arts disciplines which develop and assess the analytical and problem solving skills, understanding of one's own and other cultures, and awareness of self necessary for educated citizens of an advanced technological society.

(c) Assists students to identify appropriate professional options within liberal arts disciplines.

(d) Offers strong undergraduate and graduate professional programs in business, engineering technology, education and other areas relating to the technical/managerial needs of the area.

(e) Expects scholarly activity, including research, scholarship and creative endeavor, that supports its programs at the associate and baccalaureate degree level, its selected graduate programs, and its special mission.

(f) Supports the application of scholarly activities to the social, cultural, and economic problems of modern industrial communities.

(g) Provides special programs to meet the educational needs of the minority and disadvantaged populations within the area.

(h) Demonstrates its commitment to the principle of life-long learning through the services it offers to nontraditional students and through its outreach and continuing education programs.

(i) Serves as a focal point for cultural, artistic, intellectual, and community activities in the region.

(j) Cooperates with the University of Wisconsin-Extension in the development and coordination of statewide outreach programming, integration of the extension function into the institution, and appropriate and adequate recognition of those involved in outreach activities.



University of Wisconsin-Parkside

900 Wood Road, Box 2000 Kenosha, Wisconsin 53141-2000

Provost and Vice Chancellor 414/595-2261 Fax 414/595-2630

July 11, 1997

To: Board of Regents

From: John Ostheimer, Provost/Vice Chancellor J. Ron Singer, Associate Vice Chancellor for Planning, Budget & Resource Allocation, and Chair, University Council putt University of Wisconsin - Parkside

Re: Background for Proposed Revision to Mission Statement

During 1995-96, UW-Parkside began extensive discussions around the topic of the university's relationship to regional service, the nature of its curriculum, and other issues related to its fundamental mission. The 1995-96 academic year saw the campus reorganizing from four schools into two, attended by lengthy discussions about the nature of the institution. During Fall, 1995, several meetings were held around the question of UW-Parkside's special "niche". Spring, 1996 saw additional discussions of the existing mission statement, which has been unchanged since 1988.

• By Summer, 1996, there was growing consensus that it was time to reexamine the institutional mission and to engage in strategic planning. The University Planning Committee was formed, consisting of ten faculty (including department chairs), eight staff, several administrators, three external community members, and two students. This group held a retreat with a facilitator on August 21 to initiate the planning process. A variety of data and documents were reviewed prior to the retreat, dating back to the most recent North Central Association's accreditation review in 1992. In addition to UW-Parkside data and information about our region, the packet also included an article on the "Wisconsin Idea" and a copy of the Regents' 21st Century Report.

The Planning Committee began meeting every two weeks in September, 1996. In early October, the Chancellor asked Richard Brown, Dean of Business and Technology, to take on the task of chairing the University Planning Committee. Smaller working teams, including committee members and individuals who were not members of the Planning Committee, worked on specific aspects of the process. There were six such teams:

- 1. Strengths, Weaknesses, Opportunities, and Threats (SWOT)
- 2. Mission
- 3. Objectives
- 4. Measurable Outcomes
- 5. Strategies
- 6. Vision

The teams worked sequentially. For example, as the SWOT was being completed and its findings were taking shape, the Mission team was getting under way. As each new team was becoming familiar with its charge, the results of the earlier teams were available to inform the next step in the process.

Each team reported regularly at the University Planning Committee's meetings. In that way, the specific components of the plan were not allowed to stray far from the UPC's consensus. The balance between the working teams' creativity and their steady contributions to the coherence of the plan proved to be very positive.

The SWOT results were reported to the Committee on September 20, 1996. That team had held several brainstorming sessions to collect data on perceptions about the environment in which the campus would plan. What competition do we face? How do we view ourselves, and how does our community view us? What steps are needed to take full advantage of the university's potential? Strengths, weaknesses, opportunities, and threats were listed, discussed, and given relative emphasis.

