Western Illinois University
Division of Academic Affairs
College of Arts and Sciences
Consolidated Annual Report, Planning Document and Budget Request

CURRENT YEAR
Fiscal Year 2011

I. Accomplishments and Productivity for FY11

A. Give a brief review of the division's goals and objectives for FY11.

CAS major goals and objectives for FY11 fell under the general areas of Student Learning and Program Development, Support Student/Faculty Research and Related Academic Programs; Internationalization; Ongoing Support of existing quality programs to Enhance Student Learning and Foster Faculty Scholarly/Professional Activities; Support Faculty Diversity Initiatives; and Advancement. These goals and objectives are in support of HIGHER VALUES IN HIGHER EDUCATION 2008-2018, especially Goal 1: "Focused recruitment and retention;" Goal 2: "Enrich Academic Excellence," Action 1. "Support strong commitments to teaching and instruction" and Action 2 "Provide strong commitments and increase opportunities to support research, scholarly/creative activities, public service and outreach;" Goal 3: "Provide Educational Opportunities." Action 1. "Further augment flexibility and responsiveness to student needs and timely degree completion in academic programs" and Action 2. "Support learning inside and outside the classroom and initiatives designed to increase student success;" Goal 5: "Promote Social Responsibility," Action 2. "Use partnerships to advance the University's vision, mission, values, goals, and actions." Our departments made concerted efforts – through curriculum development and planning – to improve our recruitment of students to and retention of CAS majors. Our centers and institutes - Institute for Environmental Studies (IES), Western Survey Research Center (WSRC), and the Geographic Information Center (GIS) - also contributed to the above goals, often demonstrating a necessary connection between excellence in student learning in undergraduate and graduate studies, student and faculty research and the opportunities afforded by service, outreach, and partnership relationships. Advancement initiatives supported and enhanced these activities.

B. List the <u>most important</u> divisional accomplishments for FY11 and document how these accomplishments support the goals and objectives of the University, including specific <u>Strategic Plan</u> accomplishments. List the accomplishments based on the below goal areas. Divisions may indicate "not applicable" or "none" under a goal area as appropriate.

1. Enhanced Learning Culture
   a. Maintain rigor and high academic standards

      Inaugural **Meteorology** Student Peer Mentorship program
      Geology "Field Methods" labs moved to GIS format
      Completed **Meteorology** Track
      Undergraduate Research Activities - **CAS** grants – College expects to award more than 80 undergraduate research grants (28 in Fall; 58 applicants in Spring); Department support and Conferences (e.g., **Psychology**/ILLOWA; **Physics-Sciences**/CSUI; **Chemistry**/ACS; **History**/Phi Alpha Theta)

   b. Prepare for HLC/NCA and NCATE reaccreditation

      Biological Sciences/Chemistry/Physics Science Teacher Certification Program - National Recognition through 2019 (NSTA/NCATE)
      English Education – National Recognition with Conditions through 2013 (NCTE/NCATE)
      Foreign Languages and Literatures – National Recognition with Conditions through 2013 (ACTFL/NCATE)
      History/Social Sciences Teacher Certification Program - National Recognition through 2019 (NCSS/NCATE)
      Mathematics Teacher Certification Program – National Recognition through 2019 (NCTM/NCATE)
      Full participation of and numerous contributions by CAS Dean's Office Staff, CAS Chairs, CAS Faculty, including some leadership positions on teams

c. Strengthen academic programs through review and discipline-specific accreditation
Nursing accreditation effective February 2011
Biological Sciences and **Geology** programs underwent program review, including external review
Chemistry preparing for future AAFS accreditation (Created Advisory Board)

d. Increase course based civic learning and service learning
Constitution Day Activities
English/Journalism student projects to contribute to "Before Quad Cities," website dedicated to local history
History hosted the NEH Exhibit "Abraham Lincoln, the U.S. Constitution, and the Civil War" at the Malpass Library (grant collaboration with the Library), accompanied by a speaker series

e. Enhance Centennial Honors College
CAS faculty and administrators are members of the URD Committee
CAS is co-sponsor of URD Awards
CAS faculty taught 62% (18/29) of the scheduled Honors courses offered during Fall 2010-Spring 2011
62 **CAS** faculty mentored 188 students. 154 projects were presented by **CAS** students representing 80.6% of all presentations.

f. Expand study abroad and multicultural initiatives
Chemistry 490 student conducted research in Zambia
Continued support of study abroad programs (WISE Spain, WISE Mexico, Changing Cultural Landscapes of Thailand, Cultural Anthropology Field Study in Germany, German History and Culture: Munich and Bavarian Alps, Sacred People, Sacred Places: The Indian Religion Landscape)
Foreign Languages and Literatures Film Nights; German Coffee hour; French conversation hour
History study abroad program to Greece (summer 2010)
LAS/AAS/WS co-taught course on Race, Class, Gender in connection with Dealing With Diversity Institute (Summer 2010 and proposed for Summer 2011)
African American Studies – Jo-Ann Morgan received the Provost's Award for Excellence in Multi-Cultural Teaching
English and Journalism – Roberta Di Carmine received the Provost's Award for Internationalizing the Campus

g. Continue to explore distance education opportunities for placebound students
Nursing (BSN-RN) On-line approval; delivery is scheduled for AY12
Seven new on-line courses were been approved for **African American Studies**, **History**, **Physics**, **Political Science**, **Psychology**, **Religious Studies**, and **Foreign Languages and Literatures**.

h. Support scholarly/professional activity
Creation of CAS Faculty Research Travel Foundation Account
Sponsored five faculty members (co-sponsored with OSP) to attend the LINC Research Collaboration Conference in St. Louis, MO.
Continued to support faculty travel with $375 in matching funds for research presentations
Sociology and Anthropology – David Rohall received the Provost's Award for Excellence in Scholarly/Creative/Performative/Professional Activities

i. Investigate interdisciplinary/collaborative initiatives
Explored Integrated Baccalaureate Masters Degree (IBMD) between **Women's Studies**, **African American Studies** and **MLAS**
Explored Film Option between **English and Journalism** and Broadcasting
Biological Sciences collaborative partnership with Burpee Museum in Utah on a paleontology field course
Forensic Studies Program Series (Fall 2010) – **Chemistry**, **Physics**, Law Enforcement, **Psychology**, **Sociology and Anthropology**, Health Sciences and **Biological Sciences**
Interdisciplinary Panel with Faculty from **English**, **Anthropology**, RPTA at Association for Study of Literature and Environment (ASLE)

j. Integrate technology into the classroom
Biological Sciences - $100K spent by John G. Shedd Aquarium, classroom equipment and technology were updated at Shedd Aquarium site

k. Other learning enhancement initiatives
BLAS/MLAS Integrated Baccalaureate Masters Degree
Approval of new Pre-Law programs in **History** and **Political Science**
Development of a B.S. in **Chemistry** with Pharmacy option in curricular approval process

