

SUSTAINABILITY REPORT

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I. PRESIDENT'S OVERVIEW



Dear Reader:

Grand Valley State University's liberal arts focus and increasing local, regional, and international presence have made it a leader of higher education in West Michigan. With that level of visibility comes an increasing level of responsibility.

Our mission is educating students to shape their lives, their professions, and their societies, and our students, the citizens of tomorrow, will need to address global issues of sustainability. The university has the responsibility to make sure the students are knowledgeable about these issues and understand realistic ways to address them. Sustainability issues, however, are complex and interrelated within financial, environmental, and social capital frameworks. Grand Valley must have the capability to develop assessment tools and process improvements, as well as the capacity to monitor future sustainable improvements.

Our university faculty and staff have worked together to develop this report on our current sustainability initiatives and programs. We are proud of our ongoing sustainability programs and activities, and continue to work on other areas where we know improvements are needed. We look forward to the opportunity to share our successes and further our sustainability initiatives in partnership with others, such as the Community Sustainability Partners and the City of Grand Rapids.

Our continued sustainability efforts at Grand Valley will help ensure that the university, in partnership with our students, staff, and faculty, is capable of meeting our own needs while not compromising the ability of future generations to meet theirs.

Sincerely,

Mark Murray,
President, Grand Valley State University

II. EXECUTIVE SUMMARY

Grand Valley State University has been engaged in the development of the Grand Valley Sustainability Report since July 2004. At the outset, we established a requirement that this report be well balanced and documented and that all areas of the “triple bottom line,” including social, environmental, and economic areas, have equal representation. Each triple bottom line (TBL) section has approximately six sustainability categories, with each category having three to four sustainability indicators or performance metrics. In total, there are 20 sustainability categories and 64 sustainability indicators or metrics.

In addition, we have developed this sustainability report as an initial database for cataloguing current sustainability activities and programs. One outcome of the report is that the framework of sustainability has provided leverage and focus for our campus operations and activities for faculty, staff, and students. This framework of sustainability will also help Grand Valley achieve its current vision and accomplish its established goals and objectives.

The highlights of this sustainability report include the following:

- The community engagement of the university including faculty, staff, and student outreach activities
- Education for sustainability including addressing global issues, concerns, and sustainability curriculum
- Transportation programs including student bus ridership
- Resource consumption including overall energy and water savings
- Economic development contributions provided by the university to West Michigan including students that remain in the region after graduation

Since this report is the first of its kind at Grand Valley, information gaps have been identified and will be addressed in the next sustainability report which is expected in approximately two years.

SOCIAL INDICATORS

Grand Valley has a well established education curriculum among its eight colleges, with a tradition of liberal education that contains nearly 200 courses that deal with triple bottom line sustainability issues. Students have been exposed to a variety of global sustainability issues and have the opportunity for community engagement projects through internships, volunteerism, and service learning, which have totaled over 28,000 hours. Nearly 4,500 students have participated in internships, co-ops, practica, and student teaching, saving participating organizations in West Michigan more than \$18 million.

Fitness and wellness are major goals for the overall health of the university for its faculty, staff, and students. Each year an increasing number of students participate in intramural sports, fitness and recreational programs. More than 15% of the students on the Allendale Campus play intramural sports. Grand Valley has also been able to keep medical costs under the rate of “medical inflation costs” of ~13% annual increases, by plan design and rate contracts with all major healthcare providers and by encouraging participants to select in-network service providers. Although substance abuse is a concern of college administrators nationwide, the incident rate of liquor law and drug law violations on the Allendale Campus is less than 1% annually. Grand Valley’s Alcohol Campus Education (ACE) and

Alcohol, Education, Research, and Training (ALERT) substance abuse programs are well recognized nationally.

The university student body has grown to 22,063 in fiscal year (FY) 2004-2005, with the female to male ratio remaining relatively constant at 61% to 39%. Asian, Black, Hispanic, and American Indian minorities represent 10% of the student body. Minority staff members represent 13% of the 1,623 employees. Minority procurement is also approaching \$4 million annually. Additionally, the university has hired more than 65 new international faculty in the last five years.

The campuses of Grand Valley are also considered safe with 95 reportable injuries reported among 2,578 faculty and staff (an incident rate of ~3.7%). Crime on the major Allendale Campus has an incident rate of less than 1%. Extensive training and prevention programs are provided to faculty, staff, and students, and range from general to personal and operator safety.

The culture at Grand Valley is guided by its vision, mission, and values and is rooted in its tradition of liberal education in general arts, sciences, and the professional degree programs. Grand Valley looks to enrich society through “excellent teaching, active scholarship, and public service” and prepares its students for a lifetime of change. Community outreach or engagement is encouraged at all levels of the university and includes faculty, staff, and students.

ENVIRONMENTAL INDICATORS

Grand Valley has grown into a leader of education in West Michigan with more than 4.1 million square feet on five primary campus locations, with 64% of these facilities either constructed or acquired since 1995. Even though there has been a tremendous increase in energy consumption as a result, conservation efforts and good construction practices have led to a decrease in annual consumption measures on a square foot basis for both electricity and gas. The university has also been able to reduce the annual cost of electricity to \$.69 per square foot and the yearly natural gas cost to \$.46 per sq. ft. Annual energy savings projects have now grown to over \$635,000 and include lighting, heating, and cooling improvements.

Similarly, total water consumption has also increased significantly, but the consumption per square foot has remained level at 39.8 gallons per square foot and the water cost per square foot has decreased to \$.17. Water savings projects include the use of waterless urinals, reduced flow showerheads, and low flush toilets. Stormwater management systems include the use of porous asphalt parking lots, rain gardens, and water retention basins.

Grand Valley takes great pride in the minimal amounts of greenhouse gases emitted. Indoor air quality has become a future focus area as 77 incidents were successfully addressed and reported in the most recent year. Additionally, the university has approximately 75,000 square foot of new Leading Environmental and Energy Design (LEED) buildings on campus.

In recent years, the university has averaged ~1,500 tons per year (TPY) of waste with a 30% recycling rate or 450 TPY. Grand Valley is also certified as a Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste. Recycling rate decreases can be attributed to the switch from paper to electronic forms and the fact that the university can no longer recycle styrofoam or colored glass.

Grand Valley has 87 campus buildings, five major facilities, and approximately 10 miles of roadways, five miles of CATV cable, three miles of utility tunnels, and 50 miles of fiber optic and broadband

cable, and more than 12,000 parking spaces. The Allendale Campus has more than 1,200 acres with about 495 acres of natural habitat in the ravines, providing much beauty for all.

A key area of focus has been bus transportation for the students and the creation of a transit culture on campus. Since bus operations began in FY 2000--2001, bus ridership has increased more than sevenfold to nearly 850,000 cumulative riders, with an average daily ridership of more than 7,000 students. With this bus ridership, Grand Valley has saved an estimated 550,000 gallons of gasoline totaling \$1.5 million, using an average price of \$2.75 per gallon.

ARAMARK Food Services has about 60 full-time employees; however, Grand Valley students represent greater than 50% of the ARAMARK workforce hours. Campus dining provides a wide range of food service options for both staff and students including meal options, availability of local produce, and food nutritional information on an organic food menu.

ECONOMIC INDICATORS

Revenues have grown consistently over the past years to approximately \$275 million, with a continuing trend away from state appropriation with larger portions coming from tuition and auxiliary activities including housing, the bookstore, and grants. Grants have grown to nearly \$14 million. Endowments have grown modestly to \$46 million. Enrollment has increased steadily over the past two decades, doubling roughly every 12 years to its present level of 22,063 in FY 2004--2005. The trend began to slow in 2005 as the university began to cap the size of the freshman class. The number of degrees per year reached 3,822 in FY 2004--2005.

Expenditures have grown to \$263 million in FY 2004—2005, with increased enrollment and an increased level of auxiliary enterprises. Expenditures for scholarships and financial aid have grown mostly to match growth in tuition revenue. The proportion of expenditures going to instruction and research has remained relatively steady at 40% while growing in total dollars. Growth in the cost per student has remained near the rate of inflation as measured by the Consumer Price Index. The general fund cost per equivalent student grew to \$9,528 in FY 2004--2005 comparable with the annual increases in the consumer price increase.

The university's economic impact in West Michigan has increased twofold over the last five years to greater than \$600 million. Over 12,000 jobs were directly or indirectly attributed to Grand Valley in the most recent year. Additionally, Grand Valley has nearly 42,000 alumni that reside in the state of Michigan, with more than 68% of recent Grand Valley graduates working in West Michigan and representing an economic value of more than \$85 million. Greater than 86% of alumni work in Michigan representing an economic value of more than \$110 million. Moreover, the Grand Valley Business Alliance, which is composed of the Family Owned Business Institute, Michigan Alternative and Renewable Energy Center, Michigan Small Business and Technology Development Center, the Van Andel Global Trade Center, and the West Michigan Science and Technology Initiative, represents Grand Valley on over 25 boards, and delivered training and consulting services to more than 2,000 companies and 5,000 individuals per year. The university's debt to capital assets ratio has increased to approximately 37%, which can be attributed primarily to the increased capacity in housing. Grand Valley has consistently maintained an A+ Standard & Poors credit rating, which is at the upper end for four-year comprehensive public universities.

Financial aid, including grants and loans, has increased to \$120 million; financial aid as a percent of gross tuition has increased to 93%. Grant acceleration slowed in FY 2004--2005 due in part to timing of payments from the State of Michigan Merit Awards. The amount of financial aid from loans as a

percent of total financial aid has remained relatively constant at 66%. However, the absolute level of student debt has increased and the average student is graduating with a higher debt load.

Utilization of assets including classrooms, buildings, and housing is an important focus area. The campus housing utilization rate has consistently remained in the 100%--105% range over recent years, with greater than 100% rates being achieved by placing additional students in rooms and using student lounge areas. In Allendale, classroom utilization rates have approached 80%, while on the Pew Grand Rapids Campus, classroom utilization rates are over 50% during the 8 a.m. – 6 p.m. period.

Total square feet, including the general and auxiliary funds, has grown 52% over the last five years to 4,124,573 square feet, faster than enrollment.

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III. INTRODUCTION

This report is about sustainability at Grand Valley State University. It provides data regarding many sustainability indicators and explains trends evident in the data. It also reports on many activities in university operations and academic programs that relate to sustainability. We think you will find this report interesting and informative.

Sustainability is a term indicating an ability to continue for the long term. From a global perspective, it relates to the environmental impact of human activity, the enhancement of social systems, and the improvement of economic conditions. From a university perspective, it also refers to our ability to continue for the long term and refers to our local environmental impact, social issues on campus, and the economic performance of the university.

GLOBAL PERSPECTIVE ON SUSTAINABILITY

As scientific knowledge advances increase our understanding of the planet Earth, we recognize the damage human activities sometimes inflict on the environment and the need to modify these activities to become harmonious with critical environmental systems. We have seen the visible effects of soot and smoke emissions on urban air quality and understand our need to burn cleaner fuels. We have seen the effects of untreated human and industrial waste on natural water systems and have combined our municipal and industrial treatment systems. Large landfills of trash and toxic waste have encouraged recycling and control of hazardous material. As continued advances in environmental science make us aware of the less visible impacts of human activity, we begin to recognize the limits of our oceans, atmosphere, and forests to absorb the emissions of our modern society. To sustain human activity, we must be respectful of the earth's carrying capacity.

The human population has been increasing at a rapid rate. There are more than six billion people on Earth today, with nearly half of the world's population living in major cities. Changes in the technology of transportation and communication have brought together different cultures, faiths, and races. Society becomes more complex with the variety of experiential backgrounds interacting every day in more crowded conditions. Only a few centuries ago, most interaction between cultures, faiths, and races was primarily through trading or war. But, after many decades of voluntary and forced migration, people with many different lifestyle experiences live and work together in a society that has become more complex. Issues of respect, prosperity, safety, security, malnutrition, health, and wellness remain important for all people in a world where differences in freedoms, education, and access to wealth are clearly visible through mass media and the Internet. We need social systems that work for the benefit of all people.

Technology and advances in the management of organizations have created the ability to produce ever more types of food, goods, and services with greater efficiency. These economic advances have created a standard of living for a majority of the people in some countries which was once attainable by only the wealthy elite. All countries now attempt to expand their economies to raise the standard of living for their citizens. Perhaps we will find limits to consumption-but currently even the wealthiest societies continue to strive for growth. Both within and between countries, unequal distribution of food, goods, and services creates pressure for growth. The negative impact of economic activity on the environment and society can be seen in many places-for example, deforestation in undeveloped countries, air and water pollution in developing countries, unhealthy working conditions in low wage countries, and high levels of energy consumption in highly developed countries. And yet, economic activity is seen as the

best opportunity to increase the standard of living for most people. To achieve long-term economic growth, it must be in harmony with environmental and social improvements.

The required balance between economic, environmental and social systems has been characterized as sustainable growth. Some issues such as air pollution, energy use, ocean pollution, population expansion, and the control of deadly diseases are global problems which cannot be solved without global strategies and cooperation. But, even these global problems have local components-the global energy use is the sum of energy use by individuals, businesses, and institutions. So, while we need sustainable strategies on a global scale, we must develop sustainable strategies locally, regionally, nationally, and even as individuals. For this reason, businesses and institutions have begun to publish a sustainability report-often called a triple bottom line (TBL) report-which attempts to describe performance in economic, environmental, and social parameters.

UNIVERSITY PERSPECTIVE ON SUSTAINABILITY

Grand Valley State University, as a public university supported by State of Michigan tax collections and student tuition, has a responsibility to practice sustainable growth. Economically, Grand Valley must operate responsibly by controlling the number of its students to maintain quality, controlling the cost per student, building its endowment, using assets effectively, and maintaining an appropriate capital structure. At the same time, Grand Valley must maintain and protect the environment and strive to improve society. Grand Valley must achieve sustainable growth in all three areas-economic, environmental, and social. But it not sufficient to do this quietly. As a highly visible and respected institution in West Michigan, Grand Valley has a responsibility to publicly report its triple bottom line in an effort to model the behavior needed from all businesses, institutions and individuals. The recognition of this responsibility to be sustainable in our actions and our responsibility to report to our constituents on our sustainable actions with transparency and integrity lead to the development of this first triple bottom line report.

In this report, which we expect to update every two years, we provide data and information about the university's economic, environmental, and social performance. Where possible, we have provided data for a five-year period. While it would be interesting to go back further, limits of data availability made five years seem like a reasonable compromise. Picking the categories and sustainability indicators has been challenging. Again, we were limited by the availability of data in some areas, but we wanted to provide specific examples of activity in each of the key areas. As we began to explore each area, we were pleased to find activities that in many cases exceeded our expectations. In a large organization, nobody can know all that goes on. One hopes that setting a positive tone through mission, vision, and values carries through the organization and inspires activities that take us along the right path. This has been true at Grand Valley, as we discovered during our research for this report.

It is not surprising to find that Grand Valley performs well in sustainable growth practices. The university was founded in the 1960s during an era of environmental and social awakening. The trustees created a bold vision for the university that would grow to serve the West Michigan region. The original design of the campus included focused learning communities as well as a respect for the national setting, the unique ravines, and the overall topography. James Zumberge, an eminent geologist, was the first president.

When land for the university was purchased in Allendale, Michigan, the trustees purchased over 1,000 acres even though the entering class was just 226 students. They were planning for future growth. The initial buildings (Lake Michigan Hall, Lake Superior Hall, Lake Huron Hall, the Seidman House, and James H. Zumberge Library) were substantial buildings, built of stone and concrete, intended for many

years of service. In the early years, Grand Valley was thinking far into the future. The initial buildings were constructed to respect and embrace the natural beauty of the deep ravines of the Allendale Campus. A series of concrete tunnels were constructed between the central utilities building and the academic buildings to keep wires underground and provide easy access for maintenance.

A bridge called Little Mackinac Bridge was built to move students from living centers north of a large ravine to academic buildings south of the ravine. A large storm water retention pond (now referred to as Zumberge Pond and stocked with bass, bluegill, and perch) was constructed to capture runoff and slow the flow rates of storm water into the ravines. Early construction was accomplished with respect for the environment.

When it was time for Grand Valley to expand into downtown Grand Rapids, 14 miles east of Allendale, a location on the west side of the Grand River was chosen. At that time, the west side was in serious decay and many questioned the decision to locate among crumbling, boarded up industrial factories. But, the university's location has helped to revitalize Grand Rapids. Grand Valley has now acquired 33 acres in Grand Rapids. The building of The Eberhard Center, the Richard M. DeVos Center, Peter F. Secchia Hall, and Winter Hall have transformed this area and attracted other community investments such as the VanAndel Public Museum and the David D. Hunting YMCA. Today, Grand Valley's location on the west side of Grand Rapids is characterized by significant community development and involvement with the diverse population nearby.

In a similar manner, when Grand Valley expanded in Muskegon, Michigan, two new buildings, the Robert B. Annis Water Resources Institute and the Michigan Alternative and Renewable Energy Center, were located in the downtown area. These industrial sites on the waterfront were chosen in an effort to help revitalize the downtown economy.

In its first 45 years, Grand Valley has paid attention to balancing economic, environmental, and social capital as it has expanded rapidly from a small college in Allendale to a successful university in Allendale, Grand Rapids, Muskegon, and Holland, Michigan.

GRAND VALLEY TODAY

Grand Valley has become a comprehensive university with more than 22,000 students and 725 faculty members. The university's primary mission is to provide academic excellence enhanced by active scholarship at the undergraduate and graduate levels. The mission attracts students from throughout Michigan, the nation, and several foreign countries because of Grand Valley's commitment to personalized attention and research opportunities for students. Students may choose from more than 200 disciplines, including 68 undergraduate majors and 23 master's programs. The campuses offer state-of-the-art facilities, ranging from wireless academic buildings to modern living centers and performance and athletic facilities.

Grand Valley has an endowment of more than \$46 million, due in large part to the support and activity of the Grand Valley State University Foundation. Gifts to the Foundation from friends, alumni, faculty, and staff help ensure the continuation of Grand Valley as a vital public education resource in West Michigan.

The Grand Valley story is one of continued commitment to a high quality, student-focused learning experience. It is the story of students, friends, alumni, faculty, staff, donors, and members of the community who have positioned this institution to make a meaningful impact within the state, region,

nation, and world. It is the story of leadership building on success, with exciting chapters yet to be told. In 2003, a university wide effort to rewrite the mission and vision statements produced the following:

GRAND VALLEY'S VISION AND MISSION

VISION

Grand Valley State University is a public institution with a local, regional and state commitment, and a global perspective. We are dedicated to providing our students with the highest quality undergraduate and graduate education.

Teaching in the liberal tradition, whether in general arts and sciences or the professional degree programs, has always been at the heart of Grand Valley's educational mission. A liberal education acquaints students with the tradition of humane values and the heritage, problems, and perspectives of their own and other cultures. It transcends the acquisition of information and rests on scholarship and the open exchange of ideas. Students learn to think for themselves as they develop the skills of inquiry, reflection, critical analysis, dialogue, and expression. At Grand Valley State University, the values of liberal education permeate all programs and areas of study.

A broad education rooted in the arts and sciences provides students with the general knowledge and skills necessary to participate intelligently in public discourse. Grand Valley State University is also dedicated to educating students to become competent professionals in their chosen fields. These ideals coexist within our institution, and together they inspire graduates not only to pursue their own success and well-being but also to positively influence their communities, their professions, and their world.

Grand Valley State University is characterized by and known for superior student-centered teaching and learning. Our diverse environment promotes the development of intellect and creativity through teaching, scholarship, service, and a vibrant campus culture. Realizing this vision will result in a broad national reputation for excellence.

MISSION

Grand Valley State University educates students to shape their lives, their professions, and their societies. The university contributes to the enrichment of society through excellent teaching, active scholarship, and public service.

It was the university mission, the education of our students and the shaping of their lives and professions, that focused our attention on the best practices of sustainability. How are we going to help our students become better global citizens so that they can shape their societies?

During the summer of 2004, a steering committee was formed to determine and categorize the sustainability activities on campus as they related to the economic, environmental, and social triple bottom line. A steering committee chaired by Timothy Schad, Vice President for Finance and Administration, began with the question: “What sustainable activities do we have ongoing at the university and what data is available to measure our performance?”

In the fall of 2004, work began to determine the available data that was being tracked and to begin to develop this collected information in a potential TBL sustainability reporting format. Timothy Thimmesch, Assistant Vice President, Facilities Services, was the focal point for the environmental data, James Bachmeier, Associate Vice President, Business and Finance, for the economic data, and Scott Richardson, Associate Vice President, Human Resources, for social data. Norman Christopher was hired as the Director of Sustainability--a role in which he coordinated the writing of our first triple bottom line report. Deans H. James Williams and Wendy Wenner joined the group to increase the emphasis on academic activity. It was decided in a fourth quarter, 2004 meeting with all the college deans that each of the colleges would determine the sustainability content and subject matter in the current undergraduate and graduate courses for their respective colleges. This activity helped to create additional awareness about sustainability and to begin to engage faculty in education for sustainability.

By the end of 1Q05, more than 125 data points regarding sustainability activities had been collected for various portions and different areas of the TBL. The steering committee was then given the approval to develop a full sustainability report with indicators for the university. Next, twenty preliminary categories of interest were determined for each area of the TBL:

- Social (culture, education, community engagement, diversity, health and wellness, and safety and security)
- Environment (energy, water, air quality, waste, land use/habitat, built environment, transportation, and food service)
- Economic (revenues, expenditures, economic development, student education affordability, utilization of assets and capitalization)

It is important to remember that a university is not managed to maximize performance in economic, environmental, or social areas. Grand Valley has a mission of educating students. As you read the University Mission Statement you will find reference to teaching, scholarship, and public service. But a sustainable organization, while pursuing its mission, also must be attentive to economic, environmental, and social performance. A balance is required. And while progress cannot be expected in all areas at all times, it is important to measure the outcomes over time and relate these measures to the growth of the university. That has been our goal with our first triple bottom line report. We welcome your comments and suggestions; they will be the basis for improvements in future reports.

IV. BACKGROUND ON SUSTAINABILITY

The roots of sustainability go back to the 1960s, but it wasn't until the 1980s that sustainability started to become a recognized activity and initiative. We have found that here on our campus, as well as in West Michigan, the term is starting to become broadly used-- but what does it really mean?

There are several well accepted definitions, the most noted being the U.N. Brundtland Commission, which in 1987 defined sustainability (sustainable development) as “providing for the needs of the present generation while not compromising the ability of future generations to meet their own needs.” The World Business Council for Sustainable Development defines sustainable development as

“environmental protection, social, and economic growth.” The U.K. Strategy for Sustainable Development, which was adopted by Procter & Gamble, defines sustainable development as “a very simple idea. It is about ensuring a better quality of life for everyone now and for future generations to come.”

These definitions of sustainability all have some important common threads:

- Living within limits
- Understanding the interconnectedness among and with economy, society, and the environment
- Equitable distribution of resources and opportunities

In the early 1990s, a group of companies founded an organization known as CERES (The Coalition for Environmentally Responsible Economics) which now has to more than 2,000 members. Ten important guiding principles were established:

- Protection of the biosphere
- Sustainable use of natural resources
- Reduction and disposal of wastes
- Energy conservation
- Risk reduction
- Safe products and services
- Environmental restoration
- Informing the public
- Management commitment
- Audits and reports

These baseline guiding principles have been used in developing sustainable enterprises and organizations.

In 1990, 20 universities signed the Talloires Declaration which now includes more than 315 academic institutions. In summary, the university and college presidents who have signed this document agree to the following:

- Increase awareness of environmentally sustainable development
- Create an institutional culture of sustainability
- Educate for environmentally responsible citizenship
- Foster environmental literacy for all
- Practice institutional ecology
- Involve all stakeholders
- Collaborate for interdisciplinary approaches
- Enhance capacity of primary and secondary schools
- Broaden service and outreach nationally and internationally
- Maintain the movement

Additionally, others have embraced the Earth Charter, which has developed a set of shared values that describes:

- Respect and care for the community of life

- Ecological integrity
- Social and economic justice
- Democracy, nonviolence, and peace

From these sets of guiding principles and value statements, there are several important areas of focus. One significant sustainability reporting activity has now been tabbed as the triple bottom line (TBL) by enterprises and organizations. It is also known as the three E's or the three P's as well:

- Environmental (ecology or the planet)
- Economic (economy or profits)
- Social (equity or people)

The TBL, three E's, or three P's all involve the efficient use of all forms of capital including: financial, human, manufactured, natural, and social.

The premises to the TBL include the following:

- Strategic longer term approach to economic, environmental, and social considerations
- Definition of values associated with economic, environmental, and social matters
- Identification of a measurement of important performance metrics for key stakeholders

So, as we look here on campus among faculty, staff, and students, we are trying to embrace the elements of sustainability in helping achieve the mission and vision for the university as well as in improving the overall productivity and efficiency of our ongoing facility operations. Some of these elements we embrace are as follows:

- | | |
|-------------------------------|-----------------------------|
| • Connection to place | • Personal dignity |
| • Responsible consumption | • Communication |
| • Living with limits | • Collaboration |
| • Diversity | • Transparency |
| • Honoring culture | • Interconnectedness |
| • Economic justice and equity | • Systems oriented thinking |
| • Democracy | |
| • Accountability | |

V. SUSTAINABILITY INDICATORS AND METRICS

Sustainability indicators, or performance measurements with corresponding metrics, are developed once the overall steps to sustainability have been addressed.

The steps to sustainability include addressing a number of key questions and issues:

- *Why do it?* This question addresses driving forces, determination of overall value, and need for commitment to change. Understanding the needs to be addressed provides an overall awareness and sustainability framework for doing the work.
- *Where are we now?* This question describes the need for an overall assessment of ongoing activities as well as a determination of current practices.

- *Where are we going?* This question assures that the proper planning tools are in place, both tactically and strategically, along with the establishment of a future vision and strategies for achieving stated goals.
- *How do we get there?* This question ensures that sustainable development best practices are used, what lessons are learned, and what factors will be used with quantifiable and qualifiable action plans.
- *How do we measure progress in the sustainability categories of interest?* This question addresses the need to determine correlative sustainability indicators, performance measurements, and metrics, as well as overall reporting techniques.

Sustainability indicators are measurement tools. The main functions of indicators are to do the following:

- Support systematic and rational decision making
- Set targets and establish standards
- Disseminate information and create awareness
- Establish interconnectedness and interrelationships of data leading to integrated action
- Focus discussion by developing a common language
- Monitor, evaluate, and benchmark developments and desired results (Adapted from Lino Bruglio)

The sustainability indicators used at Grand Valley describe three types of collected data:

- *Five-year trendline data.* This type of data has historically been collected, with corresponding trendlines determined for the period 2000--2001; 2001--2002; 2002--2003; 2003--2004 and 2004--2005 for the school year ending June 30, 2005.
- *<five-year trackable data.* This type of data may have been collected over a two to four-year time frame. A corresponding sustainability indicator of the data may also be available.
- *Single point data.* This type of data may have only been collected for a period of one year. This type of data will add clarity to the description of the sustainability category of interest.

At Grand Valley, the steering committee acknowledges that when the sustainability report was developed, all three legs of the TBL would be balanced and be of equal footing, importance, and representation.

Several formats can be adhered to regarding sustainability reporting, the most formal of which is the Global Reporting Initiative (GRI). The GRI is used by many of the leading global business enterprises and has an auditing requirement. We at Grand Valley chose to develop our sustainability report on a best efforts internal reporting basis.

SOCIAL

<u>Categories</u>	<u>Indicators of Sustainability</u>
A. Culture	<ol style="list-style-type: none"> 1. Leadership 2. Supportive Campus Environment 3. Purposeful Engagement 4. Level of Acceptance and Sense of Community
B. Education	<ol style="list-style-type: none"> 1. Curriculum and Courses Containing Sustainability Subject Matter 2. New Sustainability Courses and Curriculum 3. Development of Education for Sustainability 4. Sustainability Awareness
C. Community Engagement	<ol style="list-style-type: none"> 1. Joint Ventures, Partnerships, and Collaborations 2. Educational and Community Outreach Activities 3. Student Volunteerism and Community Service 4. Internships and Cooperative Education
D. Diversity	<ol style="list-style-type: none"> 1. Gender, Race, and Ethnicity of Students 2. Gender, Race, and Ethnicity of Faculty and Staff 3. Minority Procurement 4. Number of International Faculty
E. Health and Wellness	<ol style="list-style-type: none"> 1. Wellness and Recreation Service Programs 2. Fitness and Wellness Facilities 3. Healthcare and Quality of Life Services 4. Training, Service, and Prevention Programs
F. Safety and Security	<ol style="list-style-type: none"> 1. Reportable Injuries and Accidents 2. Campus Crime 3. Training and Prevention Programs

ENVIRONMENTAL

<u>Categories</u>	<u>Indicators of Sustainability</u>
A. Energy	<ol style="list-style-type: none"> 1. Electric Energy Consumption 2. Natural Gas Consumption 3. Energy Savings
B. Water	<ol style="list-style-type: none"> 1. Water Consumption 2. Surface Water Quality 3. Storm Water Management
C. Air Quality	<ol style="list-style-type: none"> 1. Outdoor Air Quality 2. Indoor Air Quality
D. Waste	<ol style="list-style-type: none"> 1. Waste Disposal vs. Recycling 2. Non-hazardous Waste 3. Recycling 4. Hazardous and Universal Waste
E. Land Use/Habitat	<ol style="list-style-type: none"> 1. Land Use 2. Ravines
F. Built Environment	<ol style="list-style-type: none"> 1. Facilities Overview 2. LEED Building Design
G. Transportation	<ol style="list-style-type: none"> 1. Campus Parking 2. Public Transit Daily Ridership 3. Reduction of Emissions 4. Bus Ridership Satisfaction
H. Food Service	<ol style="list-style-type: none"> 1. Food Options 2. Food Procurement 3. Organic Waste Disposal

ECONOMIC

<u>Categories</u>	<u>Indicators of Sustainability</u>
A. Revenues	<ol style="list-style-type: none">1. Revenues by Classification2. Enrollment3. Endowment
B. Expenditures	<ol style="list-style-type: none">1. Expenditures by Classification2. Cost per Student3. Sustainability Purchasing
C. Economic Development	<ol style="list-style-type: none">1. Economic Impact2. Grand Valley Business Alliance3. Grand Valley Alumni in the Tri-county Area
D. Student Education Affordability	<ol style="list-style-type: none">1. Tuition Costs vs. Median Income Levels2. Amount and Type of Financial Aid3. Financial Aid as Percent of Gross Tuition
E. Utilization of Assets	<ol style="list-style-type: none">1. Classroom Utilization2. Housing Utilization3. Number of Square Foot Buildings/Land4. Academic Square Feet by Student
F. Capitalization	<ol style="list-style-type: none">1. Debt Structure2. Credit Rating

VI. SOCIAL INDICATORS

Of the three areas of the triple bottom line (TBL), social indicators represent some of the most important, yet some of the more difficult performance measurements and metrics to describe.

Socio-economic indicators have also gained a great deal of attention and recognition, yet for many, they are overlooked because of the difficulty in qualifying and quantifying their measurement. Some of the difficulty is due to these indicators crossing over several different areas of collected data including faculty, staff, and students.

Some indicators are easier to describe, and include the demographics and diversity of the faculty, staff, and students; number of reportable injuries; healthcare costs, and so forth. Other social indicators are more difficult to quantify and define. These indicators include: description of the culture, overall health and wellness, and education for sustainability subject matter.

We also determined that there were several social indicator areas for which we do not currently track available data and information. These areas include: volunteerism for faculty and staff and service-learning hours for students.

In essence, one of the primary objectives of social indicators is to increase the campus quality of life for faculty, staff, students, and our community. With this objective, social capital is interconnected and interrelated with the other forms of capital including natural, financial, human, and manufactured capital.

Grand Valley must continuously work to improve the organizational health of the university and community as measured by these critical social categories including culture, education, community engagement, health and wellness, diversity, and safety and security. By monitoring these important activities, we are able to measure our positive impacts on our university and the community at large.

A. CULTURE

The culture at Grand Valley is guided by its vision, mission, and values. At the heart of the university's mission, "educating students to shape their lives, their professions, and their societies," is teaching in the liberal tradition. As stated in the university's vision statement, this liberal education foundation "acquaints students with the tradition of humane values and the heritage, problems, and perspectives of their own and other cultures. It transcends the acquisition of information and rests on scholarship and the open exchange of ideas. Students learn to think for themselves as they develop the skills of inquiry, reflection, critical analysis, dialogue, and expression. At Grand Valley State University, the values of liberal education permeate all programs and areas of study."

These values of liberal education not only permeate student life and the classroom but also the general work environment. They are reflected in the design of the physical environment in which the students, faculty, and staff work and in the art that hangs in all the buildings, the importance of solving problems, a focus on seeing the student as an individual and meeting student needs, an attitude that we can make this happen, a safe and comfortable environment, quality faculty whose purpose is to contribute to the enrichment of society through "excellent teaching, active scholarship, and public service"; social cohesion; and an excellent work ethic.

One of the most distinctive aspects of our culture is hard work and unified purpose. According to the Michigan Auditor General's Office, we have a relatively streamlined organization with fewer administrators per student than other universities and colleges. We are able to reach consensus quickly and have a much faster process for making decisions and a more empowered staff than others. These traits are critical cultural components that must be in place if we are to tap the full creative talents of our community and become more sustainable.

1. LEADERSHIP

The university's philosophy of leadership is based on the idea that leadership can be learned and that even experienced leaders can continue to learn new concepts. We also support the notion that leadership is a collaborative group process that is inclusive of all participants, and therefore, not focused on an individual, but instead on the relationship between group members. Our belief is that the outcomes of the leadership process are oriented toward positive change, whether within the group or the greater community.

Leadership opportunities for faculty and staff are part of the culture of Grand Valley. The Office of Human Resources provides annual programs focused on helping faculty and staff leaders improve their skills. An All Division Update each semester provides leaders with an understanding of the university goals and planning for the current academic year. Problem Solving Skills for Leaders helps leaders strengthen their skills in defining problems, identifying potential causes, and choosing corrective actions for long-term improvement. Building Effective Working Relationships helps leaders develop appropriate methods and flexible interpersonal styles to build a cohesive faculty or staff team. The Provost Office also sponsors an ongoing leadership workshop series for deans and department chairs on diversity, faculty personnel and development issues, resource management, curriculum development, planning and decision making, conflict and stress management, and effective communications skills.

Leadership training through the Leadership Grand Valley Initiative provides Grand Valley students with training, education, and experiences that encourage their growth as lifelong leaders of integrity who promote civic engagement and social change within their professions and communities. Student Life sponsors ongoing leadership training for students and student leaders across the campus.

2. SUPPORTIVE CAMPUS ENVIRONMENT

The Grand Valley values statement stresses the importance of a supportive environment for diversity and diverse viewpoints.

“A range of thoughtful perspectives is necessary for open inquiry, liberal education, and a healthy community. Recognizing this, we seek and welcome a diverse group of students, faculty, and staff. We value a multiplicity of opinions and backgrounds and seek ways to incorporate the voices and experiences of all into our university. We value our local community and embrace the participation of individuals and groups from Michigan, the nation, and the world. We also encourage participation in educational opportunities abroad. In order to foster a healthy and diverse environment, we will act with integrity, communicate respectfully, and accept responsibility for our words and actions.”

Grand Valley is committed to increasing diversity in all aspects of our campus life and to creating a campus climate in which every person connected with the university is treated with respect and dignity. Administrators in all areas of the university are held accountable for their efforts to increase diversity and improve the campus climate. We also offer a number of supporting organizations and programs for faculty, staff, and students:

- Padnos International Center
- Counseling and Career Services
- Office of Multicultural Affairs and the Multicultural Center
- Gay, Lesbian, Bisexual, Transexual (GLBT) Center
- Women's Center
- Women and Gender Studies Program
- Allies and Advocates
- Intercultural Awareness Council
- New Faculty Diversity Training
- Healing of Racism Workshops
- Mediation Training
- Multicultural Assistants in Residence Halls
- Intergroup Dialogues
- Intercultural Committee
- Cultural Board
- Student Intercultural Fest
- International Lecture Series
- Tunnel of Oppression Cultural Experience

3. PURPOSEFUL ENGAGEMENT

The university values purposeful engagement of students, staff and faculty in both the university and the communities. In the Education section below, there is a more detailed description of projects individual colleges and departments have with community and regional partners.