The Mission team reported its final draft in October. However, as with the other components of the plan, it was agreed that the Mission Statement would be open to reworking as the larger document took shape. That team's operating premise was that the statement be brief, crisp, and intelligible to the general (particularly external) audience.

The Objectives Team concluded its draft, containing eight objectives, or goals, in late October. Their statement amplifies the mission statement at a level that is specific enough to indicate how the mission is to be carried out. It is action-oriented, giving clear overall direction to all campus units. Some of the eight objectives are, frankly, not currently strengths at UW-Parkside. Yet, they must <u>become</u> strengths if we are to serve our region and the State.

The Measurable Outcomes Team filed the report that included its final draft with the Planning Committee on January 23, 1997. They had thought imaginatively about measures that would provide candid assessment of success on each objective. Further, they identified the units of the campus that would be responsible for collecting appropriate data, and presumably for specific planning to enhance future success.

The Strategies Team took the objectives to the next level of specificity. What actions are needed to position UW-Parkside to improve its performance in our dynamic region? What specific processes need to be set in motion right away to strengthen the university's performance in the medium and long run? The Team's proposed strategies are the most controversial part of the strategic plan: they specify ways that the current practices of individuals and groups will have to change if needed improvements in productivity are to occur. Work on a number of these strategies was begun even before completion of the Plan, and that work continues. External groups were consulted for their views on the emerging plan. The Chancellor's Advisory Committee, a group of community leaders from various professions and agencies that are important to the campus, considered the entire draft plan on January 27. In earlier meetings, they had had an opportunity to discuss the SWOT analysis and other components.

In addition to the Chancellor's Advisory Committee, the Alumni Association Board of Directors and the Benevolent Foundation Board of Directors also examined and commented on the Plan's drafts in November, 1996.

Internal groups were also consulted: draft materials were sent to the entire university's faculty and staff on October 25, 1996, and at subsequent stages of the drafting. Open meetings were held for people to share their views with representatives of the Planning Committee.

The final draft Strategic Plan was submitted to the University Planning Committee on February 3, 1997. It consisted of the Mission Statement, eight Objectives, 49 Measurable Outcomes that will serve as indicators of the campus' success in carrying out the objectives, and seven Strategies to expedite an on-going planning process, with an additional 24 to accomplish the eight objectives. The Plan was submitted to the constituent groups (faculty, students, academic and classified staff) for approval.

The Academic Staff Committee and the Classified Staff Committee approved the drafts of the Mission, Objectives, and Measurable Outcomes in early February, and the Faculty Senate followed suit on February 25. The Chancellor also approved the plan.

On March 1, with the retirement of Dean Dick Brown, Ron Singer, the Associate Vice Chancellor of Planning, Budget, and Resource Allocation, was asked by the Chancellor to take over as chair of the University Planning Committee for what was to be its final meeting. With the drafting of the Strategic Plan completed, the first facilitating strategy was put into motion, creating a broad-based University Council that will be responsible for overseeing the continuing planning process. The Council consists of ten faculty, nine administrators, six staff, three students, and two external community members.

The Strategic Plan is serving a crucial function in UW-Parkside's development. We have agreed to a number of significant actions that need to be taken. Of equal importance, the process itself has helped disparate sectors of the campus to come closer together. The work of the Vision Team, which is considering UW-Parkside's medium and long-range future, completed a series of meetings with mixed groups of campus and external people during April and May, 1997. Its work will continue into the Fall of 1997. A conscious decision was made to proceed with the essentials of the strategic plan, and to delay the discussions about vision. Some organizations take this approach to planning if they face significant present-day challenges that require action. The University Council has begun to reconsider and facilitate implementation of the Strategic Plan, and the campus is committed to making the Plan the centerpiece of our efforts.

In summary, the changes incorporated in the proposed mission statement are both substance and process oriented. On the process side, the proposed statement is the culmination of a strategic planning process which was as important in its collaborative nature as it was in its substantive results. In addition, the mission and the accompanying objectives have been developed in conjunction with a set of measurable outcomes that will be useful in gauging our progress towards meeting our objectives. Finally, the proposed mission replaces what was a combination of a mission statement and a list of programs offered. The new mission and objectives offer a concise statement of purpose. Specifically, the proposed mission and objectives provide a broad based community focus not as clearly described in the 1988 mission.