2. Fiscal Responsibility and Accountability
   a. Review departmental budgets
   See Sections I.D.2. and I.D.4.
   b. Reallocate variance dollars to support University priorities
   See Section I.D.2.
   c. Identify alternative funding sources
   See Sections I.D.1 and I.D.3.
   d. Review academic program costs
   Program Reviews
   New Personnel Requests
   Feasibility Studies for New Programs
   e. Other fiscal responsibility and accountability initiatives
   Grants and contracts: $637,426; local accounts: $145,129.70
   Arranged individualized training sessions for department personnel responsible for departments' budgets
   Dean's Office & CAS Departments withheld 25% from budget as a contingency through March 1
3. Partnerships, Community Engagement, and Outreach
   a. Create and support partnerships with University departments, institutions of higher education, and the community
   WIU Pre-pharmacy and UIC College of Pharmacy (Chicago and Rockford campuses)
   WIU Pre-engineering and U. Iowa College of Engineering
   Biology - Biology Day
   History – Annual History Conference; Teaching America History Grant summer trip
   Two faculty members from **Political Science** co-chaired WIU's participation in the American Democracy Project and faculty from a number of departments participated in the Constitution Day panel.
   Continued annual lecture series in Philosophy and Religious Studies (Mary Olive Wood Lecture), Geography (Robert Gabler Lecture) and Physics (Morrow Lecture).
   Continued support of annual John Hallwas Liberal Arts Lecture.
   b. Other partnerships, community engagement, and outreach initiatives
   EICCD A.S. in Conservation Technology + WIU RPTA (w/ENVR Minor)
   Chemistry and Physics Demonstration Show general public "S.P.A.C.E. = Space Physics and Chemistry Extravaganza."
   GIS Outreach – including high school students from Schuyler Country 4H; one day seminar for high school students from McDonough county 4H.
   Institute for Environmental Studies – co-sponsor of and contributor to Upper Mississippi River Conference (part of on-going affiliation meeting with Upper Mississippi River Fish and Wildlife Interagency Committee);
   Math – Girls Plus Math summer camp; visitations to local high schools; MAA Math Competition for 6-12 graders; 60th Annual Math Teachers Conference.
   Nursing – offering blood pressure and Flu Shot Clinics in the Macomb area.
   Physics – Astronomy Nights for sky viewing
   Developed summer science program for high schools students with contributions from several science departments in the college (first offering will be Summer 2011).
   Physics will offer in Summer 2011 a special section of PHYS 197 University Physics I, for local high school students.
4. Access and Equity
   a. Increase diversity
   See 4.c. below
   b. Increase internationalization
   Foreign Language and Literatures Wise Program (WIU Spanish Experience – Mexico)
   History Study Abroad experiences in Germany and Greece)

Chemistry 490 student conducted research in Zambia

c. Enhance recruitment and retention activities
CAS review and revision of Discover Western participation, display materials, and structure
Chemistry and Savannah State University (HBCU) Summer Research Workshops
Review of curriculum to increase multicultural course availability and opportunity
English/Journalism & African American Studies; African American Studies, Liberal Arts and Sciences, Women's Studies: Race, Class and Gender Course delivered in collaboration with Dealing with Diversity Institute
Reviewed all department procedures for tracking and contacting new admits

d. Other access and equity initiatives
Initiated CAS Departmental Meetings with DRC and OEOA- Completed meetings with **Biological Sciences**, **Chemistry**, **Physics**, **Women's Studies**. Plan to meet with **English & Journalism**, **History**, **Sociology & Anthropology**, and **Psychology** during spring 2011.
Addressing accessibility issues in Simpkins – see 5.c.

5. Student Centered Environment

a. Review FYE
We offered 103 sections for a total of 2230 seats in Fall '10 and Spring '11 (in contrast to the 124 originally planned). The decline was due to reductions in FYE staffing based on last Spring's FYE 3.5 % budget reduction.

b. Review academic advising
The college supports 8 full-time academic advisors who advise students in 16 departments. Two faculty members are also assigned part-time to conduct advising within their programs (**BLAS/MLAS, Science Teacher Education**). The full-time advisors had an average caseload of 293 students and an average of 640 face-to-face meetings with students per year. This past year, the college created an Advisors Council (CASAC) which holds bi-weekly meetings with the Associate Dean to discuss ongoing matters of concern to the college's advisors and serves to distribute information from the university advising council (COAA). The CASAC has created a set of by-laws to guide the committee

c. Review all student support services within Academic Affairs (writing and math centers; tutoring)
In collaboration with Malpass library and the department of **English and Journalism**, the College would like to move the main University Writing Center to the 3rd floor of Malpass Library. This would eliminate considerable access issues for individuals with limited mobility associated with the current UWC space in Simpkins and the central location would make the Center more accessible to students across campus. A satellite UWC would remain in Simpkins to service students in ENG 180/280. (Supporting 5.e. below).

d. Enhance communication and information leading to student success
Created a student-centered environment by enhancing communication and programs through the CAS Student Council. Developed a Student Ambassador Program that provides students within the College of Arts and Sciences the opportunity to work with incoming freshman and transfer students, as well as students that switch majors. Student Ambassadors work with these students either one-on-one when they visit individual departments, in groups at Discover Western visits, or via internet (e-mail, Facebook, etc).
The CAS Student Council developed a "Last Lecture Series" which provides an informal occasion for selected, student-nominated faculty to share reflections from their life's journey and to speak with students as if it was their last lecture ever. Intended to take place each semester, the faculty member will be speaking from the premise, "If you knew this was the last lecture you would ever give, what would you share with students?"

e. Other student centered environment initiatives
The CAS Faculty Council has discussed the issue of deteriorating basic skills among incoming students as witnessed by increasing percentages of incoming students placing into remedial English and Math courses and the difficulty teacher education students are having passing the Illinois Basics Skills Test. The council is currently developing an action plan/initiative to address these issues of continuing concern. One result is a new basic skills tutoring initiative for Mathematics (see Appendix 1 - Math 099 Proposal) and in process of developing pedagogy and transfer of writing skills and knowledge across writing curriculum

C. Indicate measures of productivity by which the unit's successes can be illustrated.

1. **Measures related to academic support**
    a. **Continuing development, refinement, and assessment of curriculum** reflective of student needs and university goals as prioritized by academic support of undergraduate and graduate majors, professional degree programs, minors, First Year Experience initiative, general education, and service courses.
    b. **Mentored student/faculty research, student professional development** (participation in conferences, publications, etc.), participation in the honors program, student experiential learning and internship involvement.
    c. **Initiatives to increase student appreciation** and understanding of diversity, globalization, and internationalization.
    d. **Student recruitment** and retention initiatives and events.
    e. **Numbers of majors and minors** (especially in relation to the number of tenure/tenure-track faculty in a department).
2. **Measures related to faculty**
    a. **Faculty teaching** experience.
    b. **Faculty professional achievements** realized in publications, presentations, extramural funding.
    c. **Support of development, recruitment, and retention** of a qualified and diverse faculty.
3. **Measures related to the performance of the major non-departmental units within the college (e.g., WSRC, IES, GIS Center)**
    a. **Research** (grants, contracts, publications, presentations) and academic activities central to the mission of the unit as measured in faculty productivity and student participation.
4. **Measures related to college-wide initiatives**
    a. **Support of the liberal arts and sciences mission.**
    b. **Continued support of university-wide initiatives** such as First Year Experience, internationalization, support and development of WIU-QC programs and offerings, and the American Democracy Project.
    d. **Continued commitment** to important outreach activities.
    e. **Continued work** toward implementing advancement/development initiatives