We also value high levels of student engagement in university academic and cocurricular programs. Grand Valley was one of the universities chosen to participate in the American Association of Colleges and Universities Greater Expectations Program. As a result of our connections with this program, we have undertaken a project called Claiming a Liberal Education that will be led by the director of our Faculty Teaching and Learning Center. Several of the important initiatives to increase student, faculty, and staff engagement in university life and several research projects which developed out of this program are as follows:

- A research study to determine student and faculty expectations of each other
- A series of intergroup dialogues for faculty, students, and staff, with the goal to discuss readings related to liberal education, students/faculty expectations, and diversity and to make suggestions for improvements in the university structure and programming
- The Liberal Education Academy, which provides an opportunity for faculty to discuss liberal education as it relates to their courses and pedagogy
- The LIB 100 project, designed to introduce first-year students to the meaning of liberal education and to provide connections between their co-curricular and curricular activities

- The Lumina Project--Grand Valley was chosen to be one of 44 schools to participate in the Lumina Project to measure students' development of critical thinking skills
- The FSSE and NSSE assessments of student engagement administered to get a baseline for our students' engagement in their studies and campus life; the data is being analyzed and will be distributed to the campus community later this year

4. LEVEL OF ACCEPTANCE AND SENSE OF COMMUNITY

It is important for the university to create a sense of community, and we have conducted two university-wide surveys and one follow-up survey to evaluate campus climate with the intent of understanding issues on campus and increasing the level of acceptance for all faculty, staff, and students. In April 1993, Grand Valley conducted its first campus climate study. As a result of this study, five projects were identified:

- Establishment of the Women's Commission
- Establishment of the new Children's Center
- Clarification of the discriminatory harassment policy
- Establishment of a group to study GLBT issues
- Studies of faculty and staff salary patterns

The implementation of these projects has resulted in significant progress in these areas. In 1999, the university received the Progress and Equity Award from the American Association of University Women. In April 1999, Climate Study II was administered as a follow-up to the original study. In January 2001, the findings of this study were published and distributed to the university community. Discussions of these findings resulted in additional recommendations for university projects.

B. EDUCATION

Grand Valley's current efforts in sustainability education fall into four categories:

1. Curriculum and courses containing sustainability matter and content
2. New sustainability curriculum or courses
3. Sustainability outreach programs in partnership with the community
4. Sustainability awareness programs

Grand Valley's mission is to "educate students to shape their lives, their professions, and their societies," and we believe that an understanding of the issues our global community faces in the areas of economic, environmental, and social sustainability are essential for them to become active and contributing citizens in the future. Our current university curriculum includes courses which offer sustainability information, student-faculty research projects, internships, and service-learning projects regarding sustainability.

1. CURRICULUM AND COURSES CONTAINING SUSTAINABILITY

SUBJECT MATTER OR CONTENT

We have courses across the curriculum that teach the issues of sustainability and provide students with opportunities to investigate and suggest solutions. Our current curriculum contains 193 courses that deal with triple bottom line sustainability issues. Samples of courses in each area are listed below:

Environmental:

- Environmental Science
- Environmental Ethics
- Conservation Biology
- Emerging Issues in Water Resources
- Environmental Chemistry
- Global Environmental Change
- Forest Ecosystem Management

Economic:

- Current Economic Issues
- Environmental and Resource Economics
- Emerging Markets Issues
- Business, Social Change, and Ethics
- International Economic Issues

Social:

- Urban Economics
- Diversity in Education
- Issues in Third World History
- Community Working Classics
- Family and Gender in the Developing World
- Exploring Latin America

A listing of courses from the College of Liberal Arts and Sciences, the Seidman College of Business, the Kirkhof College of Nursing, the College of Health Professions, the College of Interdisciplinary Studies, the Padnos College of Engineering and Computing, and the College of Education can be found in the appendix.

A. GENERAL EDUCATION

The university's general education program requires students to take three courses from different disciplines linked by a theme. The thematic group is designed to help students learn to integrate knowledge from various disciplines through the study of a major idea. This kind of cross-disciplinary study helps students learn to integrate and harmonize different perspectives and prepares them to intelligently participate in the increasingly complex discourses that shape the modern world. Several of the theme groups deal with sustainability issues and include the following:

- Perspectives from the Outside: Marginality and Difference
- Gender, Society, and Culture

- Ethics
- Earth and Environment
- Freedom and Social Control
- Global Change: Integration and Fragmentation
- American Mosaic

Students are also able to design a custom study abroad theme and may take sustainability courses in a university anywhere in the world.

B. STUDENT RESEARCH

The Student Summer Scholars program is designed to provide students with the opportunity to work closely with a faculty member on a research project in the field. Summer projects for 2005 included work in all three areas of sustainability. As a sample, students and their faculty mentors researched water quality issues in the Pine River, Cedar Creek, the Muskegon River, and Lake Michigan; researched the effects of traditional physical therapy exercises on muscle improvement; and developed a model to describe the informal economic structure of markets and home businesses in Chile.

2. NEW SUSTAINABILITY COURSES AND CURRICULUM

The College of Interdisciplinary Studies in conjunction with other colleges across the university is engaged in developing new interdisciplinary programs focused on sustainability issues:

- **Adventure Tourism:** This program brings together faculty and courses from Hospitality and Tourism Management, Natural Resource Management, and Movement Science to create a minor that will provide students with the skills and knowledge to lead ecologically sound tours in remote areas.
- **Environmental Studies:** This new major will bring together courses from across the university to address important issues of environmental stress and sustainability.
- **Global Studies:** This new major will build off our current programs in International Relations, East Asian Studies, African Studies, Latin American Studies, International Business, and Middle East Studies. It will focus on world economic, political, social, and environmental systems and interconnections.
- **Gerontology:** This interdisciplinary program will be for students interested in working with the older adult and the aging population. The program will help students develop an in-depth understanding and perspective on aging and will require skills in working with older adults, their families, and other professionals around the issues of later life.
- **Interdisciplinary Nicaragua Initiative:** The project brings together faculty from Nursing, Engineering, Psychology, and Women and Gender Studies to create linkages between Grand Valley and The Miraflor Community to provide faculty, students, and staff with opportunities to work on sustainable initiatives such as sustainable farming, fair trade export or organic coffee and classroom education of children and adults in this rural community. All three areas of sustainability will be addressed.

3. DEVELOPMENT OF EDUCATION FOR SUSTAINABILITY

Students and faculty are also involved in a variety of service-learning and outreach projects that involve sustainability issues. We provide our students with hands-on experience in addressing and solving social, environmental, and social sustainability problems in our own neighborhood and community.

- **Kirkhof College of Nursing:** Faculty and students are involved in several projects designed to help students understand social and economic sustainability issues. Students who participate in the Engaged Partners Program work with community agencies in interdisciplinary teams to solve community social problems. They also work in the Family Health Center in the Heartside Neighborhood to provide health care for the underinsured and uninsured. In a sequence of four nursing courses, 350 students are paired with elders to form a relationship, assess their health care needs, and develop specific strategies to enhance the health and well-being of older adults.
- **Padnos College of Engineering and Computing:** Engineering students participate in a number of community service projects. Heat Transfer students have developed and tested portable shelters for the homeless that are constructed of materials commonly found in dumpsters. They also thermally imaged a house on Grand Rapids' west side to determine the need for insulation, and, in partnership with Nu-wool®, provided the labor to insulate the house. Senior students in the capstone project work with local businesses and industries to propose, build, and deliver products which include life cycle analysis and environmental impact statements.
- **College of Health Professions:** Therapeutic Recreation students worked with Franklin School in the Grand Rapids Public Schools to design and teach the curriculum through play. They provided healthy snacks and helped students develop needed social skills. The project was supported by community donations. In the assessment and evaluation classes, students worked with the Refugee Project to provide transportation education for refugees so that they could use the bus system. This year they will work with the Center to help refugees to find recreation resources in the community that will help them keep their identity and also become part of local culture. Students also partnered with David House Ministries, an adult foster home for the mentally disabled, to address issues of quality of life for the residents.
- **The Autism Education Center:** Headed by a Grand Valley professor of Psychology, this center works to improve outcomes for Michigan's students with autism spectrum disorders and help their families. Since 2001, 596 teachers have completed all the requirements for this endorsement, 196 of them through Grand Valley.
- **Seidman College of Business:** The business college sponsors a breakfast series to promote dialogue among local business leaders and the community on issues of sustainability. Recent topics have been Sustainability in a Diverse Community, Sustainable Business in West Michigan, Business and Human Rights in China: Opening Markets, Opening Minds, and a Sustainable Business. The Center for Business Ethics provides a forum for members of the local community and Grand Valley faculty to exchange ideas on ethical questions for the benefit of the university, business enterprises, and the West Michigan community. In the academic year 2004--2005 students held 19 internships in the community that integrated all three elements of triple bottom line sustainability education.
- **College of Interdisciplinary Studies:**

4. SUSTAINABILITY AWARENESS

Since July 2004, there have been an increasing number of sustainability awareness and orientation programs among faculty, staff, and guests at Grand Valley. It is estimated that more than 500 people have attended some of these initial meetings regarding sustainability awareness.

Examples of key sustainability awareness and orientation programs and workshops that have taken place include:

- Breakfast series at the Seidman College of Business including City of Grand Rapids Mayor George Heartwell and Fred Keller, CEO of Cascade Engineering
- Cataloging and databasing of sustainability activities on campus
- Workshops with city governments and their business communities
- Business Leadership series at the Seidman College of Business
- Mayor Heartwell's State of the City address
- The People Speaks Forum
- Ernst & Young Entrepreneur of the Year Award
- Study Abroad Programs
- Sustainable Business Conference held in conjunction with the West Michigan Sustainable Business Forum
- Interdisciplinary campus faculty meetings
- Leadership Grand Rapids Retreat
- Centers for Entrepreneurship and Business Ethics in the Seidman College of Business
- SmartZone activities

Many of these sustainability activities were also held at various Grand Valley locations.

In the winter semester of 2005 the university hired the director of the Sustainability Initiative to work part time with the College of Interdisciplinary Studies to bring together faculty and staff interested in sustainability issues on campus and in our curriculum. In March, interested faculty attended a Web-cast sponsored by Society College and University Planning (SCUP) addressing ways to include sustainability information and projects in the curriculum. In April 2005, the Sustainability Council, with representatives from each of the seven academic colleges, Facilities and Planning, Student Services, and Finance, met for the first time to set direction and plan for 2005--2006 for the university's academic program for sustainability.

- Plans were made to host a day-long program for faculty, staff and students on National Sustainability Day, October 26, 2005. The objective for the day will be to create additional awareness on campus regarding sustainability issues and how the University is addressing these global concerns.
- The university also has become a member of these national and international sustainability organizations:
 - Michigan Higher Education Partners for Sustainability
 - University Leaders for a Sustainable Future
 - Education for Sustainability Network
 - US Partnership for the Decade of Education for Sustainable Development

C. COMMUNITY ENGAGEMENT

Community outreach or engagement is encouraged at all levels of the university including faculty, staff, and students. For faculty and staff, this effort usually takes the form of volunteerism. For students, these community engagement activities could take the form of volunteerism, internships, or service-learning hours.

However, the objective of community engagement is much the same for everyone at Grand Valley. It is the process of working collaboratively with one another and through groups with similar interests to address issues affecting the well-being of society. This type of collaboration is a powerful process for bringing about ecological, economic, and social behavioral changes that will improve the overall health of our community. These types of collaborations and partnerships help mobilize resources, influence systems, and serve as catalysts for change.

Community engagement activities can be tracked at Grand Valley and their overall positive impact described for the community at large. Furthermore, community engagement or outreach is encouraged across the university body including overall campus life.

1. JOINT VENTURES, PARTNERSHIPS, AND COLLABORATIONS FOR STUDENTS

Students can become actively engaged in more than 200 campus organizations across a wide and diverse interest area at the university.

There are more than 55 academic and professional organizations. Examples range from art, anthropology, advertising, engineering, chemistry, geology, information systems, philosophy, pre-physician and pre med, music, human resources, and nursing, to debating, forensics, law, astronomy, athletics and teaching.

Approximately 14 cultural organizations are represented on campus, including African, Arab, Asian, Chinese, Latin American, French, Native American, and Russian cultures. Also, about 22 Greek fraternities and societies are represented on campus.

Approximately 10 media organizations range from music and broadcasting, to film, and performing arts organizations range from stage, dance, rhythm and blues, and theater, to choir.

About 10 religious organizations and more than 30 service and advocacy organizations on campus deal with health, poverty, literacy, disabilities, seniors, hunger, and homelessness, as well as conservation, labor, and environmental issues.

Social interest organizations account for roughly 20 groups on campus and include political organizations, international relations, science fiction, photography, scrap booking, and social, political, and economic issues, and environmental conservation.

Approximately 20 sports and recreation organizations offer participation in backpacking, bowling, cycling, equestrian, fencing, hockey, lacrosse, ping pong, rowing, rugby, shooting, soccer, skating, swimming, volleyball, and water polo, as well as other sports. In addition, there are 10 student government and community council organizations on campus.

2. EDUCATIONAL AND COMMUNITY OUTREACH ACTIVITIES

The eight individual colleges and enumerable institutes at Grand Valley have their own individual projects and community outreach activities which at this time are too numerous to mention. Many of these activities have been successfully established and have grown within the community as a result of student volunteerism, internships, and service-learning hours, as well as through the support of faculty and staff.

Grand Valley's colleges and institutes have their successful outreach programs because of the positive feedback from the community at large. Examples from some of the colleges and institutes include the following:

- a. College of Liberal Arts and Sciences including Annis Water Resources Institute (AWRI) and Sparkle™ Project
- b. Padnos College of Engineering and Computing
- c. College of Education
- d. College of Community and Public Service including the Johnson Center for Philanthropy and the Community Research Institute
- e. Kirkhof School of Nursing
- f. Seidman College of Business
- g. College of Interdisciplinary Studies

a. COLLEGE OF LIBERAL ARTS AND SCIENCES

i. ANNIS WATER RESOURCES INSTITUTE (AWRI)

Located in Muskegon, AWRI has over a dozen key educational and community outreach activities. At this location, eight principal research investigators have full-time annual appointments and teach at least one class per year. Key examples include the following:

- Since 1986, the West Michigan Outreach Education Program has provided 77,000 students and others with the Great Lakes "floating classroom" experience that helps to meet science criteria and state standards. Two vessels include the D.J. Angus and the W.G. Jackson. Programs can be customized from the fourth grade to adults. Most students reside in Ottawa and Kent counties. Approximately 5,000 students participate annually.
- The Information Services Center provides a great deal of data collection, survey and mapping services for the Muskegon and Grand River watersheds projects. Services include Geographic Information Services, topography, geography land use, identification of green areas and so forth. Examples of the collaborative partnerships for this work include Grand Rapids Metro Council, Macatawa Area Coordinating Council, National Park Service, West Michigan Strategic Alliance, Green Infrastructure Task Force, and Land Conservancy of West Michigan.
- The Biannual Lake Michigan State of the Lake Conference gathers scientists and interested parties from around the nation and world.
- The Project Global Learning and Observation to Benefit the Environment (GLOBE) and Project Water Education for Teachers (WET) workshops are provided for educators as well as for instruction. AWRI was selected as the outstanding U.S. partner for the Global Learning and Observations to Benefit the Environment in Croatia. GLOBE is also supported by NASA.

- The Michigan Space Consortium has funded AWRI to conduct classroom activities and support GLOBE teachers. About 1325 students were reached by classroom activities and AWRI staff visits to schools.
- The Michigan Project WET water festival was facilitated by AWRI through Nestlé Waters®. Four festivals have been held, reaching almost 900 students.
- The Clean Michigan Initiative Environmental Education Curriculum Project selected AWRI to write the air quality curriculum and to help assist in writing the water quality curriculum.
- AWRI is a current member of the Water Resources Roundtable, the national organization currently involved with sustainability indicators with a current focus on socio-economic indicators, the Great Lakes Advisory Council; and the Great Lakes Regional Collaboration.

i. SPARKLE

Another unique Grand Valley educational program that reaches out to the community is SPARKLE™-Spinning Physical and Renewable Kinetic Living Energy. This program is designed to reach students and educate them about nationwide obesity rates among children, which have risen 50% in the past decade.

The goal of SPARKLE is to educate young people about the importance of fitness, health, and renewable energy. By riding bicycles that are converted to generators, students “power” a theater play and dance production. A video production has also been made at the Grand Valley Michigan Alternative and Renewable Energy Center (MAREC). Beginning in the fall of 2005, it is anticipated that 250 students per day, two days per week will be able to participate and see this production, starting with the Muskegon Public Schools. The mission of MAREC is to bring together academia, government, industry, and the community to advance innovation, education, and a cleaner environment in West Michigan.

b. PADNOS COLLEGE OF ENGINEERING AND COMPUTING

This college is involved with more than 15 key educational and community outreach projects and activities. Overall, the college actively promotes a number of sustainability programs through an umbrella of service learning projects with students, including the following:

- In conjunction with the College of Liberal Arts and Sciences, the Regional Math and Science Center provides overall improvement throughout K-12 education levels in science and mathematics. Partnership efforts with Padnos College of Engineering and Computing include the Steps Program that works with girls interested in engineering during the summer between sixth and seventh grades and the Science Olympiad.
- AIM Manufacturing Education is a partnership between Grand Valley, Grand Rapids Area Pre-College Engineering Program (GRAPCEP), Davenport University, and Grand Rapids Community College that works with a grant from the Society of Manufacturing Engineers. The program starts with middle school and works through high school education in chemistry, biomedical, and engineering science.
- Grand Valley is the regional site for the First Robotics Competition. With First Fellows, the college has been working with Grand Rapids Public Schools to provide team member support to school competition, including faculty mentoring.

- With Bikes for Kids Bicycle Rehabilitation, the college has formed partnerships with the Grand Rapids Police Department, Otherway Ministries, and Sibley Elementary School students to rehab old and used bicycles and donate them back to the community through the ministry and school. Children receive new locks and helmets, and the police department provides safety training.
- With the Math Counts program, the college provides \$1,000 scholarships to math athletes through a partnership with the Michigan Society of Professional Engineers. Students can apply for these scholarships when entering Grand Valley.
- The Engineering capstone course, Affiliations with the Local Business Community, involves the business community acting as the customer in the design and construction of custom automation and testing systems. The overall program has been very successful to date, with several students included in two patent applications. The college has received several recognized Environmental Awards, such as for the Design for Recycling Program, a partnership between the Michigan Department of Environmental Quality, Padnos Iron and Metal, the American Society of Mechanical Engineers, and the Michigan Society of Professional Engineers. This curriculum has been made available to over 1,000 universities worldwide.
- The Padnos Design Competition has been conducted for five years in partnership with the American Society of Mechanical Engineers and the Padnos Foundation to select environmentally responsible projects from around the world.
- The P2/RETAP Program focuses on pollution prevention using retired professional engineers in Michigan. A partnership is formed with an individual company, the State of Michigan, and the college through a funded internship. Several local companies have had successful programs including Oliver Products and Butterball Farms.

C. COLLEGE OF EDUCATION

The College of Education has 10 key educational and community partnerships and outreach activities. The vision of the College of Education has a strong commitment to social responsibility, which is defined as “our deeply rooted commitment to contribute consistently to the welfare of our communities.” Social responsibility is focused on curricular enrichment, community support, professional development, and tutoring. Key examples include the following:

- The Learning to Give project is a comprehensive program designed to assist teachers in teaching the importance of voluntary action for the common good of a democratic society, with partner schools in Kent, Ottawa, and Allegan counties.
- The Urban Teacher Academy prepares a cadre of master teachers skilled in the use of standards based inquiry science curriculum.
- The DREAMMS for Kids project with the Grand Rapids and Muskegon Public Schools increases the use of research classroom instructional management strategies and establishes a network to support proficiency in science instruction and learning.
- Service projects with the Grand Rapids Public Schools help high schools redesign their educational efforts and assist in the creation of schools within schools. Required learning projects integrate community service activities into course curriculum and provide community support.
- The Adopt a District Program provides faculty professional development to Allendale Public School teachers in the area of differentiated instruction, as well as tutoring for the Allendale Public School District.
- The Middle Start project in Kent, Allegan, and Ottawa counties creates a system for reform in the middle schools that serves the needs of the students.

- Absolutely Incredible Kid Day provides approximately 500 handwritten encouragement letters annually to students and distributes them throughout the Grand Rapids Public Schools.

Overall, the College of Education takes an active role in making the vision of Grand Valley State University “teaching excellence enhanced by active scholarship” a reality.

d. COLLEGE OF COMMUNITY AND PUBLIC SERVICES

The College of Community and Public Services has a number of schools, centers, and institutes that contribute to improving the social equity of the community through student academic service-learning and student volunteerism.

Key examples include:

- Johnson Center for Philanthropy
- Community Research Institute
- School of Profit and Non-profit Administration
- School of Criminal Justice
- School of Social Work
- Department of Hospitality and Tourism

i. DOROTHY A. JOHNSON CENTER FOR PHILANTHROPY

The Center provides a nonprofit directory on its web site for West Michigan including organization, mission, and contact information for philanthropic organizations in Kent, Ottawa, and Muskegon counties. It also provides a nonprofit good practice guide including free service such as for accountability and evaluation. To date, there have been over 250,000 “hits.” A start-up kit is also available on the Web site.

- The Center also conducts teaching outreach courses. CEO 201 is a two and a half day course to assist new executive directors of NGOs. The Nonprofit Executive morning series is held once a quarter.
- There is also a nonprofit technical assistance fund with many collaborative local foundation partners that provides grant monies to NGOs for consulting. Grand Valley reviews the grants in process.
- Research is also provided with available publications. Examples include: a phone survey of more than 600 people concerning giving and volunteering, and a recent phone survey of more than 600 people regarding how to address the potential \$100 million City of Grand Rapids budget shortfall over the next five years.

ii. COMMUNITY RESEARCH INSTITUTE (CRI)

- The CRI has established collaborative partnerships with Healthy Kent 2010, Grand Rapids Community Foundation, Area Agency on Aging, Delta Strategy, DeVos Foundation, Education Reform Initiative, Kellogg Foundation, Leadership West Michigan, Grand Rapids Police Department, Home Repair Services, Dyer-Ives Foundation, and others.

- The CRI provides regional trend reports in a number of areas including arts and culture, child welfare, civic engagement, demographics, economic development, education, health, poverty, and safety. Examples of these trend reports include crime, expanded learning, Kent County restorative justice, child and family resources, housing, and median income levels.
- The CRI has also provided community profiles for 23 Grand Rapids neighborhoods, the City of Grand Rapids, Kent County, Muskegon neighborhoods, and the City of Muskegon, as well as sustainability indicators for West Michigan and shared indicators for Kent County.

e. THE KIRKHOF COLLEGE OF NURSING (KCON)

KCON embraces the triple bottom line of sustainability through economic viability, environmental safety and balance, and social justice by addressing the availability and accessibility of the U.S. health care system, by identifying and helping to prevent the links between pollution and cancer, and acting as an advocate for those in need of health care whose voices are less privileged and less heard.

Some of these initiatives include the following:

- The Grand Rapids Correctional Facility, where students work with female inmates to identify their priority health care needs and provide focused educational seminars. One outcome is that, when the women are released from the correctional facility, they will be more aware of community agencies to which they can turn for assistance.
- All KCON students belong to the KCON Student Nurse Association (SNA), which encourages community involvement including:
 - Ongoing volunteer work with the Mother of Twins Club. Nursing students are matched with a mom of twins to provide relief care.
 - Annual sponsorship of a health-related walk, such as the Making Strides Against Breast Cancer Walk and the Relay for Life.
 - Community Health students have worked with Bosnian refugees to assist them in their transition to the U.S. health care system.
- Through a transdisciplinary initiative, the Engaged Partners Program, faculty from the College of Health Professions, Medical Education and Research Center of Grand Rapids, and KCON are investigating ways to bring students together in the classroom, laboratory, clinic, and community to learn more about each others' professions and how to utilize knowledge and skills in a mutual and more effective and efficient manner to benefit the client or patient and the health care system. Examples are as follows:
 - More efficient use of personnel (economic)
 - More sensitive care for the client and community (social justice)
 - More efficient use of non-renewable resources (environment)
- The Grand Valley Family Health Center in Grand Rapids provides health services to all types of clientele both underinsured and uninsured. Nurses and nurse practitioners provide health care to faculty, students, community citizens, and residents of the Ferguson Apartment facility. Fees are on a sliding scale. Community sustainability is enhanced through the provision of health care regardless of the individual's ability to pay.
- InterDisciplinary Nicaragua Initiative (INI). Originating as an initiative of KCON in 1999, the project is now administered with the Padnos International Center. The INI is establishing linkages with a university in Nicaragua to provide students, faculty, and staff opportunities to teach and learn a more global sustainability perspective through education, economic development, and community health and welfare. Examples include sustainable organic farming and the Fair Trade

export of the community's organic coffee. The INI provides opportunity for actual, real-world problem solving through interdisciplinary and cross-cultural effort.

f. SEIDMAN COLLEGE OF BUSINESS

Seidman College of Business, located in DeVos Center in Grand Rapids, sponsors a wide variety of community service and outreach activities that support sustainable business practices:

- The Seidman College of Business Breakfast Series allows for sharing information among local business leaders and the community on a variety of related issues including the social and environmental impact of business activity. Presentation topics have included Sustainability in a Diverse Community and Sustainable Business in West Michigan.
- Leadership Roundtables are with informal discussion between business leaders, alumni, and business guests on topics important in today's businesses. Past topics have included The Art of Developing Leaders and Black Wall Street.
- The Center for Business Ethics serves as a forum for members of the local business community and Grand Valley faculty to exchange ideas on ethical questions including sustainability for the benefit of the university, business community, and the West Michigan community in general.
- In the academic year 2004-2005, Seidman College of Business students participated in internships with 97 West Michigan companies. Nineteen of these were determined by the Internship Program coordinator to integrate all three elements (economic, social, environmental) of the sustainable development interests. All 97 of the internships were determined to have both an economic and social impact on business development.
- The guiding values and beliefs statements of the university student organizations parallel the concerns of a sustainable development. Among the beliefs is a commitment to responsible citizenship, diversity, and respect for the physical environment, ethical behavior, and the willingness to think critically and engage in dialogue. In addition to the specific interests of each organization, community service activity is strongly encouraged.
- Study Abroad programs are coordinated by the Seidman College of Business in a variety of countries to provide students with exposure to a changing and increasingly competitive business environment. Exchange programs are offered in England, France, Ghana, Hungary, Italy, Jamaica, Mexico, New Zealand, Poland, Trinidad and Tobago, and The Netherlands. Seidman faculty-led programs are conducted in England, France, and Poland.
- Seidman faculty are involved in a wide range of community service outside of their work at the university. In the 2004-2005 academic year, they donated their time or contributed their expertise at 107 local organizations. Among these organizations are Goodwill Industries, Habitat for Humanity, United Way, and Rotary International.

g. COLLEGE OF INTERDISCIPLINARY STUDIES

The mission of the College of Interdisciplinary Studies is "Connecting diverse interdisciplinary communities: creating innovative liberal learning and our programs reflect this commitment to inclusion and connection with the community.

- Continuing Education is committed to facilitating increased access and opportunity for the citizens of West Michigan and beyond to high quality educational outreach and lifelong learning opportunities, career transitions and academic growth, consistent with the mission of Grand Valley State University.

- The Autumn Health Forums are an annual series of discussions on timely health care topics of interest to both the general public and health care professionals. It's an opportunity for the West Michigan community and Grand Valley faculty, staff, and students to engage nationally prominent health care experts in dialogue about health care issues.
- East Asian Studies: The EAS program offers students opportunities to study and learn economic, political, cultural, philosophical, historical, and artistic aspects of the entire East Asian region. The program sponsors a summer school abroad for students and faculty in Shanghai and a variety of East Asian community programs during the academic year..
- Latin American Studies Program hosts the Conference on the Americas each year for Grand Valley and the community to discuss issues related the Latin and South American politics and culture. The program also provides students with an opportunity to participate in the Model Organization of American States each year.
- Middle East Studies: Each year with support from the National Council on US-Arab Relations and the Padnos International Center of Grand Valley State University, Middle East Studies hosts the Michigan Model Arab League. This is a three-day simulation, attended by students from colleges and universities throughout the state. They come prepared to role play as delegates from the twenty-three member states of the Arab League. The program also presents a year long series of seminars and speakers for the community and university.
- Liberal Studies Department: Each year, The Liberal Studies Department invites a distinguished person from outside the college to visit and present his or her special vision of life in a series of small-group discussions and in The William James Synoptic Lectures. Previous synoptic lecturers have included environmental scientist Sandra Steingraber, cultural critic William Irwin Thompson, writer Tillie Olsen, historian Herbert Gutman, and filmmakers Leo Hurwitz and Ken Burns.
- Padnos International Center provides outreach to the international community through partnerships with international universities. Each year they host international students and scholars and provide opportunities for over five hundred students to study abroad. The center provides funds for faculty and staff projects overseas and for international programs and speakers on campus.

3. STUDENT VOLUNTEERISM AND COMMUNITY SERVICE

The Community Service Learning Center (CSLC), within the Office of Student Leadership and Service, promotes active student volunteer involvement in many community outreach organizations, programs, and activities. Here is the listing of some of these initiatives:

- Volunteer Net-a database of current volunteer opportunities in West Michigan.
- Campuswide Days of Service-In October of each year, this national day of service focuses on local nonprofit agencies in the greater Grand Rapids area and had over 100 volunteers participate last year.
- Campus Outreach Week-In April of each year, students volunteer in the community, learn about local agencies in need of volunteers, and hear motivational speeches on the importance of community outreach.
- Student Community Action Network (SCAN) As a SCAN representative for Grand Valley, students join with other Michigan student leaders engaged in service, service-learning, or civic engagement activities on campus.
- Grantmakers Program-Grantmaker Board participants, through the planning, selection, and evaluation process, learn about how the grant process works for nonprofits, including both

grantmaker and grantees, as well as the importance of the volunteer. Participants choose a nonprofit agency to allocate a \$500 grant and service hours.

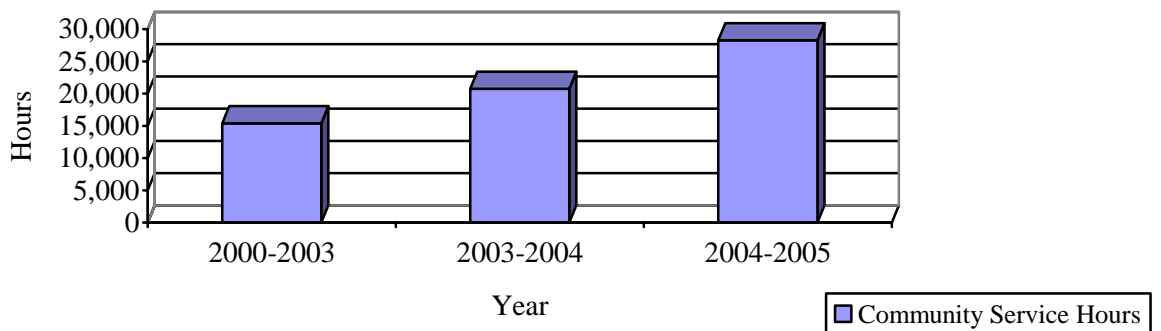
As noted, Grand Valley has more than 30 service and advocacy organizations on campus. Alpha Phi Omega, the national service fraternity, is also located on campus. Since 1925, more than 17,000 young men and women throughout the U.S. have been serving youth, the community, and the nation on more than 350 college campuses, making Alpha Phi Omega the nation’s largest collegiate fraternity.

a. TOTAL COMMUNITY SERVICE

Since FY 2002--2003 total community service hours by students have nearly doubled from 15,402 hours to 28,276 hours. This significant increase supports the overall growing student commitment to assisting and serving the greater Grand Rapids community in a variety of capacities. By serving the community, students are more apt upon graduation to look for jobs locally and regionally in their professional discipline.

One example of faculty volunteerism is the Seidman College of Business, where in faculty in 2004-2005 contributed their expertise to over 100 local organizations such as Goodwill Industries, Habitat International, United Way, and Rotary International.

FIGURE 1. TOTAL COMMUNITY SERVICE



The following is an overall list of Grand Valley community service hours by organization including number of participants, number of hours, and estimated dollar value contribution based on an average wage of \$17.55 per hour. Using this rate per hour, the total estimated dollar amount of student volunteer time for FY 2004-2005 was over \$475,000.

TABLE 1. COMMUNITY SERVICE HOURS

Organization	Participants	Hours	Est. dollar value
CSLC	293	805	\$14,127.75
Animal Caretakers	34	167	\$2,404.35
Alternative Breaks	188	5,386	\$94,524.30
Best Buddie	168	259	\$4,545.45
Health & Aids	71	338	\$5,931.90

Hunger & Homelessness	21	84	\$1,474.20
Habitat	67	225	\$3,948.75
C.A.R.E.	700	8,400	\$147,420.00
P.A.L.S.	235	1,880	\$32,994.00
SEC	66	373	\$6,546.15
Seniors	37	170	\$2,843.10
WIVC	225	2,100	\$36,855.00
Volunteer Grand Valley	30	135	\$2,369.25
Office of Multicultural Affairs	122	2,933	\$51,474.17
Michigan Service Scholars Program	4,039	3,286	\$70,884.45
Greek Community Service	44 projects	1,735	\$11,957.00
Total Estimated	6,000 +	28,276	\$478,342.52

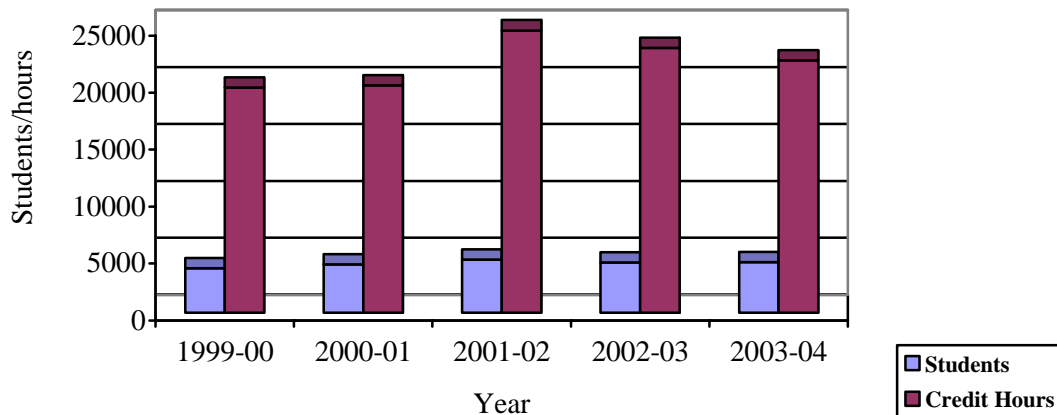
4. INTERNSHIPS AND COOPERATIVE EDUCATION

Grand Valley has been contributing for a number of years at local, regional, and state level through active student experimental education programs. These programs include internships, co-ops, practica, student teaching, and clinicals.

Since FY 1999-2000, the number of participating students has grown from 3,906 to 4,436 by FY 2003-2004, an increase of 13.6%. During this same time frame, the number of credit hours has grown from 19,759 to 22,150, an increase of 12.1%.

Assuming that the average intern works 20 hours per week for a full 16 week semester and makes an average of \$5 per hour, Grand Valley students were paid ~\$7.1 million in 2003-2004. This value is based on 4,436 students contributing 22,150 credit hours. While junior and senior students perform entry-level positions, new graduate students are engaged at a higher level. Based on an average starting salary of a graduate of \$36,250, Grand Valley students saved participating organizations, primarily those in West Michigan, over \$18.5 million in 2003-2004.

FIGURE 2. INTERNSHIPS AND COOPERATIVE EDUCATION



Additionally, the Seidman College of Business participated in internships with 97 West Michigan companies for the year 2004-2005. All of these internships were determined to have both an economic and social impact on business development within the community.

D. DIVERSITY

The university has a strategic goal to promote and integrate diversity in all aspects of campus life. The university values statement states the following about diversity and the community. “A range of thoughtful perspectives is necessary for open inquiry, liberal education, and a healthy community. Recognizing this, we seek and welcome a diverse group of students, faculty, and staff. We value a multiplicity of opinions and backgrounds and seek ways to incorporate the voices and experiences of all into our university. We value our local community and embrace the participation of individuals and groups from Michigan, the nation, and the world. We also encourage participation in educational opportunities abroad. In order to foster a healthy and diverse environment, we will act with integrity, communicate respectfully, and accept responsibility for our words and actions.”

1. GENDER, RACE, AND ETHNICITY OF STUDENTS

From year 2001-2002 to year 2004-2005, the university has grown from 18,579 students to 22,063 students, an increase of 19%. During this same time frame, total fiscal year equivalent students (FYES) grew from 15,512.5 to 19,399.5, or an increase of 25%.

In 2004-2005, freshmen totaled 19%, sophomores 19%, juniors 18%, seniors 27%, and masters students 17%. In the most recent year, females represented 62% of the students and males 38%. In comparison with 2000-2001 females represented 61% and males 39% of the student body. Overall, the female to male ratio has remained relatively consistent during this time frame.

In 2000-2001 the Asian, African American, Hispanic, and American Indian people represented 1,600 or 9% of the student body. By 2004-2005, this population increased 49% to 2,245 or approximately 10% of the student body. During this time frame, the number of Caucasian students grew from 16,715 in 2001-2002 to 19,424 in 2004-2005, an increase of 16% or ~88% of the total student body.

