

## CRITERION FOUR: ACQUISITION, DISCOVERY AND APPLICATION OF KNOWLEDGE

*The organization promotes a life of learning for its faculty, administration, staff, and students by fostering and supporting inquiry, creativity, practice, and social responsibility in ways consistent with its mission.*

### Introduction

Youngstown State University strives “...to foster intellectual inquiry, exploration, and discovery; ...to encourage creativity; ...and to excel in research and scholarly activity...” (Core Values). The institution supports these values through its planning, policies, and allocation of resources. Consistent with its mission to forge connections among teaching, scholarship, and service, the acquisition, discovery, and application of knowledge can be seen in the classroom and in the community.

### Core Component 4a:

*The organization demonstrates, through the actions of its board, administrators, students, faculty, and staff, that it values a life of learning.*

### Research and Scholarship

*4a5. The faculty and students, in keeping with the organization’s mission, produce scholarship and create knowledge through basic and applied research.*

### External Funding

One indicator of the University’s increased emphasis on research is the growth in external funding, which is described in Chapter 2. The level of external grant support and the number of applications have increased. Between fiscal years 1997 and 2007, grants increased from \$1,409,532 to \$5,873,266. External funding agencies include the Air Force Office of Scientific Research, the American Chemical Society, the Raymond John Wean Foundation, Research Corporation, the U.S. Department of Transportation, the U.S. Department of Labor, the National Aeronautics and Space Administration, the Ohio Board of Regents, the National Institutes of Health, the Environmental Protection Agency, and the U.S. Department of Defense.

Faculty from all colleges have obtained external support for their scholarly endeavors. For example:

- The Department of Biological Sciences in the College of Science, Technology, Engineering, and Mathematics was awarded three grants totaling \$869,000 from the National Science Foundation to fund proteomics research.

### Core Component 4a:

*The organization demonstrates, through the actions of its board, administrators, students, faculty, and staff, that it values a life of learning.*

- The College of Fine and Performing Arts has received funding from the Ohio Arts Council for the McDonough Museum of Art and the annual New Music Festival.
- The Beeghly College of Education was awarded a \$2.5 million Teacher Quality Enhancement Grant for the *Tri-County Partnership for Excellence in Teacher Education* in 1999.
- The U.S. Department of Education awarded an initial grant of \$183,000 and a second grant of \$170,000 to the Emerging Markets Initiative in the Williamson College of Business Administration.
- The Ohio Learning Network awarded \$245,562 to faculty from the Department of Health Professions in the Bitonte College of Health and Human Services for developing asynchronous distance learning courses for the health professions.
- The Ohio Humanities Council has supported a variety of scholarly projects in the College of Liberal Arts and Social Sciences.

### Research Emphases

Faculty scholarly accomplishments are documented in the annual reports of the colleges, the academic departments, and the School of Graduate Studies and Research. The intellectual contributions of the faculty include books and book chapters, articles in peer-reviewed journals, conference proceedings, poster presentations, workshops, design competitions, juried exhibitions, video and audio recordings, live performances, and musical compositions. Over half of the faculty responding to the Higher Education Research Institute (HERI) Survey in fall 2004 had had writing published or accepted for publication within the preceding two years. The following paragraphs provide an overview of selected research activity within colleges and centers:

■ Dr. Ron Volpe, Professor of Accounting and Finance, conducts research on the financial literacy of students, boards of directors, human resource benefit analysts, and working adults.

■ The **Williamson College of Business Administration (WCBA)** emphasizes faculty scholarship that contributes to management practice, advances the discipline, and enhances the teaching-learning process. Faculty members are actively engaged in research that is disseminated nationally and internationally through presentations and publications to academic and practitioner audiences. Areas of faculty research include executive compensation, auditing standards, young consumers and the Internet, ethics and academic dishonesty, fraud and tax evasion, effective spokespersons in public service, workplace diversity and community collaboration, internationalization strategy of Malaysian and Taiwanese firms, emerging markets, and inter-firm networking and knowledge flow.

The WCBA's research and outreach centers are the **Williamson Center for International Business**, the **Monus Entrepreneurship Center**, and the **Center for Nonprofit Leadership**. The College also provides leadership—along with the College of Liberal Arts and Social Sciences—to the **Center for Working-Class Studies**. Grants from organizations such as the Kauff-

man Foundation, the Coleman Foundation, the US Department of Education, Murray State University/Kellogg Foundation, and American Humanics have enabled the College to develop new programs and courses, support faculty research, and facilitate the integration of teaching, scholarship, and service.

- In the **Beeghly College of Education (BCOE)**, faculty research topics include classroom accommodations and modifications for students with visual and motor problems; responding to sexual assault victims; college students who engage in self-injury; and minorities in education. Funded projects include training literacy specialists in Conneaut Area City Schools and Youngstown City Schools through the Reading First grants; implementing the Ohio Integrated Systems Model, a tiered approach to addressing academic and behavioral needs of students school-wide; and collaborating with faculty from the Department of Mathematics and Statistics in designing, testing, and presenting model inquiry-based mathematics lessons.

The Teacher Quality Enhancement grant for the *Tri-County Partnership for Excellence in Teacher Education* supported faculty research with local schools in language arts, mathematics, and science throughout the five-year grant period. The College includes the **Beeghly Center for P–16 Research and Development** and the **Rich Center for the Study and Treatment of Autism**. The focus of the Beeghly Center is collaborative research leading to improved practices in the classroom. Faculty research projects are currently ongoing at the Rich Center and the Youngstown Early College High School, both of which are located on the YSU campus.

- Scholarly activity in the **College of Fine and Performing Arts (FPA)** includes—in addition to the traditional publishing and presentation of academic papers—the creative activities pursued by faculty in the arts. Faculty perform professionally; produce, direct, and design in the theater; produce radio and television programs; compose music and conduct in the concert hall; curate art exhibits; and create art in various media. The Dana School of Music faculty have produced and recorded over a dozen compact disks in the last decade. The after-school program *Homework Express* (described in Chapter 5), produced by faculty in Telecommunication Studies, has been twice-nominated for an Emmy Award.

The Department of Art is dedicated to developing leadership in the application of technology to the arts. This goal has been supported by the creation of the **Beecher Center for Technology in the Arts**, a partnership between Youngstown State University and the Butler Institute of American Art. The Beecher Center provides opportunities for the creation, exhibition, archiving, and dissemination of technology-based art. There are only a few centers in the world with the technical capabilities of the Beecher Center. The Center has received over \$800,000 of external funding since its opening and collaborates with ZKM of Carlsbad, Germany (recognized as the premier such center

- Dr. Howard Pullman received the Distinguished Research in Teacher Education Award in 2004 from the Association of Teacher Educators.

- Dr. Stephanie Smith, Department of Art, studies the Christian catacombs of Rome and has made several presentations on the relationships among catacomb decoration, the deceased, and the living.

in the world). The Center is regularly visited by world-renowned artists and has provided students and faculty with interactive venues rarely available at similar universities.

■ YSU's Department of Nursing was among 26 nursing programs nationwide selected for the "Safe Patient Handling and Movement" pilot project. The project, developed by the American Nurses Association and the National Institute for Occupational Safety and Health, is aimed at teaching students how to prevent work-related musculoskeletal injuries while working as nurses.

■ Dr. Gail Okawa, associate professor of English, conducts ongoing research into the lives of Japanese civilian internees during World War II.

■ Frederick Douglass is the focus of Dr. Diane Barnes's research. Dr. Barnes has edited several volumes of Douglass's papers.

■ Faculty from the **Bitonte College of Health and Human Services (BCHHS)** conduct research that promotes the health and quality of life of individuals, families, and communities. Research projects frequently focus on underserved populations, crime victims, juvenile offenders, mental health consumers, victims of sexual abuse and domestic violence, incarcerated individuals, the elderly, and children. Connecting themes across departments include diversity, cultural competence, social justice, and health. Externally funded grants and research to improve health include projects focused on oral health, exercise, eating behaviors, and diabetes management.

BCHHS faculty are involved in the scholarship of teaching and learning, examining online teaching, multicultural education, scenario-based learning, simulation, and student decision-making. Other studies are aimed at improving professional practice through needs assessment, program evaluation, and studies of professionalism, mentoring, patient education, and technology in clinical practice. Several faculty in the College have been named Rich Center Faculty Fellows in recognition of their research activities with the Rich Center for the Study and Treatment of Autism.

■ The **College of Liberal Arts and Social Sciences (CLASS)** supports archeological projects in Guatemala and the Bahamas; archival and other applied historical investigation, including a sponsored, national exhibition partnership with the University of Tennessee and Kennesaw State University; interdisciplinary gerontology, including outreach work with caregivers and other civic partners in the Mahoning Valley; as well as a great variety of individual and collaborative faculty scholarship in the nine departments and a dozen interdisciplinary programs and centers. For instance, in 2007 alone there have been at least three significant monograph publications in the college, ranging from a study of English Renaissance drama to a book entitled *Taking America Off Drugs*. An important synergy focused in the interdisciplinary programs and centers is global international relations. Recently published scholarship reflecting this theme includes studies of Koranic scriptures, Russian ecology, and Mayan civilization. The College provides leadership for the interdisciplinary **Center for Historic Preservation**, described in 4a2, as well as the **Center for Working-Class Studies**.

■ Research in the **College of Science, Technology, Engineering, and Mathematics (STEM)** is extensive and varied. Much of the research can be classified into three areas of significance: energy, materials, and biotechnology. Examples of faculty research include issues of environmental concern, such as water quality in the Mahoning River and carbon capture from coal-fired power plants; evaluating the electrical characteristics of high-temperature superconductors; protection strategies for bridges under

extreme conditions, such as explosive blasts and hurricanes; techniques in biomathematics; ultra supercritical boilers for coal combustion; finite element analysis to describe harness bending; globular star clusters in the Milky Way Galaxy; optical properties of polymeric materials for use in fiber optic applications; and new techniques in analytical mass spectrometry.

Research activities are supported by businesses (e.g., Ajax Tocco Magnethermic Corporation, Babcock and Wilcox) and federal and state sources including the National Science Foundation, the Ohio Space Grant Consortium, and the Ohio Learning Network. Faculty have been highly successful in securing equipment funding. Chemistry obtained \$475,000 from the National Science Foundation to purchase a nuclear magnetic resonance spectrometer, equipment that helps faculty and students conduct cutting-edge research in biotechnology and nanotechnology. The Department of Defense has supported the **STaRBURSTT CyberDiffraction Consortium**, which serves as the node for the College's substantial crystallographic research effort.

The descriptions of PACER centers found in 4a2 provide more information about STEM research. In addition to PACER centers, STEM conducts research through the following units:

- **The Center for Transportation and Materials Engineering**, funded by \$2 million from the U.S. Department of Transportation, focuses on basic and applied research to solve problems in the transportation industry and infrastructure.
- **The Center for Undergraduate Research in Mathematics (CUR-Math)** is the first center in the nation designed to promote the professional development and research activities of undergraduate students interested in mathematics.
- **The Institute for Applied Topology and Topological Structures** focuses on fundamental mathematical research.

Interdisciplinary research is facilitated through several centers. **The Center for Working-Class Studies (CWCS)** was founded in 1997 as the first center in the United States focusing on working-class life and culture. The mission is to foster multidisciplinary research, support the development of related courses, and provide public programs that serve the community. The CWCS has established an online bibliography with contributions coming from scholars all over the country. The web site includes a treasure trove of primary source material on the history and culture of the Mahoning Valley. The Center is co-directed by Dr. John Russo from the Williamson College of Business Administration and Dr. Sherry Linkon from the College of Liberal Arts and Social Sciences. It has been supported by a \$350,000 grant from the Ford Foundation. Chapter 5 describes the Center's programs that involve the community. Sample of evidence 4a2 describes other interdisciplinary centers, which were initiated as part of the PACER project.