Attachment:

"Measurable Outcomes" (see page 2 above)

Objective and Measures	Data Collection Responsibility	Baseline	Target
I. Offer high quality academic programs rooted in the tradition of a liberal education in the arts and sciences, and actively seek their continual improvement.			
 Recognition by: a. Students (at 60 credits) b. Current graduates c. Alumni d. Community e. Employers f. Advisory Boards g. High school counselors Retention rates Graduation rates Graduations Accreditations Performance on proficiency/competency exams Number of majors and graduates Exit interviews 	Academic Affairs (AA) Student Affairs (SA) University Relations (UR) UR SA All SA SA SA SA AA AA AA AA AA		

.

	Objective and Measures	Data Collection Responsibility	Baseline	Tärget
II.	Generate, disseminate, and apply knowledge through research and professional creative activity that benefits communities throughout the region and the world.			
1. 2. 3. 4. 5. 6.	Number of: a. Books b. Articles c. Presentations d. Performances e. Consultancies f. Workshops g. Research/creative activity awards Percent of full-time faculty/academic staff contributing Quality of research and professional creative activity, e.g., citations, reviews, requests for reprints, reputation of journals Satisfaction of audience (e.g. presentations, performances, consultancies, workshops) #/\$ of grant funding Level of institutional support	A11 A11 A11 A11 A11 A11 AA AA A11 A11 A		
 111. 1. 2. 3. 4. 5. 6. 7. 	Attract and retain a diverse and multicultural population of students, faculty and staff. Number of full-time equivalent (FTE) students Number of student credit hours (SCH) Ethnic/racial/gender/disabled population of students and faculty/staff by position Number of different ethnic/racial groups represented Retention of students by ethnic/racial/gender/disabled categories Retention/tenure/promotion rates of faculty/staff by ethnic/racial/gender/disabled categories Number of programs/classes dealing with diversity issues	SA SA A11 A11 A11 A11		

•

2

	Objective and Measures	Data Collection Responsibility	Baseline	Target
IY.	Foster a teaching and learning community that provides opportunitic for collaborative faculty, student, and staff interaction in support of excellence.	25		
1.	Number of :a.Interdisciplinary programsb.Team taught coursesc.Co-authored articles/presentationsd.Student/faculty research projectse.Collaborative performancesf.Student credit hours (SCH) in interdisciplinary programsg.Class group projectsh.Classified staff involvedi.\$ spent, e.g., tuition reimbursement, professional developmentj.Professional development programs/participantsk.Student organizations/participantsl.Students in Honors ProgramStudent/alumni satisfaction with the quality of the teaching and learning community, including advising	AA AA AA AA AA AA AII Business Services (BS) AII SA AA AA AA		

3

	Objective and Measures	Data Collection Responsibility	Baseline	Target
V.	Creatively and effectively utilize technology in courses, programs, and services.			
1.	Satisfaction of graduates	AA/UR		
2.	Usage of touch-tone registration and student information systems	SA		
3.	Number of technology based distant education student credit hours (SCH) in			
	a. Provided by UW-Parkside	AA		
	b. Provided to UW-Parkside			
4.	Number of:	AA		
	a. \$ for creative and effective technologically based education			
	b. Percent/number of courses designed with effective use of	AA		
	technology	AA		
	c. Usage of communication technology (voice/e-mail)	AA		
5.	Success on computer literacy test			
VI.	Prepare students to be successful in their professional, civic, and	· ·		
	personal lives.			
1.	Percent/number of students/alumni	•		
	a. Obtaining employment in field of study	SA		
	b. Admitted to graduate/professional school			
	d. Volunteering			
	e. Serving on boards	UR/SA		
	f. Completing internships	AA		
2	g. Serving professional organizations	UR		
2. 3.	Assessment of development skills/competencies	A A /SA		
L				

4

.