FIGURE 3. ENROLLMENT BY GENDER

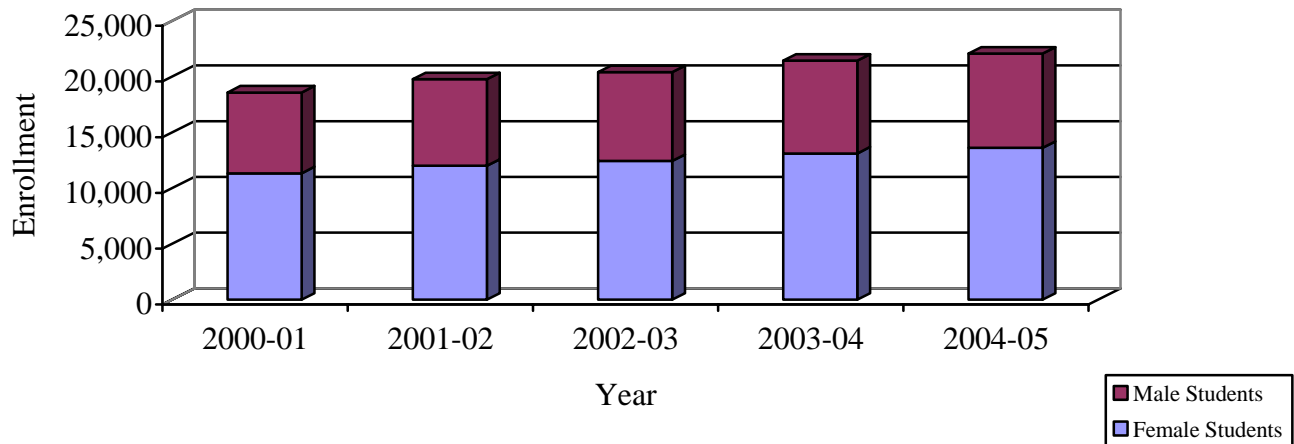


TABLE 2. ENROLLMENT BY RACE AND ETHNICITY

Race and Ethnicity	2000-01	2001-02	2002-03	2003-04	2004-05
Asian	312	371	392	445	514
African American	825	887	901	1,013	1,007
Hispanic	354	409	455	525	588
American Indian	109	116	124	131	136
White	16,716	17,687	18,215	18,958	19,424
Other	264	292	320	355	394

2. GENDER, RACE, AND ETHNICITY OF FACULTY AND STAFF

In order for Grand Valley to achieve its stated mission, it is necessary that the university also maintain its development of a diverse composition of its faculty and staff.

In 2004, Grand Valley faculty and staff was made up of 1,623 regular employees, of which 877 (54%) were female and 746 (46%) were male 216 (13%) were minority staff. This ratio compares similarly with 2000-2001 with a workforce of 1,317, of which 714 (54%) were female and 603 (46%) were male. There were 169 (13%) minorities. As Grand Valley has grown rapidly, 24% in five years, we have been able to increase both the numbers of female faculty/staff (up 23%) and minority faculty/staff (up 28%).

There are also eight executive officers. Five executive officers are female, three are male, and one is a minority member.

FIGURE 4. FACULTY/STAFF BY GENDER

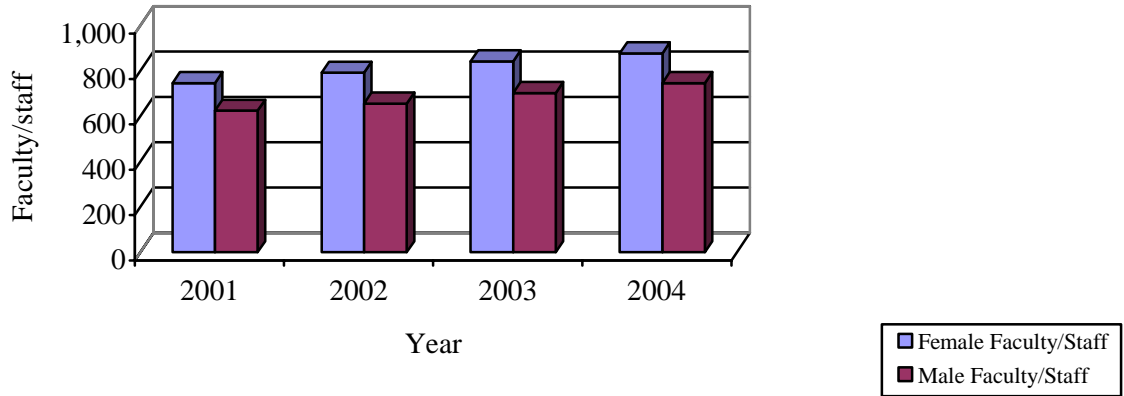


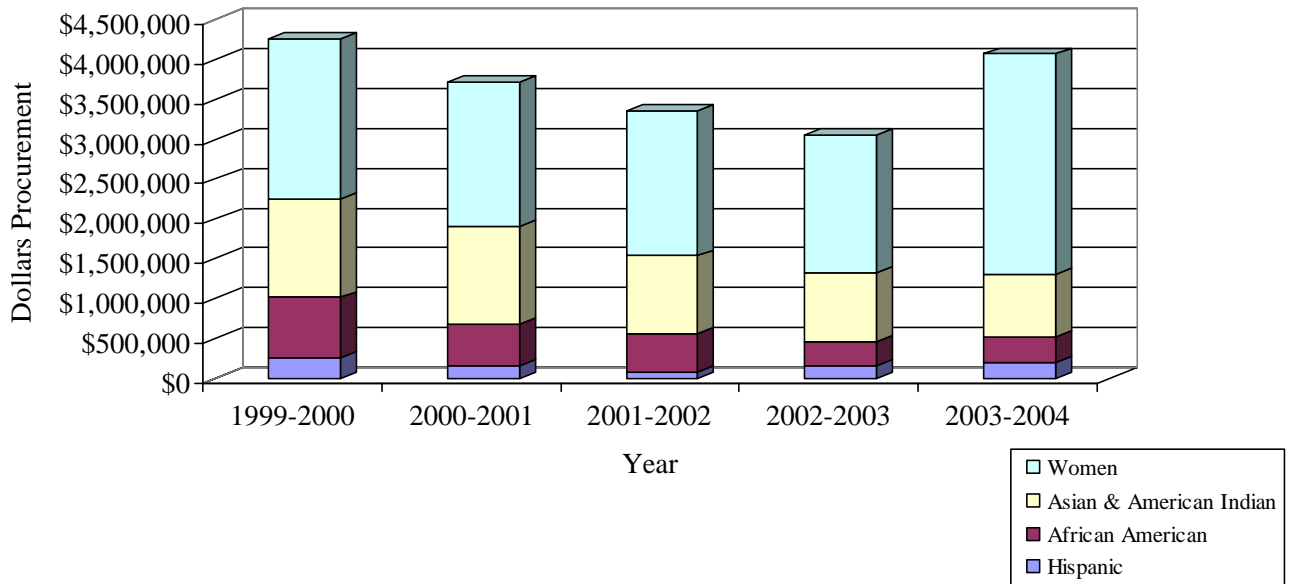
TABLE 3. FACULTY/STAFF BY RACE AND ETHNICITY

Race and Ethnicity	2001	2002	2003	2004
Asian	38	45	57	57
African American	88	93	95	104
Hispanic	34	44	44	47
American Indian	8	7	7	8
White	1,202	1,259	1,341	1,407

3. MINORITY PROCUREMENT

Over the last five year period, minority procurement has stayed relatively constant at about \$4 million. Women comprised nearly 68% of all minority procurement in the most recent year.

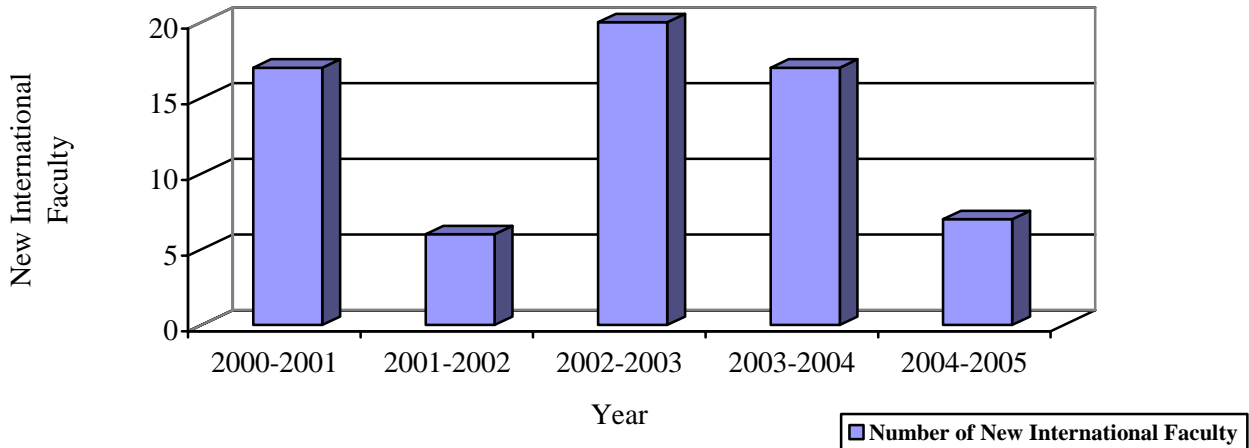
FIGURE 5. MINORITY PROCUREMENT



4. NUMBER OF INTERNATIONAL FACULTY

Another important component in Grand Valley’s diverse community is the internationalization of its faculty. As Grand Valley has become more intercultural, we have actively sought to internationalize the faculty. Over the last 5 years, Grand Valley has added 67 new international faculty members.

FIGURE 6. NEW INTERNATIONAL FACULTY



E. HEALTH AND WELLNESS

To continue and constantly improve the overall “organizational health” of Grand Valley, the university must focus on the health, wellness, and fitness of the individuals who make up our community--our faculty, staff and students. At Grand Valley, we believe that stressing lifestyles that promote good health is as important as the quality of healthcare itself.

Our future objectives will continue to embrace a healthy campus lifestyle that highlights fitness, disease prevention, exercise, and nutrition. The university will continue to promote these activities through creative program activities and overall improvement for general awareness.

1. WELLNESS AND RECREATION SERVICE PROGRAMS

Grand Valley provides a variety of wellness and recreation service programs for the students, including intramural sports, group exercise classes, wellness special events, and use of the Fieldhouse Recreation Facility.

Wellness Center services include fitness appraisals and consultations, exercise programming, massage therapy, health risk appraisals, nutrition, and cholesterol screening. Special programs and events include first aid and CPR classes, campus outreach, health fairs, nutrition education, Ta Kwan do, and others. All of these services are offered to faculty, staff, and students and stress lifestyles that promote health, fitness, exercise, and nutrition. The overall program highlights for FY 2004-2005 include the following:

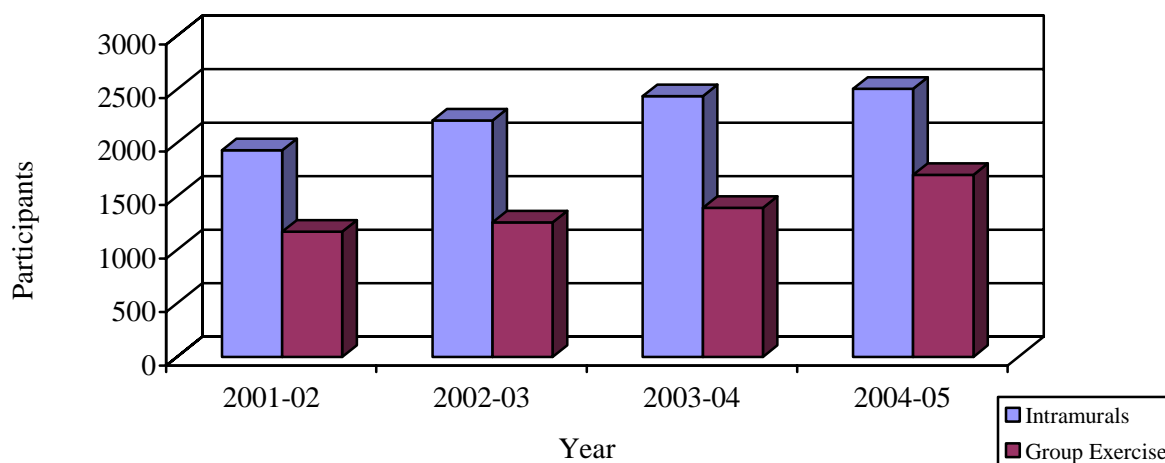
- 27 intramural sports activities
- 1,197 group exercise classes
- 1,415 wellness special event participants

Since FY 2001-2002 through FY 2004-2005, the number of students participating in intramural sports has grown from 1,931 to 2,506 participants, an increase of 29.8%. During the same period, the number of students participating in group exercise classes grew from 1,171 to 1,700, an overall increase of nearly 45%.

This data indicates a continuing increase in the number of participants each year in the overall programs and activities offered by the Office of Wellness and Recreation Services. The increasing number of student participants demonstrates the importance of fitness, intramurals, and wellness as part of a healthy lifestyle.

National studies indicate that students who participate in recreational sports programs and activities identified recreational sports as one of the key determinants for college satisfaction and success. This premise demonstrates how important the recreation facilities and programs are to the Grand Valley community at large.

FIGURE 7. WELLNESS AND RECREATION PARTICIPATION DATA



2. FITNESS AND WELLNESS FACILITIES

Fitness is a major initiative and it is our goal to offer best-in-class fitness and wellness initiatives and facilities. Grand Valley has a state-of-the-art fitness facility located in Allendale and a smaller facility located in downtown housing. On the Allendale Campus, the Fieldhouse offers an olympic pool, a basketball court, and an indoor track, which are all used for varsity sporting events. The recreation center offers students, faculty, and staff an indoor track, basketball courts, cardiovascular and weight training equipment, racquetball courts, a climbing wall, classrooms such as for sports medicine, and a dance studio. Our partnership with the YMCA offers nine facilities covering most of the greater Grand Rapids area where our faculty and staff live. All of these facilities offer personal health and fitness coaches, state-of-the-art facilities and equipment, swimming pools, and instructional classes, to faculty, staff, and students. Fitness coaches and instructional classes are offered at either no cost or at a reduced charge. More than 100 university families joined the new LEED Certified David D. Hunting YMCA in downtown Grand Rapids at its opening in July 2005.

The “Get Moving” program is a new partnership among the Grand Rapids YMCA, the Grand Valley Movement Center, Campus Wellness, and Human Resources, and Work Life Connections. This initiative will focus on improving wellness through activity aimed at increasing fitness at all levels of ability.

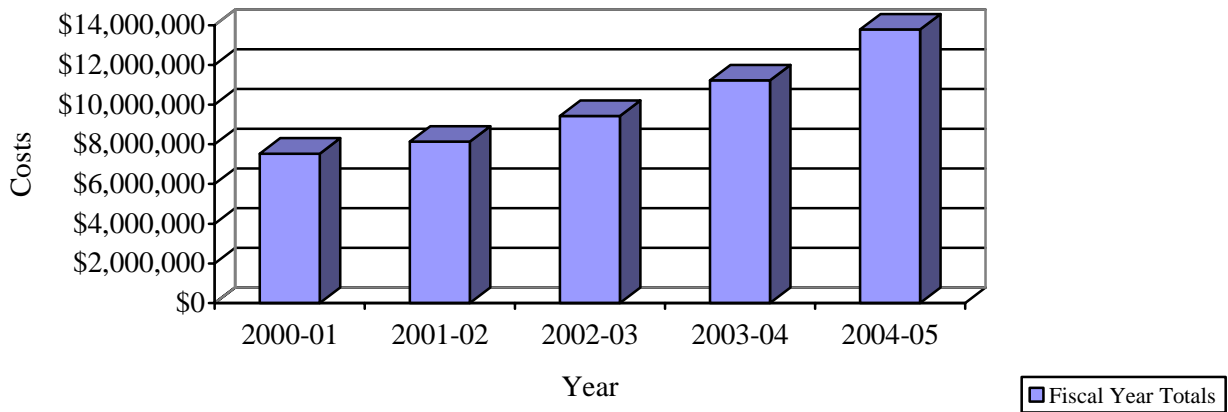
3. HEALTHCARE AND QUALITY OF LIFE SERVICES

Grand Valley offers faculty and staff high quality medical plans with four options to meet individual needs. All plans stress wellness care and the importance of health appraisal and coverage for wellness care, in addition to excellent treatment of illness and injury.

a. TOTAL MEDICAL COSTS

University spending on medical care alone has increased from \$7,523,951 in FY 2000-2001 to \$13,777,683 in FY 2004-2005, an increase of \$6,253,732, or an average annual increase of nearly 13%.

FIGURE 8. TOTAL MEDICAL COSTS

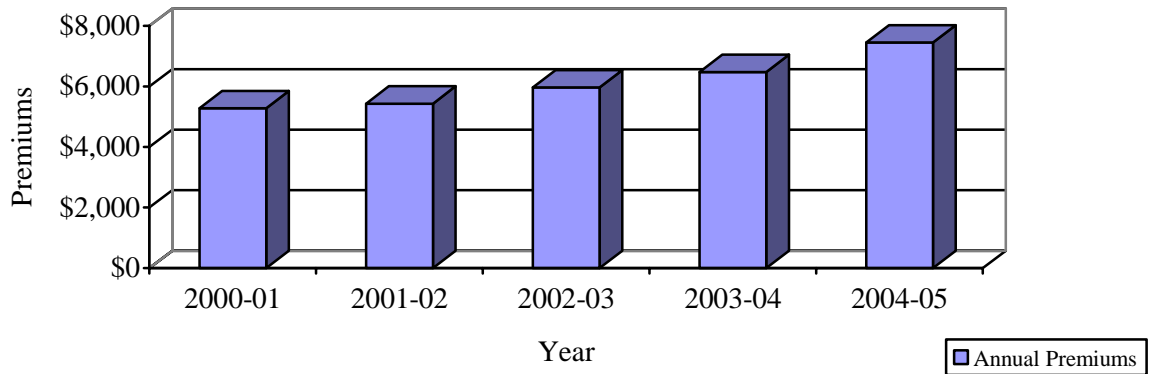


b. AVERAGE MEDICAL COSTS

Costs per faculty/staff member have increased from \$5,280 per person in FY 2000-2001 to \$7,449 per person in FY 2004-2005, an increase of 41%, or an average annual increase of nearly 8%. The national average annual increase of medical health care costs is 13%.

Grand Valley has been able to keep cost increases under the rate of “medical inflation costs” by designing medical plan coverage that encourages participants to select in-network service providers. Use of these doctors and hospitals has consistently given the university discounted claims of approximately 28% from normal medical billing levels.

FIGURE 9. AVERAGE MEDICAL PREMIUM PER FACULTY/STAFF MEMBER

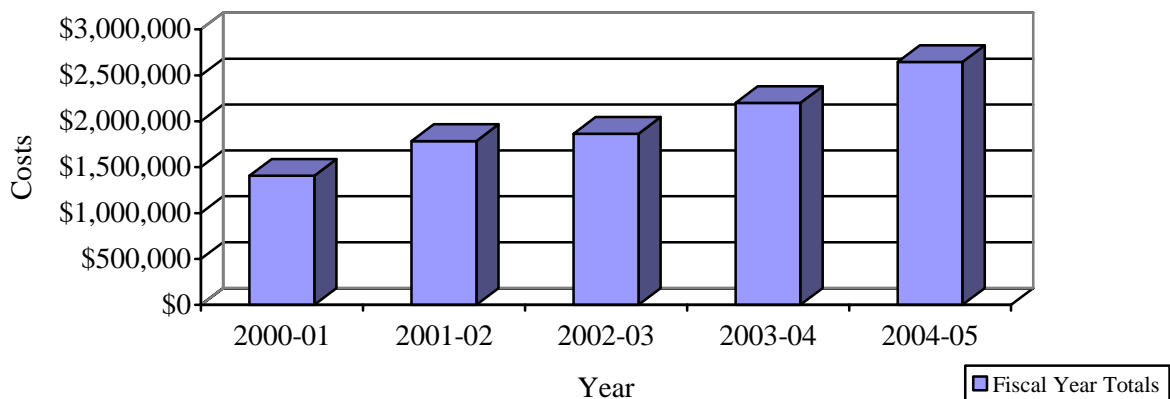


C. PRESCRIPTION DRUG COSTS

Significant medical costs can also be attributed to prescriptions. Drug costs for Grand Valley, similar to all employers in the region, have risen dramatically, from \$1,405,115 in FY 2000-2001 to \$2,645,289 in FY 2004-2005, an increase of \$1,240,174 or approximately 88%, or an average yearly increase of more than 13%.

While these increases are significant, they have followed norm trends for similar plans. One explanation of why prescription costs have risen at a slightly faster rate than overall medical costs is that today's first line of medical treatment has traditionally been drug therapy, thereby eliminating or greatly reducing the need for hospitalization or more expensive medical treatment.

FIGURE 10. PRESCRIPTION DRUG COSTS



Grand Valley is also a smoke-free environment and regularly offers smoking cessation programs. In addition, Weight Watchers at Work programs are also offered. Faculty, staff, students, and dependents are also offered low cost flu shots, mammograms, and nutrition information at the worksite.

Grand Valley's new Work Life Connections Program is in place to support faculty, staff, and their families with any of life's issues that may come upon or face them. It includes active assessments of our work environment, education, and many issues of personal concern such as work, child care, elder

care, and personal problems. In addition, Grand Valley retains an off-site employee assistance program for support of personal issues and concerns.

4. TRAINING, SERVICE, AND PREVENTION PROGRAMS

a. SUBSTANCE ABUSE

The university also has several established, effective, and nationally recognized substance abuse programs, primarily dealing with alcohol. These programs are known as the Alcohol Campus Education (ACE) program and the Alcohol, Education, Research, and Training (ALERT) Laboratories.

Substance abuse is a concern of college administrators nationwide. Alcohol and drug use have a negative impact not only on a student’s academic achievement, but on his or her ability to have a positive and rewarding college experience. Academic consequences include missing class, doing poorly on exams or papers, and receiving lower grades overall.

Substance abuse has a detrimental impact on the community as a whole. It may be difficult for a student to study while community members party late into the night. Most unwanted sexual contact involves alcohol consumption by one or both parties. Each year students threaten or attempt suicide while under the influence of alcohol or drugs. Substance abuse is a continuing community concern.

For the period of 2000-2004, the student enrollment at Grand Valley grew from 18,579 to 22,063, an increase of nearly 17%. However, during this time frame, the total number of liquor law and drug abuse incidents has not significantly changed, averaging about 137 incidents annually.

One indicator measurement used is incident rate. For both liquor law incidents and drug abuse incidents, the rate has always been below 1% for either type of incident in any year from 2000-2004. Drug incidents have averaged 17% and liquor law incidents 83% of all substance abuses. Overall the student substance abuse incident rate has averaged .007% for the period 2000-2004.

For the crimes of alcohol and drug abuse, these statistics are not necessarily a true reflection of what occurs in the community, since they are usually victimless crimes. The incidents reported are normally a result of self-invitation to public safety personnel enforcing the law. Overall, Grand Valley has contributed to the success of students who have turned their lives around regarding substance abuse, due to the university’s active program involvement.

TABLE 4. GRAND VALLEY TOTAL CAMPUS INCIDENT RATE

Year	2000		2001		2002		2003		2004	
Student Enrollment	18,579		19,762		20,407		21,429		22,063	
	incidents	Rate percent	incidents	Rate percent	incidents	Rate percent	incidents	Rate percent	incidents	Rate percent
Liquor Law	100	0.0054	107	0.0054	87	0.0043	148	0.0069	129	0.0058
Drug Abuse	27	0.0015	25	0.0013	20	0.0010	27	0.0013	17	0.0008
Total	127	0.0068	132	0.0067	107	0.0052	175	0.0082	146	0.0066

Note: Definitions for the above can be found in the appendix

i. ACE

ACE is the university's alcohol offender program, which evolved from an early program (Time Out) redesigned in 2001. The ACE 1 program is a two hour psycho-educational program designed to raise student awareness regarding issues of dangerous drinking, social norms, and the physical, emotional, legal, and safety impacts of irresponsible alcohol use. ACE 2 is utilized for students who have more than one alcohol offense at Grand Valley. Despite the increase in residential students, the number of referrals over the period of 2000-2004 has not increased.

TABLE 5. ACE DATA

Area	2000-2001	2001-2002	2002-2003	2003-2004
Number of Sessions	28	31	37	36
Attendance Based on Surveys	240	267	228	288
- Female	139	152	142	146
- Male	172	161	153	194
Average GPA	2.97	2.9	2.98	3.03

It should be noted that the majority of referrals are freshmen with an average age of 18 to 19 years old. Fraternity and sorority involvement has remained low. For the period of 2000-2004, over 95% of the participants either strongly agreed or agreed that the program was educational rather than punishing in orientation and that group members had input into what was covered.

ii. ALERT LABORATORIES

The mission of ALERT Labs is to promote the health and safety of Grand Valley students, faculty, and staff, and the public with whom they interact through alcohol and other drug (AOD) prevention programs. As a national goal, the U.S. Surgeon General has established a 50% reduction in college binge drinking by the year 2010. Because of the program's success, the U.S. Department of Education determined the ALERT Labs a model program in August 2004 and awarded a \$126,000 grant to both enhance the program and make it available to other universities across the nation.

When ALERT began its prevention program in 1999, binge drinking on campus was practiced by 37% of the student population. As of the April 2002 evaluation, Grand Valley had reduced binge drinking to 22%, thus achieving the national goal. Maintaining this goal has been very difficult, since each year some freshmen enter with established binge drinking habits.

By conducting annual research on student drinking behavior, with over 4,250 randomly selected students over the last five years, and reporting identified norms back to students, faculty, and staff, ALERT has made significant progress in reducing binge drinking on campus and increasing abstinence in drinking. ALERT's social norms messages since 2002 have been variations on the following: "nearly 80% of Grand Valley students have 0-4 drinks when they go to parties or bars; about 70% average 0-3 drinks, and 30% do not drink at all."

Besides contributing to an improvement in the students' health, ALERT has made significant contributions to the academic environment and provided real world learning opportunities through

graphic design, video, film, and media. ALERT also works with the community to support substance abuse programs at a local level including partnerships with Baker College, Hope College, Muskegon Community College, East Grand Rapids High School, Ottawa Hills High School, West Ottawa High School, Kent County, and Ottawa County.

Future goals include the implementation of ALERT’s STARR program (Screening, Testing, and Referral to Recovery) in order to intervene with students who are abusing AOD and to support students who have become dependent on AOD.

TABLE 6. ACTUAL AND PERCEIVED DRINKING PATTERNS

	1999	2000	2001	2002	2003	2004	Difference
1. Perceived to Drink Heavily	37.0%	32.0%	34.0%	22.4%	25.3%	28.9%	-24.5%
- Frequent	9.0%	9.0%	4.0%	6.5%	3.7%	4.6%	-48.8%
- Occasional	28.0%	23.0%	30.0%	15.0%	21.6%	24.3%	-16.7%
2. Drink Moderately or Abstain, Actual	63.0%	66.0%	67.0%	78.7%	74.7%	72.1%	+14.4%
3. Abstain, Actual	23.0%	23.0%	26.7%	29.2%	24.7%	24.7%	+ 7.4%

Based on 4,268 randomly selected students over a five-year period.

b. MENTAL HEALTH AND CAREER DEVELOPMENT

The mission of the Grand Valley Counseling and Career Development Center (CCDC) is to serve students, especially those with mental health and career development concerns. The center offers the following services:

- Counseling common concerns regarding homesickness, relationship issues, anxiety, depression, academic skills, and diversity issues.
- Career development such as exploration of personal interest, strengths, values, and goals; career tests; and development of a career portfolio.
- Seminars such as managing test anxiety, stress management, preparation for exams, study skills, career planning, seasonal blues, time management, multicultural awareness, building relationships, and preparation for graduate skills.
- Group therapy programs based on ongoing research, evaluation, and effectiveness of services. Staff time is spent in direct counseling (73%), supervision (13%), outreach (9%), and training (9%).

Key findings in the most recent year included the following:

- More than 1,600 students sought services at the Counseling Center, for a total of 5,645 contact hours, an increase of 9% from 2002-2003. There also has been a steady increase of students utilizing services since 1999.
- Women (68%) were more likely to seek counseling than men (33%). The majority of clients (75%) were 18-22 years of age. Students residing off campus (57%) sought services at a slightly higher rate than those residing on campus (43%). Each class level received services at a roughly equal rate.

- Individual counseling averaged nearly four sessions per student.
- Students from diverse racial backgrounds comprised 15% of clients.
- Over 48% of the students presented educational and career concerns.
- Nearly 70% of students surveyed perceived improvement in their well-being after receiving counseling services.
- The top five clinical presenting concerns of students seeking services were depression and mood disorders, relationships, anxiety, alcohol/drug abuse, and situational adjustment.
- Staff members provided more than 400 workshops, seminars, and trainings that impacted more than 8,000 students, faculty/staff, and community members.

TABLE 7. MENTAL HEALTH AND CAREER COUNSELING

	2002-03	2003-04
Type of Contact	Counseling Appts.	Counseling Appts.
Individual Counseling	3,436	3,157
Intake	1,049	1,174
Psychiatric Evaluation/Medication	331	348
Group Counseling	213	448
Couples Counseling	81	64
Career Counseling	724	802
Total Number of Clients	1,515	1,623

c. ADVISING RESOURCES AND SPECIAL PROGRAMS (ARSP)

The mission of the ARSP is to provide students and the greater community with academic advising, support services, and resources to complete educational and career goals. ARSP values individualism, promotes diversity, encourages professionalism and collaboration, endorses scholarship, and advocates life-long learning.

ARSP services can be characterized as development academic advising that helps students over the course of their academic career become independent and self-directed graduates. More intrusive work happens with pre-college, freshmen, and sophomores through such programs as EXCEL, Disability Support Services (DSS), Graduation Persistence Advising (GPA), TRiO Upward Bound Program, tutoring, and transfer programs. A new initiative with freshman advising has also become more intrusive in nature, with a structured plan to facilitate First Time in Any College (FTIAC) students in assuming more responsibility during the advising process. The common thread that ties these various programs together is the overall mission. Following is an overview of these activities:

TABLE 8. ADVISING RESOURCES AND SPECIAL PROGRAMS ACTIVITIES

Major Activities	Highlights
Freshman Orientation	<ul style="list-style-type: none"> - Assist with the entire freshman orientation process and review all freshmen schedules - serve ~ 3,300 students
Transfer Orientation	<ul style="list-style-type: none"> - Manage entire transfer orientation process and review all degree analyses for incoming transfer students - Serve ~ 2,200 students
Test Center	<ul style="list-style-type: none"> - Administer CLEP (College Level Examination Program) test for college credit - Administer CELT (Comprehensive English Language Test) for international students - Administer WRT 305 essay exam to ~ 3,000 students - Administer Grand Valley placement test to ~ 650 students
Academic Advising	<ul style="list-style-type: none"> - Provide academic advising, study skills development, and time management instruction for all undeclared and non degree-seeking students - Resolve graduation issues for all students at final audit - Serve ~ 3,400 freshmen students
Disability Support Services	<ul style="list-style-type: none"> - Provide special academic support and advising to minority students - Serve ~ 455 current participants
EXCEL Program	<ul style="list-style-type: none"> - Provide special academic support and advising to minority students - Serve ~ 480 current participants
Graduation Persistence Advising	<ul style="list-style-type: none"> - Offer to students in academic difficulty (cumulative GPA below 2.0) at the beginning of each semester - Serve ~ 20 current participants
Muskegon Community College Partnership (MPP)	<ul style="list-style-type: none"> - Provide transfer advising support for Muskegon Community College ethnic minority students and disadvantaged students - Serve ~ 280 current participants
Administer Federally Funded TriO Programs	<ul style="list-style-type: none"> - Educational Support Program (Student Support Services) - Educational Connections (Talent Search) - Upward Bound - McNair Scholars Program

Additionally, the ARSP provides tutoring services in math, writing, and specialized tutoring areas. For the period below, over 23,300 tutoring hours were provided free to students using a total of over 370 tutors for all 100 and 200 level courses.

The ARSP also has several ongoing programs that focus on helping low income students and include the Education Support Program, Talent Search, and TriO Upward Bound.

TABLE 9. ADVISING RESOURCES AND SPECIAL PROGRAMS TUTORING SERVICES

Area		Fall 2003	Winter 2004	Summer 2004
Specialized	Hours	3,945	3,051	1,268
	Tutors	110	100	31
Math Lab	Hours	2,275	2,092	500
	Tutors	16	18	7
Writing	Hours	6,402	3,587	183
	Tutors	46	38	6
Total	Hours	12,622	8,730	1,951
	Tutors	116	156	44

F. SAFETY AND SECURITY

Safety and security are key components to the well being and campus life of the students, faculty, and staff and encompass a number of areas of concern including reportable injuries and accidents, campus related crime, and university policy and ordinance violations.

Currently, the Department of Public Safety on the Allendale campus includes community police, an investigative officer, a traffic officer, supervisors, and patrol officers.

The Department of Public Safety provides a variety of educational programs that help promote a safe environment in the areas of sexual assault prevention, safe dating, crime prevention, alcohol awareness, and self defense, to name a few.

The campuses of Grand Valley are considered safe. They are, however, subject to many of the same issues and concerns that occur in the surrounding communities. An essential ingredient for a university environment that provides optimal conditions for academic success is personal safety.

1. REPORTABLE INJURIES AND ACCIDENTS

Over the last five year period from 2000-2004, the number of reportable injuries, such as slips, falls, and other accidental injuries for students and visitors have ranged from ~ 150 to 200 reportable injuries and accidents per year.

The average over the five year period has been 170 reportable injuries and accidents per year, even though there has been an increasing number of visitors and students each year on campus.

TABLE 10. REPORTABLE INJURIES

	2000	2001	2002	2003	2004
Students/Visitors	162	154	164	170	202

TABLE 11. REPORTABLE INJURIES FACULTY/STAFF

Year	Faculty and Staff	Total Employees	Percent
2000	67	2,037	3.29%
2001	89	2,181	4.08%
2002	69	2,268	3.04%
2003	80	2,469	3.24%
2004	95	2,578	3.69%

2. CAMPUS CRIME

Campus-related crime statistics do not cover all types of crime, but are limited to the statistics required by the Campus Security Act of 1990, with one exception, larceny. Looking at the data required by the Campus Security Act, it would appear that very little, if any crime occurs on the Allendale campus of Grand Valley. The Department of Public Safety (DPS) includes data on larceny to demonstrate that we do have crime that occurs.

The crime rates listed below are based on the student enrollment population during the fall semester of the year specified. The total number of crimes committed since 2000 has been 824, with an overall annual incident rate of .008%. Larceny remains the predominant crime committed, averaging 92% of all crimes during the five year period 2000-2004.

TABLE 12. ALLENDALE CAMPUS CRIME RATES

Year	2000		2001		2002		2003		2004	
Students	18,579		19,762		20,407		21,429		22,063	
	Incident #	Rate percent	Incident #	Rate percent	Incident #	Rate percent	Incident #	Rate percent	Incident #	Rate percent
Murder	0	0.0000	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Manslaughter	0	0.0000	0	0.0000	0	0.0000	0	0.0000	1	0.0000
Sex Offense-Forcible	2	0.0001	5	0.0003	9	0.0004	7	0.0003	6	0.0003
Sex Offense-Non Forcible	0	0.0000	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Robbery	0	0.0000	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Aggravated Assault	1	0.0001	0	0.0000	0	0.0000	1	0.0000	1	0.0000
Arson	0	0.0000	0	0.0000	0	0.0000	0	0.0000	1	0.0000
Burglary	9	0.0005	2	0.0001	2	0.0001	4	0.0002	4	0.0002
Larceny	113	0.0061	153	0.0077	182	0.0089	154	0.0072	155	0.0070
Motor Vehicle Theft	2	0.0001	1	0.0001	0	0.0000	3	0.0001	1	0.0000
Weapons Possession	1	0.0001	1	0.0001	0	0.0000	0	0.0000	2	0.0001
Total Incidents	128	0.0069	162	0.0082	194	0.0095	169	0.0079	171	0.0078

Note: Definitions for the above crime categories can be found in the appendix.

3. TRAINING AND PREVENTION PROGRAMS

a. COMMUNITY POLICE

The community police officers have actively sought out opportunities to present information to both students and professionals:

- DPS Police and Staff Training
- Graduate Assistant Training
- Grand Valley Police Academy
- Tri-Cities High School Police Academy
- Housing Security Supervisors and Staff Training
- Ottawa County Explorers

Some of the key programs have included the following:

- Fire Safety
- “Shots with Cops” program that educates students on how to party smart and safely
- Sexual assault prevention that presents a brief introduction to sexual assault prevention and rape aggression defense program
- Hate Crimes program that presents information about what they are, how to identify them, and so forth
- Safety and Security
- Handling Emergencies
- Ravines Safety
- Fire Safety
- Personal Self Defense
- Avoiding Stalking and Dating Violence

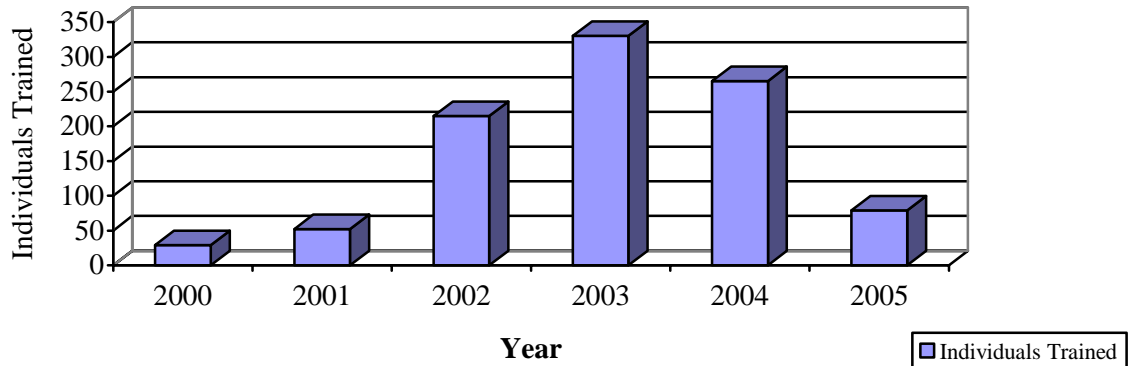
b. SAFETY TRAINING

The Safety Department within facilities management began a university training initiative for faculty and staff with the assistance of Occupational Health and Safety (OSH) degree program instructors and students. The Safety Department also utilizes OSH students as employees and interns for “real life” job experience.