■ Dr. Chet Cooper, Dr. Thomas Kim, and Dr. Gary Walker obtained a \$700,000 National Science Foundation grant for AIDS-related research.

■ Dr. Eleanor Congdon, History, received a Franklin Research Grant from the American Philosophical Society for her research on 15th-century Venetian merchants.

### Representative Faculty Scholarship

- Dr. Janet E. Del Bene, professor emeritus of chemistry, published her 200th scientific paper in 2007, believed to be the most ever by a YSU faculty member. The article, published in *Magnetic Resonance in Chemistry*, explains how nuclear magnetic resonance experiments can be used to characterize hydrogen bonds and suggests some experiments that could provide new and important insights.
- Dr. Mustansir Mir was one of 30 internationally recognized scholars invited by the Archbishop of Canterbury to a dialogue on Christianity and Islam held in Qatar in 2003.
- Two assistant professors of astronomy, Dr. Pat Durrell and Dr. John Feldmeier, were part of an international team that discovered a previously unknown dwarf galaxy and four new star clusters while using the Hubble Space Telescope.
- Dr. Paul Sracic's recently published *San Antonio v. Rodriguez and the Pursuit of Equal Education: The Debate over Discrimination and School Funding* is the only book about the landmark case. The class-action lawsuit argued that equality in education, not just basic schooling, was a fundamental right protected by the Constitution. The book has been adopted as a class text by several universities.
- Dr. Anwarul Islam, assistant professor of engineering, developed a computer model of a typical two-lane bridge and tested the impact of a terrorist car-bomb blast at five locations on or near the bridge. Islam concluded that regulations and barricades that prevent vehicles from stopping under, on, or within 16 feet of bridges may be one of the ways to deter catastrophic bombings of such structures.

### Student Research

*4c5. The organization supports creation and use of scholarship by students in keeping with its mission.*

- Katherine Bair, a Religious Studies major, earned third place in the annual Eli Weisel Essay Contest which drew 455 students from over 400 universities.

Youngstown State University supports student scholarship at both the graduate and undergraduate levels. Research requirements for **graduate students** vary by program. Sixteen graduate degree programs require or provide an option of a thesis to fulfill master's degree requirements. In some departments, a different type of scholarly work, such as a recital, is required. In others, coursework alone can fulfill the requirements for a master's degree. The doctoral program in educational leadership requires a dissertation.

Most **graduate assistants** are teaching assistants. However, some assistantships are available to support students who work with faculty research projects or externally funded research programs. The **Charles B. Cushwa, Jr./Commercial Shearing Inc. Graduate Student Scholarship/Fellowship Fund** provides a \$15,000 stipend to selected master's degree students in science, technology, engineering, and mathematics. Students work 20 hours a week and spend one summer as interns doing research at related businesses.

Graduate students can also participate in the **Student Research Assistant** program. The program promotes faculty scholarship while giving students the benefit of faculty mentorship. Juniors and seniors with grade-point averages above 3.0 and graduate students are eligible for these paid positions. In fiscal year 2007, 72 faculty members were allocated \$108,000 to hire student research assistants.

In recent years, YSU has increased its emphasis on research experiences for undergraduates. A faculty member, Dr. Jeffrey Dick, serves as **Director of Undergraduate Research**. He promotes undergraduate research activities, such as QUEST and the Undergraduate Student Research Grant Program:

■ **QUEST** is an annual day-long forum for student scholarship. It encourages the growth of students as independent scholars and the growth of mentorship abilities in faculty who sponsor their research. The event, which includes oral and poster presentations, is free and open to the public. A program guide with abstracts is published. Students have presented results of scientific research; musical scores; engineering designs and analyses; panel discussions of social, political, and economic issues; poetry readings; honors and senior theses; and study-abroad experiences. Submissions are judged and awards given for the best presentations from each college. The judges' evaluation sheets provide useful assessment information to students and their faculty mentors. Award winners can present their projects at the Academic Alliance Regional Symposium. In 2007, QUEST involved 278 students.

■ The **Undergraduate Student Research Grant Program** helps defray the costs of student research projects. It provides up to \$500 to pay for such things as data collection expenses, supplies or materials, photocopying, and necessary items of small equipment. Up to 20 awards are given each year in a competitive process.

**STARS, Student Achievement in Research and Scholarship**, is a statewide program, sponsored by the Ohio Board of Regents, for high-achieving undergraduate minority students. The mission of STARS is to increase minority representation in Ohio's college/university faculties. Youngstown State University is one of 17 Ohio institutions that participate. STARS provides students with academic counseling, independent research opportunities, conference participation and travel scholarships, networking opportunities, and assistance in applying to graduate school. Participating students are required to complete a scholarly research project, attend, and present their research projects and findings at the Annual Ohio STARS Statewide Student Research Conference.

Youngstown State University also participates in **Research Experience for Undergraduates (REU)**, a National Science Foundation 12-week summer program. Students work with faculty on specific projects at participating institutions. YSU students have worked on research projects with faculty at

■ YSU students were selected to present their research, "Scientists to the Rescue: A Solution to a Water Conservation Problem," at the national conference "Posters on the Hill," sponsored by the Council for Undergraduate Research.

■ Renee Rogers, a senior in Exercise Science, won the Best Undergraduate Student Presentation Award at the Midwest Regional Meeting of the American College of Sports Medicine for her research entitled "Effects of Aerobic Dance on Children with Autism."

■ Doug Wajda, a dual major in Mechanical Engineering and Mathematics, is working with MIT on the Mars Gravity Biosatellite Program, an international space collaboration to determine how humans will respond to the reduced gravity environment of Mars. Wajda is using 3D design software to model parts of a satellite in which mice will orbit the Earth.

■ Chemistry student Cortney Hoch was one of 60 students selected from hundreds of applicants to present her research on breast implants at the Council for Undergraduate Research's "Posters on the Hill" at the U.S. Capitol. She conducted her research at the University of Akron through the National Science Foundation program Research Experience for Undergraduates.

■ Two Industrial Engineering students placed first at the Institute of Industrial Engineers Student Regional 4 Conference at Purdue University in 2006 for their paper "General Electric Ravenna Lamp Plant: Utilizing Buffers in a Manufacturing Facility."

Clemson University, Auburn University, Iowa State University, the University of Akron, and in Hong Kong through the Colorado School of Mines.

Students can participate in independent research through **independent study**, **research courses**, and **internships**. **Contract Honors** courses provide an opportunity for students to pursue research projects related to courses in which they are enrolled and to earn honors credit. When student research is accepted for presentation at a professional conference, the **University Student Enrichment Fund**, provided by the Youngstown State University Foundation, supports travel expenses.

On the fall 2004 HERI survey, 71.7% of participating faculty reported working with undergraduate students on a research project in the preceding two years. Of the seniors completing the National Survey of Student Engagement (NSSE) in 2007, 16% had worked with faculty on research. This percentage is the same as that reported for Carnegie peer institutions and slightly less than the percentage for all institutions, which was 19%.

Research projects in the Department of Physics and Astronomy illustrate the opportunities for undergraduate students at YSU. Two undergraduates, Ron Propri and Tom Drummond, traveled with Dr. Jeff Carroll to Japan's Harima Science Garden City to research an isomeric material called hafnium. Propri's previous research-assistant assignments have taken him to Vancouver, British Columbia, Long Island, and Stuttgart, Germany. Propri says, "On these trips, I have met a lot of people and learned a lot about team collaborations. I have had the chance to see how other teams do things and how different teams and different cultures mesh." Drummond, who is majoring in Integrated Sciences Education and Physics, adds "These are opportunities that no undergrad would see at a larger school." He says his experience in Japan will help him as a teacher: "There's a big difference between reading about things, and experiencing them. It's not just textbook. Now I have an appreciation for science that I'll be able to present to students" (*Frontiers*, a publication of YSU's School of Graduate Studies and Research, Winter 2004).

## Academic Freedom

*4a1. The board has approved and disseminated statements supporting freedom of inquiry for the organization's students, faculty, and staff, and honors those statements in its practices.*

The Board of Trustees has approved and disseminated statements supporting freedom of inquiry for students, faculty, and all University employees. Faculty members have the freedom to pursue knowledge—and to report the truth as they see it—in the classroom, in publications, in reports of research activities, and in all other professional and academic forums. This principle of academic freedom is stated in the *YSU/YSU-OEA Agreement*, Article 15.

The current version of the *Agreement* was ratified by the Board of Trustees in 2005 and extends to August 17, 2008. Copies of the *Agreement* are provided to all members of the bargaining unit and posted on the Human Resources web site at [http://cc.yosu.edu/hr/Contract\\_Agreements.htm](http://cc.yosu.edu/hr/Contract_Agreements.htm).

*The Code: A Handbook of Student Rights, Responsibilities and Conduct* lists the “right of free inquiry, expression, and/or assembly” as one of students’ basic rights (Article 1, Section B). The Board has affirmed these rights through approval of Board Policy 8001.01—Student Rights, Responsibilities, and Conduct (The Code). *The Code* is distributed to new students during orientation and is available in the offices of the Vice President for Student Affairs and the Executive Director of Student Life and on the YSU web site at <http://www.yosu.edu/thecode.pdf>.

Board Policy 1016.01—Research Misconduct includes the following statement: “Among the basic principles of Youngstown State University are the pursuit of truth and the responsible exercise of academic freedom. From these principles derive such ideals and values as the freedom and openness of inquiry, academic honesty, and integrity in scholarship and teaching. The University affirms and honors the preservation, growth, and flourishing of these values throughout all its activities, including teaching and learning, research, scholarly inquiry, and creative scholarly endeavor.” The policy was most recently revised and approved in 2006 and is available at <http://www.yosu.edu/vpadmin/GDBK%20memo2.htm>.

## Life of Learning: Planning, Financial Allocation, and Professional Development

*4a2. The organization’s planning and pattern of financial allocation demonstrate that it values and promotes a life of learning for its students, faculty, and staff.*

*4a3. The organization supports professional development opportunities and makes them available to all of its administrators, faculty, and staff.*

### Planning

Youngstown State University’s planning documents (Mission Statement, Vision Statement, Core Values, and Centennial Strategic Plan) articulate the importance of learning for students, faculty, and staff. The Centennial Strategic Plan (see Appendix B) establishes goals and strategies for promoting learning, particularly in Critical Issues 2 and 9:

- *Critical Issue 2—Programs/Teaching, Learning, and Research:* “YSU will promote excellence in teaching, learning, service, and research—and prepare students to undertake civic and leadership responsibilities—through programs and educational experiences that meet student and workforce needs.”

- *Critical Issue 9*—Human Resources Development: “YSU will further develop a competent, motivated, diverse, and competitively paid workforce committed to carrying out the mission of the University.”

Strategies in the *Centennial Strategic Plan* to address these issues include strengthening and expanding academic programs and providing faculty development and staff training. The recent *Academic Strategic Plan* (see Appendix C) builds upon Critical Issue 2 and identifies goals and activities for the Academic Division through 2013. These, too, include initiatives to strengthen student learning and increase faculty development opportunities.

### Financial Allocations

The largest share of the institution’s budget (55%) went to Academic Affairs in FY 2007. The division’s budget increased by 38% between FY 2001 and FY 2007, an average annual increase of 6%, despite declining revenue from the State of Ohio. Significant resources are devoted to employee development. For example, in FY 2006, \$2,446,358 was spent on tuition remission for faculty, staff, and their dependents.