	Objective and Measures	Data Collection Responsibility	Baseline	Target
VII.	Provide programs that meet the intellectual and cultural needs of people throughout their lives.			
1. 2. 3. 4.	Enrollment in: a. Pre-college programs b. Non-credit courses Number of enrollees in high school programs Enrollment/completion of credit/non-credit certificate programs Number of non-degree seeking students/student credit hours (SCH)	AA AA AA/SA AA SA		
VIII.	Provide and share in cultural and intellectual activities in partnership with our communities.	•		
1. 2.	Satisfaction of communities Number/quality of community based: a. Performances b. Presentations c. Consultancies d. Workshops e. Exhibits f. Internships g. Institutional agreements h. Programs on campus i. UW-Parkside/Community Partnerships	UR AA AII AA AA AA AA AA AII AII		
4.	J. Attendance events Attendance at community based a. Performances b. Presentations c. Workshops d. Exhibits e. Programs f. Athletic events	AA All All All All All AA	• • •	

oul canes.lab

- •

5

SUMMARY OF PUBLIC HEARING

ON PROPOSED REVISIONS TO MISSION STATEMENT OF

THE UNIVERSITY OF WISCONSIN - PARKSIDE

Held on Thursday, September 11, 1997 1:00 p.m. Galbraith Room 363, Wyllie Hall University of Wisconsin - Parkside

The hearing was chaired by Regent Alfred DeSimone. Regent Grant Staszak also participated.

Regent DeSimone made introductory comments, noting that mission statements for the institutions of the UW System were adopted in 1974 and revised in 1988. UW-Parkside's mission statement has remained unchanged since that time. The proposed revisions were presented at the July meeting of the Board of Regents' Education Committee. Comments made at this hearing will be presented to the Education Committee for recommendation to the full Board.

Interim Chancellor Gordon Lamb welcomed those in attendance, stating that UW-Parkside is interested in serving the needs of the area and the educational needs of the students into the future.

Ron Singer, Chair of the University Council, presented the proposed mission statement, which was developed by a broad-based University Planning Committee in a collaborative process involving faculty, staff, students, community members and alumni. This group was charged with developing a strategic plan, one portion of which is the revised mission statement. The University Council will head implementation of the plan.

The Planning Committee examined opportunities and threats, strengths and weaknesses, core values and key stakeholders. While the mission statement that emerged incorporates many components of the existing statement, it also is a product of compromise among the diverse perspectives and beliefs presented to the Committee. The proposed statement incorporates the key values of high quality, benefit to and partnerships with the community, diversity, collaboration, and lifelong learning.

An important component of the new statement, Dr. Singer noted, is that the process by which it was formulated includes the basis for future improvement. The strategic plan has measurable goals and strategies for accomplishing them. Measures include recognition of quality by students, alumni, and employers; graduation rates; retention of students and staff; success of graduates; level of service on community boards; and number and quality of community partnerships. While the measures and strategies are not part of the mission statement, they are part of the outcome-based context underlying the statement's objectives. Strategies for achieving the objectives include review of allocation of resources among programs; development of plans to improve retention; review of program content and delivery to meet student needs; review of support services; plans for expansion of diversity; initiatives to strengthen community relations; building of life-long relationships with alumni; and enhancement of international experiences.

Teri Jacobsen, President of the UW-Parkside Student Government Association, spoke in support of the proposed mission statement. She particularly commended the broad reach of the process, which provided for commingling of the thoughts and views of all constituency groups on an equal basis. All agreed that the strategic plan and measurable outcomes are important. In addition to bringing about change in the mission statement, the planning process brought about change in the way people on campus work together.

Professor George Perdikaris, a member of the Planning Committee, noted that language in the existing statement about UW-Parkside's commitment to the region and to its changing industrial/technological society is missing from the proposed document. Also missing is reference to offering strong professional programs in business, engineering technology, education and other programs relating to the technical/managerial needs of the area. Indicating that area business people have questioned why this local focus has been removed, he urged that language about meeting these needs be returned to the document. He did not believe this to be incompatible with the stated focus on liberal arts.