D. Describe how the division used any of the following categories of funds to enhance accomplishments and productivity:

1. Western Illinois University Foundation funds
   The college expended $207,183.24 in WIU Foundation funds during the period July 1, 2010 through February 28, 2011. Funds were used: 47.6% ($98,722) in support of student scholarships; 9.1% ($18,906) in support of student assistantships, student research or student employment; and 43.2% ($89,555) was used for miscellaneous expenses (consumables, equipment, etc.).
2. Funds available due to vacant positions or dollars saved through hiring of new personnel at whatever level those funds reside
   In FY11, the majority of college variance dollars were directed toward covering the permanent 3.5% budget reduction of $770,253. In addition, two positions in support of the Nursing program were not centrally funded as expected and a total $130,005 was reallocated for those positions. An additional $151,307 was reallocated to support overload, vacation buyouts, faculty on sick leave, additional graduate assistant support and additional student help. Permanent reallocations include the two nursing positions, increasing a 50% Nursing Resource Center coordinator to 100% FTE, and adding several Chemistry and Biology GA and TA positions.
3. Grants, contracts, or local funds
   Grants and contracts received in FY10 (through February 28, 2011) totaled $637,472. Grant funding was used to purchase scientific equipment used in both research and teaching, to fund undergraduate and graduate research, to provide travel expenses for faculty and students attending profession meetings, and to conduct K-12 outreach activities. Additionally, funds received through local accounts totaled $145,130 through February 28, 2011. Those funds were generated through internal grants and the GIS Center and the Western Survey Research Center. Funds were used to support equipment and commodity purchases, research travel, and to employ undergraduate and graduate students. Additional grants and contracts are pending through the remainder of FY11.
4. Internal Reallocations: For reallocations over $20,000, identify the amount, area that was reallocated from, and the priority that funds supported
   Permanent budgetary reallocations include two Nursing positions ($130,005), increase the Nursing

Resource Center Coordinator from 50% to 100% FTE ($20,007), and adding GA and TA positions in Biology and Chemistry ($37,800).

5. Other fund sources
   None

E. Describe the impact the 3.5 percent rescission had on your division in FY11.

Opportunities

- More attention to and understanding of budgeting and cash flow processes
- Dean's Office training sessions to ensure compliance, efficiency, and accuracy

Challenges

- Hiring Holds (AAS, Biol, E&J, History, Math)
- Fulfillment of start-up equipment and space
- Technology and classroom issues
- Staffing FYE in response to increased enrollment

II. Budget Enhancement Outcomes for FY11

For each budget enhancement received in FY11 complete an Accountability Report form (Attachment A). Be specific about approved productivity measures.

A. Funding for one year of Mathematica software site license. (Attachment A1)
B. Phase I of Currens Hall remodeling to accommodate School of Nursing faculty (Attachment A2)
C. Funding for LINC Conference (Attachment A3)

BUDGET YEAR
Fiscal Year 2012

III. Major Objectives and Productivity Measures for FY12

CAS major goals and objectives for FY12 fall under the general areas of Student Learning and Program Development, Student/Faculty Research and Experiential Learning, Internationalization, ongoing support of existing quality programs, Advancement, and potential for new curricular programs. These goals and objectives are in support of HIGHER VALUES IN HIGHER EDUCATION 2008-2018, especially Goal 2: "Enrich Academic Excellence," Action 1. "Support strong commitments to teaching and instruction" and Action 2 "Provide strong commitments and increase opportunities to support research, scholarly/creative activities, public service and outreach;" Goal 3: "Provide Educational Opportunities." Action 1. "Further augment flexibility and responsiveness to student needs and timely degree completion in academic programs" and Action 2. "Support learning inside and outside the classroom and initiatives designed to increase student success;" Goal 5: "Promote Social Responsibility," Action 2. "Use partnerships to advance the University's vision, mission, values, goals, and actions." Our centers and institutes - Institute for Environmental Studies (IES), Western Survey Research Center (WSRC), and the Geographic Information Center (GIS) - each contribute to the above goals, often demonstrating a necessary connection between excellence in student learning in undergraduate and graduate studies, student and faculty research and the opportunities afforded by service, outreach, and partnership relationships. Marketing and advancement initiatives support and enhance these activities.

Please note that all associated budget and reallocation requests are found in Section V (Budget Reallocation) and Section X (Budget requests).

A. List the most important goals and objectives the division will pursue in FY12, and how these actions will be measured/assessed.

a. Student learning and program development *(Goals 1.1.a-f; 1.2.e; 2.1.a-f; 2.2.a-b; 2.3.; 3.1.a-l; 3.2.b; 3.2.e; 3.2.i)*

1. Goal: Support a School of Nursing and the Nursing program *(Goal 1.1.a.1; 1.1.e-f; 2.3.e; 3.1.c).*
Objectives:

a. Support RN-to-BSN *completion* program (ongoing) and establish on-line courses (short-term).
b. Support basic Nursing Program. Hire faculty and support staff (short-term).
c. Admit two 30-student cohorts into the pre-licensure nursing program, one each in the Fall and Spring Semesters (short-term).*(Goals 1.1;2.1.a)*
d. Support 2+2 agreement with Black Hawk College and other community colleges in the western Illinois region and explore similar arrangements with other colleges (mid-term).

e. Complete nursing resource centers for skills and classrooms (short; mid-term).
f. Maintain CCNE (Commission on Collegiate Nursing Administration) accreditation.
g. Conduct a feasibility study for a Doctorate in Nursing Practice program. In addition, the feasibility of offering such a program via distance delivery will be considered (mid-term).
h. Increase number of sections for support courses in Biological Sciences and Chemistry and other disciplines as appropriate.
i. Provide necessary instructional environment and materials for student labs, including manikins.

2. **Goal:** Receive approval to offer the Environmental Science Ph.D. program *(Goals 1.1.a, 2.1.a, 2.1.b, 2.1.c, 2.1.d, 3.1.h, 4.1.b).*
   Objectives:
   a. Advance the request for a new program through WIU and IBHE for approval.
   b. Secure funding and approval to fill one new faculty position from Provost in support of the Environmental Science Ph.D. program.
   c. Secure funding from Provost for equipment and program startup expenses.
   d. Reallocate CAS funds to support two graduate assistantships for the program.
3. **Goal:** Support the FYE initiative by offering a minimum of 103 classes, with additional support contingent on enrollment figures and funding (on-going) *(Goal 3.2.e)*.
   Objectives:
   a. Teach the range of classes as described above.
   b. Request approval to conduct searches to replace FYE positions with tenure-track positions.
4. **Goal:** Hire Chair of **African American Studies**
5. **Goal:** Seek substance abuse accreditation in **Psychology** to give students the opportunity to become Certified Alcohol and Drug Counselors (CADC). Integrating substance abuse counselor training with our Bachelor of Science degree program in Psychology will fill a niche in the treatment community by providing graduates with a unique combination of skills *(Goals 1.1.a.1; 3.1.d; 3.1.e)*.
   Objectives:
   a. Pursue accreditation by Illinois Alcohol and Other Drug Abuse Professional Certification Association (mid-term).
   b. Conduct a search for a faculty position (fund through a reallocation of an FYE position) with a clinical background and specialty in substance abuse in FY12 (short-term).
6. **Goal:** Promote Pre-Law study in the College by supporting pre-law options in **Political Science**, **Philosophy**, and **History** and continue to offer pre-law courses and develop pre-law internships in Political Science for students considering a career in law (short-term) *(Goals 1.1.a.1; 2.1.b; 3.1.d)*.
7. **Goal: Religious Studies** Major - Potential for partnership with **Anthropology** re: social/cultural significance of the rural church in western Illinois region. *(Goals 1.1.a.1; 2.1.b)*
8. **Goal:** Establish an Earth/Space Science Teacher Certificate Option in **Geology**. *(Goals 1.1.a.1; 2.1.b).* Objective: Implement and support Earth/Space Science Teacher Certificate Option (short-term).
9. **Goal:** Develop Integrated Baccalaureate and Master's Degree Programs in **Biological Sciences** (and explore the possibility for Geography) (short-term). *(Goals 1.1.a.1; 3.1.d; 3.1.e).*
10. **Goal**: Provide a premium undergraduate education in **Geography**, **Meteorology** and specific subfields *(Goals 1.1.a.1; 2.1.b; 2.1.c; 3.1.d).*
    Objectives:
    a. Explore creating an experimental General Education 100-level introductory **GIS** course (short-term). *(Goal 2.1.b)*
    b. Complete the creation of Forensic GIS minor (mid-term). *(Goals 1.1.a.1; 2.1.b; 3.1.d)*
    c. Work with Provost's Office to continue central funding for university-wide GIS license (on-going).
    d. Develop undergraduate minor in Urban Planning (through Geography Department) and explore possibility of creating an Urban Planning option for the B.S. in **Geography** (mid-term).*(Goals1.1.a.1; 2.1.b)*
    e. Develop a GIS in Forensic Mapping Track (mid-term).
    f. Explore development of an M.S. in Sustainable Community Development offered jointly by Geography and the Illinois Institute of Rural Affairs (mid-term). *(Goals1.1.a.1; 2.1.b)*
    g. Purchase equipment to acquire geochemical data for undergraduate instruction and research (Geology)
11. **Goal:** Develop a 3 + 1 program with Palmer Chiropractic through the **Department of Biological**