Several programs support faculty in their research endeavors:

- **University Research Council (URC) Grants** provide limited seed money, on a competitive basis, for new research and scholarly or creative projects, especially when other sources of project support are unavailable. All full-service faculty are eligible for URC Grant support, which is based on the submission of a short proposal to the Dean of Graduate Studies and Research and the University Research Council. URC Grant funds may be used for project technical assistance, data-collection travel, materials and services, and equipment. Proposal requests of \$500 or less may be submitted at any time to the Graduate Dean for a possible award of discretionary grant funds, until such funds are depleted. Fifteen awards totaling \$43,590 were made to individual faculty or groups of faculty in 2006–07.
- Each year, up to 18 faculty members whose research is deemed worthy of support are designated as **Research Professors**. They are selected by a committee of graduate faculty, chaired by the Dean of Graduate Studies and Research. Research Professors have a one-third reduction in teaching load. Six of these awards are reserved for untenured faculty.
- **PACER Centers**. In 1997, the PACER (Presidential Academic Centers for Excellence in Research) program was begun as part of a 10-year research development effort. The program funded centers proposed by faculty and recommended by a panel of external reviewers and the University Research Council. The Dean of Graduate Studies and Research allocated significant internal resources to fund each center for three years, with the expectation that the centers would eventually attract enough external funding to become self-sustaining. Although not all of

the centers established through the PACER program achieved this goal, the program was instrumental in expanding research capacity. Centers established through the PACER program during the last 10 years include:

- The **Center for Photon-Induced Processes** brought together faculty from the Department of Physics and Astronomy and the Department of Chemistry whose research activities focus on laser-related and -facilitated areas. Research topics include nonlinear optical materials synthesis and characterization, gamma-ray laser development, and the development of optical tools and measurement techniques for sensing, imaging, and spectroscopic applications. The Center evolved into the **Research Program in Photon-Induced Processes**.
- Faculty from the Department of Chemistry and the Department of Biological Sciences formed the **Center for Biotechnology** to focus on bacterial infections that show resistance to antibiotics. The goals are to produce recombinant antibodies that have potential as therapeutic agents and/or clinical reagents in the diagnosis of bacterial infections and give opportunities to students for research experiences, which prepare them for careers in the pharmaceutical and biotechnical industries. The work of the Center has been funded by grants from the American Chemical Society (Petroleum Research Fund) and Research Corporation.
- The mission of the **Lake Erie Center for Enology Research** is to enhance the health and competitiveness of Ohio wine and grape producers via fundamental and applied research on enology and viticulture and to support the research priorities of the American Viticulture Association. In partnership with Cleveland State University and the Lake Erie Quality Wine Alliance, Youngstown State University is the lead institution for the Center. Undergraduate and graduate students from both campuses are involved in the work of the Center, which is currently funded by the Ohio Plant Biotechnology Consortium. Research projects are underway at three different vineyard locations in Northeast Ohio.
- Faculty from English, Psychology, History, Art, and Teacher Education created the **Center for Literature for Young Adult Readers (LYRE)** to conduct scholarship on literary works published for and/or about young people. LYRE sponsors presentations by authors and illustrators of books for young people, provides a book collection (housed in the Wilcox Curriculum Resource Center), and edits *The Lyre Review*, an online review of books for young readers. The Center has received funding from the Martha Holden Jennings Foundation.
- The **Mahoning River Basin Research Center**, a collaborative effort of faculty from the Departments of Civil, Environmental, and Chemical Engineering, Geological and Environmental Sciences, Biological Sciences, Chemistry, and Geography was one of the initial PACER centers. It addressed environmental problems in the Mahoning River basin and was supported by the Ohio Department of Natural Resources, the U.S. Environmental Protec-

■ Student researcher Karen Howard; Dr. Roland Riesen, a researcher in the Biological Sciences Department; and Chemistry Professor Dr. James Mike won the Best Enology Paper Award from the American Society for Enology and Viticulture.

tion Agency, Mahoning Valley Sanitary District, and the U.S. Army Corps of Engineers. The work of the Center led to the creation of the **Center for Environmental Monitoring and Restoration**. This Center's interdisciplinary team members use their expertise in ecology, microbiology, botany, chemistry, geology, environmental engineering, and community planning to assist in the restoration of the Mahoning River.

- The **Center for Historic Preservation** uses an interdisciplinary approach to historic preservation. It draws upon the expertise of individuals from History, Geography, Anthropology and Sociology, Art, Urban and Regional Studies, and the Butler Institute of American Art. Undergraduate and graduate students from a variety of programs are involved in the Center. The staff members are committed to celebrating and safeguarding the nation's vintage architecture, industrial and engineering sites, and historic resources by serving as professional consultants for local, state, and federal projects (<http://www.as.yzu.edu/~histpres/>).
- The **Center for Advanced Numerics, Complexity, and Networking** focuses on the advancement of parallel computing. It involves a diverse group of faculty specializing in parallel algorithm development, mathematical biology, artificial intelligence, wave propagation, and parallel programming education.
- The **Center for Hydraulics Research and Education** includes a hydraulics laboratory, a computational laboratory, a technical assistance program, and an educational assistance program. The Center collaborates with Cleveland-based Parker Hannifin Corporation, the nation's leading hydraulics manufacturer, whose local division donated equipment to establish the hydraulics laboratory.
- The **Electromagnetic Field Research and Instrumentation Center** was established to further research in MRI optimization, optical and radio frequency communications, the development and characterization of novel nonlinear materials, and electromagnetic compatibility. The Center has collaborated with Advanced Imaging Research, Inc.; Packard Electric Systems of Delphi Corporation; CBOSS, Inc; and the Youngstown Business Incubator.

### Professional Development

All full-time employees have opportunities for **leaves for professional development** purposes. Collective-bargaining agreements describe leave policies and procedures for members of the collective-bargaining units ([http://cc.yzu.edu/hr/Contract\\_Agreements.htm](http://cc.yzu.edu/hr/Contract_Agreements.htm)):

- **Faculty** members of the YSU-OEA may be granted leave to acquire further education, pursue scholarly activities, perform community service, or carry out other professional activities that advance teaching, scholarship, or service. Youngstown State University has the unusual policy of awarding two-semester sabbaticals and one-semester faculty improvement leaves with full pay. There is a competitive application process, and not all proposals are approved. In addition, leave without pay may be

granted for appropriate professional-development activities. Exchange leaves permit a faculty member to receive full pay and benefits while exchanging positions with a faculty member from another institution. Article 7 of the *YSU/YSU-OEA Agreement* contains the relevant policies and procedures for leaves.

- **Professional and administrative staff** (members of APAS) may be granted professional-development leave to attend professional meetings, conferences, and seminars or training leave to acquire training or education required as a condition of continued employment. Individuals on professional or training leave receive full pay. Leave without pay for a period of up to three years is also possible.
- Members of the **Association of Classified Employees** and members of the **Fraternal Order of Police** are retained on regular pay status while obtaining training required as a condition of continued employment. They may also apply for leave without pay for up to two years for educational purposes related to their positions.

Board policies provide leaves for exempt professional/administrative staff, including:

- leave without pay to secure additional education or appropriate experience that will enhance the individual's contribution to the University (Board Policy 7002.03);
- department chairs' sabbaticals that are similar to those for faculty (Board Policy 1008.01); and
- staff development leave at full pay for up to three months (Board Policy 7002.06).

Academic departments are allocated \$600 per faculty member for **professional-development** travel. Department governance documents describe the method of allocating the money. In addition, each dean administers a faculty-development travel fund of \$500 per faculty member.

**Tuition and Fee Remission.** Employees are encouraged to increase their knowledge by taking courses at Youngstown State University. Full-time and .75 FTE employees may enroll in as many as 18 credit hours during the academic year and six in the summer without paying tuition or general fees. A part-time employee whose appointment equals or exceeds .5 FTE receives remission of one-half of the instructional and general fees for up to six semester hours during the fiscal year of employment. Part-time faculty who teach two or more workload hours in a semester receive remission for one-half of the instructional fee for up to three credit hours per term. Board Policy 7015.01—Fringe Benefits, Employee Fee Remission Program, available at <http://www.yсу.edu/vpadmin/guidelinespdf/RVSD7015.01.pdf>, provides details of the fee-remission program.

In addition, the University has a tuition-remission program for non-credit continuing education courses. Full-time and .75 FTE employees are entitled to instructional fee remission for two non-credit courses per calendar year.

**Reimbursement for Advanced Study.** Faculty who lack the appropriate terminal degree for the field of their primary assignment may be reimbursed for expenses incurred in pursuit of the degree, with prior administrative approval. From FY 2004 through November 1, 2007, the University reimbursed over \$334,000 to faculty seeking advanced degrees. In addition, an annual pool of \$10,000 is available each year for faculty participation in educational activities. The Reimbursement for Advanced Studies Committee, whose members are appointed by the faculty union and the administration, allocate the funds through a competitive application process.

**Pay Raises for Education.** Members of the Fraternal Order of Police receive an hourly pay increment for obtaining education. The increment ranges from 20 cents per hour for completing 16 semester hours of study to 60 cents per hour for obtaining an approved baccalaureate degree. Faculty who obtain a doctoral degree receive an annual salary increase of at least \$3,680 at the beginning of the term following completion of the degree.

**Reassigned Time.** Each college has a pool of workload hours to distribute as reassigned time to faculty for professional development and scholarship, including the scholarship of teaching and learning and the development of distance learning courses. A faculty committee chaired by the dean of the college evaluates the applications and awards the reduction in teaching load.

**Computer Training.** A computer lab in Kilcawley Center is dedicated to training for faculty and staff. A Technology and Training Specialist offers classes on a wide variety of software programs, such as *Adobe Acrobat*, *FrontPage*, *Dreamweaver*, and Microsoft Office products.

**Academic Chairpersons' Development.** A Chairpersons Development Committee plans professional-development activities for academic department chairs. These activities include an annual two-day retreat. Topics have included role of the chair; funding; program review; understanding the collective bargaining agreement; court decisions in academia; evaluation, tenure, promotion, and termination; assessment; and conflict between faculty and students.

Various campus units offer workshops, guest speakers, panel discussions, and conferences each year. Chapter 3 describes faculty-development services related to teaching, such as the Instructional Technology Center (ITC).

The preceding paragraphs document several ways that the organization promotes a life of learning for students, faculty, and staff. Nine of 10 Board of Trustees members who returned the Board of Trustees Survey agreed that the Board's planning and financial allocation demonstrate that it values a

life of learning for students, faculty, and staff. However, less than half of the faculty and classified staff respondents to the Campus Climate Survey agreed with the corresponding statements on that instrument. This may be a reaction to specific budget cuts (see Core Component 3b and 4b) and financial constraints of the past few years.

On the other hand, a majority (62.6%) of the Campus Climate Survey respondents agreed that “Within financial constraints, the University provides its employees reasonable opportunities for professional development and training.” A similar percentage (67.7%) of faculty responding to the Higher Education Research Institute (HERI) Survey in fall 2004 agreed that there is adequate support for faculty development. On the Board survey, 100% of respondents agreed that the Board supports professional development for faculty, staff, and administrators. As noted in Chapter 1, there are some differences between perceptions of employees and trustees. (See Appendix H.)

### Recognition of Accomplishments

*4a4. The organization publicly acknowledges the achievements of students and faculty in acquiring, discovering, and applying knowledge.*

Faculty and student scholarly and creative work is widely disseminated to the larger community through many publications, presentations, performances, and media events. These achievements are publicly recognized in a variety of ways. The **Honors Convocation** celebrates student scholarships and awards, such as the Dean’s QUEST awards. At this event, the **YSU Distinguished Professors** are named. Up to 24 persons are selected as Distinguished Professors (six on the basis of excellence in teaching, six for scholarship, six for public service, and six for University service). Faculty, chairpersons, deans, and students may nominate individuals, and a faculty committee selects the awardees. Distinguished Professors receive a \$2,000 award.

The Dean of Graduate Studies and Research/Associate Provost for Research hosts an annual **Research Recognition Luncheon** to honor faculty and staff for activities that contribute to the growth of grants, sponsored programs, research, and scholarship. The Graduate School Dean’s Awards are given to individuals and departments for superior success in obtaining external funding. The luncheon program recognizes faculty and staff who received external funding, the recipients of University Research Council grants and research assistant awards, and Research Professors.