Examples of training topics include, but are not limited to asbestos awareness, blood borne pathogens, chemical hygiene, fire extinguisher, forklift safety, grounds safety, hazard communications, mold awareness, carbon monoxide, and general safety. A pilot training program on chemical hygiene was implemented and well received by the faculty, as they can review the training anytime on any computer connected to the Web.

Since 2000, a total of 970 faculty and staff have received safety training in specific areas related to their work environment. Peak training years occurred from 2002-2004 when 810 individuals were trained, with a peak training year of 330 in 2003.

FIGURE 11. SAFETY TRAINING



VII. ENVIRONMENTAL INDICATORS

Important environmental issues are being considered on a global level, especially those that involve global warming, ozone depletion, natural habitats, and how individuals can have a positive impact in today's world. At Grand Valley, we understand these concerns and are working on energy conservation, alternative energy sources, air quality, storm water management, transportation solutions, and waste reduction. The university is striving to make a positive difference for a more sustainable future. As one of the largest entities in the West Michigan area, we have the greatest opportunity to be a mentor and an example to the community with the system improvements we implement toward this endeavor.

This section of the report brings these efforts to the forefront. Grand Valley is focusing on energy, water, air quality, waste recycling, hazardous and universal waste, safety training, land use, transportation, built environment, and food service at the university. Currently, data from each of these elements is being collected to measure the progress, and to assist in identifying goals to achieve a more sustainable institution. It is hopeful that this data can be used to not only identify the areas we can improve upon, but that it will enable Grand Valley to find alternative ways to utilize its natural resources and provide for a more solid base of sustainability in the future.

A. ENERGY

Today, with more than 22,000 students, Grand Valley is an education leader in West Michigan. What once was a small college has grown into a major university encompassing more than 4.1 million square feet over five campus locations throughout West Michigan. Of these 4.1 million square feet, 64% has been constructed or acquired since 1995. This increase has had a tremendous impact on all utilities.

During this 10-year period, our overall energy costs have grown significantly. As a result, we are focusing on reducing the energy cost on a per square foot basis and on minimizing the energy consumption increase rate over the long term. To achieve this objective, some of our strategies include the use of ENERGY STAR rated efficient products and services, both for new construction as well as maintenance.

1. ELECTRIC ENERGY CONSUMPTION

Due to the institution's growth, electricity conservation efforts have become very important. Many programs and projects have been successful in reducing the annual per square foot consumption of electricity. Some of these successes include an energy awareness campaign in our housing units, lighting upgrades and modifications across campus, improvements to heating and cooling controls and construction of the self-sustaining MAREC building in Muskegon. Figure 12 indicates the drop in KWH (kilowatt hours) consumed per square foot per year. The reduction from an annual high point of 14.5 KWH per square foot to 12.8 KWH per square foot per year is evidence of the successful conservation efforts occurring at the university. As the university has grown and overall consumption of electricity has increased by 16 million KWH from 2000 to 2005 (Figure 13), we continue to aggressively pursue conservation measures that reduce our rates of usage of electrical power.

FIGURE 12. ELECTRICITY KWH CONSUMPTION PER SQ.FT.

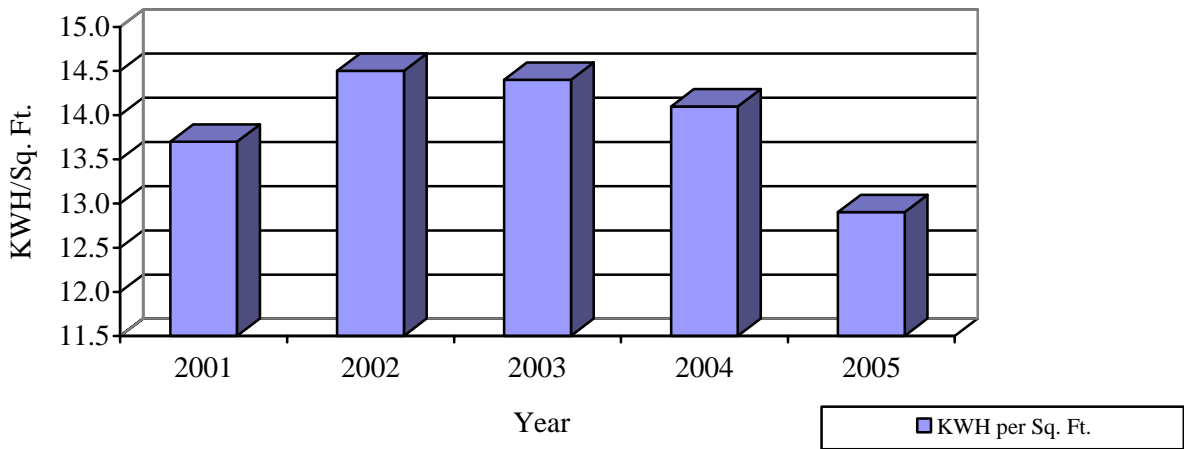
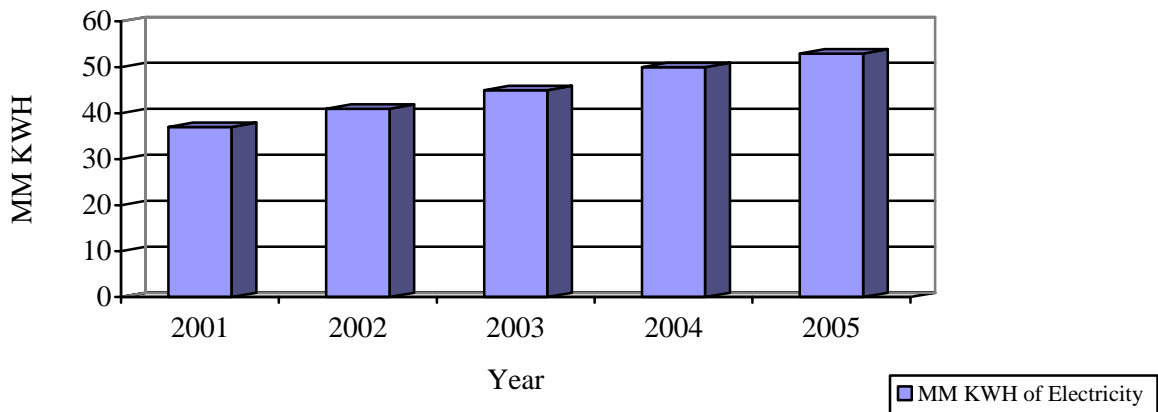


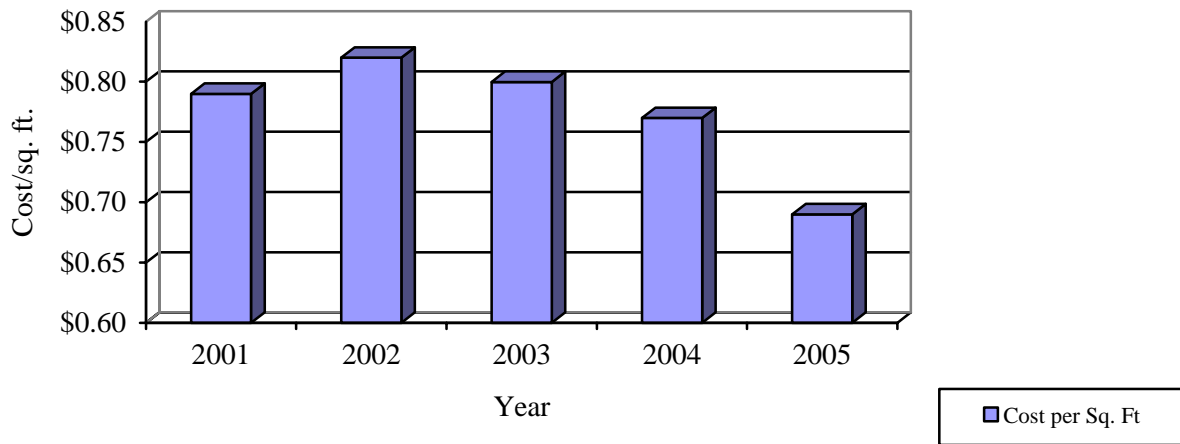
FIGURE 13. TOTAL ELECTRICITY CONSUMPTION



Another result of our conservation efforts is a reduction in the annual cost per square foot for our electricity. The cost per square foot has decreased 15% from a high of \$.81 in 2002 to \$.69 in 2005

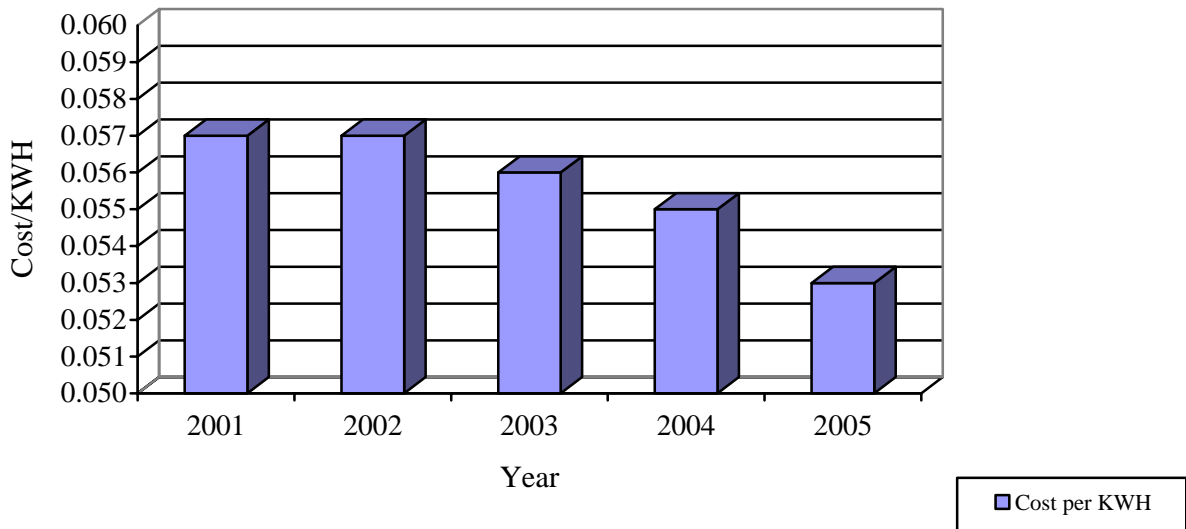
(Figure 14). The university is consuming less energy per square foot, and consequently, our cost per square foot has also decreased. An additional factor that helped reduce cost was our involvement in a 15-month (March 2004 to May 2005) open access electrical agreement. Significant utility funds totaling \$310,000 were saved during this contract period. This agreement provided an opportunity for Grand Valley to purchase electricity from a third party provider at a lower rate than from the traditional utility company. The program criteria changed this past year and we returned to our standard electrical provider in June 2005.

FIGURE 14. ELECTRICITY COST PER SQ. FT.



Our electricity cost per KWH has also declined, due to the reasons already noted (Figure 15). Close management of our utility contracts affords us the best rates at the various campus locations.

FIGURE 15. ELECTRICITY COST PER KWH



2. NATURAL GAS CONSUMPTION

Similar to the increase in the consumption of electricity, the usage of natural gas has risen significantly due to university growth. Conservation efforts are underway and increasingly vital to manage consumption of this resource. As noted in Figure 16, annual natural gas consumption has decreased from a high of .08 MCF (thousand cubic feet) per square foot in 2003 to .062 MCF per square foot in 2005. The university has been able to successfully reduce consumption by a variety of means, which include establishment of an institutionwide thermostat set point program, burning fuel oil at selected times in the winter as an alternative source, various modifications to the boiler systems at the central utility building in Allendale, and construction of new, energy-efficient buildings. The overall consumption of natural gas has increased at Grand Valley by 65,000 MCF (Figure 17), or 34% from 2001 to 2005. Even though we have incurred increased usage as Grand Valley has grown, we continue to focus on conservation efforts and reducing the amount of gas needed to heat and maintain our buildings.

FIGURE 16. NATURAL GAS CONSUMPTION (MCF/SQ. FT.)

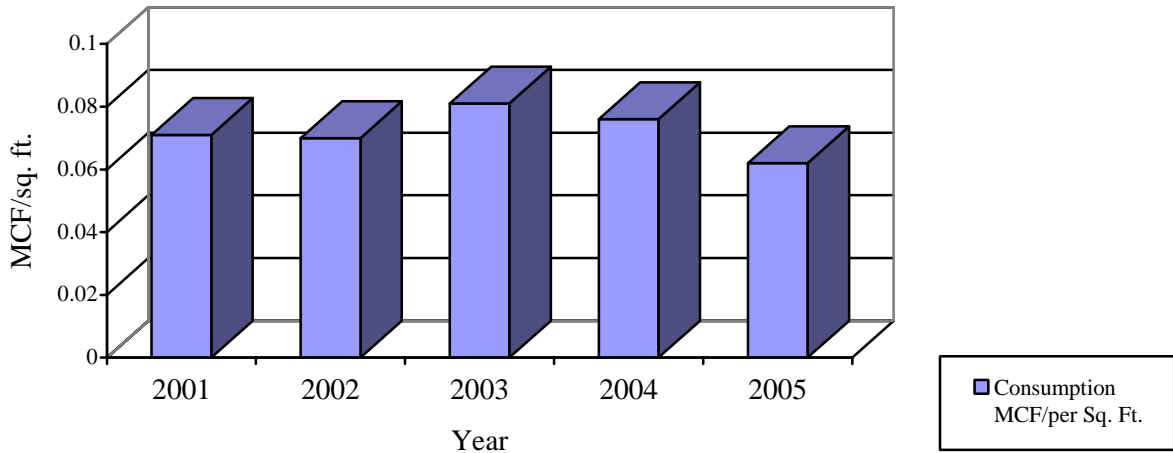
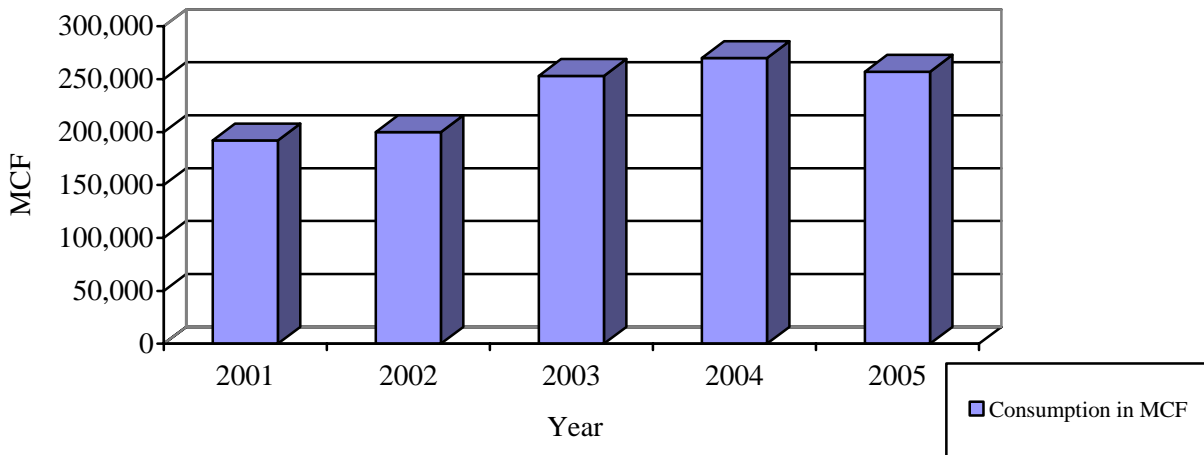
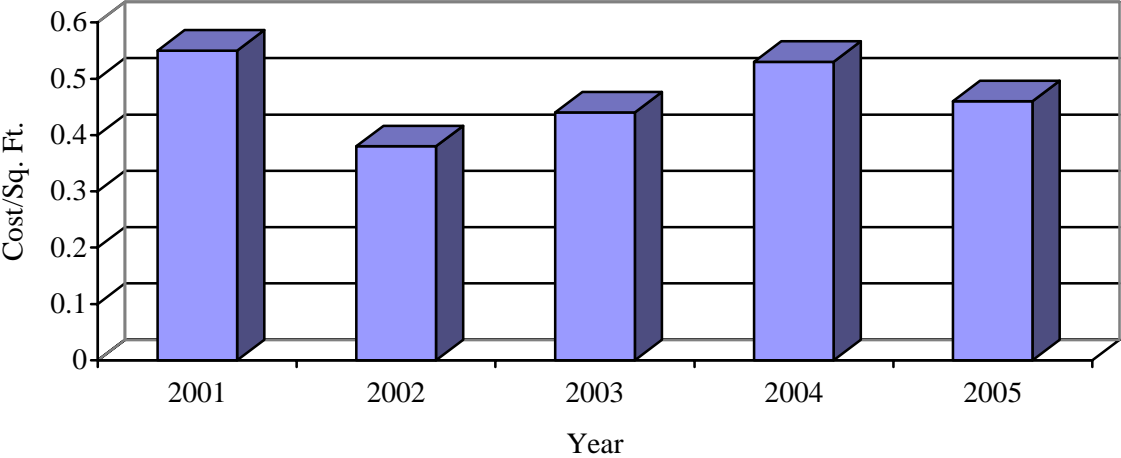


FIGURE 17. NATURAL GAS CONSUMPTION IN MCF



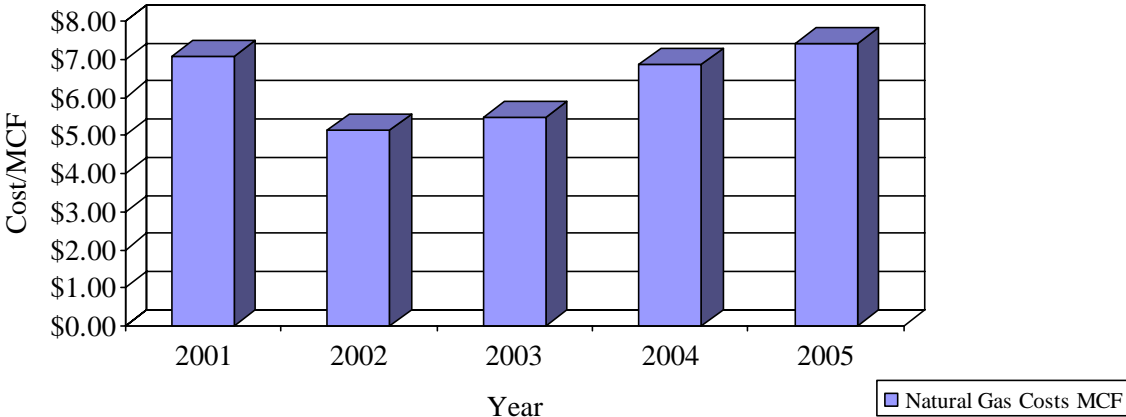
Managing natural gas costs and purchases has been particularly challenging since 2001 because of market volatility. However, due to the various conservation activities, we have also been able to control the annual cost per square foot of the gas that we consume. As the consumption per square foot has decreased, so has the yearly cost, decreasing from \$.55 to \$.46 per square foot, or a 16% decline, during the 2001 to 2005 time frame (Figure 18). Another contributing factor to this decreased annual square footage cost is implementation of a gas purchase strategy, as explained in Section 3. Energy Savings. It is important to note that while unprecedented higher market prices for natural gas have occurred, the annual cost per square foot has decreased.

FIGURE 18. NATURAL GAS COST PER SQ. FT.



Finally, it has been vital to track natural gas prices during recent years. Figure 19 indicates the sharp increase in fuel costs over the past five years. The market for gas continues to be strong and even higher prices are projected. We will continue to face challenges to conserve natural gas whenever possible, to closely manage gas purchases, and to explore alternative sources of energy whenever feasible.

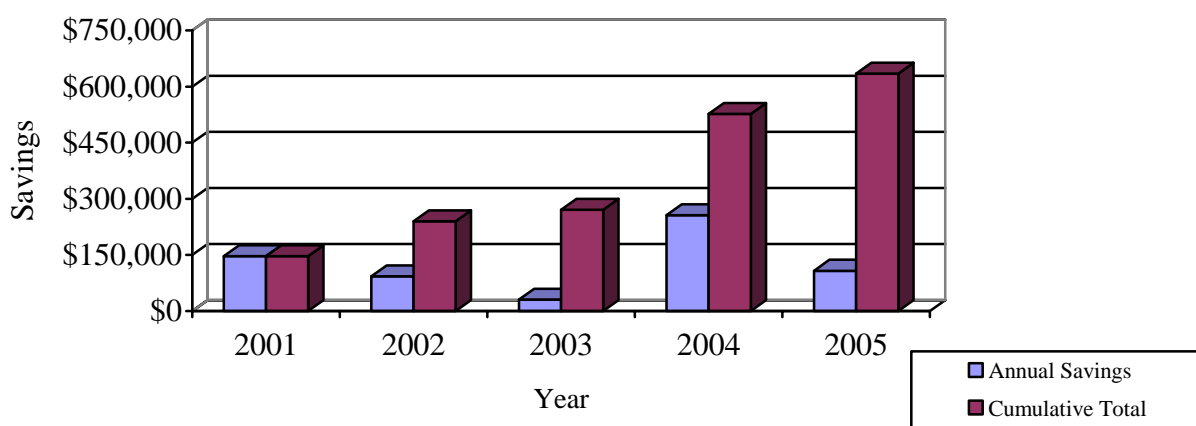
FIGURE 19. NATURAL GAS COSTS IN MCF



3. ENERGY SAVINGS

Grand Valley continues to bring an increased awareness to the faculty, staff, and students on energy costs to the university and helps to educate them on how they can make a difference, as well as the importance of their support. The successful programs in housing have encouraged student participation. Faculty and staff have willingly supported energy savings recommendations. Energy reduction projects have shown an annual savings of \$635,000. These projects range from simple lighting modifications to elaborate studies and implementation of better heating and cooling functions in specific areas. Other one-time energy cost saving initiatives over the same period have reduced energy costs by a total of \$638,000.

FIGURE 20. ENERGY SAVINGS



As part of the education experience, Grand Valley created a student energy awareness advertising campaign with the university student-run newspaper to create awareness and help engage the students regarding energy savings. This campaign has been underway in the campus housing units for the past three years. Magnets are placed in each housing area to encourage students to turn off their lights. In addition, education materials are given to the students on ways to save energy. Grand Valley focused on residence halls as a way to create the culture of an energy saving campus.

One of Grand Valley's notable projects includes a thermostat set point program that was initiated two years ago with the support of faculty and staff. The program implements ways to save on heating and cooling costs by setting high and low points that were compatible with the seasons. Since implementation of this program, the university has not deviated from the set points.

The Allendale campus continues to burn fuel oil in conjunction with natural gas during the winter to offset the high fuel price months. A natural gas purchase strategy has been in place for three years. Grand Valley continues to target purchasing one to three years in advance, committing to a percentage of its gas requirements and "layering in" natural gas purchases. The university recently joined a State of Michigan natural gas cooperative with other state agencies and institutions, to purchase a percentage of natural gas in future years.

B. WATER

Grand Valley is fortunate to have the majority of its campuses located near several natural bodies of water, including Lake Michigan. The primary Allendale and Pew campuses are uniquely situated along the same Grand River. The Annis Water Resources Institute in Muskegon, a leading research center addressing local, regional, and national issues including environmental legislation and regulation, and the Holland campus are adjacent to Lake Michigan. All campuses are served through municipal water supplies, supplying water for the university's grounds and irrigation systems. The Meadows Golf Course is operated by individual wells.

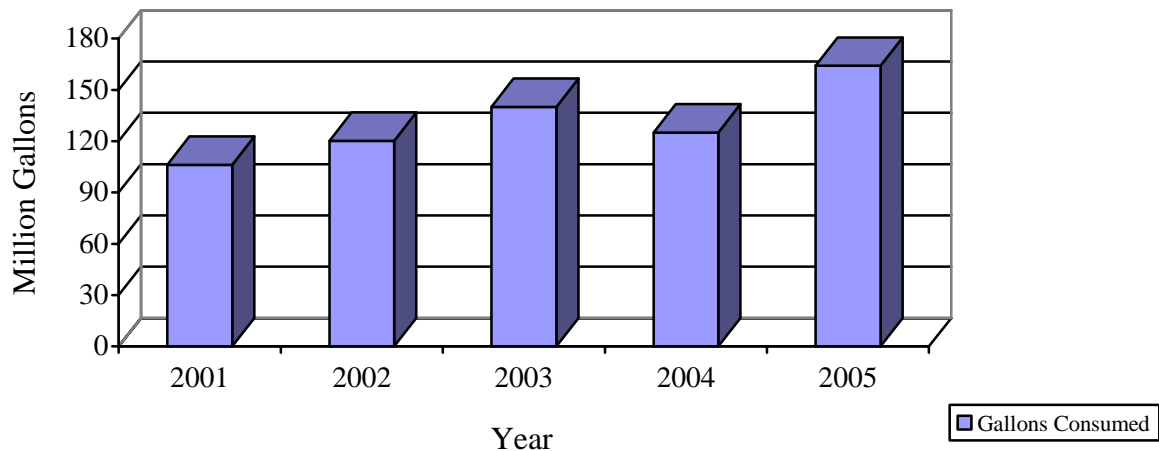
Because our campus sites are located adjacent to these important, natural bodies of water, we are reminded to focus on good water management practices in an effort to conserve this vital resource. The university has a long-term objective of minimizing the increasing rate of water consumption as well as reducing the overall water cost per square foot through the use of more efficient products and services in new construction and maintenance activities.

1. WATER CONSUMPTION

As with energy consumption, water consumption has also increased significantly. The water consumption has increased by 54% from 106.2 million gallons to 164.1 million gallons from 2001-2005.

However, the water cost per gallon, the water cost per sq. foot, and the water consumption per square foot per year have all decreased during the time frame 2001-2005.

FIGURE 21. WATER CONSUMPTION



- The water consumption per square foot stayed level from 2001-2005, averaging just over 39 gallons per square foot
- The water cost per square foot has decreased 19% from \$.21 to \$.17

FIGURE 22. WATER CONSUMPTION IN GAL./SQ. FT.

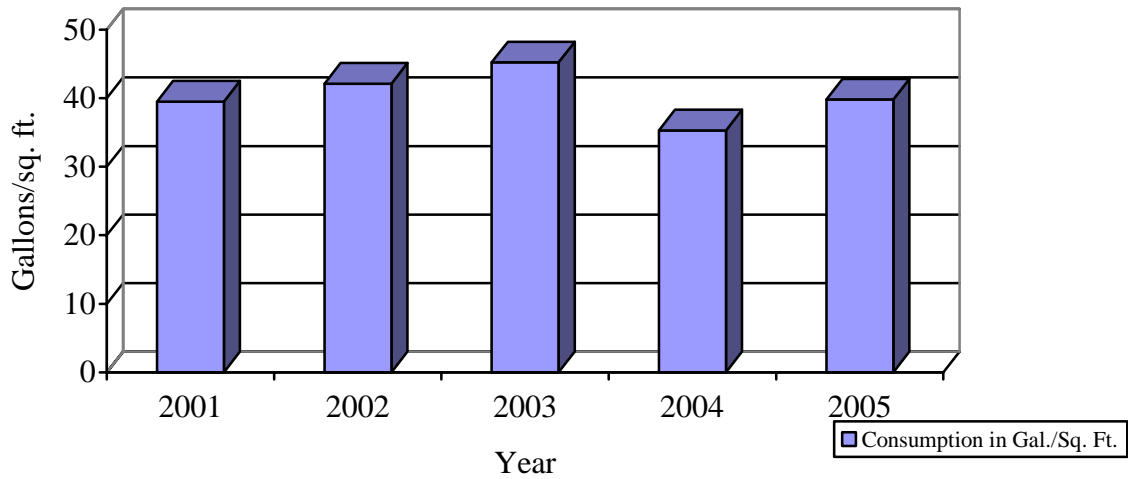
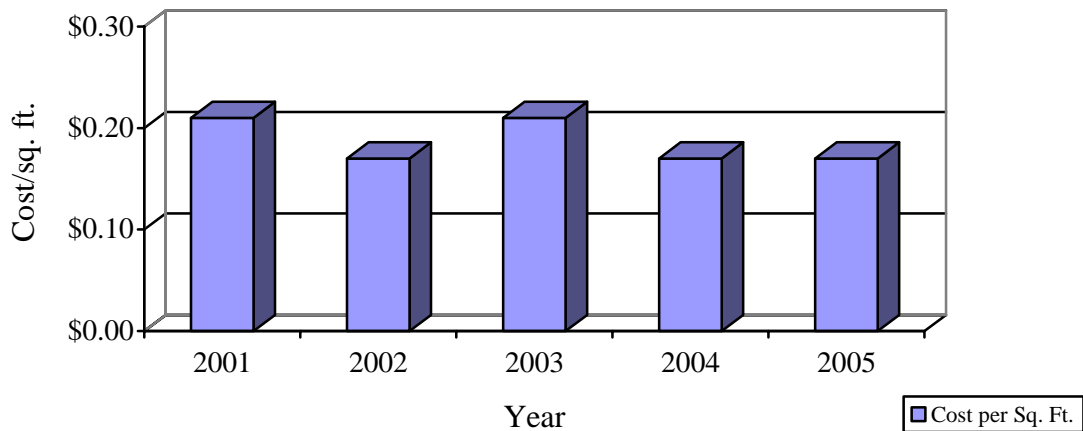


FIGURE 23. WATER COST PER SQ. FT.



Additionally, Grand Valley has also focused on water savings. Some of the successful innovative water saving projects implemented by Grand Valley include irrigation rain gauges, waterless urinals, reduced flow showerheads, and low flush toilets.

For example, waterless urinals have been installed at the MAREC building in Muskegon as well as in the Service Building and the new Lake Ontario Hall on the Allendale campus. It is estimated that each waterless unit saves up to 40,000 gallons of water per year. Reduced flow showerheads and low flush toilets continue to be incorporated into new construction and renovation projects.

2. SURFACE WATER QUALITY

The Zumberge Pond is beautifully located on the Allendale Campus. To maintain its grandeur, pond surface water testing is performed annually to determine pH and oxygen levels and to detect any chemical residues that may occur from adjacent lawn fertilization. The pond also is treated with installed compressed air diffusers to ensure that appropriate oxygen levels in the pond are maintained.

The pond was stocked with fish (bass, bluegill, perch) in the summer of 2002. Additional aquatic life add to the pond's ecosystem and offer a convenient outdoor lab space for a variety of classes.

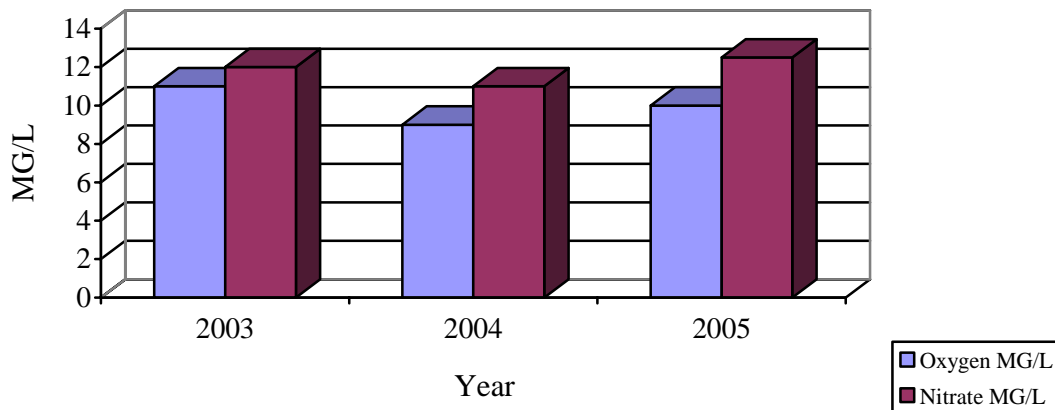
During the period of 2003-2005 the overall water quality in Zumberge Pond has been consistently maintained, averaging as follows:

- 10 MG/L oxygen level content
- 11.83MG/L nitrate level content
- pH of 8.92

The oxygen level in Zumberge Pond is closely monitored so that a high concentration is maintained to support the fish habitat. A low level of oxygen in the water can raise the ammonia or nitrite reading, which is not desirable for a healthy pond. The minimum level for oxygen concentration in a pond that supports fish life is 6 MG/Liter. We have been successful in maintaining an oxygen concentration that is 50% to 75% greater than this level.

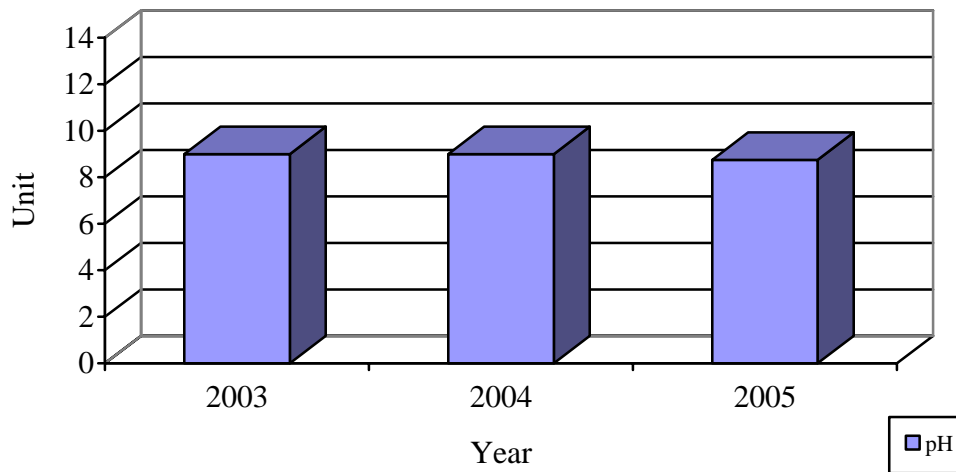
Nitrates are compounds that are used by the pond plants as food. Consequently, large algae blooms occur as the nitrate concentration increases. Levels of nitrates below 12.5 MG/Liter provide good plant conditions, do not stimulate algae growth, and are excellent for fish habitat. Our efforts are directed at keeping the nitrate levels at or below this 12.5 MG/Liter reading. Oxygen and nitrate measurements are key tests for us to maintain a quality pond habitat.

FIGURE 24. OVERALL WATER QUALITY



The pH reading indicates the alkalinity level of the pond water. The ideal range is between 7.0 and 8.5. Outside of this range, fish become more susceptible to diseases and other stress factors. The pH level can change during the course of the day, depending on the pond environment and weather. We continue to conduct pH readings and to manage plant life so that we can bring this reading within the most desirable range, though the latest reading of 8.92 is acceptable for our type of pond.

FIGURE 25. WATER PH



3. STORM WATER MANAGEMENT

Storm water management is a continuing focus of facilities design and management, with the primary objective being reduction and control of surface water runoff. Porous asphalt was installed as a method of storm water management during new parking lot construction in Allendale in the summer of 2004. Two new parking lots--Lot R at 6,600 square yards and Lot Q at 8,000 square yards, were constructed using this method. Porous asphalt uses a gravel mix that keeps fine particles to a minimum. This type of asphalt allows rainfall to naturally drain through the surface rather than creating runoff. Below the pavement is a gravel bed that can receive and hold the storm water, allowing it to then slowly seep into the underlying soil. This process eliminates soil erosion and effectively manages rainwater. In addition, storm water retention basins were constructed at Lot K and Lot O in Allendale to manage runoff water and also allow for controlled drainage.

Rain gardens were recently added to the landscape at the new South A and B residence units in Allendale. Two such garden plantings were installed at the four-way stop on South Campus Drive, and a third garden was planted on the south side of unit B. Rain gardens provide for a location for storm water retention. These rain gardens are located in low-lying areas and include layers of soil, sand, and mulch. Grasses, plants, and flowers installed at these sites absorb the water runoff and assist in naturally filtering any pollutants that may collect in the runoff water. This natural process is an environmentally sensitive approach that reduces storm water pollution while creating an attractive addition to the campus landscape.

The Annis Water Resources Institute (AWRI) also serves as an outreach for the university to enhance research, education, and preservation of fresh water resources. The Institute is located along the shores of Lake Michigan in Muskegon. Additional information about AWRI can be found in the Community Engagement section of this report.

C. AIR QUALITY

Recently there has been a great deal of national attention given to the quality of air and specifically to the release of greenhouse (GHG) emissions. These emissions deal primarily with carbon dioxide (CO₂) gas, but also with other gases such as nitrous oxide (NO_x) gas emission. Another primary air

pollutant comes from the exhaust gases from automobiles and trucks including NO_x gas, sulfur dioxide (SO_x) gas, and particulate emissions. These gas emissions, including methods for control and reduction, have become increasingly important.