Sciences (mid-term). *(Goals 1.1.a.1; 2.1.b; 3.1.j)*

12. **Goal:** Support continued growth of Forensic Chemistry Program. *(Goals 1.1.a.1; 2.1.b; 4.2.f)* Objective: Obtain accreditation from AAFS (mid-term).
13. **Goal:** Obtain small, specialized equipment items to meet dramatic upsurge in CHEM 370 enrollments caused by additional students from Forensic Chemistry and the Integrated Baccalaureate and Master's Degree Program in Chemistry (short-term). *(Goals 1.1.a.1; 2.1.b)*
14. **Goal:** Support **Liberal Arts and Sciences (LAS)** degree programs at the baccalaureate and post-baccalaureate levels to serve students in Macomb and Quad Cities (ongoing). *(Goals 1.1.a.1; 1.1.e-f; 2.1.c; 3.1.c)*
    Objectives:
    a. Continue to secure commitments to systematically add new faculty to augment commitments made by CAS and Provost to reflect growing enrollment at Quad Cities campus (on-going).
    b. Continue to offer courses in support of Western's commitment to students at the Quad Cities campus, especially in support of the LAS degree (on-going).
    c. Work with the Liberal Arts and Sciences Advisory committee to oversee the implementation of the undergraduate and graduate LAS degree programs (on-going).
    d. Support dual-admission program with Black Hawk College (on-going).
15. **Goal:** Explore creating a new Foreign Language major in **Foreign Languages and Literatures** (short-term). *(Goals 1.1.a.1; 2.1.b)*
16. **Goal:** Explore possibility of alternate formats for offering developmental and competency courses in **Mathematics**, especially with Mathematics 099. Partnership with CBOT to assist in course delivery (2 teaching assistantships) (mid-term). *(Goal 2.1.d)* – see Attachments
17. **Goal:** Investigate potential for establishment of a forensic training area for evidence and controlled substance handling (**Chemistry)** and for safety issues in general (mid-term). *(Goal 5.3.a)*
    Objectives:
    a. Develop plan to refurbish area to serve as vault with lock boxes to teach forensic chemistry students federal protocols for log-in/log-out procedures for evidence handling and handling of controlled substances.
    b. Purchase chemical cabinets that meet standards for proper storage of volatile chemicals.
18. **Goal:** Explore possibility of developing a pharmacy program (long-term). *(1.1.a.1; 2.1.b; 3.1.j)*
19. **Goal:** Complete curriculum development and seek approval for a Pharmacy option for the B.S. in **Chemistry**, including preparation of a feasibility study (short-term). *(1.1.a.1; 2.1.b; 3.1.j)*
20. **Goal:** Hire a Forensic Faculty (1-**Physics**; 1-**Chemistry**) and an Inorganic Chem Faculty;
21. **Goal:** Develop a minor in **Forensic Physics**. *(Goals 1.1.a.1; 2.1.b)*
    Objectives:
    a. Obtain approval of new Forensic Physics curriculum (short-term).
    b. Hire a new faculty with a specialty in Forensic Physics (mid-term).
    c. Identify and secure additional resources for needed equipment and supplies (mid-term).
22. **Goal:** Explore the possibility of an affiliation agreement with Black Hawk College (BHC) and the Journalism Program.
23. **Goal**: Develop an agreement to permanently establish a collaborative paleontology field course in Utah with the Burpee Museum and **Biological Sciences**, similar to the course that has been offered on an experimental basis (short term).*(Goals 1.1.a.1; 2.1.b)*
24. **Goal:** Explore development of post-baccalaureate certificate in Survey Methods (**WSRC**; mid-term).*(Goals 1.1.a.1; 2.1.b)*
25. **Goal:** Initiate a new orientation program for History graduate students to enhance successful completion of M.A. in History degree in a timely fashion (mid-term). *(Goals 1.1.a; 2.1.d)*

b. Support Student/Faculty Research, Experiential Learning and Related Academic Programs

1. **Goal:** Support of student/faculty research and creative activity (ongoing). *(Goals 2.2.g; 3.2.b; 5.1.a)*
   Objectives:
   a. Maintain funding to support the College of Arts and Sciences Undergraduate Research program.
   b. Maintain the institutional CUR membership.
   c. Maintain funding to support CAS match for Graduate Student Research and Professional Development Fund Awards.
2. **Environmental Studies *(Goals 2.2.a; 2.2.b; 2.2.d.; 2.2.g.; 4.1.b.; 5.3.l)*:**
   a. Goal: Institute for Environmental Studies: Create an interdisciplinary, externally funded

environmental studies research program (on-going).

Objectives:

1. Support the development and submission of competitive proposals to funding agencies for multidisciplinary environmental research. *(Goals 2.2.a, 2.2.b, 2.2.d, 5.3.l)*
2. Continue to develop partnership between WIU and the U.S. Fish & Wildlife Service. *(Goals: 2.2.a, 2.2.d, 4.1.b, 5.3.l)*
3. Maintain leadership in the Upper Mississippi River Conference planning process and increase participation of WIU faculty, students, & staff. *(Goals: 2.2.g, 4.1.b, 5.3.l)*

b. Goal: Increase educational, research and outreach activities at the Kibbe Life Sciences Station.