Youngstown State University sponsors a very active chapter of **Phi Kappa Phi**, dedicated to recognition and promotion of academic excellence in all fields of higher education. Information about its activities and awards can be found at <http://cc.yzu.edu/phi-kappa-phi/>. Colleges and departments hold events to honor outstanding students and sponsor discipline-specific honoraries (e.g., Beta Gamma Sigma—business, Tau Beta Pi—engineering, Kappa Delta Pi—education, Gould Society—Liberal Arts, Sigma Xi—Science, Lambda Pi Eta—Communication Studies).

■ In 2007, three students at YSU obtained awards from the National Honor Society of Phi Kappa Phi, including the Graduate Fellowship Award, Emerging Scholar Award, and the Love of Learning Award. It is the third consecutive year that a student from YSU has received a Phi Kappa Phi Graduate Fellowship.

■ Snowflake Kicovic, a senior dual major in Physics and Computer and Electrical Engineering, won a gold medal at Tesla Fest 2004, an international inventors' festival held in Yugoslavia. She accepted the award for research that she and a team of YSU students carried out in semiconductor electronics.

Publications and press releases publicize student and faculty achievements widely. The printed *YSUupdate* as well as the online version, *eUpdate*, and the weekly *News Briefs* include a section called “Faculty and Staff Awards, Publications, and Presentations.” *Frontiers*, a publication from the School of Graduate Studies and Research, contains feature articles on faculty and student research accomplishments. The *Youngstown State University Magazine* communicates student, alumni, and employee successes to almost 80,000 readers. For the past several years, the University’s marketing has featured student and alumni successes in recruitment and image campaigns throughout the YSU service area.

## Organizational and Educational Improvements

*4a6. The organization and its units use scholarship and research to stimulate organizational and educational improvements.*

Youngstown State University uses scholarship and research to stimulate organizational and educational improvements at many levels. Individual faculty conduct action research to improve classroom practices. For example, faculty in the College of Health and Human Services are conducting a study of student and faculty perceptions of what constitutes “prompt feedback” in the traditional classroom and in online teaching environments. At the institutional level, YSU is one of several universities participating in the “Parsing the First Year of College” research study of first-year students. Results will be used to improve the freshman experience at YSU. See Chapter 3 for more description of the processes and data used for continuous improvement.

## Summary and Evaluation of Core Component 4a

*Youngstown State University demonstrates, through the actions of its board, administrators, students, faculty, and staff, that it values a life of learning.*

Youngstown State University’s commitment to a life of learning is evident in its mission and planning documents, Board policies, professional-development programs, and celebrations and awards. Substantial resources are allocated to professional development and academic programs. Nevertheless, over one-third of Campus Climate Survey participants disagreed that the institution’s planning and financial allocation indicate that the organization values a life of learning for faculty, staff, and students. The reasons for this perception are unclear. Policies and practices support freedom of inquiry for students, faculty, and staff. The institution provides many opportunities for student research. The results of this commitment to a life of learning can be seen in the scholarship produced by faculty and students.

**Core Component 4b:**

*The organization demonstrates that acquisition of a breadth of knowledge and skills and the exercise of intellectual inquiry are integral to its educational programs.*

**General Education****Program Design and Implementation**

*4b1. The organization integrates general education into all of its undergraduate degree programs through curricular and experiential offerings intentionally created to develop the attitudes and skills requisite for a life of learning in a diverse society.*

*4b2. The organization regularly reviews the relationship between its mission and values and the effectiveness of its general education.*

**Purposes and outcomes.** The present General Education program, implemented in the fall of 2000 simultaneously with the institution's conversion from quarters to semesters, is the result of several years of development. As approved by the Academic Senate in 1994, the program is designed to foster qualities such as curiosity, intellectual honesty, fairness, civility, and an openness to ideas and sharing of knowledge; thinking that is critical, independent, and objective; integration of knowledge across disciplines; the ability to function effectively in a technological society; an understanding of the importance of studying the past and present; appreciation of literature and the arts as expressions of human cultures; recognition of the importance of acting as informed, responsible citizens of the world; and an attitude that learning is a personal and collaborative process exercised over a lifetime. The specific goals of the program are listed in **Figure 4-1**.

**Program model.** To achieve these outcomes, all baccalaureate-degree students must complete the following General Education Requirements (GER):

- Essential skills courses in writing, mathematics, and speech
- Upper-division writing-intensive courses
- An oral communication-intensive course
- Critical thinking-intensive courses
- Eight courses across four knowledge domains: natural sciences, personal and social responsibility, societies and institutions, artistic and literary expression
- One course from Selected Topics or an additional course from the knowledge domains
- A senior-level capstone course

**Core Component 4b:**

*The organization demonstrates that acquisition of a breadth of knowledge and skills and the exercise of intellectual inquiry are integral to its educational programs.*

*Figure 4-1: Youngstown State University General Education Model*

Goals	Course Requirements
<ol style="list-style-type: none"> <li>1. Write and speak effectively</li> <li>2. Acquire, process, and present quantitative and qualitative information using the most appropriate technologies, including computers</li> <li>3. Reason critically, both individually and collaboratively, draw sound conclusions from information, ideas, and interpretations gathered from various sources and disciplines, and apply those conclusions to one's life and society</li> <li>5. Comprehend mathematical concepts and reason mathematically in both abstract and applied contexts</li> </ol>	<p>A. Essential Skills</p> <p>Writing 1 Writing 2 Communication Foundations</p> <p>2 upper-division "writing intensive" courses</p> <p>1 "oral communication intensive" courses</p> <p>2 "critical thinking intensive" courses</p> <p>1 upper-division capstone course</p> <p>1 course in Mathematics</p>
<ol style="list-style-type: none"> <li>6. Understand the scientific method, forming and testing hypotheses, as well as evaluating results</li> <li>7. Realize the evolving relationships among science, technology, and society</li> <li>13. Understand and appreciate the natural environment and the processes that shape it</li> </ol>	<p>B. Natural Science</p> <p>2–3 courses* from a list of courses that meet goal 13 and in addition goal 6 or 7. One must have a lab component.</p>
<ol style="list-style-type: none"> <li>8. Grasp and appreciate artistic expression in multiple forms and contexts</li> </ol>	<p>C. Artistic and Literary Perspectives</p> <p>2–3 courses* from a list of courses that meet goal 8, and one additional goal</p>

*Continued on the following page*

Goals	Course Requirements
10. Understand the development of cultures and organization of human societies throughout the world and their changing relationships with Western society 11. Evaluate the impact of theories, events and institutions on the social, economic, legal and political aspects of society 12. Comprehend and appreciate the development of diversity in America in all its forms	D. Societies and Institutions  2–3 courses* from a list of courses that meet a combination of two goals from 10, 11, 12
4. Understand the personal and social importance of ethical reflection and moral reasoning 9. Understand the relationships between physical, mental and emotional well-being and the quality of life of the individual, the family, and the community	E. Personal and Social Responsibility  2 courses from a list of courses that meet either goal 4 or goal 9 in combination with one other goal from 3–13.
F. Special Topics and Electives. 1 course which combines goals in ways not listed above or 1 course from mathematics or B, C, or D above.	
*Number of courses from B, C, D must total 8	

**Associate Degree Requirements.** Associate degree General Education requirements include Writing 1 and 2 and four additional courses from at least three of the following areas: Mathematics, Speech, Natural Science, Artistic and Literary Perspectives, Societies and Institutions, and Personal and Social Responsibility. Not more than one course counted toward this requirement may be in mathematics. The Ohio Board of Regents requires that all associate degree programs include written and oral communication, humanities, and social sciences, in addition to supporting courses for the technical specialty. These supporting courses tend to be in mathematics and natural sciences. At least 28 credits must be outside of the technical specialty. Therefore, associate degree students are exposed to a breadth of knowledge.

**Freshman Readers Dialogue.** From 2002 through 2005, the General Education curriculum was supplemented by the Freshman Readers Dialogue (FRD). Each year, a book was selected that provided an opportunity for interdisciplinary consideration of a topic relevant to the world today. Faculty from

various disciplines could integrate the book's themes into their classrooms and organize panels, lectures, or campus activities. In addition, FRD brought the author of the book to campus for a lecture, a WYSU-FM radio interview, and classroom appearances and sponsored an essay contest. The program was discontinued in 2006 for financial reasons.

**Administration and Processes.** A General Education Coordinator (a faculty member with reassigned time) and the General Education Committee (GEC) administer the General Education program. The committee includes faculty representatives elected from each college and appointed representatives for each of five domains, two students, and the Coordinator of General Education. The GEC certifies General Education courses, makes recommendations to the Academic Senate regarding the program, and monitors assessment of the outcomes. Details about the course-approval process can be found on the GER web site. A faculty member also receives some reassigned time to serve as Director of Writing Across the Curriculum.

**Evaluation.** A degree audit was completed for a sample of the spring 2005 graduating class to determine whether they had completed the General Education requirements. The sample excluded transfer students. Fewer than half the native students had completed 100% of the program. Several factors were identified as contributing to this problem: poorly designed departmental advisory sheets, inadequate number of intensive courses, lack of general education offerings in the evenings, the cumbersome process of submitting new general education courses, and inconsistency in approving substitutions and exemptions.

Progress has been made in resolving these issues. Student members of the Academic Senate proposed uniform standards for advising sheets, and their resolution was approved by the Senate in 2006. To address the problem of inadequate number of intensive courses, the GER program was slightly revised in May 2006. Departments now have more flexibility in the creation of intensive writing, oral communication, and critical thinking experiences. They can distribute these assignments over a number of courses and incorporate out-of-class presentations. However, the General Education Committee must review and approve these alternative paths. The GEC is currently examining its own application forms for the possibility of simplifying the procedure.

### Outcomes Assessment

*4b5. Learning outcomes demonstrate that graduates have achieved breadth of knowledge and skills and the capacity to exercise intellectual inquiry.*

*4b6. Learning outcomes demonstrate effective preparation for continued learning.*

The General Education Committee (GEC) has primary responsibility for assessing General Education. The Coordinator of General Education has worked with

the Director of Assessment to establish a comprehensive system of assessment for the program. The coordinators established similar standards, timelines, and processes for assessment of GER outcomes and academic major outcomes.

**Course-Embedded Assessment.** Assessment of General Education outcomes is done primarily through the assessment of specific learning outcomes in GER courses. Departments offering these courses were required to develop assessment plans and submit them for approval to the GEC. The departments were expected to use multiple measures (both direct and indirect), select an adequate sample, employ a feedback loop, disseminate the results, and retain documentation. Assessment plans have been approved for most, but not all, general education courses. Departments providing general education courses are also expected to report annually on the implementation of these plans and the results; however, there has not been full compliance each year.

**Academic Profile.** The Academic Profile, a test from the Educational Testing Service, provides an assessment of General Education learning outcomes, such as writing and critical thinking. The test was administered to a sample of seniors in the spring of 2000 and to freshmen in the fall of 2000. The Academic Profile was administered again in the 2004–05 academic year. In both years, YSU freshmen scored well below the average, but seniors were very close to the average. The Academic Profile results compared YSU students to students at other comprehensive universities. Approximately 70% of the institutions in the comparison group were considered competitive or very competitive. Although YSU is an open-admissions institution, these data indicated that senior students were performing at about the fiftieth percentile within a group of more-competitive institutions.

**Intercollegiate Studies Institute Survey.** In a recent survey conducted of first-year and senior students at 50 colleges and universities, Youngstown State students finished 12th out of 50 in the improvement of scores on an American civics test between the freshman and senior years.