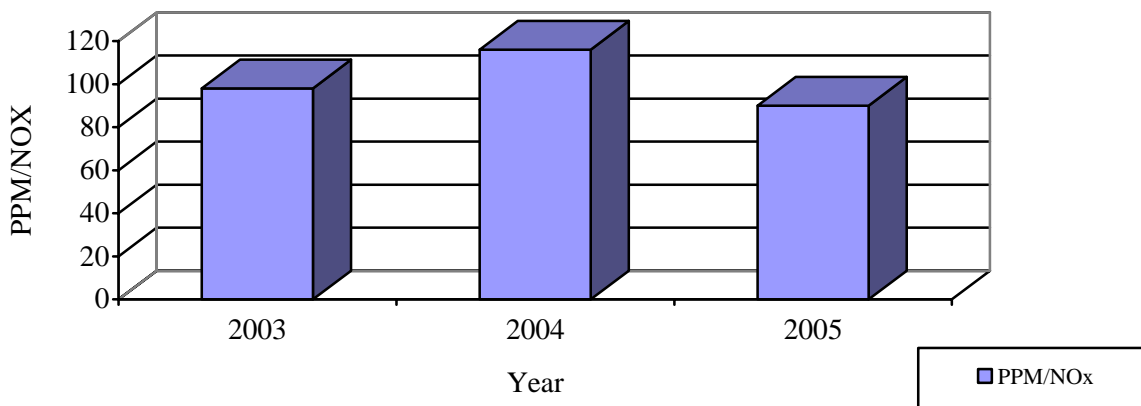
The university takes pride in the minimal amounts of greenhouse gas emissions from our campus environment. Monitoring, testing, and collection of data are done at the Central Utilities Building (CUB), located on the Allendale Campus. The emissions are monitored by staff at CUB and include tests for carbon dioxide, oxygen (O₂), and nitrous oxide.

The CO₂ and O₂ testing monitors the boiler combustion efficiency and are adjusted annually for maximum boiler performance. Testing for nitrous oxide (NO_x) as a gas pollutant is done for evaluation of our emissions to confirm that we are within standard guidelines of less than 200 parts per million (PPM). No particulate emission tests are done, since natural gas is the primary fuel source. The carbon monoxide (CO) level is used as a secondary guide to analyze the amount of non-combusted fuel that is emitted out of the boiler into the atmosphere. Along with the combustion efficiency readings, these readings help to identify other factors that cause less than optimum fuel utilization. Staff works to keep this reading at or close to zero.

1. OUTDOOR AIR QUALITY

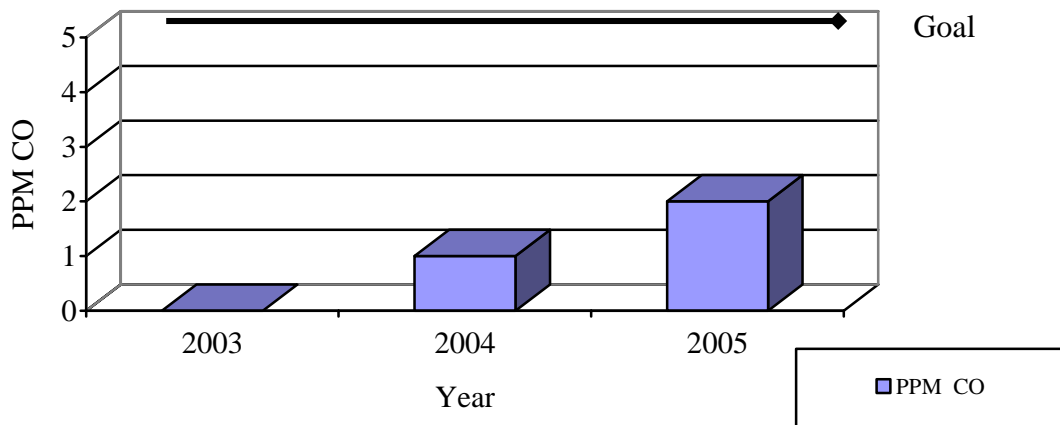
For the period 2003-2005 the NO_x levels have averaged 101.3 PPM or ~50% of standard boiler emission guidelines.

FIGURE 26. NO_x LEVELS



The goal of our maintenance staff is to keep the CO reading as close to 0 PPM as possible, since this indicates fuel combustion performance. For our type of boiler, the industry would accept a reading of up to 200 PPM of CO in the exhaust, so we maintain an efficiency reading that is near perfect. So, while the ideal goal is to keep this reading close to 0, we would accept any figure less than 5 PPM. Beyond that measure, maintenance staff would look at mechanical problems or changes to our fuel and air mixture ratios. Our boilers and burners have been very well maintained for 35 year-old equipment and continue to operate very efficiently.

FIGURE 27. BOILER CO EMISSION



2. INDOOR AIR QUALITY

Indoor air quality (IAQ) is being closely monitored and evaluated. Faculty, staff, and students are beginning to express more concerns regarding the air quality in office or classroom environments. These indoor air quality issues are being aggressively pursued. Additional tests are being completed to make the necessary corrections to help alleviate these concerns.

IAQ reporting procedures have been established to track such incidents. In FY 2005, 77 requests were successfully assessed and satisfactorily resolved by the safety management staff at the university regarding indoor air quality at various campus locations.

The university has added CO₂ monitors to new construction and renovations, implemented controls to program minimum outside air, and improved and/or upgraded HVAC systems in general to enhance air quality.

It should also be noted that the university operates two new LEED certified (Leading Environmental and Energy Design) buildings. These new buildings will be monitored for air, water, energy, and other measurements. Because of the newly installed and more efficient products, improved indoor air quality is anticipated.

D. WASTE

Waste is another critical category of interest, as waste is generated from a number of increasing sources:

- Construction and demolition debris
- Food or organic waste
- Non-hazardous waste including paper, plastic, cardboard, and books, and glass
- Hazardous waste including metal, computers, batteries, and light bulbs
- Chemical waste including laboratory and reagent chemicals, used gear, and transmission fluids

The primary objectives of the university are to help with the following items:

- Reduce the overall amount of waste generated
- Reduce the overall amount of waste going to the landfill
- Recycle the most amount of waste we can for reuse
- Purchase as many recycled products we can, such as recycled paper, for a variety of end uses

The origin of recycling at the university began in 1990 and has continued to develop in importance over the last 15 years.

1. WASTE DISPOSAL VERSUS RECYCLING

Our waste generation has increased 15% from 1,363 tons to 1,567 tons during the period of 2002–2005. This represents an annual average of 1,510 tons per year. The increase is directly attributable to the growth in student enrollment and the increasing number of buildings on campus. During this same time frame, recycling has decreased from 441 tons per year to 435 tons per year. The recycled material as a percent of total waste has decreased from 32% of the waste stream to 28% on an annual basis (Figure 28).

There are various reasons that explain the decrease in the recycled material numbers. The primary cause for this drop has been the switch to more electronically generated forms, which has decreased the amount of paper recycled. Electronic distribution of the student catalog also has resulted in a decrease in paper recycling. Our registrar’s office and the business office are providing more forms in an electronic, paperless format. These areas and others across the university are contributing to a reduction in paper usage and consequently, a reduction in recycled material.

Another factor that has contributed to the reduced amount of annual recycling volume is that the university can no longer recycle colored glass and styrofoam products. Both of these items were important pieces of our recycling process, but since 2003, we have been not been able to recycle these items and they are now part of our waste stream. We continue to look for vendors that will again accept these items for recycling.

FIGURE 28. ALLENDALE CAMPUS WASTE VERSUS RECYCLING

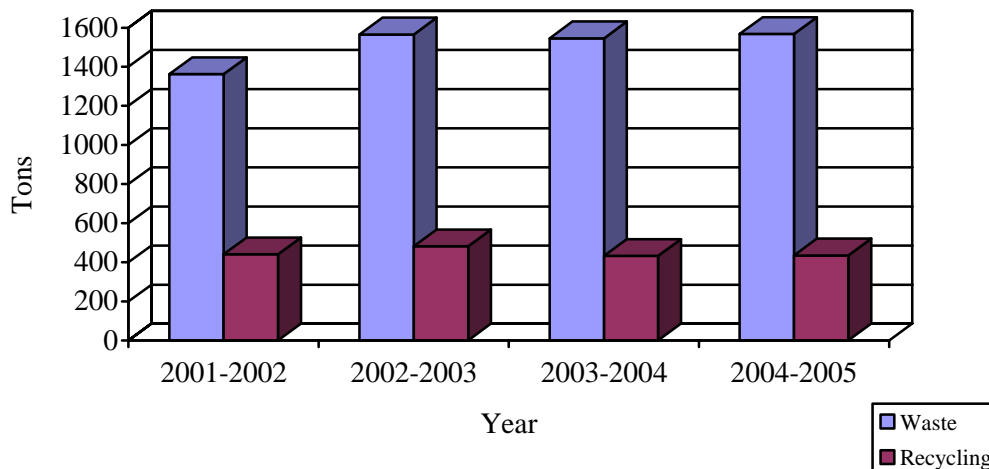


TABLE 13. RECYCLED MATERIALS AS A PERCENT OF TOTAL WASTE

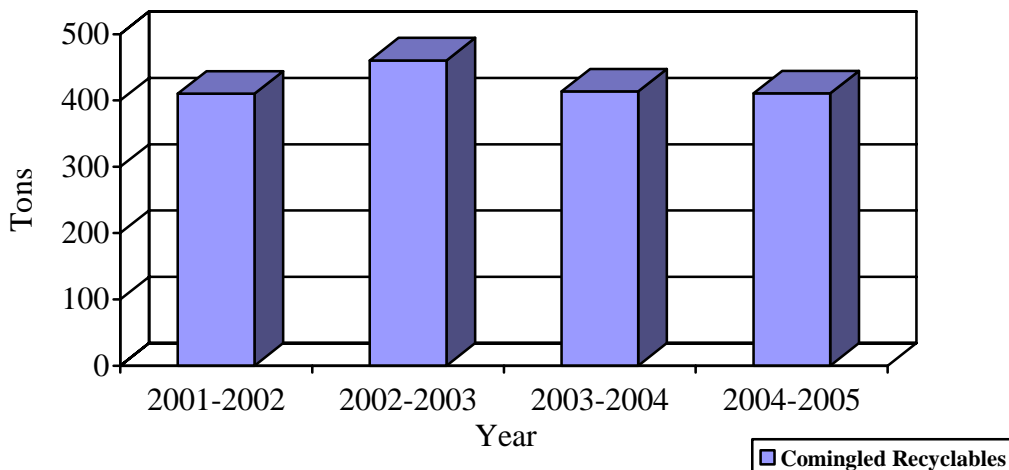
Year	Recycled material as a percent of total waste
2002	32%
2003	31%
2004	28%
2005	28%

2. NON-HAZARDOUS WASTE

The university has targeted a number of non-hazardous waste sources that are recyclable into two different categories. Category I consists of comingled paper, cardboard, glass, plastic, and tin. For the period of 2002-2005 the amount of comingled recyclables stayed relatively constant and has averaged 424 tons per year annually, even though the number of faculty, staff, and students has grown during this time frame.

CATEGORY I

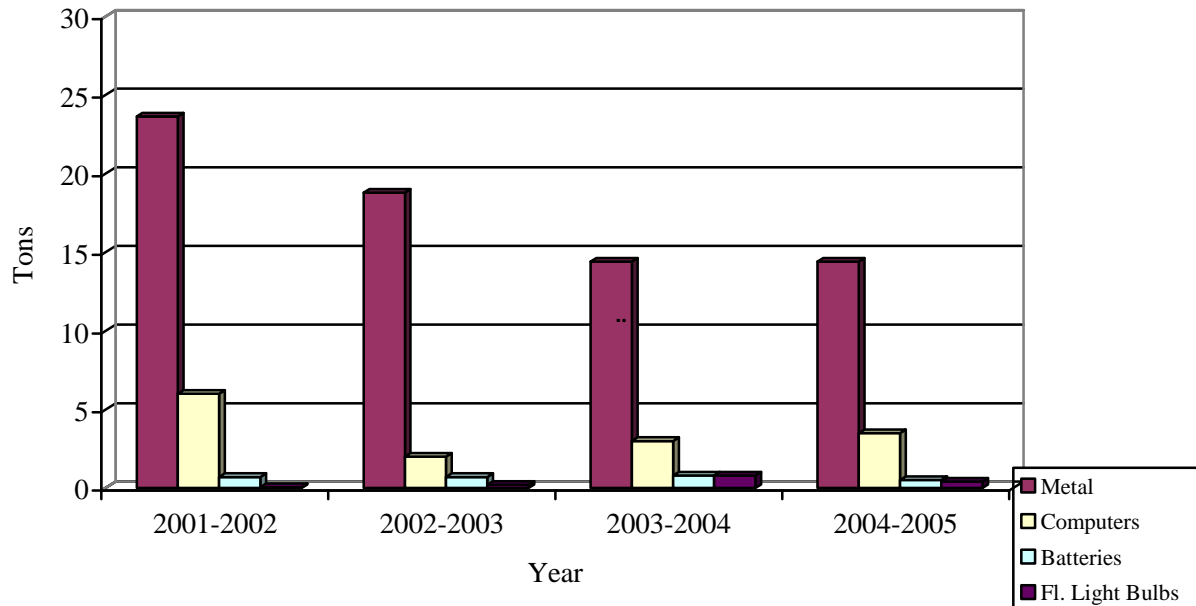
FIGURE 29. COMINGLED RECYCLABLES INCLUDING PAPER, CARDBOARD, BOOKS, GLASS, PLASTIC AND TIN (ALLENDALE CAMPUS)



Category II materials consist of metal, computers, batteries, and fluorescent light bulbs, with metal and computers being the primary sources. For the period of 2002-2005, the university has experienced an overall decrease in the amount of these materials from ~30 tons in 2002 to ~19 tons in 2005. It should be noted that a sophisticated electronic waste recycling system has been established to deal with computers, fax machines and cell phones.

CATEGORY II

FIGURE 30. RECYCLABLES INCLUDING METAL, COMPUTERS, BATTERIES AND FLUORESCENT LIGHT BULBS (ALLENDALE CAMPUS)



3. RECYCLING

In order to minimize the generation of waste on campus, Grand Valley has implemented a number of successful programs. The university has been very involved with recycling at its primary campus locations. Custodial and Operations staff are involved in recycling white paper, colored paper, cardboard, books, glass, plastic, tin, metal, computers, batteries, and fluorescent light bulbs. Recycle stations are located throughout all academic and housing areas on campus. Large multi-bin recycle stations are located in the apartment buildings on campus and at the Facilities Services building. Recycled materials from faculty, staff, and the surrounding community are also accepted at these locations.

Recycling at Grand Valley is a custodial and student managed effort. Custodial staff collects recyclables during their daily work activities, collecting items at assigned building locations. Student employees collect this material and take it to a central collection source for removal by specified contractors.

As stated, the origin of recycling at the university started in 1990. An arboretum at the Allendale Campus was created in an effort to encourage recycling. The original goal was to plant a tree for every ton of paper recycled. Success of this program has far exceeded the area designated for the arboretum, with over 700 trees planted representing 195 different species. Trees and shrubs indigenous to the West Michigan area are featured.

A composting program was also initiated in the arboretum in 1998. Leaves, grass clippings, and pruned material are turned into compost and returned for use in the arboretum. The grounds department uses mulching mowers to recycle grass clippings and leaves back into the turf. The

Meadows Golf Course at the Allendale Campus also maintains a composting program and returns the material to natural uses on the course.

A donation program was recently established with the coordinated efforts of custodians, students and housing staff on the Grand Valley Allendale Campus. As part of the 2005 year-end student move-out, canned goods, old clothing, furnishings, and other student school items were collected and donated to local charities. Over five tons of goods were collected during this program, items that in previous years had been discarded to the landfill.

4. HAZARDOUS AND UNIVERSAL WASTE

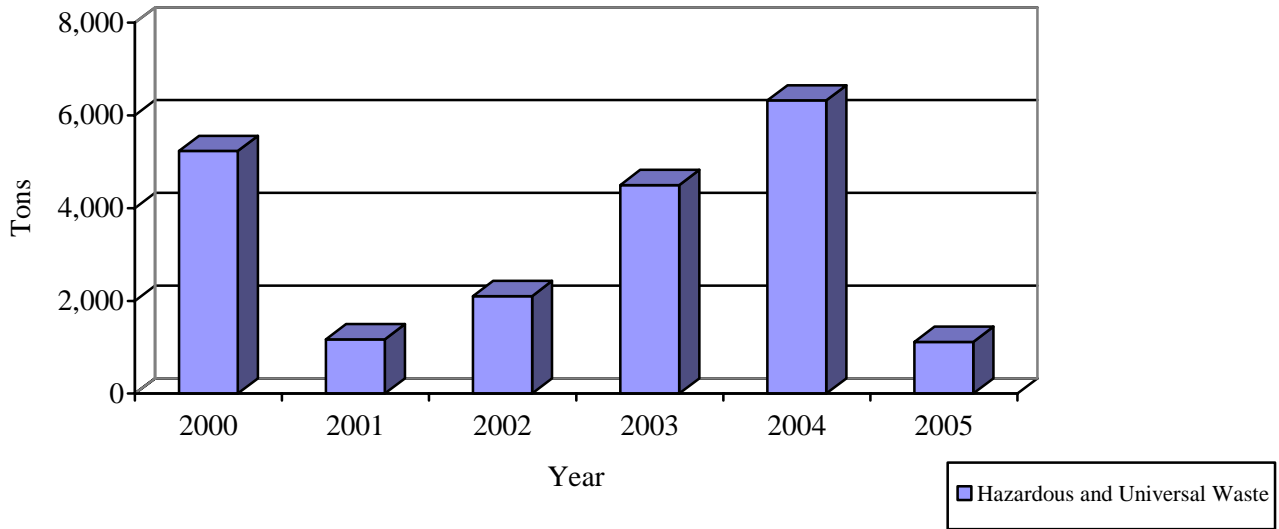
Grand Valley is classified as a Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste, which includes primarily chemical hazardous waste such as flammables, acids, bases, solvents, and organic materials from our science teaching laboratories, art department and maintenance department universal waste pesticides, and other devices such as those containing elemental mercury. Universal waste is collected primarily for recycling purposes.

When the Seymour and Ester Padnos Hall of Science and Henry Hall were completed in 1995, an initiative was begun to dispose of old chemicals. The final impact of this initiative is noted in Figure 31. In 2000, nearly 5,000 pounds of hazardous materials were disposed of to complete this program. At this time, the university was still classified as a Small Quantity Generator (SQG). The Safety and Chemistry departments subsequently worked with the Michigan Department of Environmental Quality (MDEQ) to successfully reclassify our generator status as CESQG.

The production of hazardous waste volumes has continued to grow with the increasing numbers of students and labs. Universal waste increased in 2003 due to an initiative to recycle more computers, batteries, fluorescent bulbs, mercury, and other products. In addition to this initiative, there was a program to recycle old mineral spirits from art labs in 2004. Various peaks will occur in our universal waste recycling data as opportunities to safely dispose of such products become available. Recent good management practices relating to hazardous and universal waste resulted in a decrease to 1,100 pounds of such material requiring disposal in 2005. The various departments within Grand Valley continue to work together to minimize the generation of hazardous waste and the accumulation of universal waste.

CESQG status significantly reduces the regulatory requirements previously needed for the SQG status. After the university was reclassified to CESQG status, the EPA successfully conducted an overall inspection. The EPA found the university in compliance with record keeping, waste accumulation, and disposal procedures. The various departments within Grand Valley continue to work together to minimize the generation of hazardous and non-hazardous waste, as well as minimize the accumulation of universal waste. The amount of hazardous and universal waste has decreased to approximately 1,100 lbs. in FY 2005. For the last five-year period, the average annual amount of hazardous and universal waste was nearly 3,050 lbs.

FIGURE 31. HAZARDOUS AND UNIVERSAL WASTE (ALLENDALE CAMPUS)



E. LAND USE/HABITAT

The habitat is an important natural resource for the university, for both the campus life of today and in the future. Everyone on the Allendale Campus, including students, faculty, staff, alumni, visitors, and guests can all see, experience, and feel the presence of the natural habitat surroundings. The natural habitat and its existence, however, cannot be taken for granted from one year to the next. Specific steps must be taken to maintain, restore, renew, and preserve the natural habitat including the meadows, ravines, woods, open fields, arboretum, ponds, and overall green space on the university campuses.

1. LAND USE

Grand Valley State University consists of five separate campus locations in Michigan, including Allendale, Grand Rapids, Holland, Muskegon, and Traverse City. The Allendale Campus consists of 1,237 acres that include academic, residential, and natural areas. The Meadows Golf Course also is situated at this site. Our Pew Campus in Grand Rapids includes academic, residential, and conference spaces in an urban setting. Also included is a health professions building adjacent to the Spectrum Hospital location in downtown Grand Rapids. The Meijer Campus at our Holland location includes many academic spaces. Facilities in Muskegon include the Annis Water Resource Institute (AWRI) and the Michigan Alternative and Renewable Energy Center (MAREC) building. A leased campus location is maintained in Traverse City.

The Allendale Campus is uniquely situated along a portion of the Grand River in the West Michigan area. Large ravines along the east side of this campus provide a geographic feature that is not found elsewhere along the river. Wildlife, hardwood trees, and a variety of plant life is found in the ravines. Many of the academic programs, including the Art and Design program, make significant use of this natural resource in their courses of study.

The university master plan includes acreage that has been set aside for preserved meadows and preserved wood lots including a seven-acre arboretum natural area in the center of the Allendale

Campus for study and green space. Retention ponds have been a recent addition in various campus locations to manage storm water runoff as well as to provide additional natural landscaping for the university.

Construction in recent years at locations in Grand Rapids and Muskegon has included soil and remediation site cleanup of old brownfield zones. These former industrial sites were transformed into safe, usable university campus locations. One major example of this brownfield redevelopment project is the site of the attractive downtown Pew Grand Rapids Campus, a \$60 million capital investment that opened in 2000.

2. RAVINES

Grand Valley's main campus is located almost midway between downtown Grand Rapids and Lake Michigan, near the town of Allendale. The natural land structure of the Allendale Campus includes 494 acres of deep wooded ravines, a high bluff overlooking the Grand River to the east and gently rolling open fields to the west. The campus is designed to take advantage of the area's scenic wood ravines as well as its open meadowlands.

Since 1982, a consistent number of faculty and students have traversed the ravine paths for recreation, solace, and reflection in the midst of a busy day. Several of the faculty have begun to work on a project to build an archive of information about the ravines that surround Grand Valley, from all possible disciplines. On a preliminary basis, research papers, student projects, syllabi, and photos relating to the ravines have been collected and are currently housed in the Special Collections Library. The archive will always house a history and understanding of the ravines and be a place to study human relationships to the land. Information about the ravines will be continually added to the archive in the years to come.

It has been reported that the proximity of the ravines has also been partially responsible for the university's success. The ravines serve not only as a respite and place of recreation, but also as a reminder. The ravines tell us that human effort is subject to change and if we want to survive, we must progress. The ravines also demonstrate that, in spite of severe changes and exploitation, the earth, like the human mind, works quickly to heal itself.

F. BUILT ENVIRONMENT

Grand Valley can be described as having the following features:

- 87 buildings on campus
- Five major facilities
- 4,124,573 sq. ft. of buildings
- 2,652,490 sq. ft. of growth over the last 10 years
- 74,000 sq. ft. LEED certified buildings since 2004 (MAREC and Lake Ontario Hall)
- 9.91 miles of roadway and sidewalks

- Five miles of CATV cable (TV broadcasts)
- 2.5 miles of utility tunnels
- 52 miles of fiber optic and broadband cable
- 12,300 parking spaces

1. FACILITIES OVERVIEW-SQUARE FOOTAGE BY AGE

The university has 87 campus facilities totaling 4,124,573 square feet. Lake Superior Hall and Lake Michigan Hall were the first Allendale Campus buildings constructed in 1963. Approximately 50% of all campus buildings have been built within the last 10 years and account for approximately two-thirds of the square footage.

Fifty-three general fund facilities account for 2,618,038 sq. ft. Approximately 40% of these buildings have been built in the last 10 years and account for 60% of the square footage.

TABLE 14. TOTAL CAMPUS FACILITIES

Age of Buildings (years)	Number of Buildings	Square Feet
0–10	41	2,652,490
11–20	17	148,675
21–30	5	150,710
31–40	19	1,044,269
41 and over	4	121,441
Totals	86	4,117,585

TABLE 15. GENERAL FUND FACILITIES

Age of Buildings (years)	Number of Buildings	Square Feet
0–10	21	1,538,358
11–20	9	36,140
21–30	5	150,710
31–40	13	777,369
41 and over	4	108,473
Totals	52	2,611,050

2. LEED BUILDING DESIGN

a. DESIGN

Leading Environmental and Energy Design (LEED) buildings will be the building design of focus and choice for the university in the future because of the attractive features, material and process technologies, and long-term efficiency. LEED buildings gain certification through a project approval

system administered by the U.S. Green Building Council (USGBC). A maximum of 69 points are available per construction project with a minimum of 25 points required for LEED certification approval. Various levels of LEED project approval are available based on the number of points awarded including certified, silver, gold, and platinum status.

LEED projects are categorized as shown:

- LEED – NC: new construction
- LEED – EB: existing building
- LEED – CI: commercial interior
- LEED – CS: core and shell

b. LEED BUILDINGS

The State of Michigan has adopted LEED building guidelines for all future new construction in the public sector as of 2005. LEED certified buildings are significantly different in their design and construction from typical facilities management buildings. Here are a few examples of these differences:

- Natural lighting for illumination and heating
- More efficient energy system, products, and services such as energy efficient windows
- Flooring made from recycled tires and bamboos
- Wallboard made from pressed wheat
- Motion detectors and sensors
- Computer programmed fluorescent lighting systems

MAREC in Muskegon recently received LEED Gold certification. This 25,000 square foot building is located in the Muskegon SmartZone and is completely energy self-sufficient, producing its own electricity, hot water, heating, and air conditioning using power generated from renewable energy technologies.

In addition to MAREC, the newest capital project is Lake Ontario Hall (LOH) on the Allendale Campus. This 50,000 sq. ft. academic building opened in August 2005 and provides the university with its second LEED building facility. LOH contains 88 faculty offices, a dean's suite, two departmental suites, two general purpose classrooms, two case rooms, conference rooms, gathering spaces, student study area, three seminar rooms, and one computer lab. A LEED certification is being pursued for this building.

G. TRANSPORTATION

With 14 miles separating the Allendale campus from the downtown Pew Campus, Grand Valley is creating a culture of alternative transportation modes among our students. Grand Valley understands the need for various means of transportation to help alleviate the environmental effects of traffic flow. From the fall of 1996 through the winter of 1999, the university provided transportation between campuses to faculty, staff, and students through a mini-bus service. As buildings were constructed, enrollment increased, and available parking dwindled, the mini-bus service could no longer meet the ridership needs. The university began to collaborate with the Inter-urban Transit Partnership (ITP) in

the City of Grand Rapids to establish a program beneficial to both parties. As a result, ITP was able to provide several full size buses to meet the increasingly high demand for transportation and established dedicated routes called the Campus Connector, Off-Campus Apartment Shuttle and, most recently, the CHS Express. As a benefit to the campus community, students, faculty, and staff can use all the offered routes at no cost with a valid university ID. In addition, the university offers use of any city bus for routes throughout the surrounding areas at no cost.

In creating a transit culture, Grand Valley established overall awareness by introducing the incoming freshmen to the bus system, and making it a requirement that all new students must ride the Campus Connector. The shuttle is also used during freshman orientation to transport the students between campuses. To encourage students throughout the year to ride the bus, marketing materials were placed around the campus reminding the students about the benefits of this valuable program. The messages in these materials include gas savings, environmental and community benefits, parking, and time savings. At the beginning of the semester, riders were given treats or rewards for riding the bus, as well as coupons for various items, as an incentive to continue using the service.

Grand Valley has worked with the Student Senate to encourage the university community to utilize the shuttle system. They currently promote the shuttle service at their meetings and in the university newspaper, the *Lanthorn*. The Office of Student Life helps to promote the shuttle service by providing shuttle information at its information desk. The Web is used to promote the shuttle service by placing links to information about the shuttle service throughout the university Web site, including the Student Senate page and the Frequently Asked Questions page. Information is provided regarding where the shuttle picks up, when it operates, and how to board. Furthermore, the Grand Valley catalog dedicates a section solely to the shuttle service. The Institutional Marketing Department at the university helps promote the shuttle service by developing signage placed on the outside of the Grand Valley buses. A varied number of marketing advertising and promotional materials have been used to increase the awareness of our successful partnership with the Rapid.

The university is advancing the transit culture by providing extended and free transportation for special university related events including athletics, meetings, and tours. When the university opened the Cook-DeVos Center for Health Sciences building in the fall of 2003, faculty and staff could only receive construction tours of the building by riding the shuttle. Data collected from annual surveys completed by students, faculty, and staff are reviewed and additional suggestions are used to continue to promote the transit culture.

Two of the more recent transportation projects that have been implemented or will be implemented soon include a “park and ride” location and a “ride share” program. Grand Valley has collaborated with the City of Walker to create a location in the Standale Meijer parking lot for Park and Ride. The students are able to park at this location, which is half-way between each campus, and ride the Campus Connector to their destination. This service will lessen the number of cars on campus while offering the opportunity for students to ride the bus. In the fall of 2005, Grand Valley will be implementing the Ride Share program.

In addition, the university offers an increasing number of bike and walking paths and trails to help the students with alternative means of transportation besides the automobile. This objective of developing and promoting alternative transportation modes will remain a future focus for the university.

1. CAMPUS PARKING

The three major campus parking space inventories include the Allendale, Pew, and Center for Health Sciences (CHS) parking lots, which total 11,977 spaces in FY 2004-2005, an increase of 14% over the 10,501 spaces in FY 2003-2004. These spaces include flat, paved lots, along with parking ramps.

The Allendale parking spaces accounted for 8,836 spaces in FY 2004-2005, an increase of approximately 10% over FY 2003-2004. Overall, the Allendale parking spaces account for ~75% of all available parking spaces at these locations. The Pew location accounted for the greatest increase in parking spaces, an increase of 31% or 704 spaces.

Several surveys of both the Pew and Allendale campuses were taken in the fall of 2004. On a typical weekday on the Allendale Campus, covering all lots at noon, which is considered the peak, 83% of all faculty and staff reserved parking spaces were filled and 82% of all student parking spaces were filled. On the Pew Campus, a similar survey was conducted. On a typical weekday, at the peak hour of noon, 93% of all faculty and staff reserved parking spaces were filled and 65% of all student parking spaces were filled.

FIGURE 32. STUDENT AND FACULTY/STAFF RESERVED PARKING (ALLENDALE CAMPUS 2004)

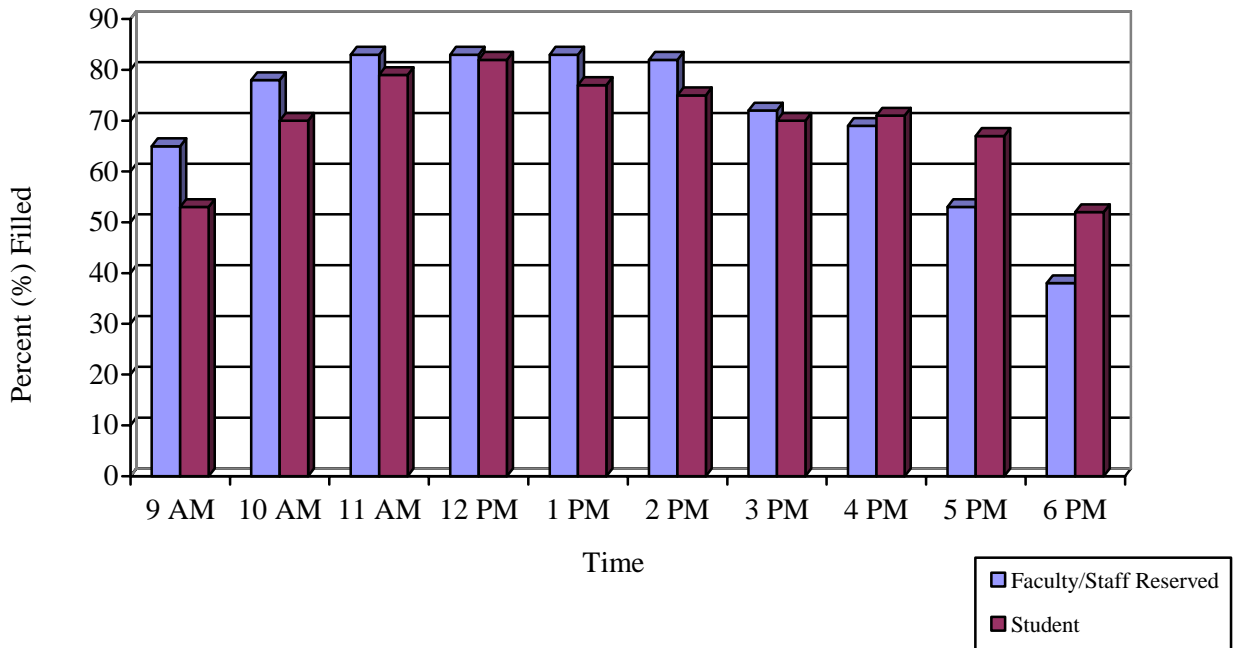
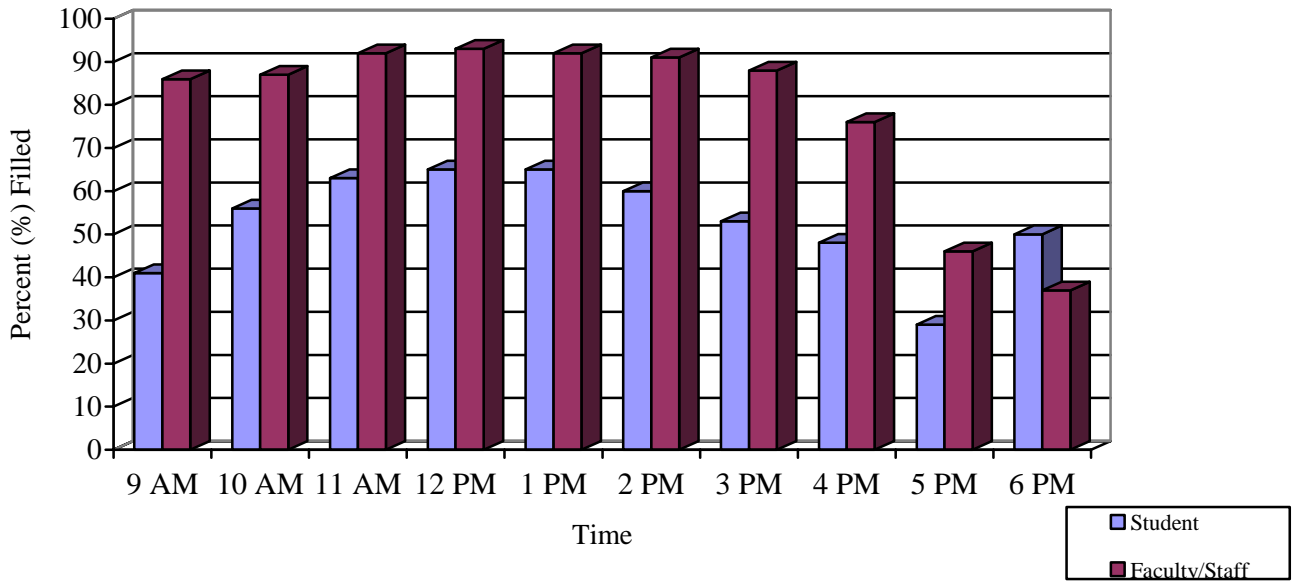


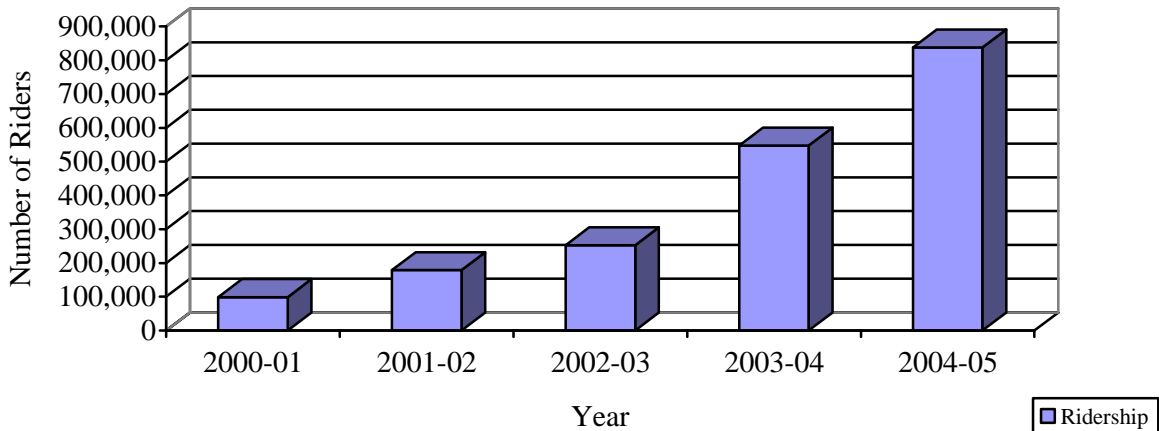
FIGURE 33. STUDENT AND FACULTY/STAFF RESERVED PARKING (PEW CAMPUS 2004)



2. PUBLIC TRANSIT DAILY RIDERSHIP

From FY 2000-2001, when operations were begun, until to FY 2004-2005, the number of bus riders has increased sevenfold from 98,821 to 837,886 riders. During last year alone, from FY 2003-2004 to FY 2004-2005 the number of riders increased 290,329 or 53%.