Objectives:

1. Expand outreach program offerings through (1) funded support from donors/grants/academic sources for Illinois high school students (and reapply for the Earthwatch program run in the past for high achieving high school juniors and seniors from across the nation) as well as the similar WIU-created program for those in our Western Illinois region and (2) development of short courses and/or workshops for high school teachers (short-term; ongoing).
2. Replace current laboratory facility at Kibbe Life Sciences Station to enhance teaching and research laboratory-based activities to replace the current 1900s structure, which has significant structural and infrastructural limitations. Continue development of a building plan and seek external funding for construction of a new facility (long-term; Advancement).
3. Secure funding to increase handicap access (primarily in terms of boat dock facilities, river access and trail access) to Kibbe Station resources (mid-term; through Advancement).
4. Identify sources of funds to purchase all land in drainage areas of Kibbe Life Sciences Station including 220 acres of agricultural land in the upper area of the drainages, which would prevent continued erosion and damage to glen habitats (long-term; through Advancement).

c. Goal: To facilitate offerings of a lab-based curriculum, develop an environmental laboratory facility at the Quad Cities campus (long-term).

Objectives:

1. Seek environmental lab space allocation at the Riverfront campus.
2. Continue collaboration on seeking funding for creation of environmental lab space with Niabi Zoo (long-term).

d. Goal: Secure funds for the greenhouse remodeling (mid to long-term).

3. Geographic Information Systems (GIS) *(Goals 2.2.a; 2.1.c; 5.2.d-f)*:

a. Goal: McDonough County GIS Center: To support interdisciplinary externally funded GIS research programs and outreach activities.

Objectives:

1. To create and pursue research and outreach activities in GIS, especially through external grants and contracts (on-going).
2. Pursue joint membership, with other Illinois universities, in the University Consortium for Geographic Information Science (UCGIS) (long-term).

b. Goal: Support academic program and research development related to GIS at WIU-QC.

Objectives:

1. Continue to promote GIS at the Quad Cities campus through upgraded computer facilities and offer GIS courses (mid-term).
2. Develop a GIS Center at the Quad Cities campus similar to the McDonough County GIS Center that will provide access to grants from Quad Cities' governments (long-term).

4. Western Survey Research Center *(Goals 2.1.c; 2.2a; 5.2.d-f)*.

a. Goal: Support goals of the Western Survey Research Center and its possible integration with the Institute for Environmental Studies. The Center currently supports our research, education and outreach goals and combines a service function with an entrepreneurial focus.

Objectives:

1. Support student and faculty survey research and outreach through external contracts and grants (on-going).
2. Integrate survey research in undergraduate curriculum and support survey research minor (Political Science, Sociology/Anthropology, Psychology) (short-term; on-going).
3. Increase number of students in the newly developed Survey Research Minor (mid-term).
4. Develop stronger relationships with the QC Campus and community through collaboration

with GIS Center and the IES; conducting more service activities for community leaders; publicizing WSCRC work in WIU-QC area (on-going).

5. **Explore inter-center/institute relationships between IES, GIS and the WSRC *(Goals 2.1.c; 2.2a; 5.2.d-f)*.**
   a. **Goal:** Seek ways to increase research, education and outreach opportunities for students and faculty and more effective utilize existing expertise and resources.

c. Support Internationalization *(Goals 4.1.a; 4.2.d; 5.1.b)*.

1. **Goal:** Identify, promote, and support opportunities for internationalization of curriculum and international studies and experience opportunities.
   Objectives:
   a. Continue support of studies abroad programs (WISE Mexico, Wise Spain, Thailand, Germany, India and Greece) (on-going).
   b. Continue supporting international visiting scholars (on-going).
   c. Continue efforts to hire international faculty
   d. Continue developing Asian (China, Thailand and Korea) international connections (mid-term).
   e. Increase capacity and efficiency of WebCAPE foreign language placement testing and proficiency testing since it will now also be used to test for proficiency with regard to the new Foreign Language and Global Issues (FLGI) requirement (mid-term).
   f. Continued support of the FLGI curriculum requirements with 69% of discipline-specific global issues courses and 86% of general education global issues courses being taught by CAS faculty (CIE webpage)
   g. Develop new courses in English and Journalism in International Relations and Global Advertising (short-term).

d. Ongoing Support of Existing Quality Programs to Enhance Student Learning and Foster Faculty Scholarly/Professional Activities *(Goals 1.1.a; 2.1.e; 2.2.b&g; 2.3.a-g; 3.2.b; 5.1.a; 5.3; 6.1.h.1; 6.1.h.4)*.

1. **Goal:** Secure and maintain appropriate accreditation for programs, including (a) NCATE accreditations for teacher education programs in **English**, **Foreign Languages**, **History**, **Science**, and **Mathematics**, including continuation of funds for observation and evaluation of Social Science Teacher Education majors, $2,000/year and to recruit students into our teacher education programs, especially in the high demand areas of mathematics and science, (b) CCNE accreditation for Nursing, and (c) AAFS accreditation for Forensic Chemistry (on-going). *(Goals 2 2.1.e.; 4.2.f; 6.h.1; 6.1.h.4)*
2. **Goal:** Promote faculty research output (on-going). *(Goal 2.2.a-g)*
   Objectives:
   a. Increase the number and/or quality of faculty publications, presentations.
   b. Support externally funded research through increased grant submissions and special programs.
   c. Continue to increase funds for faculty travel to present research.
3. **Goal:** Secure equipment upgrades to support education and research (short-term; on-going). *(Goals 2.3.a-g)*
4. **Goal:** Continue to support the College of Arts and Sciences student recruitment fund *(Goal 1.1.a)* to assist departments in meeting their identified enrollment goals (e.g., number of majors; diversity of students; students with higher mean ACT scores (on-going). Continue to develop Student Ambassador program in consultation with the CAS Student Council.
5. **Goal:** Improve facilities for students and faculty (on-going). *(Goals 5.3.e, i & l)*
6. **Goal:** Secure commitment of state funds for the new science building (long-term) *(Goals 5.3.i & l).*
7. **Goal:** Setup funds in operating budget to support equipment/technology/renovation (short-term; on-going).
8. **Goal:** Obtain approval to implement a lab fee for courses in **Biology**, **Chemistry**, **Geography**, **Nursing** and **Physics** to supplement static appropriated budgets and to bring our practices in line with comparable Illinois institutions (short term**).** *(Goals 1.2.b; 2.1.g)*
9. **Goal:** Reinstate CAS Faculty Mentor program to provide an opportunity for CAS faculty to develop research and scholarship connections with established faculty researchers/scholars in universities other than WIU (on-going).
10. **Goal:** To institute an on-line refereed journal in the area of creative writing (E&J).
11. **Goal:** Establish the National Writing Project to enhance the Writing Program and Writing Center (mid-term). *(Goal 2.2)*

12. **Goal:** To hire a full-time equipment technician to service scientific equipment in **Biology**, **Chemistry** and **Physics** (mid-term). *(Goal 2.2.d)*
13. **Goal:** Replacement of existing Nuclear Magnetic Resonance (NMR) Spectrometer for **Chemistry**; this 10 year old piece of equipment is essential in the execution of at least five external grants (mid-term). *(Goals 1.1.a.1; 2.2.d)*
14. **Goal:** Continue and expand summer research activities for faculty and students in HBCU and specific high school programs to increase diversity in STEM disciplines (ongoing).
15. **Goal:** Continue to offer A&S 210 Group Diversity as part of the Dealing with Differences Institute and incorporate it into a regular rotation during the academic year (ongoing).
16. **Goal:** Continue to support and promote the American Democracy Project and Civic Engagement commitments (ongoing), including a Mock Election Simulation for the upcoming Presidential Campaign in partnership with the Provost's Office *(Goals 3.2.a; 5.1.a)*

e. Support Faculty Diversity Initiatives (on-going) *(Goals 1.2.e; 2.2.e).*

Objectives:

1. **Support Dual Career** and Recruitment Program as appropriate.
2. **Support Visiting Scholars** program as appropriate.
3. **Incorporate diversity** objectives in faculty searches.
4. **Continue CAS participation in the Provost's Underrepresented Minority Dissertation Fellowship Program.**

f. Key Advancement Initiatives as outlined in CAS Advancement Plan *(Goals 1.1.a.4; 1.2.c; 2.2.g; 3.3.a; 3.3.b)*:

1. **Goal:** Increase external funding for CAS scholarships through donor solicitation and events such as the Annual CAS Scholarship Dinner and other external events (on-going).
2. **Goal:** Increase external funding for faculty development activities.
3. **Goal:** Increase external funding for the CAS undergraduate research and creative activity program (mid-term; on-going).
4. **Goal:** Secure external funding for CAS Endowed Professorships (mid-term; long-term).
5. **Goal:** Secure external funding for Nursing Program (mid-term).
6. **Goal:** Continue securing funds for possible Center for Substance Abuse (including student scholarships, assistantships, faculty development) (mid-term).
7. **Goal:** Continue development efforts with CAS advancement advisory board in support of CAS Advancement Plan and to re-evaluate goals (on-going).
8. **Goal:** Continue to deliver the College's magazine, FOCUS in an online format (short-term; on-going).
    a. Faculty and staff re-assigned time.
    b. Magazine production costs (mailing lists).

B. Of the objectives identified above, please indicate which are directly related to Strategic Plan action items. Incorporate in III.A. Above.

C. For Strategic Plan action items noted above, indicate whether you intend to have the action completed in the short-term (next 12 months), mid-term (2-4 years), or long term (5+ years). Incorporated in III.A. above.

IV. Technology Goals and Objectives

A. List the most important technological goals and objectives the division will pursue in FY12, and how these will be measured/assessed: The CAS Technology Plan involves prioritized goals and objectives in three broad areas: infrastructure, equipment and personnel. Central to all goals is the Dean's Technology Advisory Council (DTAC) which is charged with advising the Dean with regards to technology planning.

a. Infrastructure. To provide for a premier learning environment, the following goals are proposed: *(Goals 2.3.a,2.3.b, 2.3.c, 2.3.f)*

1. **Goal:** Increase the number of the centrally funded and maintained electronic classrooms at a much accelerated pace, apportioned in accordance with each unit's SCH production *(Goals 2.3.b*; long term).

2. **Goal:** Encourage central deployment of wireless network access for all university space (all non-academic buildings and green spaces). *(Goal 2.3.f)*
3. **Goal:** Every classroom in CAS will be wired for network connectivity *(Goals 2.3.f, 2.3.g*; midterm).
4. **Goal:** Extend wired network connectivity to needed office and laboratory spaces.
5. **Goal:** Every network access port in the College shall provide gigabit Ethernet access (*Goals 2.3.b, 2.3.d, 2.3.f*; long term). Increasingly, educational needs for bandwidth exceed that provided by legacy switches and hubs in the College's buildings, reducing the speed of network access and making some necessary activities (e.g., re-imaging hard drives in classroom labs) impractical. The College should work with UCSS to bring gigabit Ethernet to all ports in the College in the following order of priority:
   a. teaching/classroom labs and research labs
   b. classrooms
   c. individual and departmental offices

b. Equipment *(Goals 2.3.a, 2.3.b, 2.3.c, 2.3.d, 2.3.f)*

1. **Goal:** Continue central College coordination of technology
   Objectives:
   a. The College Instructional Technology Systems Manager (ITSM) will maintain a hardware inventory of personal computers in the College (ongoing).
   b. The ITSM will maintain a hardware inventory of general purpose electronic classroom equipment in the college (ongoing).
   c. The ITSM will maintain hardware and software inventories for discipline-specific electronic classrooms and computer labs (ongoing).
2. **Goal:** The College will continue to replace faculty and staff computers per the CAS computer replacement plan approved by DTAC (ongoing).
   Objectives:
   a. Replace 24 classroom lab computers purchased before 2005.
   b. Replace 39 faculty and staff computers purchased in 2005.
   c. Replace 115 classroom lab computers purchased in 2005.
   d. Replace 27 faculty and staff computers purchased in 2006.
   e. Replace 46 classroom lab computers purchased in 2006.
3. **Goal:** DTAC will continue to coordinate with the University Technology Advisory Group in the coordination of a standardized list of hardware and software (short term, ongoing).
4. **Goal:** Renovate with central funding existing electronic classrooms in conjunction with the Academic Technology Committee per recommendations of DTAC (ongoing):
5. **Goal:** Convert existing classrooms into electronic classrooms per DTAC recommendations. *(Goal 2.3.d, 2.3.f)*
7. **Goal:** Provide CAS departments with greater access to CODEC equipment.
   a. Objective: Outfit Simpkins 020 as a CODEC classroom (English & Journalism).
   b. Objective: Outfit Tillman 301D as a CODEC classroom (currently has portable conferencing unit used for teaching classes).
8. **Goal:** Convert existing classrooms into discipline-specific computer lab/electronic classroom (mid to long-term).
   a. Objective: Morgan 208 (Mathematics).
9. **Goal:** Meet CAS departments' needs for current equipment (excluding replacement of computers covered under College rotation plan) and software (ongoing).
10. **Goal:** Assist department of Biology in utilization of donated funds for renovation of MG 271 into two technology-heavy classrooms, one with CODEC capability, the other organized as a GIS laboratory (ongoing). *(Goal 2.3.d, 2.3.f)*
11. **Goal:** Reorient projection equipment in MG 324 to facilitate teaching (Sociology and Anthropology). *(Goal 2.3.d, 2.3.f)*

c. Personnel *(Goals 2.3.c, 2.3.d, 2.3.e, 2.3.f)*

1. **Goal:** Hire, train and supervise a group of student workers to serve as first responders for technology support issues for faculty and staff of the College (ongoing).
2. **Goal:** Hire a second instructional technology systems manager with experience in instructional design to work with faculty on the development of online courses and online components of

hybrid courses, with special emphasis on the incorporation of new and emergent technologies (e.g., podcasts, wikis, blogs).

B. Describe how these objectives build upon goals in divisional and/or institutional strategic plans: Incorporated in IV.A. above.

C. For each technology item, indicate whether you intend to have the action completed in the short-term (next 12 months), mid-term (2-4 years), or long term (5+ years): Incorporated in IV.A. above.

V. Internal Reallocations and Reorganizations

A. What are planned FY12 reallocations or reorganizations, including the movement of positions, the upgrade of positions, the creation of new positions, or the reallocation of personnel or operating funds? Listed below are planned FY11 reallocations or reorganizations within the college as well as continuation of commitments from the President/Provost to the College of Arts and Sciences

Cover Science Department Operating Shortfalls ($173,145 – College Personnel Reserve) for science department operating expense shortfalls related to increased costs of consumables, if the requested lab fee is not instituted.

Faculty, Staff and Classroom Lab Computers ($263,550 – College Personnel Reserve) to maintain working computers on the desks of faculty and staff, and in heavily-used department computer classrooms, we need to replace 73 computers purchased in 2006, 154 computers purchased in 2005 and 24 computers purchased in 2004 or earlier. The absence of the centrally-funded Computer Replacement Plan for the past two years has placed the entire burden of maintaining adequate computer resources on the College budget. At the requirement of central administration, we developed a 4 year rotation plan for replacement of faculty, staff and classroom computers; we now need to purchase at least 251 computers to bring us within one year of the four-year replacement target.