**Graduating Student Questionnaire.** This survey asks graduating students to evaluate how much the institution has contributed to their achievement of each of the General Education goals, as well as the acquisition of the foundation for a successful career and preparation for life-long learning. The instrument uses a Likert scale ranging from 0 (none) to 4 (very much). This survey has been administered from 1997 (prior to the implementation of the current General Education program) through fall 2007. The questionnaire is currently being revisited and will be updated and revised to reflect changing priorities and cultural sensitivities.

A comparison of mean scores across the years shows a great deal of consistency in the rank order of the outcomes. Overall, students' lowest rating was of the impact of their YSU education on their appreciation of artistic expression in the arts, music, and literature. Also receiving relatively low scores were mathematical reasoning, understanding cultures, and understanding ba-

sic scientific processes. In contrast, items receiving the highest ratings were the use of technology, critical reasoning, building a foundation for a career, and preparing for life-long learning. (See **Table 4-1.**)

**Table 4-1: Aggregated Mean Scores on the Graduating Student Questionnaire for 1997–98 through 2004–05 Graduates**

Item	Rank	Rating
Please indicate how much your education at Youngstown State University contributed to your growth in each of the following areas:		<b>0=None; 4=Very Much</b>
Preparing for life-long learning	1	3.20
Acquiring the foundation for a successful career	2	3.12
Acquiring and processing information using appropriate technologies	3	3.08
Reasoning critically	4	3.07
Speaking effectively	5	3.00
Writing effectively	6	2.99
Understanding the importance of ethical reflection and moral reasoning	7	2.78
Seeing relationships among science, technology, and society	7	2.78
Comprehending the diverse characteristics of the populations that comprise American society over time (Diversity includes, but is not limited to, the characteristics of race, social and economic class, religion, gender, ethnicity, age, disability, lifestyle, and political identity.)	8	2.69
Understanding of theories which explain how social systems function, interact, and evolve	9	2.61

*Continued on the following page*

Item	Rank	Rating
Understanding and applying the scientific method	10	2.60
Improving the mental, physical, and emotional health of yourself, your family, and your community	11	2.50
Understanding cultures throughout the world and their changing interrelationships with Western society	12	2.47
Understanding scientific processes that shape the natural environment	13	2.45
Reasoning mathematically in both abstract and applied contexts	14	2.41
Appreciating artistic expression (e.g., art, music, literature)	15	2.24

**National Survey of Student Engagement.** In 2004, 2006, and 2007, YSU students completed the National Survey of Student Engagement (NSSE). Students provided ratings of “the extent to which your experiences at this institution contributed to your knowledge, skills, and personal development” in several areas that are closely related to YSU’s General Education goals. A comparison of the mean scores of first-year students and seniors is shown in **Table 4-2**. Seniors’ means are higher than those of freshmen on several items. Although the differences are statistically significant, the magnitude of the differences is quite modest. There is no difference between freshman means and senior means for some items, including “writing clearly and effectively.” The Assessment Council and the General Education Committee will continue to compare student perceptions with direct measures of student learning (including the incoming data on the 2007 Collegiate Assessment of Academic Proficiency test scores of 365 first-year students at YSU).

**Table 4-2: Comparison of First-Year Students and Seniors on General Education Items on the National Survey of Student Engagement**

<b>The extent to which your experiences at this institution contributed to your knowledge, skills, and personal development in the following areas:</b>	<b>Class Rank</b>	<b>Aggregate Mean</b>	<b>t</b>	<b>Sig. (2-tailed)</b>	<b>Change</b>
Acquiring job or work-related knowledge and skills	Fr	2.73	-5.17	0.00	0.28
	Sr	3.01			
Thinking critically and analytically	Fr	3.12	-3.91	0.00	0.18
	Sr	3.30			
Using computing and information technology	Fr	3.04	-3.60	0.00	0.19
	Sr	3.22			
Analyzing quantitative problems	Fr	2.84	-3.55	0.00	0.19
	Sr	3.02			
Speaking clearly and effectively	Fr	2.83	-3.26	0.00	0.17
	Sr	3.00			
Working effectively with others	Fr	2.91	-3.12	0.00	0.16
	Sr	3.07			
Acquiring a broad general education	Fr	3.04	-2.74	0.01	0.13
	Sr	3.17			
Learning effectively on your own	Fr	2.81	-1.96	0.05	0.10
	Sr	2.92			

*Continued on the following page*

The extent to which your experiences at this institution contributed to your knowledge, skills, and personal development in the following areas:	Class Rank	Aggregate Mean	t	Sig. (2-tailed)	Change
Solving complex real-world problems	Fr	2.55	-1.50	0.13	0.08
	Sr	2.64			
Developing a personal code of values and ethics	Fr	2.45	-1.43	0.15	0.08
	Sr	2.54			
Contributing to the welfare of your community	Fr	2.22	-1.34	0.18	0.08
	Sr	2.30			
Understanding yourself	Fr	2.59	-0.92	0.36	0.06
	Sr	2.65			
Writing clearly and effectively	Fr	3.02	-0.85	0.40	0.04
	Sr	3.06			
Understanding people of other racial and ethnic backgrounds	Fr	2.55	0.20	0.84	-0.01
	Sr	2.53			

Source: National Survey of Student Engagement 2004, 2006, 2007

### General Education Changes

In 2006, budget considerations led to changes in the summer contract for the Coordinator of General Education and reduction in the reassigned time during the academic year. Some members of the General Education Committee submitted resignations, prompted in part by concerns about reduced support for General Education. Dr. Paul Sracic was appointed Coordinator of General Education in 2006 but resigned at the conclusion of the academic year to become a department chair. Dr. Julia Gergits assumed the coordinator's duties in 2007. More-detailed information about the evolution of the YSU General Education Program can be found in the *General Education Self-Study Report, 2006*.

## Graduate Program Review

*4b3. The organization assesses how effectively its graduate programs establish a knowledge base on which students develop depth of expertise.*

Graduate programs have entrance requirements to ensure that students have acquired an appropriately broad education as a foundation for specialized education at the graduate level. The School of Graduate Studies and Research, through the Graduate Council, reviews all graduate degree programs on a five-year cycle in accordance with procedures mandated by the Ohio Board of Regents. When possible, these reviews are scheduled to correspond with the self-studies and visits required by specialized accrediting agencies. The process examines appropriateness of the curriculum, quality of faculty, quality of students, productivity, and other factors to ensure academically sound programs of study. The reviews incorporate outcomes-based data to assess educational effectiveness. The *Graduate Studies Policy Book* contains details of the process.

In addition, the assessment process coordinated by the Office of Assessment and the Assessment Council includes the assessment of learning outcomes for graduate programs. In 2006, all graduate programs were part of the Academic Division program-review and planning process. Information about these activities is contained elsewhere in this report, assessment in Chapter 3, Core Component 3a; program review in Core Component 4c; and planning in Chapter 2.

## Curricular and Cocurricular Activities

*4b4. The organization demonstrates the linkages between curricular and cocurricular activities that support inquiry, practice, creativity, and social responsibility.*

See Core Component 4d, Social Responsibility in the Curriculum and Cocurriculum; and Chapter 5, Core Component 5b.

## Summary and Evaluation of Core Component 4b

*Youngstown State University demonstrates that acquisition of a breadth of knowledge and skills and the exercise of intellectual inquiry are integral to its educational programs.*

Youngstown State University has successfully undertaken major reforms in general education in the past 10 years. The movement from a distribution to a goal-driven model and the conversion to semesters went smoothly. A substantial assessment structure is in place. Various measures indicate that students are acquiring breadth of knowledge and skills, the capacity to exercise intellectual inquiry, and preparation for continued learning. Problems—enforcing student compliance with requirements; incomplete follow-

through on assessment plans; and lack of enough courses or pathways in the intensive area— remain, but each of these areas has received considerable attention and will improve in the future. Budget reductions related to General Education have caused concern about the ability to maintain and develop the program. The Graduate School has a well-developed process for evaluating graduate programs, and graduate programs are integrated into the overall academic assessment process.

### Core Component 4c:

*The organization assesses the usefulness of its curricula to students who will live and work in a global, diverse, and technological society.*

### Academic Program Review and Curricular Evaluation

*4c1. Regular academic program reviews include attention to currency and relevance of courses and programs.*

*4c4. Curricular evaluation involves alumni, employers, and other external constituents who understand the relationships among the courses of study, the currency of the curriculum, and the utility of the knowledge and skills gained.*

During the past decade, the Office of the Provost has guided regular academic program reviews for undergraduate programs, and, as described in Core Component 4b, the School of Graduate Studies and Research conducts program reviews for each graduate program. During the 2006–07 academic year, all academic departments developed comprehensive academic program review documents as part of the Academic Division’s strategic planning process described in Chapter 2.

The “Academic Program Review and Planning Guidelines” specifically asked departments to address program currency by answering the following questions: Is the program redefining itself in the context of contemporary changes and technology? Are the courses appropriate? Is there a need for major revision(s) in the program(s)? The complete program review guidelines are available at <http://www.ysu.edu/provost/communications/policies-forms.shtml#ProgReview>, and the resulting documents can be found in the Resource Room.

Many of YSU’s professional programs are accredited by specialized accrediting agencies. These accrediting agencies provide an external evaluation of the currency and relevance of courses and programs. The Criterion 4 Committee examined the accrediting agency standards and the self-studies documenting compliance with them. The Committee concluded that these professional programs have identified educational outcomes needed for students to function in a diverse workforce, and the programs are assessing these outcomes as part of the accreditation process.

### Core Component 4c:

*The organization assesses the usefulness of its curricula to students who will live and work in a global, diverse, and technological society.*

As described in Chapter 3, departments have developed and implemented assessment plans to determine whether students are achieving the program outcomes. The audit of assessment tools used by departments ([www.ysu.edu/strategicplan/assess\\_index.shtml](http://www.ysu.edu/strategicplan/assess_index.shtml)) documents that external constituents are involved in curricular evaluation. The Criterion 4 Committee surveyed deans and chairs and found that departments obtained information from graduates, internship supervisors, employers, and advisory boards to help determine the currency of the curricula. In response to the survey, the deans expressed the value of college Boards of Visitors and advisory boards (where these exist) in maintaining the relevance of programs. The Criterion 4 Committee recommended creating more advisory boards.

### Preparing Students for a Diverse, Global Society

*4c2. In keeping with its mission, learning goals and outcomes include skills and professional competence essential to a diverse workforce.*

*4c3. Learning outcomes document that graduates have gained the skills and knowledge they need to function in diverse local, national, and global societies.*

The importance of preparing students for a diverse society is a shared campus value. More than 90% of respondents to the Campus Climate Survey agreed that it is “very important for students to gain knowledge of and appreciation for racial/ethnic groups other than their own.” The *Centennial Strategic Plan* outlines the University’s intentions and strategies for preparing students to function in a diverse, global society.

Critical Issue 6 states “YSU will provide a climate of respect for all people. Its students, faculty, staff and course content will increasingly reflect the diversity of its community, the nation and the world.” Strategies to address this critical issue include providing educational programming to focus on diversity and expanding international studies and study-abroad programs.

### Diversity in General Education

The General Education Program addresses diversity through two goals:

Goal 10: Understand the development of cultures and organization of human societies throughout the world and their changing relationships with Western society; and

Goal 12: Comprehend and appreciate the development of diversity in America in all its forms.

These goals are integrated into knowledge domain courses, primarily in Societies and Institutions, rather than placed in a separate category of designated “diversity” courses. To be included in the Societies and Institutions domain, courses must address Goal 10 or Goal 12. Courses in Personal and Social Responsibil-

ity, Artistic and Literary Perspectives, and Special Topics may also incorporate Goal 10 or 12 to meet the criteria for inclusion in the General Education Program; there are currently 33 such courses. Most of these are provided by the College of Liberal Arts and Social Sciences and the College of Fine and Performing Arts. In fulfilling the General Education Requirements, students will experience at least two courses, and possibly as many as eight, with significant attention to diversity. (See **Figure 4-1**.)