FIGURE 34. TOTAL CUMULATIVE DAILY BUS RIDERSHIP



Comparing the average daily bus ridership between 2003 and 2004, the overall daily ridership has increased from 4,051 to 6,819 riders, an increase of 68%.

TABLE 17. AVERAGE DAILY BUS RIDERSHIP

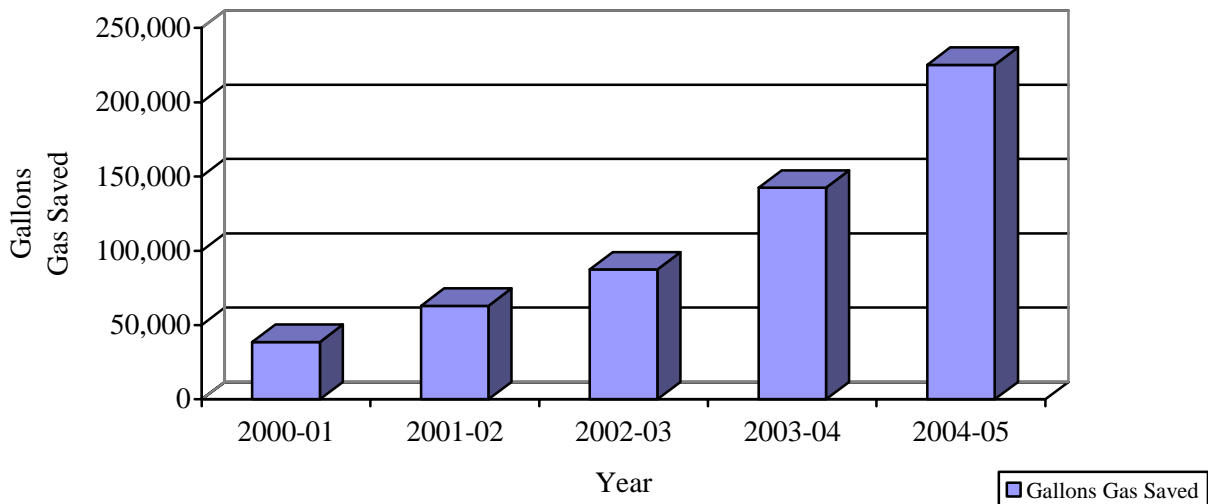
Bus Mode	2003	2004	% Increase
Campus Connector	2,185	3,432	57.1%
Off Campus Apartment Shuttle	662	2,033	207.2%
CHS Express	1,204	1,355	12.5%
Total Ridership	4,051	6,819	68.3%

PROJECTED SAVINGS

In addition to solving limitations and helping with overall traffic flow, which are too difficult to determine, an economic value for the university bus system has provided major economic benefits to the community as well.

For example, since its inception in FY 2000-2001, we have projected an estimated 556,445 gallons of gasoline saved by FY 2004-2005. At a current estimated cost of approximately \$2.75 per gallon, this equates to an overall savings of more than \$1.5 million for the student body and faculty. Additionally, we have also been able to project the reduced amount of expected air pollution from these gallons of gasoline that are saved as well.

FIGURE 35. PROJECTED SAVINGS



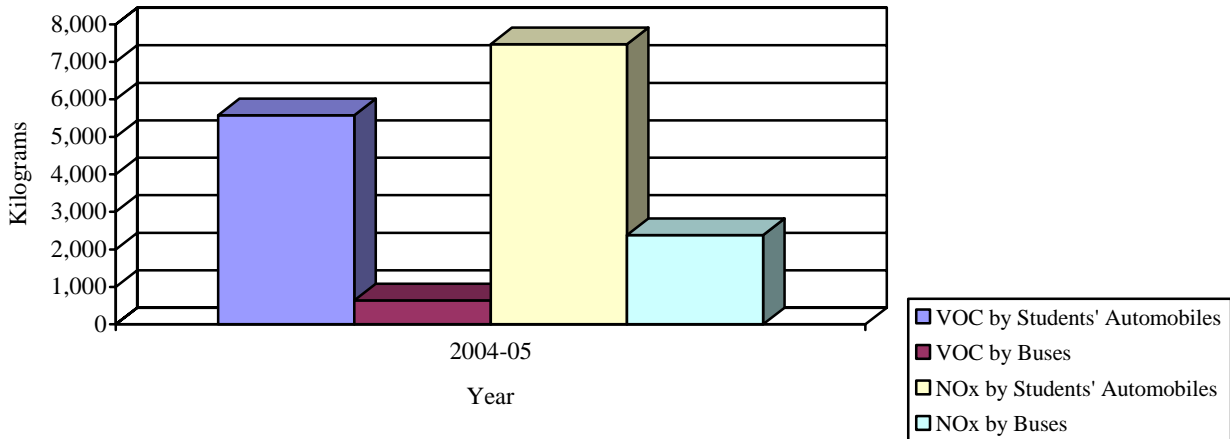
3. REDUCTION OF EMISSIONS

The university operates a very successful collaboration with the Inter-urban Transit Partnership (ITP) in the City of Grand Rapids. Our partnership has helped the ITP achieve its number one national rankings for its size among other urban transit systems.

Because students ride the bus rather than drive separate vehicles, we are also decreasing the amount of volatile organic content (VOC) emissions and nitrous oxide (NOx) emissions. Figure 36 shows the amount of VOC and NOx emissions that would be on the roads if students were driving in conjunction

with the buses they ride. In addition to reduced air pollutants, a significant number of gallons of gasoline are saved as well. Figure 36 shows the amount of VOC and NOx emissions in kilograms per year if students were driving as compared to the buses that are available.

FIGURE 36. EMISSIONS



4. BUS RIDERSHIP SATISFACTION

On a continuing basis, Grand Valley conducts a Campus Connector survey to ensure the overall satisfaction of its ridership.

Over 33% of the riders use the bus transit three to five times per week. Approximately 25% of the riders use it six to eight times per week and nearly 30% use the bus eight or more times per week. Over 60% of the ridership rates the quality of the bus service as good, with nearly 30% rating the service as excellent. Over 80% of the riders rate the drivers as either good or excellent, with only 15% rating them satisfactory. 60% of the riders indicate that the buses run occasionally late, and 35% indicated they never run late. About 33% of riders spend their time reading or studying while on the bus and another 33% spend their time relaxing. Nearly 66% of all riders also report they own a car.

Approximately 95% of all riders felt either secure or highly secure on the buses. The one primary suggested improvement was to increase the frequency of the buses.

H. FOOD SERVICE

Food service is a critical component of a student's life on campus. At Grand Valley, food services are contracted through ARAMARK, which has 60 full-time employees. Many university students are employed by ARAMARK on a part-time basis as well. These students represent greater than 50% of the ARAMARK work force hours.

Surveys of students are continually monitored to ensure that trends regarding food tastes are well known. Food services are required to meet the needs of a diverse student, faculty, and staff population. These requirements include the following:

- Variety of food options and offerings
- Close proximity of food service to student pathways on campus
- Convenient times of food service availability
- Broad menu selection including healthy nutritional items
- Quick accessibility including convenient options for payment
- Brand name selections

Food services will continue to offer new opportunities on campus regarding food options and food procurement to help ensure that the student campus life is an enjoyable experience.

1. FOOD OPTIONS

Campus Dining at Grand Valley offers a wide range of dining options for faculty, staff, and students. The Fresh Food Company in the Upper Commons building offers a full salad bar every day along with clearly marked vegetarian options, and all menu items are cooked fresh that day to order without any processed foods. Meal plans are accepted at River Landing, Kleiner Marketplace, and the Plaza Café on the downtown campus.

Our recent accomplishments include the following:

- The transition to more natural oils in both cooking and frying. Campus Dining is using a canola and olive oil blend, which is low in saturated fat and free of trans fats.
- The Campus Dining implementation of the Just 4U program in the fall of the 2004 school year has made nutritional information available to the consumer for selected items that are offered in our restaurants. Options such as Carb Counter, Low Fat, Cal Smart, and Heart Healthy are offered daily at various locations across campus.
- The availability of fresh produce at the convenience store located on campus. Students are able to use their meal plan dollars to purchase items for a healthy alternative.

In the short term we expect to accomplish these goals:

- Educate students about the different options that are made available to them on a daily basis, including concepts such as substituting a piece of fruit instead of french fries in a combo meal or choosing milk instead of a fountain beverage.
- Increase awareness of the Just 4 U program and the benefits that it can offer students.
- Eliminate the use of trans fats at every Campus Dining location.
- Increase the use of more organic ingredients.
- Offer a wide range of options for combo meals including side salads, carrot sticks, or small soup to encourage healthy eating habits.
- Increase the use of more local food suppliers.

Our long-term goals include the following:

- Provide nutritional information for every menu item that Campus Dining offers.
- Employ a trained nutritionist on staff to counsel students on making the right choices when it comes to their diet.

2. FOOD PROCUREMENT

Campus Dining at Grand Valley is starting to purchase food items from local suppliers. While it is not possible to use local vendors exclusively, using these vendors for specific items represents an opportunity to help rebuild the local economy. We are working with the West Michigan Environmental Action Council on the Farm to Cafeteria program to begin to develop relationships with our local vendors. The first Farm to Cafeteria local vendor requisition was made in September 2005.

Some of our recent accomplishments include the following:

- Fair Trade Coffee becoming a staple at most dining locations. It is offered exclusively at The Fresh Food Company and the new coffee house that is part of the Papa John's.
- The Farm to Cafeteria program in Campus Dining is looking into the use of more organic products, such as pastas, rice, and produce.

Short-term plans include the following:

- Educate our customers about the benefits of organic products.
- Develop ways to offer organic products without having to significantly increase prices and also have consistent availability.
- Develop one concept that relies exclusively on locally produced food.
- Have organic options available at every dining location.

One of our long-term goals includes the development of one campus dining location with a sustainable food theme to help educate the campus community and create sustainability awareness.

3. ORGANIC WASTE DISPOSAL

Besides composting leaves, grass clippings, and pruned material, the university is also looking into the feasibility of composting food waste. A community project involving ~10 stakeholders, with the West Michigan Environmental Action Council taking the lead, is evolving. Local companies involved in composting have an interest in using a more reliable and stable waste source for their processes. The manufactured compost could reach the local market or be consumed by or donated to local neighborhoods interested in the use of the material for food or flower gardens.

Conference Services continues to be committed to the community by donating excess food products to local missions. Unused baked goods, boxed lunches, and perishables are typical examples of donated items.

VIII. ECONOMIC INDICATORS

Economic indicators have been the mainstay of the business and corporate community and traditionally used as a means of compliant reporting for shareholders. Some of these traditional business indicators include the following:

- Gross, operating, and net profits
- Return on investment (ROI)
- Return on assets (ROA)
- Debt to equity ratio

As we all know, many of these indicators provide a window of understanding for the short term, yet do not necessarily address a successful sustainable enterprise business model for the future. Many of these indicators do not apply to a nonprofit institution or do not measure success in the same way as a for-profit entity. These additional performance measurements and metrics include the following:

- Accrued cost savings
- Reduction of risk
- Reduction of liabilities
- Improved decision making
- Economic development creation
- Sustainability purchasing contributions

For this report, our economic categories of focus are as follows:

- Revenues in dollars
- Expenses in dollars
- Economic development creation
- Student education affordability
- Utilization of assets
- Capitalization

In the future, we will endeavor in all sustainability categories of interest to provide a quantifiable economic return or cost savings for all sustainability indicators used. This effort will provide greater value and credibility in our overall future sustainability reporting.

A. REVENUES

The two primary sources of funding for the university come from state appropriation and tuition revenue. These two sources fund most of the core academic teaching and related support. Gifts and grants supplement these revenues, but are more heavily weighted toward capital construction, research, and economic development. A third significant revenue source is from the sale of auxiliary services such as housing, the bookstore, and food service.

1. REVENUES BY CLASSIFICATION

Revenues have grown consistently over the past years with a continuing trend away from state appropriation and larger portions coming directly from students through tuition and auxiliary services. The increased dependency on tuition and decreased dependency on state appropriation is a trend that has transferred the financial burden from tax payers to students.

General fund revenue, primarily tuition, has grown in total on a per student basis at a rate near the rate of inflation. State appropriations had grown significantly in actual dollars through the late 1990s, though growth has been relatively flat on a per fiscal year equivalent students (FYES) basis for almost two decades. More significantly, state appropriation has fallen from \$3,912 per FYES in 2001 to \$3,052 per FYES in 2005, a decline of 22%. This decline in state appropriation per student is the result of smaller total appropriations spread across increasing enrollments. The State of Michigan has shifted its practice of funding ~70% of the operating cost 20 years ago to less than 30% of the cost today. The status of the budget for the State of Michigan suggests funds are not available to reverse this trend.

The increased level of activity from grants has been modest and consistent over the past five years. The university has been deliberate in stepping up activity both in fundraising and in soliciting certain research and economic development grants.

Figure 37 below describes the growth in total revenue from ~\$215 million in 2001 to \$275 million in 2005. Most of the increase came from tuition revenue, which grew by over \$50 million in that time period.

Figure 38 shows the same revenue dollars distributed by percent. While tuition has always been the primary revenue source, its portion has grown from 36% to 47% of total revenue and state appropriation has fallen from 28% to 21%. Gifts and grants were unusually high in 2001 as a result of a capital campaign that year. They have fallen from the unusual figure of 19% of revenue to their normal range of approximately 13% of revenue. Capital appropriations are one time allocations for buildings and can change substantially from year to year. Auxiliary activities have grown from 12% to 15% of revenues as a response to the increasingly residential nature of the campus. More students living on campus have contributed to substantial increases in housing and food service revenues.

FIGURE 37. REVENUE BY CLASSIFICATION

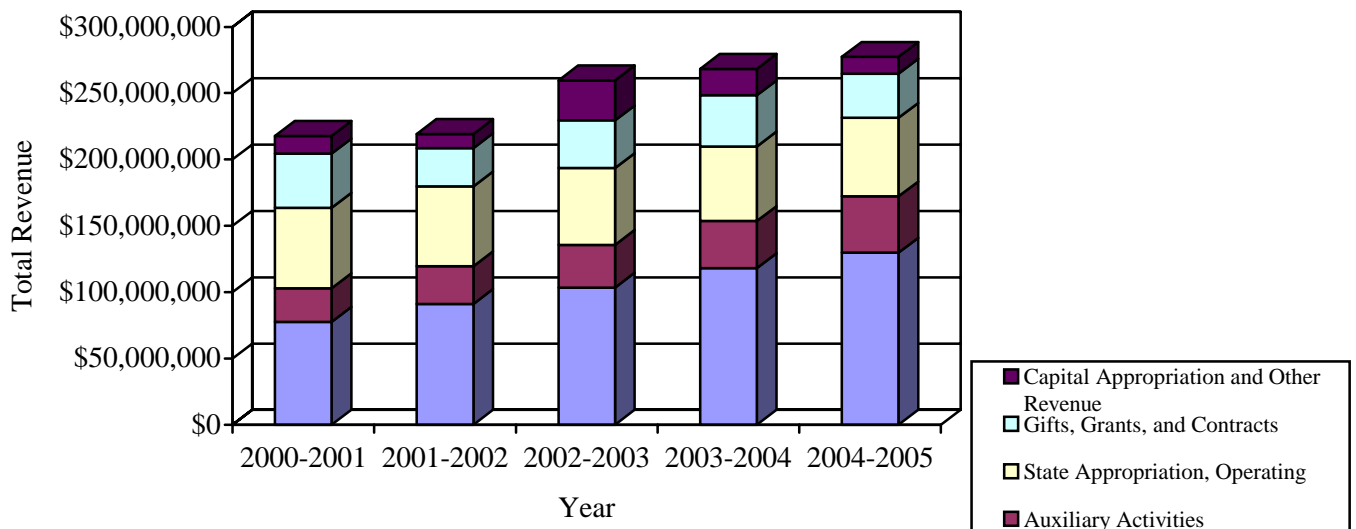
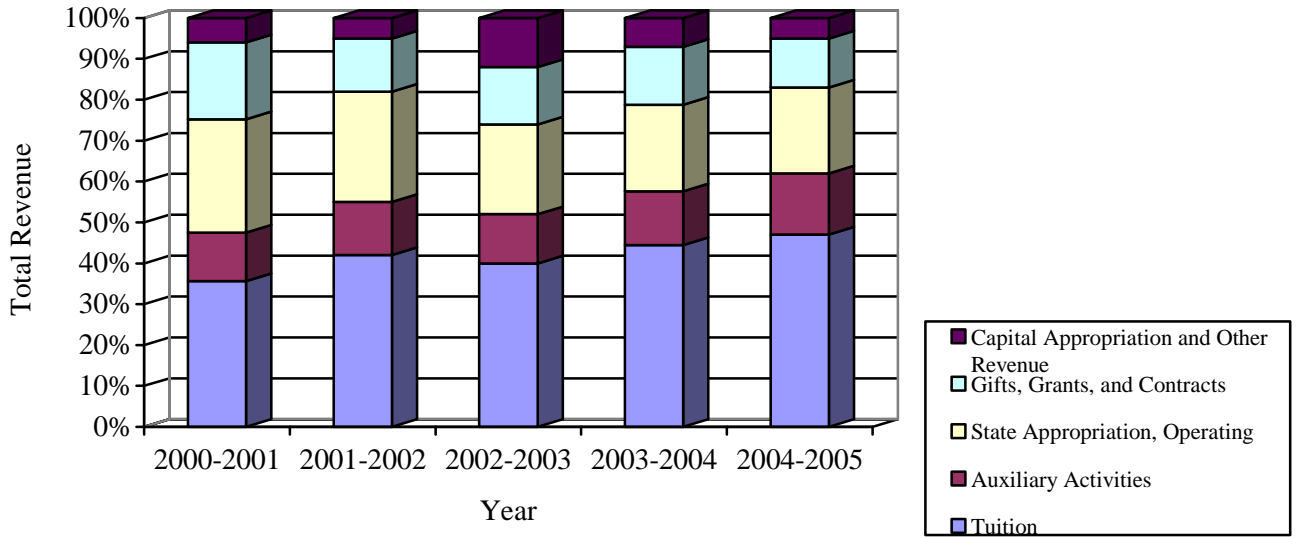


FIGURE 38. REVENUE PERCENT BY CLASSIFICATION



2. ENROLLMENT

Enrollment has increased steadily over the past two decades by doubling approximately every 12 years. That trend began to slow in 2005 and enrollment growth in the future is expected to be at a much slower pace. The university has increased admission standards and held the entering freshman class to approximately 3,400 students for the past several years. Enrollment forecast models suggest that total enrollment will level off at ~25,000 students, if freshmen admissions continue at that level. Number of degrees awarded has grown from 2,680 in 2001 to 3,822 in 2005, an overall increase of 43%.

FIGURE 39. ENROLLMENT

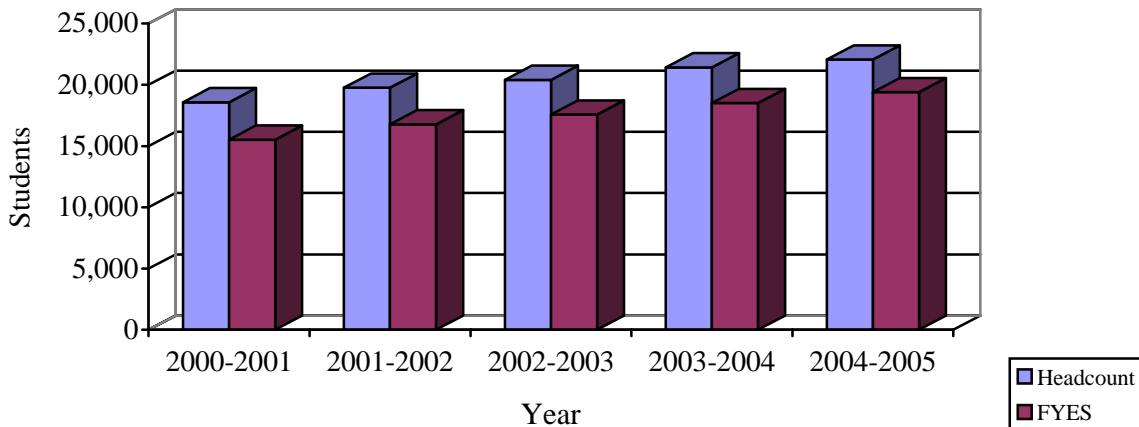
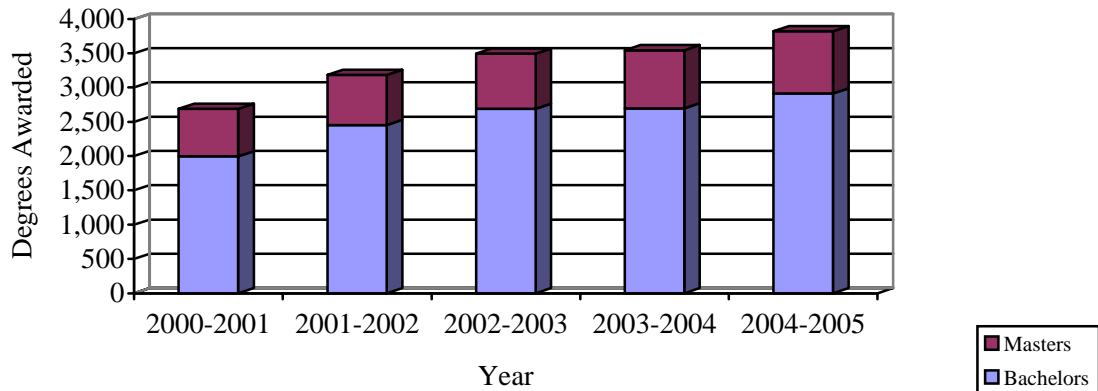


FIGURE 40. DEGREES AWARDED

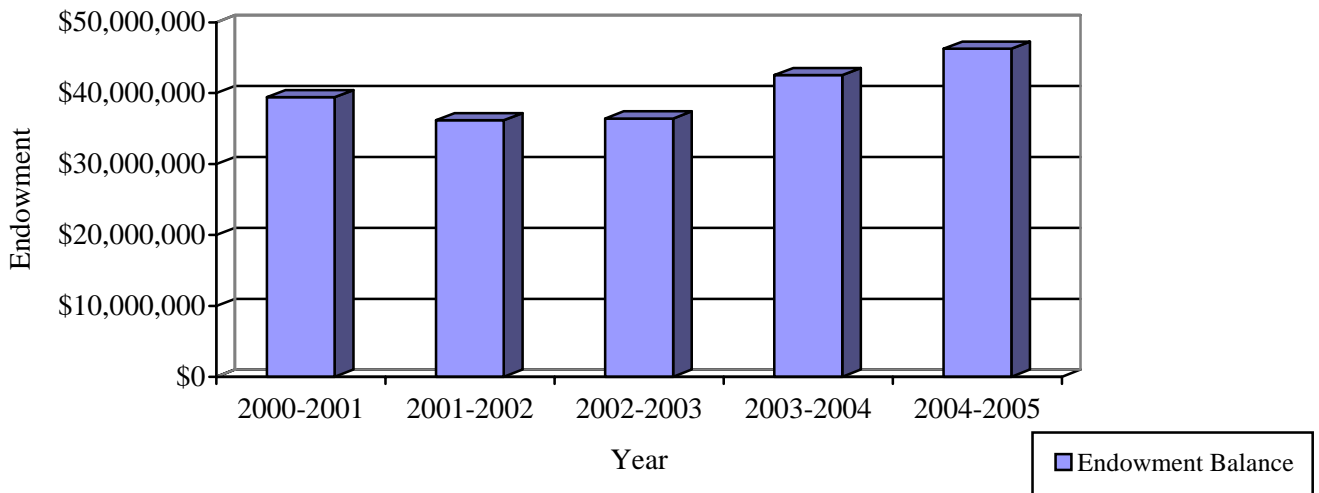


3. ENDOWMENT

The total university endowment has grown from \$40 million in 2000 to \$46 million in 2005. Endowment per student actually fell in that period as enrollment growth outpaced endowment growth and investment earnings were lower than long-term historical averages. That trend has begun to reverse in 2005.

Total endowment is the amount of gifts plus market appreciation less scholarships provided. Since Grand Valley is a relatively young university, we have not had the opportunity to build a large endowment over time as some other public and private institutions have. Endowment plays a growing role today in supplementing the operational budget.

FIGURE 41. ENDOWMENT BALANCE



B. EXPENDITURES

The primary categories of expenditures include instruction and research and academic and student support, which accounts for 55% of expenditures. Operational expenses such as public service, institutional, plant, and depreciation account for 25% of expenses.

1. EXPENDITURES BY CLASSIFICATION

Total expenditures have grown with increased enrollment, and increased level of activity in auxiliary services. The proportion of expenditures going to instruction and research has been relatively steady at 40% while growing in total dollars. There has been a small shift in allocation as expenditures for auxiliary activities and scholarships have grown slightly faster than other expenditures. Expenditures in scholarships have grown to match growth in tuition revenue.

FIGURE 42. EXPENDITURES BY CLASSIFICATION

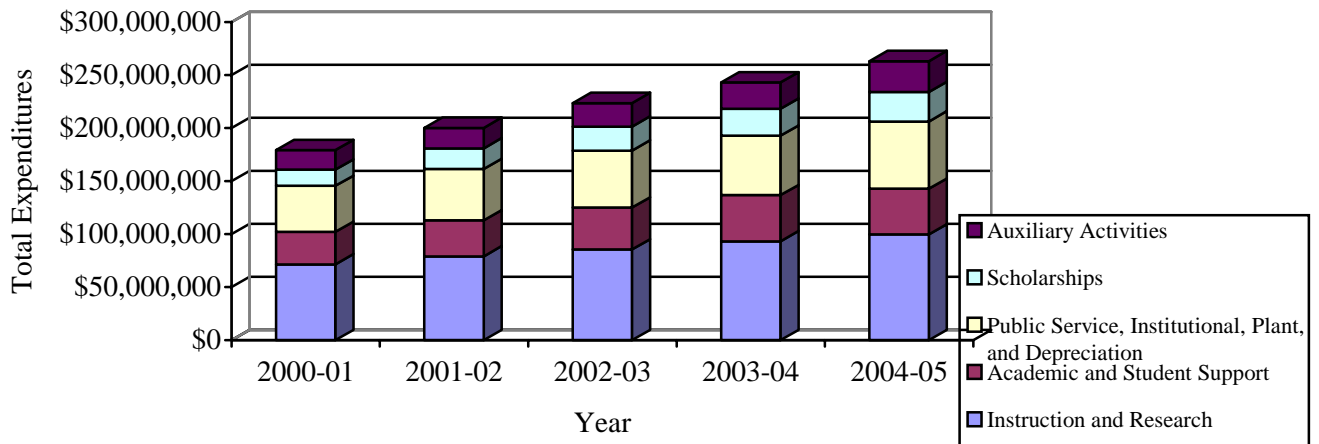
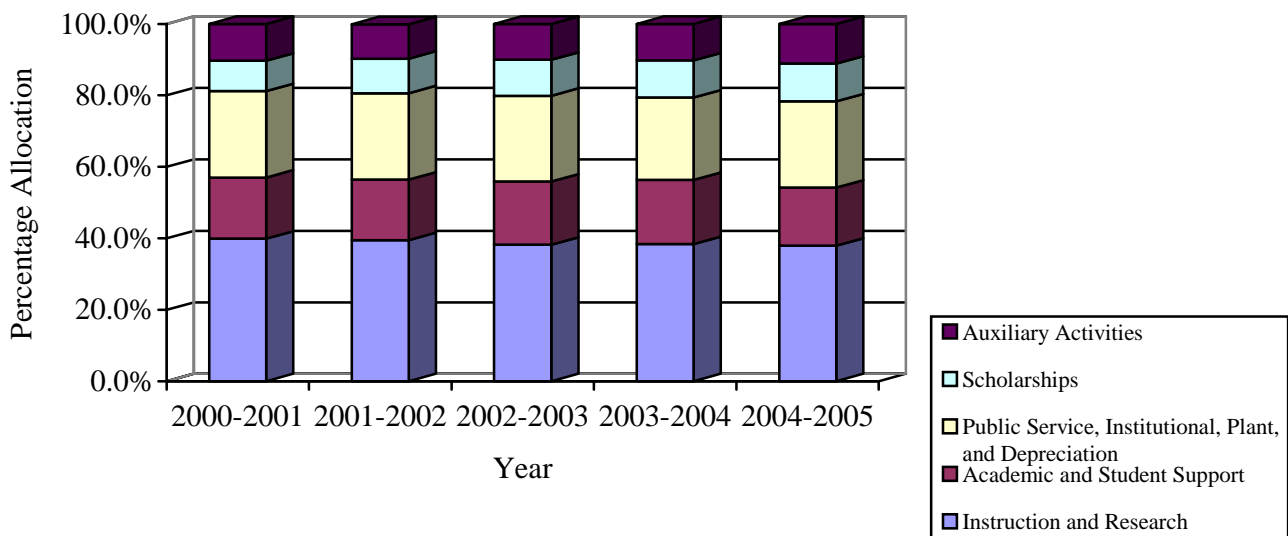


FIGURE 43. PERCENTAGE ALLOCATION OF EXPENDITURES



2. COST PER STUDENT

Growth in the cost per student has remained near the rate of inflation as measured by the Consumer Price Index (CPI) for the last five years. This achievement is particularly difficult to accomplish, given the amount of university expenses in personnel costs, which have grown faster generally than the CPI in the past several years. Utilities, another significant university cost, also has gone up much faster than the CPI.

Overall, the general fund cost per FYES has grown from \$8,271 in 2000-2001 to \$9,528 in 2004-2005. This cumulative increase of 9.8% compares with a CPI increase of 9.4% during the same time period.

FIGURE 44. OPERATING COST PER FISCAL YEAR EQUIVALENT STUDENTS (FYES)

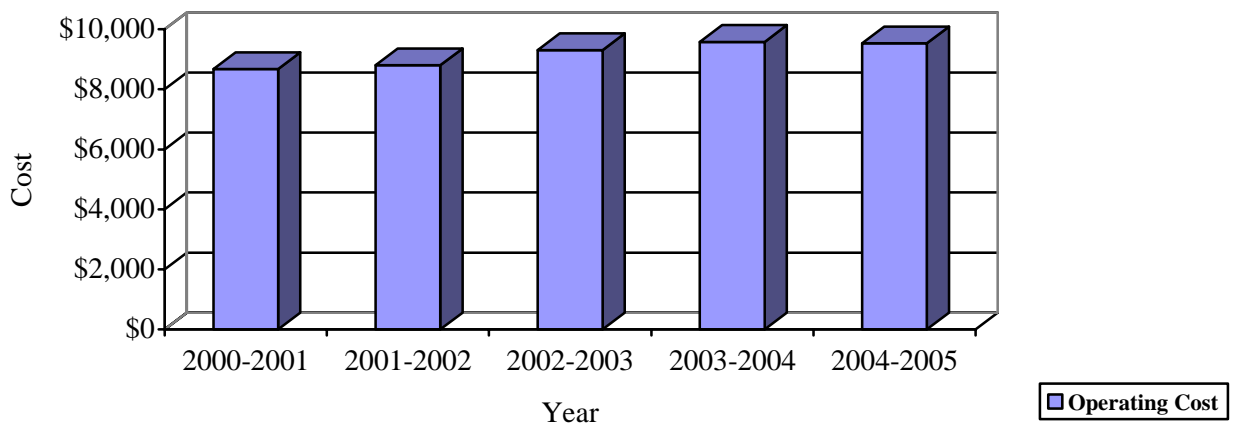
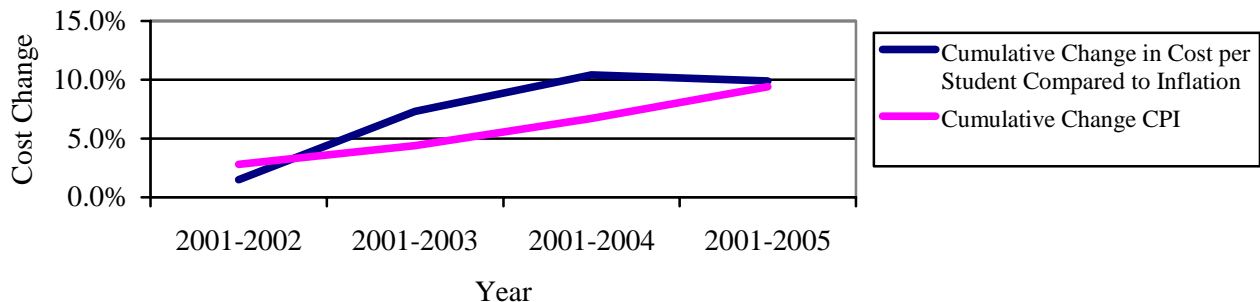


FIGURE 45. CUMULATIVE CHANGE IN COST PER STUDENT COMPARED TO INFLATION



3. SUSTAINABILITY PURCHASING

One of the university's effective means for contributing to sustainability is through green-purchasing. Green purchasing includes the acquisition of recycled content products, environmentally preferable products and services, biobased products, energy- and water-efficient products, alternate fuel vehicles, products using renewable energy, and alternatives to hazardous or toxic chemicals. As a result of our purchasing recycled papers and envelopes, Grand Valley contributes to the conservation of our natural resources. Recycled offsheet papers and envelopes require 10% fewer trees to produce, improve

energy efficiency by 4%, emit 4% fewer GHG emissions, produce 9% fewer hazardous air pollutants, and generate 4% less solid waste and pollution during the manufacturing process.

In addition, MAREC and Lake Ontario Hall (LOH) are examples of LEED sustainability purchasing principles. LOH, the newest LEED building addition to the Allendale Campus, emphasizes state-of-the-art strategies: water savings through water use reduction fixtures, energy efficient materials such as a heat reflective roof, indoor environmental quality and natural lighting such as windows with built-in blinds, and sustainable site development with more than 75% of waste materials produced during construction being recycled.

Green purchasing is a best practice model with a predictable upward trend indicator for sustainability.

TABLE 17. GREEN PURCHASING FOR FY 2005

• MAREC (LEED) Building Project Cost	\$3,445,728
– Building	\$3,245,728
– Furniture, Fixtures, Equipment	\$200,000
• LOH (LEED) Building Project Cost	\$10,917,477
– Building	\$9,600,606
– Furniture, Fixtures, Equipment	\$1,311,471
• Office Supplies/Recycled Products	\$716,903
– Papers and Envelopes	\$375,170
– Toners & Cartridges	\$267,483
– Miscellaneous	\$74,250
• Janitorial Supplies and Equipment/ENERGY STAR Products	\$120,259
– Light Bulbs	\$38,000
– Paper Towel Dispensers (motion sensor and alternative control)	\$14,375
– Paper Products	\$67,884
• Hybrid Vehicle (AWRI)	\$19,794
• Alternative Fuel (80% Diesel and 20% Soy)	\$11,042
	\$15,231,203

C. ECONOMIC DEVELOPMENT

Grand Valley has provided significant economic contributions to the overall West Michigan community through employment for faculty and staff, local purchases made by faculty, staff, and students, as well as in helping to create and fill job positions for graduating students.

Additionally, the university helps create economic vitality in the region through the Grand Valley Business Alliance, which provides training, financial, and consulting services and helps to create new jobs locally.

1. ECONOMIC IMPACT

The total employment directly and indirectly attributed to the university has grown from 8,085 jobs in 2000 to 12,024 jobs in 2004. The number of Grand Valley alumni residing in the state of Michigan

has increased from 36,764 in 2001 to 41,503 in 2004. The university's economic impact has grown to almost \$600 million in 2004 from \$400 million in 2000, an increase of 50%. This significant increase in economic development dollars demonstrates the university's commitment and contribution to the greater Grand Rapids business community and the area's overall economic vitality.

TABLE 18. GRAND VALLEY ECONOMIC IMPACT

Economic Impact (Year)	1999-00	2000-01	2001-02	2002-03	2003-04
Estimated Economic Impact (\$ million)	\$403	\$504	\$536	\$567	\$588
Estimated Employment attributed to University	8,085	19,709	11,400	12,200	12,024

2. GRAND VALLEY BUSINESS ALLIANCE

The overall objective of the Grand Valley Business Alliance is to establish economic vitality for our region through a broad range of entrepreneurial and innovative products, consulting services, and programs for the following:

- Start-up businesses
- Family owned businesses
- Small, medium, and large businesses
- Global trade

The Grand Valley Business Alliance consists of the following organizations at Grand Valley:

- Family Owned Business Institute (FOBI)
- Michigan Alternative and Renewable Energy Center (MAREC)
- Michigan Small Business Technology Development Center (MI-SBTDC)
- VanAndel Global Trade Center (VAGTC)
- West Michigan Science & Technology Center (WMSTI)

The Grand Valley Business Alliance programs have established a number of partnerships, alliances, and collaborations to help extend the university into the community through a broad offering of assistance and services.