Larry Duetsch, Interim Dean, College of Arts and Sciences, spoke in favor of the proposed statement. As a faculty member who had been at UW-Parkside since its creation, he felt that the existing mission statement is too specific as to types of programs to be offered, making it difficult to adjust to changing times. The proposed statement was drafted to be more inclusive, with the expectation that program array will continue to change and evolve. The goal is high quality for all programs - liberal arts and professional.

In response to a question by Regent Staszak, Dr. Singer commented that objective # 1 (offer high quality academic programs rooted in the tradition of a liberal education in the arts and sciences, and actively seek their continual improvement) refers to the notion of a broad-based education - not geared to a specific job, but to a career of different jobs and changing circumstances. Professor Steve Meyer, Chair of the University Committee, added that this objective conveys a core value of the university.

Frances Jaeschke, a member of the community, spoke in support of making changes proposed by Professor Perdikaris. Reading from a 1967 document on the founding of UW-Parkside, she noted that the special mission of the campus was to be highlighted by a school of modern industry, which was to train executives to have a firm grasp of technology, train engineers to understand business administration, and train labor economists in management and engineering. While this school never was created, she commented on the continuing need for leadership in industry to be educated broadly in the liberal arts. She did not oppose the proposed mission statement, but suggested strengthening it by adding language to state the special role of UW-Parkside and its relationship to area industry and technology. This, she felt, is important in regaining the university's identity and focus.

Professor Steve Meyer, Chair, UW-Parkside University Committee, testified in favor of the proposed mission statement on the basis that it reflects core values of the campus and provides direction for the future. Noting that it was the product of vigorous discussion, he said the statement combines mission with planning for the future and combines mission, objectives, strategies and measurable outcomes. Reflecting a shift away from an isolated perspective, he commented, the statement speaks of responsiveness to diverse populations and local, national and global communities, and of knowledge that benefits communities throughout the region and the world. Other shifts in direction include focus on teaching and learning communities, collaborative faculty/student efforts, and creative use of technology. Particular programs were not mentioned because it was felt that all should be of the same high quality.

UW-Parkside Provost John Ostheimer spoke in support of the proposed mission statement, commenting that the decision not to mention specific programs had been carefully considered, the conclusion being that the institution's programs serve not only business and industry, but many more segments of the population and community. As examples, he cited courses in professional writing, conflict analysis, sport management, and concentrations in graphic design, legal studies, applied physics and material science. In his view, the line between professional/applied programs and liberal arts programs is growing increasingly blurred, with professional programs having a strong liberal arts component, and liberal arts programs applying knowledge to problems in the community. If the mission statement were to be overly specific, he feared that the university would not be able to provide the curriculum necessary to prepare students for leadership in the community.

Mrs. Kenneth Greenquist, the spouse of a former Regent who was instrumental in the founding of UW-Parkside, noted the importance of UW-Parkside to the communities of Racine and Kenosha. It was her hope that the university could serve as the catalyst to bring the communities together for the benefit of all. She urged all people in the area to join in supporting UW-Parkside.

Tim Bauhs, UW-Parkside student, warned against setting forth the goal of a diverse university population unless the university is strongly committed to achieving it. In that regard, he cited a recent example of a Black professor who left UW-Parkside. He stated his own strong support for diversity, and commented that he considers UW-Parkside to be an excellent university.

Regent DeSimone responded that the Board of Regents currently is conducting a system-wide study on the subject of diversity and that the Board is committed to an effective program.

There being no additional persons who wished to testify, Interim Chancellor Lamb concluded the hearing by advising those present that all comments are appreciated and will be considered by the University Council.

-

۰.

Regent Staszak commended the effort made to allow so many to have input into the proposed mission statement and the sense of pride that faculty, staff, students and the community feel for UW-Parkside.