## College Diversity Programs

Academic programming in the colleges and departments prepares students to live and work in a world where individuals differ in gender, ethnicity, race, class, religion, culture, sexual orientation, and physical abilities. The Criterion 4 Committee conducted an audit and found more than 200 courses with explicit goals related to some aspect of diversity. These courses were distributed across five colleges. The remaining college (then The Rayen College of Engineering and Technology) reported that “team skills” were infused in courses throughout the curriculum.

A few of the many academic programs with a particular emphasis on diversity are described below. The public events that they sponsor are described in Chapter 5, in the section titled **Building Bridges Among Diverse Communities**.

The Williamson College of Business Administration houses the **Center for International Business**. The Center’s goals include “internationalizing” the students, faculty, and curriculum in the College and establishing exchange relationships with universities in other countries. The College has a partnership with São Paulo University in Brazil. As part of the **Emerging Markets Initiative**, groups of faculty and students have taken study tours to England and Ireland, India, Hungary, the Czech Republic, and Turkey to gain a broader perspective of global trade and industry. The College’s **Managing Diversity** course serves students from a number of programs in addition to business. Dr. Anne McMahon from the Department of Management provides leadership for the **Partners in Workplace Diversity** initiative, which is described in Chapter 5.

In the College of Health and Human Services, the Department of Physical Therapy conducts an annual “**Where There’s a Wheel, There’s a Way**” program. Members of the campus community have the opportunity to navigate the campus while using a wheel chair. The Department of Human Ecology hosts “**Celebrating Diversity**,” an annual program focusing on global connections. It includes a panel of international students discussing family life, a buffet of foods representing various ethnic groups, poster sessions on research with an international dimension, speakers on global issues, and presentations on study-abroad opportunities. The **Center for Working-Class Studies (CWCS)** explores the intersections of race, class, sexuality, and gender in the formation of individual and group identity. The School of Graduate Studies and Research offers a graduate certificate in Working-Class Studies. The Center’s lecture series, biennial conferences, and web site also enrich the undergraduate curriculum.

The College of Liberal Arts and Social Sciences houses programs that examine particular aspects of religious, cultural, gender, ethnic, linguistic, and racial diversity:

- **Africana Studies** is an interdisciplinary program coordinated by a director and an advisory board composed of faculty from several departments. The program facilitates an understanding of the historical, literary, social, and aesthetic impact of people of African descent on American society and the world. It also examines problems confronting contemporary multiracial society. Students can earn a major or a minor or elect Africana Studies courses to fulfill General Education Requirements.
- The **University Professor of Islamic Studies** in the Department of Philosophy and Religious Studies is an endowed professorship. Dr. Mustansir Mir teaches about Islamic religion, culture, and history. The Center for Islamic Studies publishes *Studies in Contemporary Islam*, a journal for original research. Chapter 5 describes the community outreach activities of the **Center for Islamic Studies**.
- **Women's Studies** is coordinated by a faculty member and an interdisciplinary advisory group of faculty. Students may minor in Women's Studies or design a major through the Individualized Curriculum Program. Introduction to Women's Studies (WMST 2601) fulfills a General Education Requirement. Women's Studies sponsors programs that focus on women and their lives, provides support for faculty doing feminist research, and offers faculty and students opportunities to discuss important issues in the field.
- The **Judaic and Holocaust Studies** program in the Department of History is dedicated to teaching and promoting research on all facets of Jewish culture and history. The program emphasizes the experience of the Jewish people during the Holocaust and promotes the values of tolerance and genocide prevention. Courses in Jewish history, religion, culture, and languages are offered. In 2006, Judaic and Holocaust Studies sponsored an international conference titled "Beyond Numbers, Beyond Names: The Experience of Holocaust Victims."
- The **Department of Foreign Languages and Literatures** offers majors, minors, and teacher licensure in French, Spanish, and Italian, as well as minors in French Studies, Ancient Greek Studies, Italian Studies, Latin Studies, Russian Studies, and Spanish Language and Cultures. Beginning and intermediate courses are offered in German, Hebrew, and Swahili; and the Department recently added classes in Arabic and Chinese.
- The **Global Education Program** in the Department of Political Science emphasizes an understanding of global issues and current events, an awareness of different countries and cultures, and recognition of the interdependence of the global community. Several student delegations annually participate in the Model United Nations, and YSU students have won over 100 awards in that competition.

- **Peace and Conflict Studies** is an interdisciplinary program that examines the historical, geographical, political, cultural, psychological, and philosophical dimensions of conflict. The cross-cultural and global context of contemporary conflict is emphasized. Students can earn a minor in Peace and Conflict Studies.

## International Studies

The **Center for International Studies and Programs (CISP)** is the University's clearinghouse for international activities. The Center is responsible for the institution's study-abroad activities and inter-institutional exchange agreements; international student affairs; immigration services for international students, faculty, and staff; community outreach for matters international; and the English Language Institute. The **English Language Institute**, established in 1997 as a self-supporting program, offers pre-college courses to develop English-language skills and provide an orientation to college life and U.S. culture.

YSU students have the opportunity to study in many countries through the University's affiliation with the Council on International Education Exchange and the College Consortium for International Studies. CISP also coordinates advising for the Fulbright Program, National Security Education Program, Rhodes Scholars, and the American Institute for Foreign Study.

The **International Resource Library** in CISP provides information about overseas study, work, and internship and volunteer opportunities. In addition to study-abroad resources, it contains information about various countries and helpful materials for international students.

The Center for International Studies and Programs has been affected by September 11, 2001, which precipitated a national decline in international student enrollment. In addition, CISP leadership changed three times between 2002 and 2006. International student enrollment, study-abroad participation, and enrollment in the English Language Institute declined during that time.

However, a new director has been in place for over a year; institutional barriers to international activity are being addressed, and progress is being made. The *Academic Strategic Plan* established goals of increasing study-abroad experiences and increasing international student enrollment to 3% of the YSU population by 2013. To that end, the tuition for international graduate students was reduced by 40% for the 2007–08 year.

The number of students studying abroad has increased substantially; participation in 2007–08 is triple that of the preceding year. The University has identified \$100,000 for scholarships to encourage international study. The campus chapter of Phi Beta Delta (International Scholars Honorary) has been reactivated, and the International Family/Friends Network revitalized. A weekly coffee-hour discussion, sponsored by CISP, the International Student Association, and several other groups, provides an opportunity for U.S. students to have informal interaction with international students.

- Joanna M. Fuchs, a senior in the Dana School of Music, participated in the International Conference to celebrate the Hungarian composer Bela Bartok's 125th birthday by presenting research she has conducted on Bartok's *Concerto for Orchestra*. Held in Budapest, Hungary, the conference had 20 countries represented, and Joanna was the youngest delegate, and only undergraduate, to give a presentation.

## Cocurricular Activities

In addition to CISP, several University offices, committees, and student organizations contribute to the development of students' skills and knowledge to function in a diverse world:

- The **Student Diversity Council (SDC)** was created by students to promote a better understanding of diversity; it currently has 278 members. The Council initiated the “Faces of YSU” banners that have been displayed around the campus. SDC cosponsors the annual Martin Luther King, Jr. Breakfast and gives awards at that event to individuals who have demonstrated dedication to Dr. King’s vision. The group hosts speakers, forums, movies, and other events to create an inclusive community.
- The **Office of Student Diversity** in the Division of Student Affairs sponsors educational, social, and cultural programs to increase sensitivity and responsiveness to institutional diversity and encourages understanding of the University’s diverse constituents. The Office coordinates the annual Martin Luther King Celebration, Hispanic Heritage Month, Women’s History Month, and Disability Awareness Month and provides support to student organizations such as the Muslim Student Organization and the Student African American Brotherhood.
- **YSUnity—A Gay/Straight Alliance** educates the campus and the larger community about what it means to be lesbian, gay, bisexual, or transgender. Once each semester, YSUnity sponsors **Safe Zone** training with the goal of creating a network of University personnel who have received training about sexual orientation. Individuals who have completed the training post a sign in their offices indicating that individuals of all sexual orientations will be treated with respect and confidentiality. Members of YSUnity also participate in panel discussions in classrooms.
- **Multicultural Student Services** in the Center for Student Progress engages students, faculty and staff in activities that develop understanding of cultural diversity, such as Native American Expo, Black History Month, and Hispanic Awareness Week.
- A **Coordinator of Diversity Initiatives** in the **Office of Equal Opportunity and Diversity** provides assistance, recommendations, and plans for fostering recruitment, retention, and development of a diverse faculty, staff, and student body. The Office sponsors or co-sponsors events on campus and in the community and publicizes activities through its newsletter and calendar.

## Assessment of Diversity Outcomes

On the Graduating Student Questionnaire, as shown in **Table 4-1**, students’ aggregate mean scores for the extent to which the institution contributed to their growth in understanding cultures throughout the world and comprehending diversity in America rank eighth and twelfth among the 16 items measured.

The National Survey of Student Engagement (NSSE) also provides some evaluation of the extent to which students are prepared to function in diverse local, national, and global societies. On the most recent NSSE survey, 3% of YSU seniors had studied abroad and 28% had taken foreign language coursework. These percentages were a slight increase from the previous year. Selected items from the 2007 NSSE, shown in **Table 4-3**, indicate that YSU students may be somewhat less prepared than students at comparison schools to work effectively in diverse, cross-cultural settings.

**Table 4-3: Selected Diversity Items on the National Survey of Student Engagement**

	YSU	Urban Institutions	Carnegie Peer Institutions
<i>Students responding that they “Often” or “Very Often”:</i>			
<b>Included diverse perspectives in class discussions or writing</b>			
First-year students	61%	66%	61%
Seniors	55%	65%	64%
<b>Had serious conversations with students of a race or ethnicity other than their own</b>			
First-year students	50%	52%	48%
Seniors	52%	57%	52%
<b>Had serious conversations with students who were very different from them in religious belief, political opinions, or personal values</b>			
First-year students	55%	54%	52%
Seniors	47%	53%	54%
<i>Students responding that their experiences at the institution contributed “Quite a Bit” or “Very Much” to:</i>			

*Continued on the following page*

	YSU	Urban Institutions	Carnegie Peer Institutions
<b>Working effectively with others</b>			
First-year students	68%	67%	69%
Seniors	74%	71%	77%
<b>Understanding people of other racial and ethnic backgrounds</b>			
First-year students	53%	59%	55%
Seniors	46%	57%	55%
<b>Ability to work effectively in diverse/cross-cultural settings</b>			
First-year students	42%	48%	NA
Seniors	44%	54%	NA
<b>Understanding of today's international/multicultural world</b>			
First-year students	36%	48%	NA
Seniors	37%	54%	NA

**Source:** National Survey of Student Engagement, 2007

Analysis of the NSSE results from 2004, 2006, and 2007 (see **Table 4-2**) indicates that there is no statistically significant difference in mean scores of first-year students and seniors on the item “understanding people of other racial and ethnic backgrounds.” On the other hand, seniors have higher means than freshmen for the item “working effectively with others.”

Given the institutional emphasis on diversity, these results are somewhat disappointing. However, the Graduating Student Questionnaire and the National Survey of Student Engagement are indirect and broad measures of student learning. Student achievement of specific diversity-related outcomes in general education courses and in major programs is analyzed by academic

departments and reported through the assessment system described in Chapter 3. This information is reviewed by the General Education Committee or the Assessment Council.

Integrating diversity content throughout the curriculum (rather than requiring specific “diversity courses”) makes analyses of the curriculum content and assessment of diversity-related outcomes difficult. The assessment of non-classroom diversity learning outcomes is usually informal. The Criterion 4 Committee suggested that more clarity of diversity outcomes for courses and for cocurricular activities would strengthen assessment. The findings should be communicated to appropriate stakeholders, such as the Student Diversity Council, and better applied to strengthen programs.