The Grand Valley Business Alliance as an entity does the following:

- Represents Grand Valley on over 25 boards, committees, and advisory groups locally, regionally, and nationally
- Collaborates and/or provides support to over 100 different federal, state, and local government entities
- Delivers services to over 50 counties in Michigan
- Delivers training and programming to over 5,000 individuals per year
- Offers counseling/consulting services to over 2,000 companies per year

- Speaks at, co-sponsors, or supports over 200 events across the state per year

As an example, the MI-SBTDC in 2004 helped to create over 175 new jobs and had a capital formation of nearly \$10 million including Small Business Association (SBA) loans.

WEST MICHIGAN SCIENCE AND TECHNOLOGY CENTER (WMSTI)

The WMSTI was created as a SmartZone, designated by the Michigan Economic Development Corporation in 2001 as part of an effort to promote and attract high technology business development in the state. Grand Valley was the only university in the state to be granted two SmartZones—one in Grand Rapids and one in Muskegon. Grand Valley hosts the SmartZone and operates it in a partnership with the City of Grand Rapids, the Right Place, Inc., Van Andel Research Institute, and Grand Rapids Community College.

“The Science and Technology Initiative represents the significant commitment that the City of Grand Rapids and our economic development partners have to growing a pool of jobs in the knowledge-based economy,” said Mayor George Heartwell, City of Grand Rapids.

The Biz Exchange offers technology business resource consultation, coordinated access to funding and capital sources, development of a commercial roadmap, and coordinated access to community resources.

The Tech Exchange represents a clearinghouse for new technologies from corporate research, universities, research institutions and others. The goal is to create a significant pool of emerging technologies for integration into existing West Michigan companies for new market opportunities to create new business enterprises.

The Product Development Center is designed to foster the commercialization of life science and other technology initiatives including state-of-the-art wet labs and office incubator space; highband width wireless communications; video conferencing; and laboratory access including engineering, genetics, cell and molecular biology, medical imaging, bioinformatics, and therapeutics.

In 2004-2005 there have been five company tenants and major clients.

The primary overall initiative has been the BioTech Connect program, which provides educational seminars and workshops on relevant topics such as technology transfer from hospitals and automotive and office furniture company strategies diversifying into life sciences. Coordinated critical infrastructure is also provided for the further growth of the Grand Rapids life sciences industry, such as Internet 2, GMP Laboratory, clean room manufacturing training and others. The West Michigan Science Technology Center Advisory Board includes Van Andel Research Institute, Right Place, Inc., Grand Rapids Community College, City of Grand Rapids, Spectrum Health, Mary Free Bed Rehabilitation Hospital, St. Mary’s Health, and Grand Valley State University.

THE MICHIGAN ALTERNATIVE AND RENEWABLE ENERGY CENTER (MAREC)

MAREC, located in the Muskegon Lakeshore SmartZone on Muskegon Lake, is a prototype for alternative energy technology and research as well as a venture that will attract new businesses to the

region. It is the first fully integrated demonstration facility for distributed generation of electricity using alternative and renewable energy technologies in the U.S. It is also a LEED Gold certified building.

The breakthrough vision that created this world-class research and development facility includes cooperative partnerships with Grand Valley, Michigan Public Service Commission, City of Muskegon, Muskegon Area First, Muskegon Area Chamber of Commerce, Muskegon Area Community Foundation, Muskegon Community College, and the Michigan Economic Development Corporation. These partnership discussions originated in 1999, with the facility opening its doors in November 2003.

The driving force for the development of this facility was the increasing demand for energy, the overall declining oil reserves, and the need for the development of renewable energy applications and sources. Futurists agree that energy use in this century will mirror the “distributed generation” or self-efficient example set by MAREC. In addition, MAREC ensures that Grand Valley will be a leader in developing interdisciplinary alternative energy education and product development programs.

The strategic focus of MAREC is centered on four major initiatives including managing a leading edge facility, implementing visionary energy projects, providing alternative energy education, and supporting the economic development of Muskegon and the state.

The primary technologies that MAREC utilizes include the following:

- High temperature molten carbonate fuel cell that converts natural gas into electricity (~250 KW)
- Nickel-metal hydride battery energy storage system and a microturbine (~30 KW)
- Photovoltaic roof tiles that harness solar electricity (~30 KW)
- Power distribution system

Michigan suppliers of the alternative energy technologies for MAREC include Harding Energy, Unisolar, Ovionics Division of Energy Conversion Devices, and Fuel Cell Energy. MAREC also recently received a \$1 million grant to develop a biomass to electricity electric demonstration plant in Muskegon County.

Alternative energy education is also offered through seminars; training; and conferences for students, professionals, businesses, and community organizations. Several specific education initiatives include the launch of a planned Industrial Technology and Renewable Energy associate’s degree in cooperation with Muskegon Community College. This education program will offer students a real world practical perspective on alternative energy technologies, preparing them for the new manufacturing area.

MAREC also acts as an alternative energy business incubator by attracting high technology business development in Muskegon and the region. The facility has 4,000 sq. ft. of space devoted to incubating businesses that will research and develop alternative energy sources and uses. At present, there are four start-up companies located at MAREC:

- E-Village, LLC: Developing integrated battery/solar/wind products for commercial and residential markets

- JetScrub, LLC: Advanced environmental abatement technology for the semiconductor, flat panels, and emerging white LED world markets
- E-net, LLC: Point of source combined heat and power generation technology for domestic and worldwide markets
- ERT, LLC: Global energy efficiency and recovery technology

MICHIGAN SMALL BUSINESS AND TECHNOLOGY DEVELOPMENT CENTER (MI-SBTDC)

The MI-SBTDC is a statewide network of 12 regional offices that provide services for small businesses that are emerging and growing throughout the state. This center at Grand Valley serves the Region 7 area in West Michigan and is funded through a cooperative agreement with the U.S. Small Business Administration (SBA) and matching funds from local network partners in the region including Grand Valley. The MI-SBTDC network is a grassroots advocate for small businesses working in partnership that has four technology business consultants on staff. Their expertise reflects Michigan’s technology initiatives and needs in five functional areas including life sciences, information technology, advanced manufacturing, homeland security, and energy.

The MI-SBTDC provides the following types of services:

- Counseling, such as one-on-one meetings, with experienced business consultants; developing viable business plans; creating practical marketing approaches; and generating realistic financial goals
- Training, such as workshops and seminars, both for groups and individuals on topics for starting a business, obtaining financing, setting up legal structures, and so forth
- Market research including market size, competition, customer demographics, foreign trade, and so forth

TABLE 19. MI-SBTDC ECONOMIC IMPACT

	2003	2004
Businesses Served	685	737
Hours of One-to-one Council	5,940	4,598
Training Sessions	56	56
Hours of Training	1,679	3,740
Individuals Trained	501	840
Total New Jobs Created	70	178
Women Businesses Served	39%	40%
Minority Businesses Served	22%	20%
Existing Companies Served	52%	49%
New Ventures Served	48%	51%
SBA Loans	\$3,860,000	\$3,504,000
Total Capital Formation (including SBA Loans)	\$9,250,595	\$9,556,354

FAMILY OWNED BUSINESS INSTITUTE (FOBI)

The Center for Free Enterprise is an umbrella center that plans and directs the activities of the Family Owned Business Institute and the Center for Entrepreneurship (CFE) within the Seidman College of Business.

FOBI was formed in 1999 with \$301,000 raised from a cooperative fundraising effort between the Seidman College of Business and the Grand Rapids Chamber of Commerce. The mission of FOBI is to promote, preserve, influence, and impact family businesses through quality academic research, curriculum, and information services.

FOBI's vision is to build a virtual and interoperable network of information that achieves the following:

- Provides coverage of newswires and magazines on a regular basis
- Utilizes fully the resources available on the Web by providing links to Web-related sources
- Allows for the customization of research and information
- Builds a comprehensive database of profiles for family owned businesses in the U.S. and around the world

Here are the primary activities of FOBI for 2004-2005:

- Developing research to an extended international group of researchers in addition to the Seidman College
- Enhancing the Institute's Web presence including frequently asked questions (FAQaAs)
- Integration the web presence with four international organizations
- Developing hosting Family Firm Institute publications
- Supporting regional and national family business organizations

FOBI has honored 12 family owned businesses over the years by inducting them into the Family Owned Business Hall of Fame including Alticor, Bissel, D and W Foods, Gordon Food Service, Haworth, Howard Miller, Irwin Seating, Lorin Industries, Meijer, Monarch Hydraulics, Padnos Iron and Metal, and Steelcase.

VAN ANDEL GLOBAL TRADE CENTER (VAGTC)

The mission of the VAGTC is to provide the West Michigan community with training, education, and assistance that enables companies to succeed globally. The VAGTC is a full-service international assistance organization that is dedicated to exceeding the expectations of its clients by raising the bar and "shortening the distance between you and the world."

The VAGTC focuses on the following services for its clients:

Consulting including the following:

- Exporting services such as business planning and market identification, lead generation and partner identification, export compliance and documentation, market entry and distribution development, and service provider team development
- Importing services such as sourcing identification and solution development, import process and compliance, and shipping and logistics solutions
- Foreign expansion such as market research and evaluation, supply chain solutions, in-country logistics, labor, and site development, and partner identification

Training includes a full range of seminars, certificate programs, and special events for the novice as well as sophisticated international business person. Programs are offered quarterly, provide a high take-away value, and include these features:

- Technical trade training
- Regional/country specific training
- Global trade management training
- Networking events

Custom/contact training such as specific skill-set training is provided to groups of six or more, as well as facilitated problem solving, custom training, and cross discipline training using world-class instructors and facilitators.

Global resources such as the Global Resource Specialist offer a list of qualified service providers, interactive databases, instant access help line, over 600 Web links to international Web sites, and an on-site research staff.

Additionally, the Web site www.vagtc.org provides the most up-to-date information on international business including international Web links, instant access help line, on-line registration, international news and information, and a listing of current programs and services.

NAFTALink is an additional resource center of excellence focusing on Michigan's top two trade partners--Mexico and Canada. NAFTALink services include partner identification and development, strategic market entry analysis, certification and documentation, resources and logistics, market facilitation, and compliance evaluation.

3. GRAND VALLEY ALUMNI IN TRI-COUNTY AREA

Grand Valley contributes to the economy of West Michigan and the state of Michigan through employment of its graduates. More than 68% of recent graduates work in West Michigan and over 86% work in the state of Michigan. Assuming the average salary of \$36,250, the value of Grand Valley graduates to the state of Michigan is approximately \$109,765,000, and approximately \$86,673,750 to the West Michigan community.

FIGURE 46. GRAND VALLEY ALUMNI

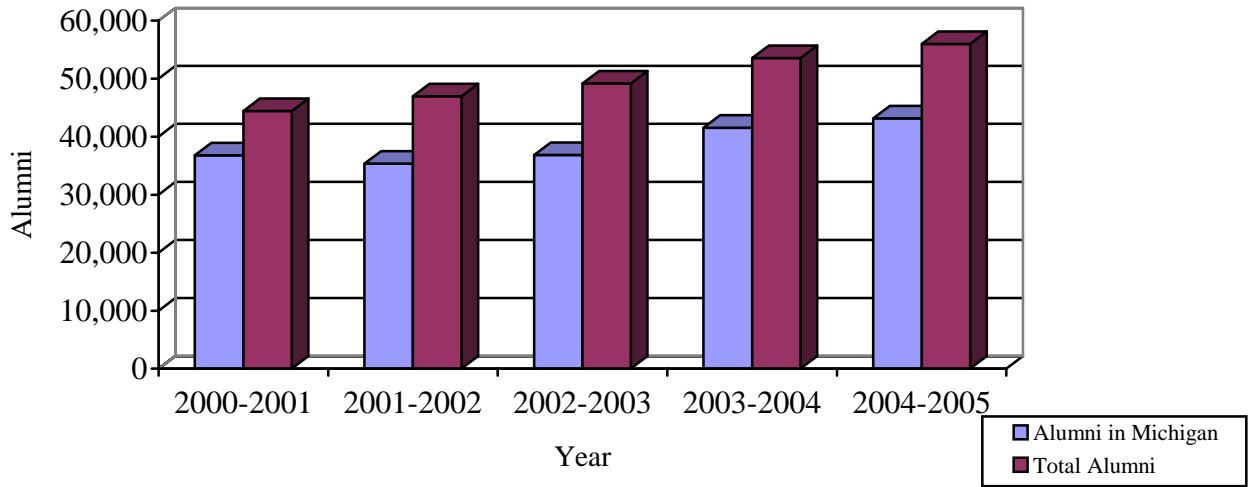
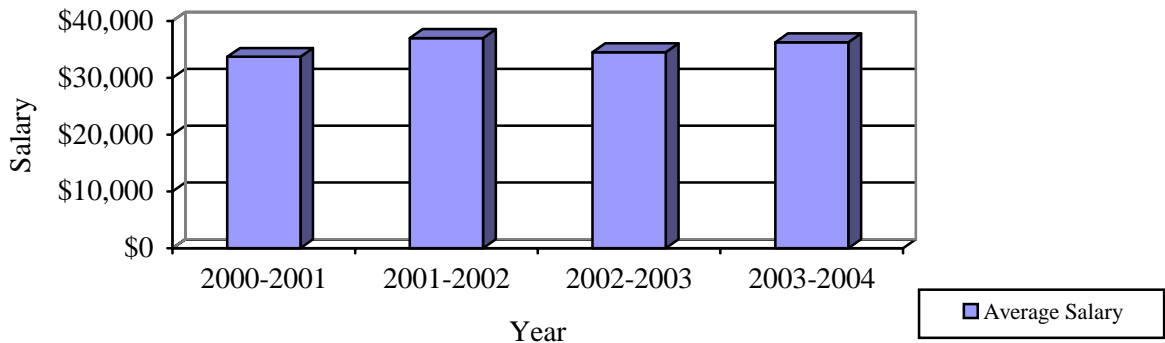


FIGURE 47. AVERAGE SALARY



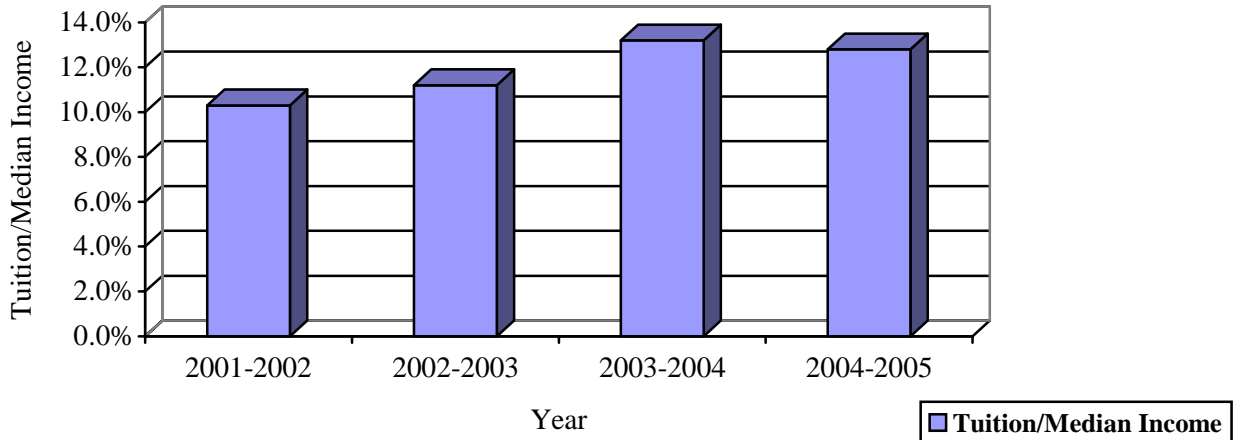
D. STUDENT EDUCATION AFFORDABILITY

Tuition has increased faster than the Consumer Price Index (CPI) or personal income. This trend is a direct result of declining state support over the past two decades. Concern has been expressed regarding student education affordability. Is the university remaining accessible and affordable to a broad and diverse student population? Universities have responded by increasing the availability of financial aid. At Grand Valley, financial aid has increased at a faster rate than tuition.

1. TUITION COSTS VS. MEDIAN INCOME LEVELS

Based on a two-year trailing median income, tuition as a percent of Michigan median income has increased from 9.3% in 2000-2001 to 12.8% in 2004-2005. This is a disturbing trend and is the result of increasing tuition rates and decreasing median income over the last five years. Tuition rates have increased 7.4% per year while Michigan median income has decreased 0.2% per year. The economic malaise in Michigan has had the effect of reducing personal income and tax revenues used for state support of higher education.

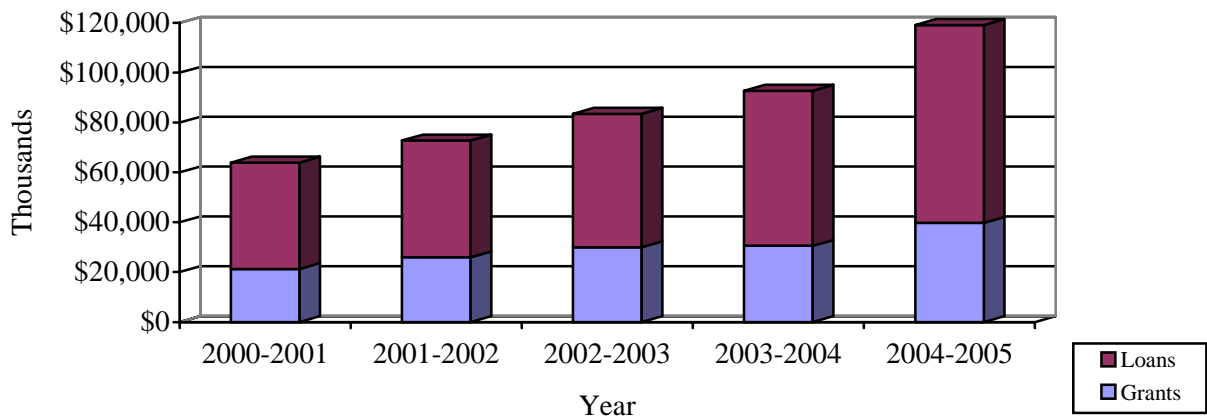
FIGURE 48. TUITION AS PERCENT OF MEDIAN INCOME



2. AMOUNT AND TYPE OF FINANCIAL AID

Fortunately, university expenditures on financial aid, as well as financial aid from other sources, have grown to assist students with their tuition bills. Financial aid, including grants and loans, has increased from \$65 million in 2000-2001 to \$120 million in 2004-2005, an increase of 85% during this time frame. Tuition revenue increased from \$78 million to \$130 million in the same time period, an increase of 67%. Only through these increases in financial aid have students been able to continue their education.

FIGURE 49. FINANCIAL AID



2. FINANCIAL AID AS PERCENT OF GROSS TUITION

Financial aid as a percent of gross tuition has increased from 84% in 2000-2001 to 93% in 2004-2005. The most dramatic change occurred from 2003-2004 to 2004-2005, with an increase of 14%. There was a slowing of grants in 2003-2004 and then an acceleration in 2004-2005 that occurred in part due to changes in the timing of payments from the State of Michigan Merit awards.

The amount of financial aid from loans as a percent of total financial aid has stayed relatively constant at approximately 66% during the 2000-2001 to 2004-2005 time frame. Even though this percentage has remained relatively constant, the absolute level of student debt has increased and the average student is graduating with higher debt load.

FIGURE 50. FINANCIAL AID AS PERCENT OF GROSS TUITION

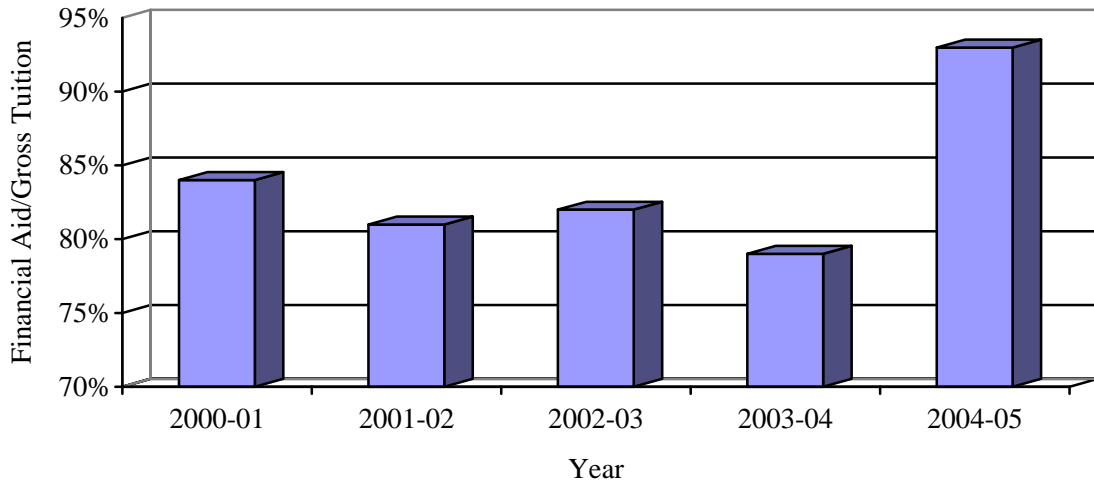
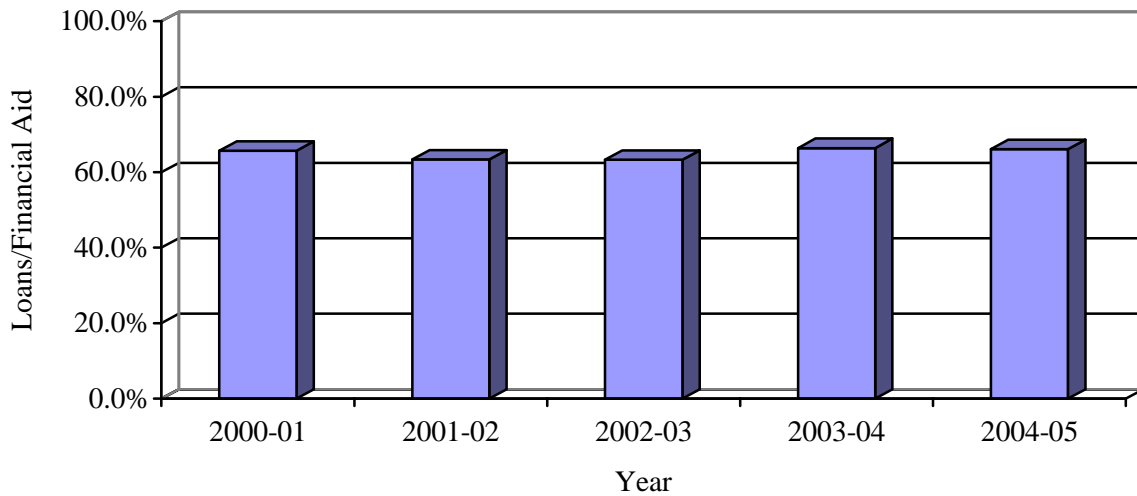


FIGURE 51. LOANS AS A PERCENT OF TOTAL FINANCIAL AID



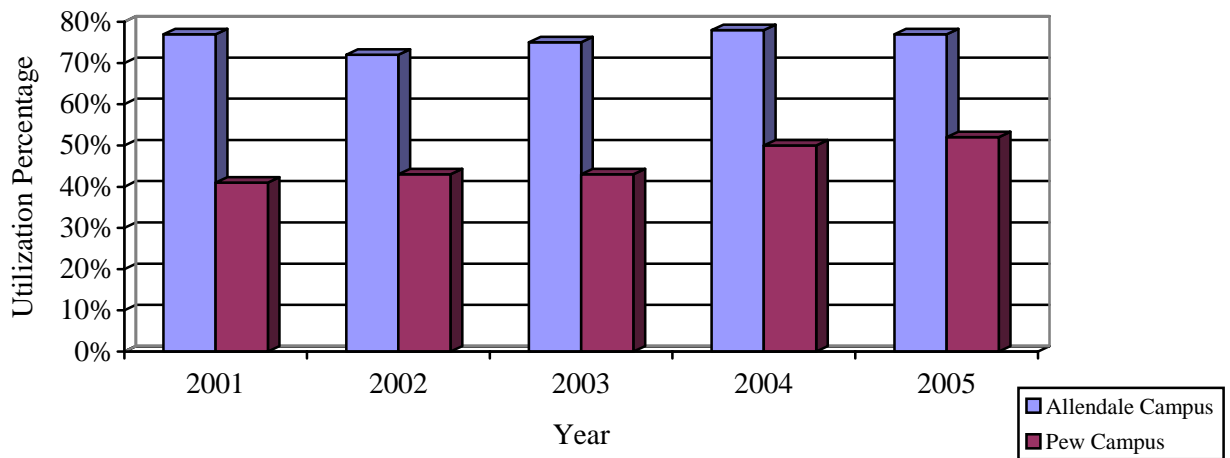
E. UTILIZATION OF ASSETS

Utilization of existing assets including classrooms, buildings, housing, and overall facilities is an important area of focus for the university. The university wants to ensure that utilization rates for these overall facilities ensure their efficient and productive use, as well as address capacity concerns when these rates are significantly high.

1. CLASSROOM UTILIZATION

Daytime classroom utilization rates are measured as the number of classrooms in use weekdays between the hours of 8 a.m. and 6 p.m. In Allendale, utilization has approached 80% three of the past five years. This data suggests that classrooms are essentially full during the prime hours of 9 a.m. to 4 p.m. with some capacity for additional classes at 8 a.m., after 4 p.m., or on Fridays. The Pew Campus has some spare capacity during the day and is substantially full in the evening hours. This data suggests that additional enrollment growth would have to be accommodated by either additional investment in classroom buildings or additional movement of classes to the Pew Campus, or by scheduling more heavily in non-traditional hours.

FIGURE 52. CLASSROOM UTILIZATION RATE 8 A.M. TO 6 P.M.

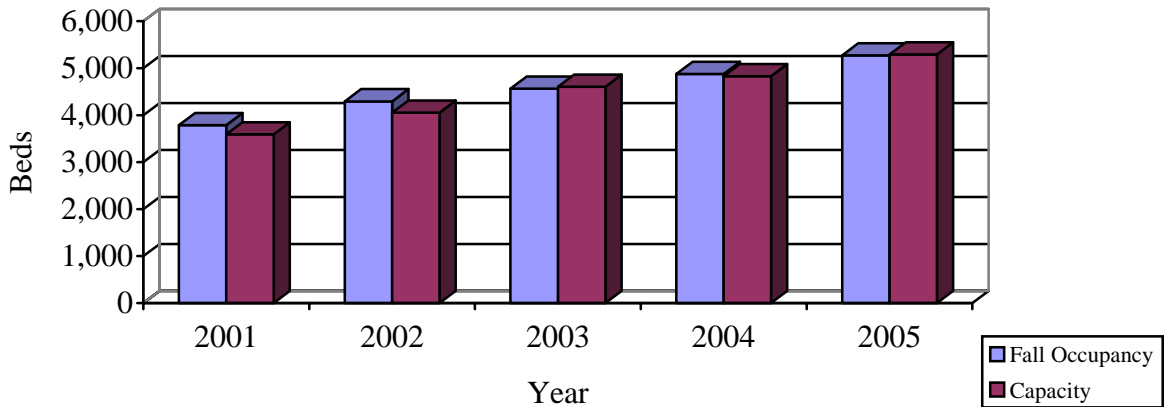


2. HOUSING UTILIZATION

Housing historically has run at full capacity for the past ten years or longer. Capacities at that high level are indicative of housing shortages and the inability of students to live on campus. The university on-campus housing system has grown from a capacity of 1,713 beds in 1996 to a current capacity of 5,292 beds in 2005, an increase of ~210%. Greater than 100% utilization rates are achieved by placing additional students in rooms and using student lounges.

Over the last five years the university on-campus housing system has grown from 3,593 beds in 2000-2001 to 5,292 beds in 2004-2005, an increase of 47%. During the most recent five-year period, the on-campus housing utilization rate has ranged from 100%-105%.

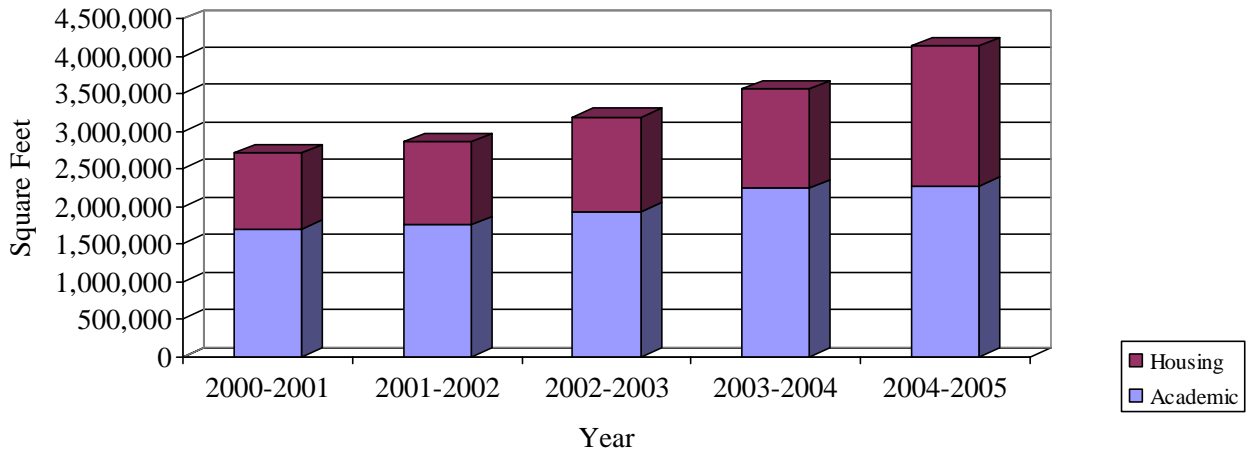
FIGURE 53. HOUSING OCCUPANCY AND CAPACITY



3. NUMBER OF SQUARE FOOT BUILDINGS/LAND

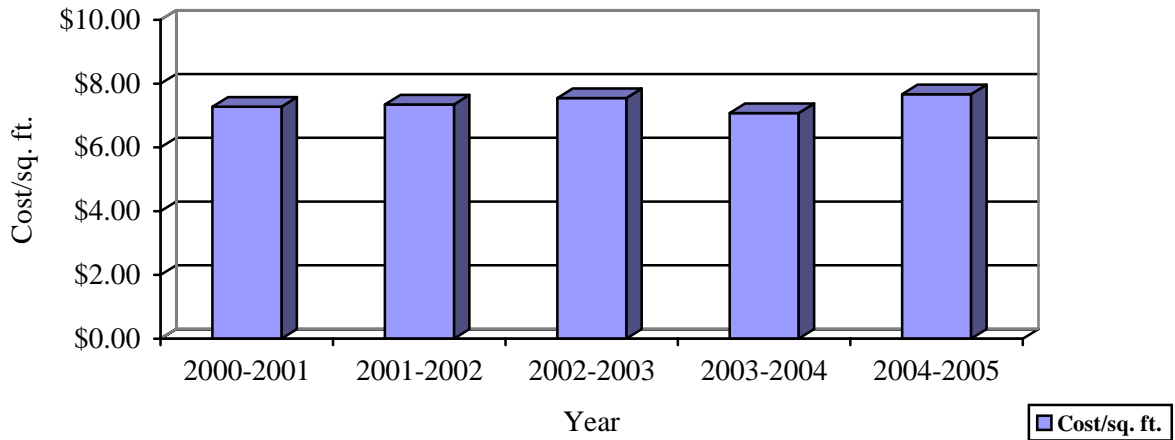
Total square feet has grown and increased faster than enrollment, from 2,708,057 square feet in 2000-2001 to 4,124,573 in 2004-2005, an increase of 52%. Academic square feet has grown from 1,692,084 square feet to 2,618,038 square feet during this same five-year period, an increase of 55%. When compared with other universities in Michigan, academic square feet per student is 20% below the average. Housing square feet has increased 36% from 1,015,973 sq. ft. in 2000-01 to 1,506,535 in 2004-05. The university can house about 28% of the undergraduate students on campus.

FIGURE 54. TOTAL BUILDING SQUARE FEET



The cost of maintenance per square foot has increased 6% over five-years from \$7.28 in 2000-2001 to \$7.67 in 2004-2005, which illustrates the efficiency of the university in the maintenance and upkeep of its buildings and facilities.

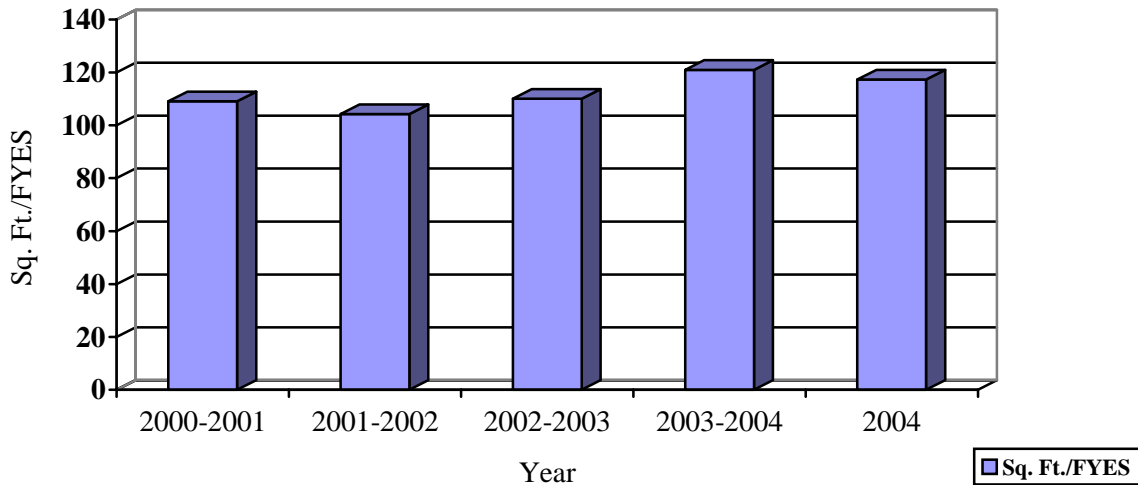
FIGURE 55. FACILITIES OPERATIONAL COST PER SQUARE FOOT



4. ACADEMIC SQUARE FEET BY STUDENT

Academic square feet per FYES basis has grown from 109.1 square feet in 2000-2001 to 117.3 square feet in 2004-2005, an increase of 8%. This ratio remains significantly below the average public university in Michigan.

FIGURE 56. ACADEMIC SQUARE FEET PER FYES



F. CAPITALIZATION

Grand Valley looks at the overall capitalization of the university including bonds, debentures, debt, surplus, and so forth to ensure that the university is fiscally viable and accountable as an institution.

The university desires to remain in a strong economic position with the continuing capability to invest in future business and educational opportunities as they arise and create additional value for the university.

1. DEBT STRUCTURE

Total debt has increased from \$84 million in 2000-2001 to \$165 million in 2004-2005, an increase of 96%. The rate of the university's debt to capital assets has increased from 29% to 36%, which is primarily due to investments in housing and is acceptable given the large quantity of new housing units. Of the total \$165 million debt, \$147 million or 89% relates to auxiliary operations. Capital assets have increased from \$289 million in 2000-2001 to \$452 million in 2004-2005, an increase of 56%.

TABLE 20. DEBT STRUCTURE

	2000-01	2001-02	2002-03	2003-04	2004-05
Capital Assets net of Depreciation (\$ million)	\$289	\$337	\$382	\$433	\$452
Outstanding Bonds (\$ million)	\$ 84	\$110	\$122	\$143	\$164
Debt to Capital Assets (%)	29%	33%	32%	33%	36%

2. CREDIT RATING

A credit rating is the result of detailed analysis of revenue and expense trends over a number of years as well as financial health based on assets and liabilities. Grand Valley has enjoyed a strong financial position and as such, enjoys a rating of A+ from Standard & Poors.

Standard & Poors has included in its ratings letter favorable comments about the university's strong demand, favorable financial statistics, and strong leadership.

IX. Conclusions and Observations

As we reflect back upon the year it has taken to generate our first sustainability report, Grand Valley is encouraged by the journey it has taken during this time frame. The university has learned a great deal about what activities and programs have already been ongoing on campus that support the framework of sustainability. A significant amount of available data has helped define our current progress. Additionally, many faculty and staff supported this undertaking and provided significant contributions. New conversations, discussions, collaborations, and relationships were established along this pathway and will continue into the future.

We realize that with this report we have created an increased awareness on campus about sustainability among faculty, staff, and students as well as within the community. Although we have tried to be balanced and thorough, we know there are some areas regarding sustainability we have not addressed. We also recognize that there may be some informational gaps and realize that we will need to improve in some areas that are addressed. We remain committed to a collaborative input and process for the future that will help develop additional sustainability areas of importance as well as corresponding indicators for our next report.

We welcome your input, feedback, and comments. Sustainability issues involving the economy, environment, and social equity are interconnected, interrelated, and complex. Grand Valley's mission is to educate our students to shape their lives, their professions, and their societies and help them address these global sustainability issues as the citizens of tomorrow.

Please provide your comments to:

Norman Christopher
Director, Sustainability Initiative
224B LOH
One Campus Drive
Allendale, MI 49401
(616) 331-7461
chrisfn@gvsu.edu

X. Appendix

Table 4 – Grand Valley Total Campus Incident Rate

Liquor Law: Prohibits the manufacture, sale, purchase, transportation, possession, or use of alcoholic beverages.

Drug Abuse: Prohibits the production, distribution, and/or use of certain controlled substances and the equipment or devices utilized in their preparation and/or use.