- -- - --

parksidehearingsum.doc

University of Wisconsin System: Competency-Based Admission

EDUCATION COMMITTEE

Resolution:

That, upon recommendation of the President of the University of Wisconsin System, the Board of Regents approve implementation of the Competency-Based Admission process on a statewide basis, to be used as a supplement to the traditional admission process.

November 7, 1997

UNIVERSITY OF WISCONSIN SYSTEM COMPETENCY-BASED ADMISSION

EXECUTIVE SUMMARY

BACKGROUND

In July 1992, the Board of Regents amended the Freshman Admission Policy of the University of Wisconsin (UW) System. The amended policy requires completion of a minimum of 17 Carnegie Units of study, including four credits in English and three credits each in social science, mathematics and natural science. At that same time, UW System Administration indicated that a task force would be appointed to examine the viability of developing a supplementary alternative admission process focused on attainment of specific competencies. This recommendation was made in recognition of the growing restructuring and reform efforts taking place in K-12 schools in Wisconsin which could lead to curricula incompatible with the traditional Carnegie Unit basis for admission. This supplementary alternative process would be no more or no less rigorous than the traditional admission process. Without an alternative process, the UW System could be a barrier to innovation and reform. Students from these restructured programs would also be at a disadvantage in the admission process. In June 1993, the board unanimously accepted the recommendation that the UW System conduct a pilot study of the Competency-Based Admission Project.

Over the past four years, UW System faculty and staff, in collaboration with faculty and staff from several area high schools, have developed and tested procedures for preparing and processing admission applications based, in part, upon student performance on university identified competencies. A rating scale was developed and Standardized Reporting Profile (SRP) was designed. In August 1994, funding was obtained from the Department of Education Fund for the Improvement of Post-Secondary Education (FIPSE) to support the training component of the Competency-Based Admission Pilot Project. Our experience has shown that this process can be used to make competitive admission decisions and that competency scores are as effective in predicting student outcomes in the first semester of college as traditional admission criteria.

The considerations which led to the Competency-Based Admission Pilot Project are as compelling now as they were in 1992. The traditional Carnegie Unit admission process serves most of our schools well and will continue to do so for the foreseeable future. However, curricular restructuring and reform continues, and the development of School-to-Work initiatives, apprenticeships and work-based learning experiences has exceeded expectations. The basic issue is unchanged: there are students in our high schools whose experience and preparation for college admission is not adequately captured using the traditional Carnegie Unit admission process. Without an alternative admission process to supplement the traditional method, these students will be at a disadvantage. As their numbers increase, we will need to assure all students that valid, reliable and equitable procedures govern admission decisions.

REQUESTED ACTION

Statewide implementation of the Competency-Based Admission Process, to be used when needed as a supplement to the traditional Carnegie Unit admission process.

RECOMMENDATIONS

To insure that all students are evaluated equitably for admission to UW institutions, it is recommended that the Competency-Based Admission process be implemented on a statewide basis. The Competency-Based Admission process will be used as a supplement to the traditional admission process. Materials for students considered under the Competency-Based Admission process will include the Standard Reporting Profile (SRP) along with the student's traditional transcript (where appropriate), the ACT score and the University of Wisconsin Application for Admission. The SRP will include teacher evaluation of the student's competency in the subject areas required for admission but not represented by the usual Carnegie Unit designation on the student transcript. This additional document will provide a basis for equitable and consistent admission decisions.

It is recommended that a report on the Competency-Based Admission process be prepared for the Board of Regents in three years.

RELATED REGENT POLICY

Regent Policy Document 72-11: Freshman Admissions Policy.

A Study of the UW System in the 21st Century. Final Recommendations on Preserving and Enhancing Access to Quality. June 1996.
Board of Visitors: University of Wisconsin-Stevens Point

EDUCATION COMMITTEE

Resolution:

That, upon recommendation of the President of the University of Wisconsin System and the Chancellor of the University of Wisconsin-Stevens Point, the Board of Regents authorize the Chancellor to increase the size of the UW-Stevens Point Board of Visitors from 18 to 25 members.