### Preparing Students as Independent Learners

*4c6. Faculty expect students to master the knowledge and skills necessary for independent learning in programs of applied practice.*

Faculty expectations for student learning are grounded in Youngstown State University’s Core Values document, which states, in part, that the University will foster students’ “capacities for lifelong learning, civic responsibility, and leadership.” The University expects to transform its students into “successful professionals, scholars, citizens, and leaders” (Vision Statement). Beyond these global expectations, faculty have established outcomes for General Education and academic programs and defined specific course objectives for the knowledge and skills necessary to achieve these outcomes.

**Capstone courses** must incorporate three General Education goals that are particularly relevant to the development of independent learners: (1) Write and speak effectively; (2) Acquire, process, and present quantitative and qualitative information using the most appropriate technologies, including computers; and (3) Reason critically, both individually and collaboratively; draw sound conclusions from information, ideas, and interpretations gathered from various sources and disciplines; and apply those conclusions to one’s life and society.

In addition to the General Education outcomes mentioned above, the following examples of program learning outcomes illustrate that faculty expect students to develop abilities as independent learners:

- Social Work: Prepare students to sustain their effectiveness by instilling the value of continuing professional growth.
- Allied Health: Employ current technologies, such as interactive video systems, computer, and web-based systems to access information and communicate with others.
- Nursing: Demonstrate flexibility and self-directed behavior in diverse practice settings.

- Business: Identify and solve problems using various capacities for thinking and reasoning, including sensitivity to the ethical dimensions of the problem.
- Environmental Science: Apply the scientific method to research an environmental problem and formulate conclusions.
- Chemical Engineering: Effectively access and assess information.

To develop and to assess students' independent-learning capacities, academic programs include capstone courses; laboratory courses; performance courses; independent study and research; and field-based courses such as internships, student teaching, clinical experiences, and practicum courses. Chapter 5 describes many of the ways YSU students apply their knowledge and skills in the community.

Most academic programs either require or encourage an **internship, co-op**, or similar real-world experience. Students can complete internships locally and throughout the country and the world. These experiences range from political science students at the Washington Center in Washington, D.C., to hospitality management students at Disney World, fashion merchandising students in New York City, and geography students at the Bahamian Field Station. Third Frontier Internships, funded by a grant from the Ohio Department of Development, provide support for engineering and science students to work for area technology-oriented businesses. A grant from the Raymond John Wean Foundation is funding eight paid internships per semester at non-profit organizations.

The Office of Professional Practice coordinates internship experiences for students in business, engineering, and technology; internships in other fields are managed by the academic departments. The Office of Career and Counseling Services also provides information and assistance to students seeking internships. Increasing the quality and quantity of internship opportunities is one of the goals of the Academic Strategic Plan. A step toward that goal is re-establishing the Internship Advisory Committee.

■ *"There is no better way to learn than by making decisions that have a real impact."*

— Dean Betty Jo Licata  
Williamson College of  
Business Administration

The **Student Investment Fund** is a recent initiative to prepare students for application of knowledge. The Youngstown State University Foundation has provided \$250,000 for a fund to be managed by students enrolled in a course called Practicum in Portfolio Management. Students will develop a portfolio strategy, analyze data, explore various investment methods, and examine investor behaviors under the guidance of Dr. Peter Chen, Assistant Professor of Accounting and Finance, and an advisory council of mentors from the YSU Foundation and the business community.

On the Graduating Student Questionnaire, seniors are asked to what extent their education at YSU has contributed to "preparing for life-long learning."

An analysis of the results from 1997 through 2005 shows this item had the highest aggregate mean score (3.20 on a scale of 0=None; 4=Very Much) among the 16 items on the survey. Seniors' ratings of the extent to which their experiences at YSU contributed to "learning effectively on your own" and "acquiring job or work-related knowledge and skills" are significantly higher than freshman ratings according to the NSSE surveys from 2004, 2006, and 2007. (See **Table 4-2**.)

*4c7. The organization provides curricular and cocurricular opportunities that promote social responsibility.*

See Core Component 4d, **Social Responsibility in the Curriculum and Cocurriculum**; and Chapter 5, Core Component 5b.

### Summary and Evaluation of Core Component 4c

*Youngstown State University assesses the usefulness of its curricula to students who will live and work in a global, diverse, and technological society.*

The 2006–07 academic program review has led to plans for educational improvements, and these plans are being implemented. College Boards of Visitors and many program-specific advisory boards provide student, alumni, and employer input regarding the currency and relevancy of the curriculum. Academic programs without advisory boards should consider establishing them. Professional accreditation provides additional evaluation and documentation of currency and relevance. Diversity topics are embedded in general education, major courses, and electives; and the curriculum is supplemented by many programs and organizations that celebrate diversity. However, despite a great deal of curricular emphasis on diversity, some indirect measures of learning indicate that student preparation for a multicultural world could be improved. Recent initiatives in international studies may contribute to that improvement.

Students have many opportunities (e.g., internships, clinical experiences, independent study, capstone projects) to demonstrate that they have mastered the knowledge and skills necessary for independent learning and the ability to function in a diverse, global, and technological society. Graduating students consistently indicate on the Graduating Student Questionnaire that the institution has prepared them for life-long learning.

**Core Component 4d:**

*The organization provides support to ensure that faculty, students, and staff acquire, discover, and apply knowledge responsibly.*

**Core Component 4d:**

*The organization provides support to ensure that faculty, students, and staff acquire, discover, and apply knowledge responsibly.*

**Research Administration and Support**

*4d4. The organization provides effective oversight and support services to ensure the integrity of research and practice conducted by its faculty and students.*

The Dean of Graduate Studies and Research/Associate Provost for Research has primary authority to oversee the appropriate conduct of research and sponsored programs. The University Research Council is charged with assisting the Dean.

The Office of Grants and Sponsored Programs supports research by identifying funding agencies, disseminating funding information, and assisting with the preparation of proposals and reports. The Office produces and disseminates the *Guide to Sponsored Program Development*, which contains the relevant policies and procedures for external funding. The office is staffed by a Director, who reports to the Dean of Graduate Studies and Research/Associate Provost for Research, and one secretary. The office has played an important role in the increase in external funding noted in Core Component 4a.

Post-award responsibility for all externally sponsored projects and programs resides primarily with the individual principal investigator or project director, the unit head (e.g., department chair, administrative supervisor), and the Director of Grants Accounting in the Office of General Accounting.

The Criterion 4 Committee noted that there are instances when investigators fail to comply with all of the external funding procedures. Grant proposals to external sponsors are sometimes submitted without adequate review and pre-approval by the appropriate University officials. Occasionally, technical or financial reports have been late, inaccurate, or not provided. Some additional monitoring procedures or support services may be needed to ensure full compliance.

Externally funded public-service activity is often conducted through the Public Service Institute (PSI). The Executive Director of the PSI has responsibility for coordinating sponsored program activity undertaken by members of the Institute staff. The proposals submitted and awards generated follow the standards for review and approval outlined in the *Guide to Sponsored Program Development*. The Executive Director of PSI reports to the Dean of Graduate Studies and Research/Associate Provost for Research.

## Integrity in Research

*4d2. The organization follows explicit policies and procedures to ensure ethical conduct in its research and instructional activities.*

Policies and procedures to ensure integrity of research and instructional activities can be found in the *University Guidebook*, on the Office of Grants and Sponsored Programs web site, and in the *Guide to Sponsored Programs Development*. They include the following:

- Board Policy 1013.01—Research, Grants, and Sponsored Programs
- Board Policy 1014.01—Integrity in Research—Use of Human Participants
- Board Policy 1015.01—Integrity in Research—Use and Care of Animals
- Board Policy 1016.01—Scientific Misconduct
- Board Policy 1017.01—Objectivity in Research—Avoidance of Conflicts of Interest and/or Commitment in Sponsored Research
- Board Policy 9006.01—Professional Conduct of Faculty, Department Chairpersons, and Professional/Administrative Employees
- Board Policy 4010.01—University Health and Safety

The University protects the rights, well-being, and personal privacy of research subjects. The Dean of Graduate Studies and Research annually forms a Human Subjects Review Committee composed of both University and non-University personnel. The Committee reviews, approves, modifies, or disapproves research activities involving human participants. Information concerning human subjects is contained in *Human Subjects Research: Regulations and Procedures*, which is available in the Office of Grants and Sponsored Programs. An Institutional Animal Care and Use Committee (IACUC) oversees the humane treatment of live vertebrate animals in research.

The Office of Environmental and Occupational Health and Safety (OEOHS), in consultation with the Office of the General Counsel, is responsible for keeping the University in compliance with local, state, and federal regulations affecting the safety of research facilities and activities.

## Intellectual Property

*4d5. The organization creates, disseminates, and enforces clear policies on practices involving intellectual property rights.*

Section 3345.14 of the Ohio Revised Code provides that all rights to discoveries or inventions that result from research or investigation conducted in a state university are the sole property of the university. A board of trustees may assign, license, transfer, or sell these rights as the board deems appropriate. The YSU Board of Trustees encourages research and scholarship through an appropriate allocation of intellectual property rights between the creator and the University. According to Board Policy 1018.01—Intellectual Property Rights, the Board has assigned the rights to intellectual property as described in the *YSU/YSU-OEA Agreement*. These rights are outlined in Article 24.3 and Appendix I of the Agreement and in the Board Policy included in the *University Guidebook. A Handbook on Ownership of Intellectual Property*, a YSU publication, is available from the School of Graduate Studies and Research and the Office of Grants and Sponsored Programs.

An office of ComDoc, a quick-copy service, is located on campus and used for most classroom printing. The service helps faculty obtain clearances for the use of copyright-protected materials to be distributed in their classes. The service will not duplicate copyrighted materials without obtaining the appropriate clearance. Small numbers of copies can be made for one-time distribution if faculty sign a declaration that material to be copied falls within the “fair-use” guidelines.

*The Code: A Handbook of Student Rights, Responsibilities and Conduct* (<http://www.ysu.edu/thecode.pdf>) defines academic dishonesty (including plagiarism), the procedures to be followed when academic dishonesty is alleged, and the possible penalties. Similar information is also distributed through the *Undergraduate Bulletin*. The Maag Library web site includes a *Subject Guide—Copyright and Intellectual Property* as a reference for employees and students needing information about these topics.

## Responsible Use of Knowledge

*4d1. The organization’s academic and student support programs contribute to the development of student skills and attitudes fundamental to responsible use of knowledge.*

Many faculty members include an explanation of plagiarism and possible penalties for academic dishonesty on the course syllabus. First-year composition courses and upper-division writing-intensive courses provide opportunities for students to develop skills and to demonstrate respect for the intellectual contributions of others. Maag Library, the Writing Center, and the Reading and Study Skills Center supplement faculty efforts by providing instruction to students about the proper use of sources and avoiding plagiarism. Peer Assistants from the Center for Student Progress receive training in academic honesty so that they can be resources for other students.

The Student Evaluation of Teaching and Learning instrument asks students to indicate whether they are aware of plagiarism or other forms of academic dishonesty in the course. The aggregated information is provided to the instructor.

Faculty who supervise student researchers enforce standards of ethical research. Students receive instruction about these ethical guidelines through courses in research, professionalism, and/or ethics that are included in their academic programs. When students conduct research involving human subjects or animals, faculty co-sign the research protocols and submit them to the appropriate regulatory committee.