Move University Writing Center to Malpass Library - Moving the main University Writing Center (UWC) to Malpass would improve accessibility for individuals with disabilities or mobility problems; the current location is inaccessible to persons in wheelchairs and locating the Center in Malpass would eliminate many potential ADA issues. In addition, the central location on campus would emphasize that the Center is for all university students and faculty, not just those in English and Journalism. ($7,000 College Personnel Reserve, $18,750 requested Provost funding)

Academic Support Position, Scientific Instrument Repair, College level appointment focused on instrument repair in natural sciences and social sciences to reduce the need for maintenance contracts ($55,000 – College Personnel Reserve).

Upgrade Scientific Equipment (Goals 1.1.a.1; 2.1.b; 3.1.c) ($278,429 – College Personnel Reserve)

Software Site Licenses ($12,827 for Mathematica and $15,000 for ArcGIS, Provost-funded) for continuing, ongoing funding for these software packages that are used university-wide.

Forensic Chemistry Vault (Goals 1.1.a.1; 2.1.b; 3.1.c) ($50,000 - College Personnel Reserve)

Carry-Alls (2 + 1 of the old vehicles), for field station and lab work in biology and geology ($110,000 – College Personnel Reserve)

Start-up Funds owed to new faculty hired to start in FY10 and FY11 ($44,998 - College Personnel Reserve)

Nursing Program (Goals 1.1.a.1; 2.1.b):

- One tenure-track faculty member to maintain student-faculty ratio required for accreditation ($80,000 Provost-funded)
- Complete remodeling of space in Currens Hall to house nursing program ($100,000 Provost/Physical Plant)

Payment of CLS Affiliates Instructional Cost (up to $8,000 – Provost Funded)

Remodel Space - classrooms, laboratories, offices (Goals 5.3.a; 5.3.j; 5.3.s) (up to $220,000 – College Personnel Reserve)

Upgrade Electronic Classrooms ($175,000 – College Personnel Reserve)

B. How do these reallocations and reorganizations further Strategic Plan goals and objectives?
See information presented in V.A. above.

C. Describe how all reallocations, permanent and temporary, will affect the unit's standard performance measures.
All of the reallocations listed in Section V.A. above are directly related to Western's tradition of being a

leader in providing academic excellence and educational opportunity. Appropriate staff, adequate classroom and laboratory materials, and modern equipment are all necessary to maintain that tradition. Temporary reallocations provide the resources necessary to equip classrooms and laboratories with equipment that represents the current technology available. Permanent reallocations provide the resources needed for trained staff in a variety of curricular areas and provides the consumables necessary to instruct students in both classroom and laboratory situations. It is noteworthy that the reallocations reflects needs in areas of strong growth or high profile programs within the College, thus areas such as forensic science and the growing nursing program have been the focus of a number of the reallocations. It is anticipated that by providing these resources, programs will continue to meet or exceed expectations in terms of enrollments and student graduating from these departments.

D. How are you planning to find new funds?

a. Describe divisional strategies to seek additional resources (e.g., grants, Foundation)

The College will continue to support efforts of departments and faculty to seek federal and state funding. Through participation in OSP grant writing workshops, support of travel to meet with agency directors, enhancement of new faculty opportunities to prepare grants by providing summer support, and reinstatement of the faculty mentoring program, the College will continue to promote grant applications.

The College continues the support of the **GIS Center** as it provides an opportunity for students and faculty through the contractual services generated doing local and community based projects. In FY09, **IES** coordinated a Memorandum of Agreement between WIU and the Army Corps of Engineers' Rock Island District (COERI). In FY10, the institute coordinated an MOU between WIU and the U.S. Fish and Wildlife Service - Rock Island. Both of these MOUs have and should continue to facilitate research contracts with the federal agencies. MOUs have also been developed with 3 hospitals affiliated with the Clinical Laboratory Science Program that requires a year of training in a teaching hospital environment. The hospitals provide the teaching staff, lab equipment, and consumables for which we pay a nominal fee of $500 to $1000 per student per semester. The students are registered for 15 to 16 semester hours of CLS courses through WIU, which generates between $3389 and $3619 per student each semester in tuition.

A laboratory fee is being proposed (see Appendix 2) for students in the laboratory science-based courses in **Biology**, **Chemistry**, **Geography**, **Nursing**, and **Physics**. This fee will augment the existing static operating budgets in these departments. Giving current enrollment trends, the proposed fee would generate in excess of $250,000 per year. All other similar institutions have a science laboratory fee and the proposed fee is at the lower range of fees charged by those institutions.

b. Provide an explanation of how additional resources would be used to enhance divisional objectives

Grants and contracts provide resources for scientific equipment purchases, funding for commodities used in research and teaching, cost of travel to professional meetings, and support for graduate and undergraduate students. Some of the funding is also used for K-12 outreach activities and student recruiting. Grant resources are also used in conjunction with advancement activities and appropriated funds to complete projects too costly to initiate using only appropriated funds. Examples include equipment used in chemistry and physics, funds to upgrade the research facilities at Kibbe Field Station, and endowed funds to support student research activities.

Costs of laboratory equipment, commodities, and service contracts have been increasing exponentially, and the proposed science laboratory fee is needed in order to continue to offer a quality laboratory experience for our science students.

c. Summarize long-term external funding goals which extend beyond FY12

Our long-term external goals include insuring the availability of funds for faculty and student travel, equipment, and facilities to continue the basic professional research that supports an academically robust curriculum. We will also continue to solicit support for the Substance Abuse Center, Creative Activity Fund, funds for new laboratory facilities on campus and at Kibbe Field Station, increases in the **Nursing Program**, environmental studies initiatives and student and faculty research.

d. Develop indicators/benchmarks to track attainment of goals

Indications that some goals are being reached will include increases in number of grant and contract proposal submitted (10% increase), although the dollar amount is less. Continued ability of faculty and students to attend and participate in professional meetings would also indicate goals had been met. The sequential up-grading of classroom and laboratory facilities would indicate success in these project areas. Improved pedagogy in science laboratories would indicate the success of providing

adequate modern instrumentation and consumables in this teaching environment.

E. What is the current status of the long-term funding goals established last year?
From July 1, 2010 through February 28, 2011, CAS faculty submitted 18 extramural proposals totaling $2,649,978. While this is less than last year's total of $3,671,986, it exceeds the $2,064,034 in external grants submitted in FY09. To date, CAS faculty have received funding of $637,472 in 13 grants. Additional grants are still outstanding pending final proposal review and determination of support. The **GIS Center** has continued to generate revenue with contracts and fee-based revenue in excess of $129,000 that exceeds the $90,000 generated in FY10. Additionally, the College expended $207,183.24 in WIU Foundation funds during the period July 1, 2010 through February 28, 2011. Fund were used: 47.6% ($98,722) in support of student scholarships; 9.1% ($18,906) in support of student assistantships, student research or student employment; and 43.2% ($89,555) was used for miscellaneous expenses (consumables, equipment, etc.). The amount raised and used for miscellaneous expenses represent a 10% increase over FY10.