Table 12 – Campus Crime Rates

Murder: The willful (non-negligent) killing of one human being by another.

Negligent Manslaughter: The killing of another person through gross negligence.

Non-negligent Manslaughter: The willful, non-negligent killing of a human being by another. As a general rule, any death due to injuries received in a fight, argument, quarrel, assault, or commitment of a crime.

Forcible Sex Offense: Any sexual act directed against another person, forcibly and/or against that person's will, or not forcibly or against the person's will where the victim is incapable of giving consent due to age and mental impairment.

Non-forcible Sex Offense: Unlawful, non-forcible sexual intercourse consisting of person(s) who are related to each other or who are under statutory age of consent.

Robbery: The taking of money and/or other valuables under the threat of physical harm or force, with or without a threat.

Aggravated Assault: An unlawful attack by person(s) upon another for the purpose of inflicting severe or aggravated bodily injury.

Arson: Any willful or malicious burning or attempting to burn with or without intent to defraud a dwelling, house, public building, motor vehicle, aircraft, or personal property of another.

Burglary: The breaking and entering, with no personal threat involved and usually no confrontation between burglar and victim.

Larceny: The act of stealing, in which neither illegal entry nor the threat or use of force is present.

Motor Vehicle Theft: The theft or attempted theft of a motor vehicle.

Weapons Possession: The violation of laws prohibiting the possession, concealment, and use of a firearm or other deadly weapon.

VI.B.1. Education, Curriculum, and Courses Containing Sustainability Subject Matter or Content

College of Interdisciplinary Studies

- AAA 202 African Diaspora (Social Justice)-examines the history and culture of African societies through the world and the cultural continua of African forms in the New World.
- AAA 315 Field to Factory: African American Migration (Social Justice, Economic)-examines consequences of African migration from the rural South to the industrialized North.
- AAA 340 African American Culture and Social Thought (Social Justice)-examines cultural ties between Africans and African-Americans.
- ANT 370 Cross-cultural Perspectives on Gender (Social Justice)-examines gender as a fundamental organizing theme of culture, as well as the socio-cultural basis for gender differences. Discusses how gender relations affect all other aspects of human life.
- EAS 201 East Asia in the Contemporary World (Social Justice)-prepares students for encountering East Asia in various ways.
- ECO 350 Gender and Economics (Social Justice, Economic)-analyzes gender differences in employment and earnings and the impact of these differences on culture and governmental programs.
- HNR 231 The Holocaust (Social Justice)-examines the Holocaust, a “watershed event” that Yehuda Bauer argues represented “something radically new” in history and that changed “human perspective.”
- HNR 232 Trauma, Culture, Memory (Social Justice)-focuses on collective traumatic events that impact large numbers and/or specific groups of people within a particular cultural setting.
- HNR 235 Democracy and Political Thinking (Social Justice)-explores the notion of political judgment in two ways. One approach will be to stand on the shoulders of many thinkers who have worked on the vexing problems of life in political community, especially those who seek to connect political judgment to democratic self-governance.

- HNR 241 The Earth, A Global View (Environment)-engages the students in scientific inquiry and develops a sense of discovery of the Earth system in which we live. One section of this course includes a trip to the Canyon lands region.
- HNR 245 Microbes and Society (Environment)-addresses the fundamental nature of microorganisms, microbial diversity, microorganisms as agents of disease, the role of microorganisms in the biosphere, and the utilization of microorganisms by humankind.
- HNR 311 Consumer Culture and Society (Economics)-reviews key theoretical perspectives on the nature and meaning of consumption as well as recent research on consumer culture in the U.S. and abroad.
- HNR 331 Culture and the Holocaust (Social Justice)-examines the Holocaust's effects on Europeans and on American culture. Likely areas of study will include literature, art, film, theology, architecture, and philosophy.
- HNR 380 Intervention and Response to Genocide (Social Justice)-devoted primarily to the examination of how, when, and why individuals, countries, and the world have responded to these catastrophic events in order to analyze various nations' responses to them, including that of the United States.
- LAS 210 Exploring Latin America (Social Justice)-examines the cultural interrelationship between Latin America and the United States.
- LAS 475 Latinos in West Michigan (Social Justice, Economic)-surveys the dynamic world of Latinos in the region and guides students through a research project documenting their experiences, achievements, and challenges.
- LIB 311 Meaning: The Humanities Resource (Social Justice)-studies, through various resources, the nature of human values.
- LIB 314 Life Journey (Social Justice)-studies life development as found in literature and other expressions of various cultures.
- LIB 325 Understanding the Gay Life Cycle (Social Justice)-studies the gay life cycle, focusing on issues of identity, relationships, and society.
- LIB 345 War in the Nuclear Age (Social Justice, Economic)-studies how the threat of nuclear war has influenced relations between nations.
- LIB 350 The Immigrant Experience in the U.S. (Social Justice)-studies the social and cultural adaptations of people who have migrated to the U.S., and how immigrants shape U.S. culture.
- LIB 373 American Society and Mass Culture (Social Justice)-emphasizes the interactive relationship between the mass audience and mass culture.

- LIB 400 Visionary Thinkers (Social Justice, Economic)-focuses on the life and work of a significant contributor to U. S. culture.
- LIB 401 Visionary Thinkers in the American Mosaic (Social Justice, Economic)-focuses on the life and work of a significant contributor to the American mosaic and thereby the United States' vision of diversity.
- MES 201 Introduction to the Middle East (Social Justice)-introduces students to the variety and complexity of the Middle East.
- SOC 323 Families in Society (cross-listed with WGS) (Social Justice)-fulfills U.S. diversity theme; teaches basic concepts in family in society.
- SOC 379 Love, Sex, and Gender (cross-listed with WGS) (Social Justice, Economic)-part of Gender, Society and Culture theme – considers socio, economic, and political values of love, sex, and gender.
- SOC 381 Class, Race, Gender, and Sexuality (Social Justice, Economic)-studies the relation of class, race, gender, and sexuality to life opportunity, privilege, and inequality.
- SOC 383 Sociology of Women (Social Justice)-examines the social and cultural construction of gender differences and sociological theories of gender from both a historical and contemporary viewpoint.
- WGS/SS 351 Family and Gender in the Developing World (Social Justice)-examines the impact of development on families and gender roles in third world countries.
- WGS 380 Special Topics in Women's Studies (Social Justice, Economic)-pursues advanced study related to women's roles in society.
- WRT 351 Writing for the World Wide Web (Social Justice, Economic, Environment)-teaches writing for world wide audiences.

College of Liberal Arts & Sciences

- BIO 105 Environmental Science
Study of natural ecosystems, their interrelationships, and human impacts; evolution of humans and environmental determinants of their cultures; land use, resource and energy utilization, population trends and causative factors, air and water pollution, and economic factors influencing decision-making are emphasized.
- BIO 215 General Ecology
Includes elements related to ecosystem sustainability from a biological perspective.
- BIO 338 Environmental Ethics
Examines the values, ideas, and technologies that humans have used, are using, and may use in the future with respect to environmental issues.

- BIO 362 Fisheries Biology
Includes elements related to the sustainability of sport and commercial fisheries.
- BIO 460 Terrestrial Ecosystem Ecology
Investigates the structure and function terrestrial ecosystems and the potential for anthropogenic changes.
- BIO 470 Conservation Biology
Theoretical concepts and research applications in the multidisciplinary and applied science of maintaining the planet's biodiversity at the genetic, species, and ecosystem levels.
- BIO 680 Emerging Issues in Water Resources
Discusses the ecological, social, and economic aspects of today's water resources.
- BIO 680 Wetland Ecology
Identifies critical issues facing wetlands ecology and management.
- CHM 102 Chemistry and Society
Several chapter in the text cover the chemistry of environmental issues, such as pollution, water resources, energy, etc. This is a GenEd course suitable for anyone.
- CHM 321 Environmental Chemistry
A study of the chemistry of our environment and the chemistry underlying our environmental problems. This is an upper-level chemistry course suitable for chemistry minor, majors, or student with the CHM 231 prerequisite.
- Geo 305 Resource Exploitation in the Third World
Numerous nonrenewable fuel (energy) and non-fuel (mineral) resources are exported from developing countries for use by industrialized nations. This course examines the relationship between geology, location, and production/exportation of third world resources by developed nations and the implications of resource depletion.
- Geo 300 Earth and Environment
Detailed examination of interactions and connections between people and their geologic environment from an Earth systems (the lithosphere, atmosphere, hydrosphere, and biosphere) perspective. We investigate complex environmental processes and issues. Students will develop and defend informed decisions concerning natural resources and hazards, industry, personal, corporate, and governmental actions, and global change.
- NRM 150 Introduction to Natural Resources
Survey of natural resource issues and environmental problems. A foundation for understanding past, present, and future natural resource issues.

- NRM 395 GIS Applications in Resource Management
Evaluates the use of GIS in natural resource management. Case studies include watershed analysis, environmental impact of timber sales, habitat loss, and endangered species conservation.
- NRM 410 Environmental Impact Assessment
Historical, legal, and administrative aspects of impact statements.
- NRM 451 Natural Resource Policy
Study of how natural resource policy is developed and implemented in the U.S.
- NRM 452 Watershed and Wetland Management
Theory and application of wild land and urban hydrology, including the values of watershed and wetlands as domestic ecosystems.
- NRM 462 Forest Ecosystem Management
Traditional forestry practices will be introduced, with emphasis on how established practices can be integrated with the concepts of sustainable forestry and ecosystem management.
- NRM 484 Land Reclamation
Concepts and processes used in land reclamation.
- NRM 495 Trends in Natural Resource Management
A comprehensive and integrative analysis of the fundamental assumptions, issues, and problems of natural resources management.
- NRM 680 Advanced Watershed Management (Koches)--identifies critical issues facing watersheds and how to develop management plans to address these issues
- PLS 212 Great Decisions
Although the themes change yearly (the course is part of a national lecture series), there is usually one week devoted to global environmental issues. For example, "Global Water Issues" was last week's lecture topic.
- PLS 327 Politics of Developing Countries
Sustainable economic development is a central theme of the course.
- SCI 225 Integrated Life Science for K-8 Teachers
- SCI 226 Integrated Physical Science for K-8 Teachers
- SCI 319 Science in Elementary Teachers
- SCI 495 Teaching Science in the 21st Century
- SCI 580 Special Topics in Science and Mathematics

- ACC 212 Principles of Financial Accounting.
Introduction to Financial Accounting. Emphasizes the importance of accounting information, how accounting information is produced, and how this information is used in making decisions about organizations.
- ACC 213 Principles of Managerial Accounting.
Examines the development and use of accounting information for planning, control, and decision-making in today's fast-changing business environment. Cost behavior analysis, ethics, activity-based costing (ABC), budgeting, variance analysis, balanced scorecards, relevant costs for decision-making, pricing, and total quality management are examined
- ACC 308 Governmental and Non-for-Profit Accounting.
Accounting and auditing principles for governmental and non-for-profit entities.
- ACC 310 Intermediate Accounting I.
Theory and application of financial accounting. Topics include the accounting cycle, development of accounting standards, financial statement presentation, basic asset/liability/equity transactions, revenue recognition, and the time value of money.
- ACC 311 Intermediate Accounting II.
Continuation of theory and application of financial accounting. Topics include basic accounting for assets, liabilities, equity, convertible debt, deferred taxes, leases, pensions, accounting changes, and the cash flow statement.
- ACC 317 Individual Income Taxation.
Consideration of the basic theory and practice applicable to the determination of the taxable income of individuals. The course will cover the individual income tax formula including the determination of income, the role of deductions and credits, and simple and complex property transactions.
- ACC 318 Entity Taxation.
Introduction to tax characteristics of various type of business entities including C and S corporations, partnerships, and limited liability companies. Topics covered include the tax consequences of entity formation, distributions, operations, and liquidations. The course will also cover federal estate and gift taxation.
- ACC 321 Cost Strategy and Decision Making.
This course will examine cost accounting activities such as activity-based costing (ABC) and activity-based management (ABM), special analysis for decision-making, product and service pricing, cost-volume-profit analysis, flexible budgeting, strategic analysis, theory of constraints, transfer pricing, capacity management, performance evaluation and sales, profitability, mix, yield, and productivity variances.
- ACC 322 Cost Systems and Control Techniques.
This course will examine cost accounting topics such as product cost determination, cost estimation using regression analysis, costing systems such as job costing, process costing, and standard costing, cost allocation techniques, joint cost allocations, and master budgets.

- ACC 330 International Accounting.
Survey of the major differences between accounting systems around the world and the business practices and environments within which these systems developed and function today. Basic study of the accounting issues affecting multinational companies, including consolidations, price changes, and inflation, foreign currency transactions and translation, transfer pricing, and international taxation.
- ACC 340 Accounting Systems.
A study of automated systems of processing data for accounting information. The accounting system is discussed from the perspective of developing and maintaining systems capable of producing information for internal decision-making and external reporting. Hands-on experience may include general ledger, ERP, flowcharting software and other relevant computer technology.
- ACC 341 Project Management.
This course incorporates the theory of how to manage projects, especially accounting projects, into actual practice. The course covers the fundamentals of project management using current software. Topics include integration management, costing, quality, collaboration, project life cycles, control, risk management, procurement, evaluation, and other essential topics.
- ACC 413 Internal Auditing.
This course covers the special areas of internal auditing. Topics include auditing of information systems, operational audits, management reports, staffing, and other essential topics.
- ACC 416 Information Systems Auditing.
This course covers the theory and practical application of information systems audit and control. Topics include authoritative information technology control frameworks, computer security, continuous auditing, and audit approaches to new and emerging technologies such as electronic commerce, the Internet, client/server networking, and enterprise systems.
- BUS 101 Introduction to Business.
Introduces the disciplines of Business Law, Marketing, Management, Finance, Accounting, and Economics; seeks to synthesize them into a general view of business; and briefly explores business careers.
- BUS 201 Legal Environment for Business.
The legal, regulatory, and ethical environment in which business operates is explored, with emphasis on the regulation of business, international law, environmental law, ethics, the political and social factors influencing case and statutory law, contracts, employment law, and business organizations.

- ECO 100 Current Economic Issues.
Examination of current social issues from an economic perspective, such as drugs, rent control, environmental pollution, poverty, crime, and the distribution of medical care. Recommended for students interested in current issues.
- ECO 200 Business Economics.
Analysis of business issues, including: demand and market pricing strategies, supply and production costs, profit maximization of firms in different markets, monetary and fiscal policy, and business cycles.
- ECO 210 Introductory Macroeconomics.
Introduction to the study of the national and global economies. Topics include the effects of government taxation and budget deficits on economic growth; ways to alleviate unemployment, inflation and international trade imbalances, and the importance of expectations and decision-making in an uncertain world.
- ECO 211 Introductory Microeconomics.
Focuses on the interactions among households, producers, and governments in market economies. Applies fundamental methods of economic analysis to topics such as household spending and saving patterns; producer pricing, profits, and organization; wages and income distribution; investment decisions; health care and insurance; government taxes, spending, and regulation of markets.
- ECO 312 Applied Microeconomics.
Applies microeconomic analysis to business, personal, and public decisions. Topics include business cost and output decisions; consumer demand; pricing and allocation of goods, services, labor, and other resources in competitive markets; strategic pricing across markets; impact of government policies, services, taxes, and regulations on market operations.
- ECO 313 Business Cycles and Growth.
Topics include analysis of economic fluctuations and their impact on corporations and consumers; different explanations for business cycles; monetary and fiscal policy for stabilizing economic fluctuations; effects of public debt, investment, employment, and trade policy on economic growth.
- ECO 330 Sports Economics.
Examination of economic issues pertaining to professional and collegiate sports, including analysis of industrial organization and antitrust issues, labor relations, discrimination, and the impact of franchises on local economies.
- ECO 341 Economics of Business Strategy.
Practical application of microeconomic methods to business decisions. Topics include current issues in consumer demand; business organization, cost decisions, and pricing strategies; decision making under uncertainty and risk management; projections using supply/demand analysis; information, incentives, and employee compensation; and cost-benefit analysis of investment projects.

- ECO 345 Environmental and Resource Economics.
Develops a systematic economic framework to analyze market and government allocations of natural and environmental resources. Topics include relationships between population growth, land development, and environmental quality; regulatory versus market oriented environmental policies; supplies and prices of mineral and energy resources; harvest and protection of forests and fisheries.
- ECO 349 Emerging Markets Issues.
Important problems in emerging markets throughout the world, such as: policies to stimulate growth via international trade; foreign aid and multinational investment in transitional economics; the use of natural resources and agriculture in economic development; and the relationship of economic development to education, health and migration.
- ECO 350 Gender and Economics.
Analysis of gender differences in employment and earnings. Topics include allocation of time between the household and the labor market, employment and family structure, theories of discrimination, antipoverty programs, comparable worth, parental leave, and affirmative action. Historical trends and cross-cultural comparisons are discussed along with current U.S. conditions.
- ECO 355 Business, Antitrust, and Regulation.
In light of the structure, conduct, and performance of American private enterprise as revealed by empirical evidence, this course discusses the intent and actual effects of antitrust policy, regulation, and deregulation.
- ECO 360 Employment, Wages, and Productivity.
The study of labor market issues using economic analysis. Topics include composition of the labor force, productivity improvements, effects of international trade and migration on wages and employment. Policy issues include minimum wages, welfare programs, OSHA, education and training, and discrimination.
- ECO 365 Comparative Economic Systems.
Relative to such economic goals as economic freedom, full employment, growth, efficiency, consumer welfare, equitable distribution of income and security, how well do alternative economic systems perform? This course studies contemporary, evolving capitalist, socialist, and mixed systems in different countries.
- ECO 369 International Economic Issues.
Selected topics in both international trade and international finance. Includes preferential trading arrangements such as NAFTA and the European Union; analysis of barriers to trade and arguments for and against protectionism; the influence of exchange rates on capital flows; and the relationship between international trade and economic growth.
- ECO 435 Urban Economics.
Topics include the urbanization process, the city as an economic system, location analysis, poverty, housing, pollution, transportation, and public finance.

- ECO 436 Real Estate Economics.
Develops an economic framework for understanding urban real estate markets. Topics include: the determinants of land prices and urban spatial structure, the characteristics of the urban housing market, factors that influence business locations, characteristics of commercial real estate markets, and the response of real estate markets to business cycles.
- ECO 440 Public Finance.
The justification for the provision of some goods and services by government, analysis of government decision-making, the design of fair and efficient taxation, and the relationships among federal, state, and local government.
- ENT 150 Entrepreneurial Quest.
Students will explore the entrepreneurial quest beginning with the myths and realities of entrepreneurs, student self-analysis, through creativity and idea generation and the concept of the business plan. Key motivators and the drivers for success will be analyzed. Students will be required to conceptualize a new venture idea.
- ENT 151 New Venture Feasibility.
This course focuses on the process of developing an idea from a product concept into a product design that has a market and commercial feasibility. Students will have 'hands on' and applied opportunities to develop their concepts within different environments including, graphics, design and prototyping.
- ENT 250 Entrepreneurial Finance and Accounting.
This course begins the process of business plan development by incorporating the raising of capital through multiple sources, risk management and controls, capital budgeting, costing, financial statement and working capital analysis, and the management of information systems.
- ENT 251 Entrepreneurial Management and Marketing.
This course completes the process of business plan development by incorporating market research, the competitive environment, legal formation, intellectual property protection, and management development.
- FIN 320 Managerial Finance.
Financial policies and practices that lead to the maximization of the value of a firm. Major topics include risk and return, management of current assets, capital budgeting, sources of financing, and optimum capital structure. International financial implications are considered.
- FIN 321 Investments.
Fundamental principles of investment, characteristics of investment and speculative assets, analysis of risk and return, operation and regulation of markets, analysis of investment requirements, types of investment trading, and timing strategies.
- FIN 331 Risk and Insurance.

Risk analysis and insurance. Planning personal and business insurance. Business insurance as it relates to business risks and decision-making. Emphasis on business exposures, coverages, and problems of the risk manager.

- FIN 427 Derivative Assets and Markets.
Valuation of options, futures, forward contracts, and swaps; institutional and regulatory attributes of derivatives markets; trading and hedging strategies; risk management.
- FIN 428 Security Analysis and Portfolio Management.
A sophisticated analysis of investment securities from the viewpoint of establishing meaningful evaluation techniques. Develops practical strategies for constructing efficient portfolios by the study of risk analysis, random walk, and other theoretical concepts.
- FIN 429 International Financial Management.
Covers the application of the tools, techniques, and the underlying theory essential for financial management in an international setting, including those required for financing and control. Topics covered also include international accounting, effects of fluctuating exchange rates, overseas investments, and the structure and function of international financial institutions and markets.
- MGT 268 Introduction to Management Information Systems.
This course is designed to give the student an understanding of the importance of information systems in modern companies, the components that make up information system and insight into the integration that good information systems foster in a business organization. Enterprise Resource Planning (ERP) Systems will also be covered.
- MGT 331 Concepts of Management.
The management process through an examination of its functions of planning, organizing, motivating, and controlling work, and work performance in a business organization. Theoretical concepts and applications through the use of selected case materials.
- MGT 333 Human Resource Management.
The historical evaluation, structure, policies, and practices of human resources departments. The work of these departments in acquiring, training, and developing human resources, facilitating corporate communication, motivating employees, setting appropriate wage and salary levels, and facilitating union relations are introduced.
- MGT 334 Labor and Employment Law.
Analysis of major labor and employment laws affecting management practice. Specific topics include National Labor Relations Act, Title VII, Americans with Disabilities Act, Affirmative Action, Fair Labor Standards Act, and the Occupational Health and Safety Act. Also considers significant tort legislation, including wrongful discharge, privacy and defamation.
- MGT 336 Compensation and Benefits Management.

Provides students with an understanding of the compensation system. Emphasis on the design, development, and implementation of a total compensation system that balances internal consistence with external competitiveness.

- MGT 339 **Business and Society.**
Explores the evolving relationship between business institutions and societal institutions through a variety of disciplines (e.g., economic and social history, industrial sociology, organizational theory, business ethics) and a variety of media (e.g., historical narratives, literary materials, articles from academic journals, newspaper reports, and films).
- MGT 340 **Business, Social Change and Ethics.**
Examines the process of business development and the ethical questions that process raises. Particular attention is paid to the questions raised by market pressures, bureaucratic organization and income stratification.
- MGT 345 **Team Building.**
A class that integrates theory and application by teaching students how to be effective members of a work team. Emphasis on both logical and creative problem solving. Dynamics and processes within teams serve as the focus of analysis, learning, and practice. Part of the Creativity theme.
- MGT 355 **The Diversified Workforce.**
An examination of the experiences of different groups in the U.S. workforce, including race, ethnicity, gender, age, disability, and sexual orientation. Cultural differences are explored and a consideration is given to the ways in which organizational norms operate to include or marginalize different groups of people.
- MGT 364 **Service Operations Management.**
An overview of the planning, controls, and designs of operations in the service industry. Emphasis on the application of economic principles, decision tools, and models to solve problems encountered in the service environment.
- MGT 371 **Systems Analyses and Design.**
Provides a comprehensive presentation of the concepts, procedures, and tools necessary for analyzing and designing management information systems. Students will develop skills necessary throughout the systems development cycle, e.g. project management, data collection, analysis, design, testing, and documentation. Students will apply course concepts and skills in a team project.
- MGT 430 **Organizational Development.**
Examines change as a dynamic and essential process in organizations and explores the manager's role as a change agent. Emphasis is given to the ability to plan, initiate, and implement changes with the potential to improve the functioning of organizations and their members.
- MGT 432 **Grievance Administration, Arbitration, and Collective Bargaining.**
Problems and issues in the negotiation of collective bargaining agreements in the public and private sectors. Grievance procedures and arbitration under a union contract. The

resolution of disputes over wages, seniority, work assignments, and other common employment relations will be covered.

- MGT 433 International Human Resource Management.
Focus on the effects of globalization on human resource activities and facilitates development of a set of skills essential for a successful career as a global manager.
- MGT 438 Business Ethics.
An inquiry into the relevance of the classical ethical literature on the resolution of everyday business problems. Particular emphasis will be placed on the practical usefulness of the Socratic tradition. That tradition requires that we attend to clarifying our own values as well as those of others. We will read a number of Socratic Dialogues, respond to a variety of business cases, and attend to the relationship between them and the process of understanding ourselves.
- MGT 466 International Management and Multinational Corporations.
A study of the managerial challenges of conducting business in a global economy. Emphasis on cultural differences and their impact on the situations and issues managers confront when working internationally. Requires senior status or approval of instructor.
- MGT 467 Advanced Topics in Operations Management.
This course provides a framework for effectively managing processes and employees in manufacturing organizations. Emphasis is given to the processes involved in initiating and implementing changes in management policies, products, and technologies. Course format includes a mixture of lectures, readings, case analysis, and real-world exercises.
- MGT 471 Enterprise Systems Configuration.
Students will learn about business processes in modern organizations, managing change to those processes, and configuring an Enterprise Resource Planning system to implement business process changes. Project organizational skills will be enhanced as students work on cross-functional teams to implement changes.
- MGT 495 Administrative Policy.
The study of functions and responsibilities of general management in terms of analyzing problems that affect the performance, character, and success of the total business enterprise. Emphasis on corporate strategy and its implementation. International aspects of corporate strategy are included.
- MKT 350 Marketing Management.
An introduction to marketing. Provides a general understanding and appreciation of the forces operating, institutions employed, and methods followed in marketing products and services both domestically and internationally.
- MKT 351 Consumer Behavior.
An overall view of some of the basic perspectives of consumer motivation and behavior.

- MKT 354 Distribution Institutions and Logistics.
An integrated study of supply chain and distribution channels, and their institutions in the global marketplace. Topics include an introduction to the supply chains, system design, advantages and disadvantages of various channel institution types, and the functional dimensions of supply chain and distribution management.
- MKT 358 Advertising and Marketing Communications.
A managerial analysis and examination of the nonpersonal demand generating element of the firm's marketing efforts. Includes study of communication theory; advertising; market, audience, and target segmentation and selection; media analysis; public relations; publicity; and most other nonpersonal communications activities. These elements are strongly related to personal selling in the private sector firm.
- MKT 359 Multinational Marketing.
Emphasizes global marketing decision making from the manager's point of view. Examines how successful international companies, both large and small, decide which goods and services to market in specific parts of the world. Evaluates the strategies and tactics necessary for multinational marketing success.
- MKT 370 New Product Development.
This course teaches students how to develop a successful new product or service. Student teams experience the whole process involved in bringing a new product from idea to launch. Emphasis is on the application of fundamental marketing and entrepreneurial principles required to achieve continuous innovation and sustainable competitive advantage.
- MKT 457 Logistics and Transportation.
Studies the role of transportation in the global supply chain and distribution channel, and the interaction of transportation with other supply chain logistics activities such as inventory control. Topics include logistics system design, transportation policy and infrastructure, each mode of freight transportation, and the management of transportation.
- ACC 511 Financial and Managerial Accounting Concepts.
An introduction to financial and managerial accounting. Financial accounting includes an examination of accounting concepts and understanding and interpreting financial statements. Managerial accounting includes examining the use of accounting information for planning, control, and decision making in today's fast-changing business environment.
- ACC 611 Contemporary Managerial Accounting.
Examines the use of information for cost management, decision-making, and performance evaluation and measurement. Topics include activity-based management, cost of unused resources, relevant costs for decision making, productivity measurement, transfer pricing, theory of constraints, balanced scorecards, total quality management and just-in-time.

- ACC 612 The Accountant's Legal Environment.
An intensive course in business law with emphasis on those subjects that relate to the accountant's legal environment, including accountant's legal liability, federal securities regulation, sales law, insurance suretyship, antitrust law, secured transactions, bankruptcy, property law, etc.
- ACC 613 Financial Statement Analysis.
Topics include the supply and demand for financial statement information. Emphasis is placed on the impact of accounting choice on financial statements, fundamental ratios, and decisions.
- ACC 614 Auditing.
The nature of audit evidence, basic audit techniques and concepts, audit practices and procedures, professional ethics, statistical sampling, auditing through and around a computer, and audit reports.
- ACC 617 International Accounting.
Study of the various difficulties and accounting procedures for the multinational company. Includes currency translation problems, evaluation of assets of foreign countries, and the general consolidation problems of foreign subsidiaries' financial statements with the parent's accounting report.
- ACC 621 Advanced Cost Management.
Using case analysis, this course examines the use of information for cost management and performance evaluation by exploring topics such as capacity management, activity-based costing and management, strategic cost management, balanced scorecard and incentive compensation systems.
- ACC 627 Estate, Gift, and Trust I.
Examines the federal transfer tax system, including estate and gift tax statutes, regulations, rulings, and cases. Topics include the definition of a gift, disclaimers, the annual exclusion, calculation of gross estate, revocable transfers, jointly held property, annuities, powers of appointment, life insurance, the marital deduction, and valuation.
- ACC 631 Employee Benefit Plans and Deferred Compensation.
Provides an in-depth survey of employee benefit plans and executive compensation arrangements under ERISA and the Internal Revenue Code. Topics covered include medical, dental, vision, and hybrid arrangements; fiduciary responsibility in the operation and management of plans. Nonqualified deferred compensation and stock-based programs are also discussed.
- ACC 633 International Tax Practice.
United States jurisdiction to tax on the basis of citizenship, source of income, and other minimum contacts required by international or constitutional law is treated, along with taxation of domestic corporations doing business abroad, entities that are either controlled foreign corporations or foreign personal holding companies, and the foreign tax credit. U.S. possession corporations, domestic international sales corporations, and tax treaties are also considered.

- BUS 531 Legal Environment of Business.
Explorations of the legal, regulatory, and ethical environment of business, with emphasis on the regulation of business and the political and social factors influencing case and statutory law. Topics covered include contracts, employment law, international law, environmental law, and business organizations.
- BUS 631 Leadership and Organizational Dynamics.
Leadership gives insight into organizational life from the perspective of the practicing manager in terms of individual, group and inter-group behavior. Course is designed to benefit persons in a variety of organizations. The goal of the course is to explore ways to achieve managerial success by becoming effective at utilizing individuals and groups as organizational resources. Special emphasis is given to assessment of personal strengths and weaknesses when dealing with situations of managerial responsibility.
- BUS 644 International Business.
A study of the international business environment within which many firms now operate. Consideration given to why firms trade internationally and/or establish a foreign base of operation. Other topics include the problems an international firm faces, such as foreign currency fluctuations and conflict with host countries.
- BUS 671 Global Competitiveness.
Explores how firms become global and how they sustain their global position. For many firms, selling in home markets no longer guarantees success. Internationalization forces affect firms' ability to establish and conduct business in foreign markets. Covers knowledge and skills needed to manage firms operating in foreign business environments, and to work effectively with people of other cultures.
- BUS 681 Strategy.
Focuses on the job of the general manager in formulating and implementing short- and long-run business strategy. An integrative course that draws on knowledge and skills acquired in other courses.
- BUS 698 Washington Program.
Special intensive study in Washington, D.C., for one week during the summer. Principal topics are Policy Development in the Executive Branch, Government Regulation, Congress—Interest Groups—Lobbying, and Domestic and International Economic Policy Issues.
- ECO 542 Economic Reasoning.
An examination of economic concepts, principles, definitions, and relationships. Designed to provide analytical micro and macroeconomic techniques and concepts necessary to reason from an economic point of view.
- ECO 641 Business Economics and Strategy.
Develops an analytical framework to identify and evaluate cost-cutting or revenue-enhancing strategies. Topics include economics of production costs and consumer demand, projections using supply/demand analysis, competitive labor markets and

employee compensation strategies, cost-benefit analysis of investment projects, decision-making under uncertainty, product pricing strategies, make-or-buy decisions, economics of business organization.

- ECO 642 Corporate Strategy for Business Cycles.
Focuses on techniques to deal with seasonal and cyclical economic fluctuations. Topics include using economic indicators to forecast the onset and duration of business cycles, impact on business of government stabilization efforts, estimating the firm's vulnerability to economic fluctuations, and the opportunities to reduce the risk inherent in business cycles.
- ECO 645 International Economic Issues.
Selection of contemporary topics, including: effects of trade arrangements such as NAFTA and the European Union on business; opportunities for multinational enterprises in emerging markets; impacts on domestic industry of government trade policy; and the effects of interest and exchange rate fluctuations on trade strategy and capital flows.
- ECO 646 Employment, Wages, and Productivity.
Examines labor market and personnel issues. Topics include training and employee productivity, employee compensation and incentives, effects of international trade on labor markets, information issues in labor markets as they relate to turnover and hiring practices; business cycle effects on labor markets and the role of labor unions.
- FIN 522 Finance Principles for Managers.
A development of the foundation tools of business finance for MBA students. Topical coverage includes: basics of financial analysis and cash flow analysis; time value of money; stock and bond evaluation; introduction to risk and return; and basics of capital budgeting.
- FIN 621 Financial Policy for Managers.
Course presumes a thorough understanding of the principles of managerial finance. Emphasis on problem-solving, decision-making and actions leading to optimizing the value of business firms. Methods of incorporating risk analysis into decisions concerning management of working capital, capital budgeting, and capital structure. Analysis of alternative theories and procedures regarding financial goals, portfolio concepts, cost of capital and dividend policy. Selected aspects of international finance are discussed. Prerequisite: FIN 522 or equivalent.
- FIN 624 Investments.
Covers the full risk/return spectrum of investment alternatives and the operations and regulations of markets. Presents the various technical methods of obtaining market profits.
- FIN 699 Independent Study. Independent research in the student's area of interest, supervised by a member of the Seidman faculty and culminating in a written and oral report.
- MGT 510 Principles of Management Information Systems.

Management information systems (MIS) are critical to the success of modern organizations. This course provides an introduction to fundamental MIS principles and concepts and the role and importance of information systems in supporting organizational processes and strategies.

- MGT 633 Management of Human Resources.
Topics include employee evaluation and development, resistance to change, discipline, affirmative action, safety and health, rewards and compensation. A major course goal is the development of an administrative point of view for the purpose of achieving organizational objectives through the efforts of others.
- MGT 635 Planned Change and Organizational Development.
Addresses issues of individual, group, and organizational change from a strategic, problem-solving perspective. Strategies for changing organizational culture, enhancing creativity, building teams, and dealing with dysfunctional aspects of planned change are presented.
- MGT 637 Problems in Labor-Management Relations.
Intensive analytical probe into areas of problems between unions and management, public and private sector. Problems include discipline and discharge, wages, discrimination, contract interpretation, safety, working conditions, arbitration, and mediation.
- MGT 638 International Human Resource Management.
Focuses on the issues and dimensions of human resource management practices that confront firms operating in a global environment. Topics include recruitment and selection of international employees, dimensions of international training and development, issues in international performance appraisal, and international compensation and labor issues.
- MGT 664 Total Quality Management.
A marked shift has occurred in the philosophy of managing quality in the nineties. The “strategic” dimension has gained precedence over the “technical” dimension. This practical course walks students through strategic and technical tools and techniques of quality management that underscore the essentials of the new philosophy.
- MGT 672 Creativity and Entrepreneurship.
Examination of personal barriers to creativity and entrepreneurship, and of characteristics and the roles of entrepreneurs in society. Each student completes a business plan to be judged for an award by professionals. Issues of franchising, purchase of a firm, and corporate entrepreneurship are considered.
- MGT 673 Small Business Management.
This course is about the reality of operation of a small enterprise. Students will meet owners in class and join them at work. Broader issues of ethical pressures, family transitions, and building the organization’s culture will also be considered. Course is not a basic introduction to operational aspects but builds on that knowledge.

- MGT 677 Professional Ethical Problems and Perspectives.
A study of ethical problems commonly encountered in business, the professions, and public service. Topics include moral responsibility of the manager in business and public service; economic justice; business practices such as pricing, hiring, advertising; profit-determination and gifts; relationship between organizational and personal goals and values; ethical codes and laws covering illegal or unethical behavior, social responsibility of corporations and public agencies; government corruption and conflict-of-interest problems.
- MKT 651 Marketing Management.
Focuses on developing an understanding of the role of markets and marketing in the macroeconomic environment, and on providing marketing managers with the knowledge and tools they will need to successfully analyze product markets and develop marketing strategies that will provide sustainable competitive advantage.
- MKT 654 Marketing Strategy in the New Economy.
Provides insights into the process of developing strategic plans and operations to improve competitive position. Focuses on mission and goal development for tomorrow's challenges. Exposes students to Internet tools for researching environmental change in society, economies, and customer preferences. Develops strategies for handling changes in the competitive environment.
- MKT 655 Promotional Strategy.
Provides students with an understanding of the communications process as it applies to advertising and other areas such as product symbolism, packaging, pricing, channels, and personal selling. Students are required to apply basic concepts in determining the objectives of a communications-promotion program, establishing the relative roles of personal selling and advertising, building an advertising campaign and determining the program budget.
- MKT 658 International Marketing.
Introduces a conceptual framework that enables the student to identify and better understand the dimensions that are operative within a global marketing environment. Explores the relationship between these dimensions and specific elements of a marketing program. While the course does not dwell on exporting per se, reasonable coverage is given to factors affecting the development of exporting activities.
- MKT 660 Marketing Research and Analysis.
An examination of marketing information needs and resources including the collection and dissemination of primary and secondary data and the cost-benefit consequences of all information gathering procedures. Topics include problem definition, research design, sampling techniques, data collection, analysis, etc. The emphasis is on conceptualizing, conducting, and evaluating marketing research.