## Social Responsibility in the Curriculum and Cocurriculum

*4b4. The organization demonstrates the linkages between curricular and cocurricular activities that support inquiry, practice, creativity, and social responsibility.*

*4c7. The organization provides curricular and cocurricular opportunities that promote social responsibility.*

*4d3. The organization encourages curricular and cocurricular activities that relate responsible use of knowledge to practicing social responsibility.*

### Social Responsibility in the Curriculum

The University recognized the importance of developing social responsibility in all of its students by establishing a category of Personal and Social Responsibility courses in the General Education Requirements. These courses are designed to address at least one of the following goals:

- Goal 4: Understand the personal and social importance of ethical reflection and moral reasoning; and
- Goal 9: Understand the relationships between physical, mental and emotional well-being and the quality of life of the individual, the family and the community.

Personal and Social Responsibility Domain courses include Introduction to Professional Ethics, Technology and Human Values, Ethics of War and Peace, Religion and Moral Issues, Religion and the Earth, Healthy Lifestyles, Human Sexuality, and other courses from the Colleges of Liberal Arts and Social Sciences, Education, and Health and Human Services. Students must complete two courses in this category.

Programs, courses, and projects throughout the University instill the value of social responsibility. Some representative examples follow. Chapter 5 describes additional ways that students learn to serve the community.

■ *“My favorite volunteering experience was Shantytown. After living in a box for a night, I have definitely changed the way I view the world. I now don’t take things for granted. Even the small things in life could be the most important to those people who don’t have much. All in all, this experience changed me for the better.”*

— Justin Hosseininejad,  
University Scholar,  
Engineering

■ *“This was definitely my best learning experience so far,” said senior Rachel Henderson. “I was shocked at first at the different culture and the poverty, but the people there were so caring and thankful.”*

— Rachel Henderson,  
Nursing Student

**American Humanics, Inc.** is a national alliance of colleges, universities, and non-profit organizations that prepares undergraduate students for leadership careers with non-profit organizations. The Center for Nonprofit leadership in the Williamson College of Business Administration offers the program, which is open to any student seeking a four-year degree. It includes both curricular and cocurricular experiences and requires classes, attendance at a national conference, and a 300-hour internship with a non-profit organization. Non-profit agencies that could benefit from student interns are often unable to pay them. The Raymond John Wean Foundation has recognized this need and provided \$112,014 for paid internships. YSU’s American Humanics program has received the Excellence in Leadership Award from Meridian Services, Inc.

**Leslie H. Cochran University Scholars** (described in Chapter 3) must donate 60 hours of community service each academic year. The University Scholars annually create Shantytown during National Hunger & Homelessness Awareness Week in November. The students volunteer at local agencies that serve the homeless, collect donations to be dispersed to the agencies, and sleep outside in cardboard boxes as a way of raising awareness about the plight of the homeless. The program includes speakers, movies, and group activities. At the conclusion of the event, the students recycle their cardboard homes with the help of YSU Recycling Services.

Service learning is integrated into courses in several fields:

- Secondary education teacher candidates in Dr. Marianne Dove’s Principles of Teaching Adolescents course worked with Daybreak Adolescent Crisis Shelter/Family Service Agency in Youngstown. The students team-taught weekly lessons to runaway and homeless youth (ages 12–17) at the residential shelter.
- Four senior nursing students and four nursing faculty members traveled to Maíz, Mexico, as part of a medical mission in fall 2007. In two days, they tended the medical needs of 264 people in a temporary clinic set up in a church. The nursing students received credit toward their clinical experience requirements.
- The Dental Hygiene faculty and students participate in “Give Kids a Smile Day” The students, dentist volunteers, and dental hygienists provide screenings, cleaning, radiographs, and fluoride treatments for children from Youngstown public schools and the Trumbull County Head Start Program.
- The Williamson College of Business Administration has initiated a Service Learning Citizens Scholars Program. Students in the WCBA who participate in four classes that offer a service-learning project (individual, group, or class project) receive a Service Learning Citizen Scholar designation upon graduation. For example, students in the Department

of Marketing are participating in the Do-It-Now campaign. The aim of the campaign is to increase the number of organ donors. Students in a marketing research class and a public relations class worked together on the campaign. The research class conducted focus groups and surveys to measure people's attitudes toward organ donation. The public relations class staged events on campus and in the community to get people to sign up to be donors.

- Family and Consumer Studies majors in the Community Programming class worked with the Rescue Mission staff to address educational needs of their female residents. The students interviewed the women and then planned and conducted workshops on managing stress, preparing nutritious food, parenting, managing money, building self-esteem, and obtaining low-cost housing.

### Cocurricular Activities

Student activities provide leadership opportunities and promote the intellectual, social, cultural, spiritual, and physical development of students. These activities include Student Government, student publications, Greek life, theater and musical productions, and student organizations. Youngstown State University has more than 150 registered student organizations; about 60 of those are honoraries or related to a specific curriculum. The Student Activities Office supports the formation and development of student organizations. Each student organization has at least one faculty or staff member as an advisor. Activities to support inquiry, practice, creativity, and social responsibility include the following:

The **Emerging Leader Program**, open to any YSU student, promotes student involvement and leadership. It emphasizes ethics, multiculturalism, global understanding, social responsibility, and community action. Students attend designated programs and activities to accumulate "leadership units" and participate in a minimum of 60 hours of community service. Those who complete the program receive the Emerging Leader designation on the transcript. The program is a collaborative effort among Residential Life and Housing, Student Activities, Center for Student Progress, Campus Recreation, and Career Services.

Students in the Emerging Leader Program may also participate in the **Cafaro Leadership Community**. Community students live together in Cafaro Residence Hall and take four academic courses together, including Exploring Leadership (Counseling 1588).

Student organizations connect students with their future fields of practice as well as the modes of inquiry in the discipline. For example, Beta Alpha Psi, an honorary society for finance, accounting, and information systems students, cosponsors an annual Accounting Student/Practitioner Day. Sessions

throughout the day feature guest speakers in the accounting professions. The nursing honor society, Sigma Theta Tau, cosponsors the annual Nursing Research Symposium.

Student Government facilitates student organization activities through its appropriation process. One of the criteria used in determining an allocation to a group is the group's community service record. Student Government projects that illustrate students' sense of social responsibility include Red Cross Blood Drives, raising money for the Tsunami Relief Fund, the Better Worlds Book Drive, and educational programs, such as "Searching for a Non-violent Future."

Cocurricular activities in the arts encourage the development of creativity. Students, including those who are not pursuing degrees from the College of Fine and Performing Arts, can participate in theater productions and in musical ensembles such as the Marching Band and the University Chorus. Student arts organizations include Dance Ensemble, Jazz Society, and the Student Art Association. Students with an interest in the arts can live together in Kilcawley House as members of the **Fine Arts Appreciation Community**. This joint project of the Dana School of Music and the Office of Housing and Residence Life provides a supportive environment, such as private sound-proof rooms for music practice, to help students develop their talents.

The many cultural and intellectual events offered on campus contribute to students' development of creativity, social responsibility, and intellectual inquiry. These events are generally open to the public and are described in Chapter 5. One of the sponsors of such events is the **Dr. James Dale Ethics Center**. The Center—administered by a faculty member from the Department of Philosophy and Religious Studies—promotes study, research, and publication in the field of ethics. It provides continuing education on ethics, provides consultation to agencies and organizations, organizes conferences, sponsors a speaker series, publishes a newsletter, and organizes workshops for faculty and staff.

### Summary and Evaluation of Core Component 4d

*Youngstown State University provides support to ensure that faculty, students, and staff acquire, discover, and apply knowledge responsibly.*

The University has created policies, procedures, and organizational structures to ensure integrity in research and instruction. The Office of Grants and Sponsored Programs has facilitated the increase in external funding noted in Core Component 4a. However, ensuring full compliance with policies and procedures regarding external funding has been difficult. More pre- and post-award grant assistance could increase observance of funding regulations.

Students become aware of their ethical responsibilities through the curriculum, cocurricular activities, and student support services. There are numerous cocurricular organizations and programs to enhance student leadership,

scholarship, service, creativity, and professionalism. Academic departments and various offices within Student Affairs cooperate successfully on several of these programs. It would be useful to identify additional ways in which Academic Affairs and Student Affairs can collaborate to develop desirable student skills and attitudes.

## Conclusions

Youngstown State University complies with Criterion 4: The organization promotes a life of learning for its faculty, administration, staff, and students by fostering and supporting inquiry, creativity, practice, and social responsibility in ways consistent with its mission.

## Strengths

1. Through its negotiated union contracts, the University provides excellent employee-development opportunities, including paid and unpaid staff-development leaves; reimbursement for advanced study and terminal degrees; reassigned time for professional development and scholarship; professional-development travel; and up to 10 fully paid faculty sabbaticals, 16 one-semester faculty-improvement leaves, and 18 research professorships annually.
2. YSU is particularly proud of its research opportunities for undergraduate students. Both graduate and undergraduate students have numerous opportunities to participate in research through courses, employment, and special programs. QUEST, research scholarships, the research assistant program, and travel support for conference presentations recognize and reward student research.
3. The increase in external funding during the past few years provides evidence of the growing capacity of the faculty to conduct research.
4. The University implemented an innovative learning-outcome-based General Education program in 2000. The outcomes specifically address intellectual inquiry, social responsibility, diversity, technology, and global awareness. A coordinator, budget, and University-wide committee provide support and ongoing development.
5. YSU's cocurricular organizations and programs provide many opportunities for students to exercise leadership, contribute service, develop creativity, and demonstrate professionalism.
6. Students indicate on the Graduating Student Questionnaire that YSU has prepared them for life-long learning.
7. Students, alumni, and employers provide input regarding the currency and relevancy of the curriculum through college boards of visitors and many program-specific advisory boards.

8. The University offers many programs accredited by specialized accrediting agencies. Professional accreditation requires curricular evaluation and documentation that graduates are prepared to work in a diverse, global, and technological society.
9. Students have many opportunities (internships, clinical experiences, independent study, capstone projects, research courses, etc.) to demonstrate that they have acquired the knowledge and skills for independent learning and living in today's world.

### Challenges and Opportunities

1. A General Education program has been designed to ensure that graduates acquire a breadth of knowledge and skills. Structures and processes to support the program are in place. However, implementation has presented challenges, and budget cuts have generated concern. Some departments have not fully implemented their assessment plans for GER courses and reported assessment results. Not all students complete 100% of the GER. Course substitutions and exemptions are frequently made for students who were enrolled prior to 2000, as well as for transfer students. Maintaining the integrity of the program without increasing the hours needed for the degree is often difficult. A few departments have not developed the required "intensive" courses for the major. The decision rules for granting exemptions are not uniform across colleges.

**Recommendations:** Continuing financial support and evaluation are needed to maintain and develop the program. The centrality of general education should be recognized in developing budget priorities. Academic departments must meet their responsibilities for assessing general education courses and ensure that students can fulfill the writing-intensive, oral-communication intensive, and critical-thinking intensive requirements. More uniformity across colleges in granting exemptions for GERs would be desirable.

2. According to the March 2007 Campus Climate Survey, many employees do not agree that the University's financial allocations support a life of learning for faculty, staff, and students.

**Recommendations:** Involve employees at all levels in developing budget priorities, and continue efforts (e.g., Budget Information Committee) to educate campus constituencies about financial challenges and decisions.

3. Comparatively speaking, few YSU students study or travel abroad, and the percentage of international students at YSU is low.

**Recommendations:** Continue efforts to provide students with international experiences and contacts. Monitor the success of recent

initiatives (e.g., international study scholarships, reduction in tuition surcharge for international students), and provide additional support as needed.

4. Despite the attention given to diversity in the curriculum and in cocurricular activities, there is not much evidence that these efforts are highly successful in preparing students to function in an increasingly diverse society.

**Recommendations:** Academic units and appropriate committees (e.g., General Education Committee, Assessment Council, Student Diversity Council) should analyze information provided by the Graduating Student Questionnaire, the National Survey of Student Engagement, and other indicators of student preparation for a diverse workforce. There is a need for improved, direct assessment of diversity-related outcomes and for “closing the loop,” using information to improve curricular and cocurricular experiences.