VI. Western Illinois University Quad Cities

A. Briefly describe programs or course offerings in the Quad Cities and the current success of those programs in terms of majors, minors, enrollment/SCH production, and completability.
Undergraduate Majors include **Liberal Arts and Sciences (BLAS)** and **Nursing** (on-line delivery schedule for AY12); Minors include **African American Studies**, **English**, **Environmental Studies**, **Psychology**, **Sociology**, and **Women's Studies**; Graduate Majors include **Biological Sciences**, **English**, and **Liberal Arts and Sciences (MLAS)**; post-baccalaureate certificates include **Environmental GIS** and **Zoo and Aquarium Studies**. Clearly **LAS** programs represent our most successful contribution to programs in the Quad Cities campus -- this year 59 undergraduates are enrolled as BLAS majors and 9 graduates as MLAS majors. [N.B. Collecting data presents various challenges in collecting date (for example, we cannot go back earlier than Summer '06 in MVS because earlier semesters are no longer available online). We have been working with IRP to be able to get accurate QC information and are still in the process of gather thing information to determine SCH. Finally, most all of the courses, especially at the undergraduate level, that we offer at the QC serve several purposes. They may contribute to a declared minor that is completed in its own right (e.g., it is a minor for BLAS students, or for other majors). Those same courses may also contribute to the BLAS degree, either as one of the concentrations or as part of the 'paired minors' option. If the course is being used to complete the BLAS paired minor option, it will not show up as a declared minor, even thought it and all the other courses required for the minor must be completed. In addition, many of those same courses also serve BOT-BA students. Again, we continue to work on having accurate information for all of our QC delivery.]

B. How many faculty do you currently have located in the Quad Cities? How many Macomb-based faculty deliver courses in the Quad Cities? How many adjuncts did you use last year to teach in the Quad Cities? Will you be requesting additional faculty/staff next year (explain)?
Six tenure or tenure-track faculty are located in the Quad Cities – 4 support the **LAS** programs as well as **English and Journalism** (2) and **Sociology/Anthropology** (2); 1 faculty supports **Biological Sciences** and 1 faculty supports **Biological Sciences** and **GIS**. A seventh instructor assists in the US Bank/WIU-QC Writing Center. An eighth instructor delivers upper-level mathematics courses in support of Teachers' Education. Twenty-four courses were taught at the Quad Cities campus (17 were face-to-face; 7 were taught using CODEC) by Macomb-based faculty. Nineteen faculty delivered the courses. We do not anticipate requesting additional faculty/staff for next year.

C. Will you be asking for new programs or offerings in the Quad Cities next year? Will you be offering fewer programs or courses next year (if so, explain why)?
While we hope to increase minor offerings, we do not see either a reduction or dramatic increase in courses offered next year. The department of **History** is currently considering adding courses to be able to fully deliver a **History** minor to support our BLAS program. Once the Environmental Science Ph.D. program receives Board of Trustees and IBHE approval, this program will be delivered. Finally, CAS/**English and Journalism** and COFAC/Broadcasting are currently discussing an option in Film that would be delivered in the QC. Both the ES Ph.D. and the Film option are contingent on budget considerations.

D. Summarize your short-term (2-4 years) and long-term (5 years or more) plans for Quad Cities in your unit (if applicable).
We will continue to support existing programs in the Quad Cities and will examine how additional programs, especially minors such as **History** could be supported in the QC (short-term and long-term). We

will also focus on environmental-based curriculum (such as adding graduate credit for ENVR 401) to develop signature programs in the QC unique to its geographical location and opportunities, especially once the Environmental Science Ph.D. program receives approval through the WIU BOT and the IBHE (short-term and long-term).

E. Explain additional resources (grants, foundation, etc.) derived from or located in the Quad Cities. Development officers Gary Rowe (Quad Cities) and Bryce Dexter (CAS) will continue to collaborate on external funding opportunities.

VII. New Academic Degree/Option/Certificate Development Requests

A. Complete a Request for New Academic Degree/Option/Certificate Development form (Attachment B) for each new degree, option, or certificate program to be submitted through the University curricular approval process in FY12, including enrollment projections and required resource requirements. Attach a copy of the feasibility study approved by the Provost.
   1. Ph.D. in **Environmental Science** (Attachment B)
   2. Pre-Pharmacy Option in the B.S. in **Chemistry** (Attachment B)

VIII. New Operating Resources Not Included in VII

A. Complete an FY12 Budget Request form (Attachment C) for each new operating fund request not associated with new academic degree/certificate development requests identified in VII above. Also, please include any previous unfunded requests which remain as priorities.

Priority Number	Title of Funding Request	Continuous Funding (Beginning FY2012)	One-Time Funding (FY2012 only)	Continuous Funding (Beginning FY2013)
1	Nursing – Faculty Position (continuous) and Nursing Lab Equipment (one-time) and two Adjunct Faculty Positions in Biology and Chemistry to cover increase in basic science courses due to Nursing	$142,154	$77,945	
2	Any unfilled faculty positions put on hold due to budget constraints	TBD		TBD
3	University Site Licenses for General Use Software: Mathematica and ArcGIS	$27,827		
4	Replace faculty, staff and department classroom computers purchased in 2005 or before (178) and in 2006 (73)		$263,550	
5	Sciences equipment repair person (Chem, Physics, Biology)	$55,000		
6	Move University Writing Center to Malpass Library		$18,750	
7	Mathematics – Unit B Faculty & TAs to offer smaller sections of MATH 099N	$39,477		$40,251
8	Testing Materials – English and Journalism & Foreign Languages and Literatures		$11,310	
9	Geology – Drill		$3,100	
10	Upgrade Electronic Classrooms	$175,000		
11	Support Mock Election (Poli Sci)		$50,000	
12	Sociology/Anthropology – Digital Scanner, Microscopes, & Skeletal Models		$4,893	
13	Nuclear Magnetic Resonance Spectrometer		$50,000 (match to NSF)	
14	Computers for New Faculty (5)		$5,250	
15	Chemistry – Vault		$50,000	
16	Geology – Carry-all vehicle		$15,000	
17	Biology – 2 Carry-all vehicles ($55,000 each)		$110,000	
18	Chemistry – GC Mass Spectrometer & FT		$55,000	
19	Biology – PCR		$9,000	
20	Chemistry – General Equipment		$24,900	
21	Physics – General Equipment & Consumables		$92,956	
22	Consumables for Biology, Chemistry & Physics		$173,145 (w/o lab fees)	
23	Biology – Microscopes		$80,000	
24	Ventilated storage cabinets for chemicals (Chemistry)		$75,000	
25	Shatterbox and ceramic grinding container for Geology		$10,600	
26	Forensic Physics Minor – Faculty and Equipment	$87,703		

IX. Facilities Requests

A. Complete an FY12 Budget Request form (Attachment D) for each facility enhancement request over $100,000.

Priority Number	Title of Funding Request	Amount Requested for One-Time Funding (FY12 only)	Amount Requested for Continuous Funding*
1	Improve ventilation in Currens Hall: replace fume hoods, sprinkler system & plumbing	$1,758,000	
2	Nursing Room Renovation	$100,000	
3	Simpkins 341 – convert to office and classroom space	$285,000	
4	Waggoner 05,07,09 – convert to neuroscience lab space	$75,000	
5	Modernization of Obsolete Classrooms, Laboratories & Storage Areas	$192,845	
6	Upgrade Greenhouse	$250,000	
7	Upgrade Kibbe Science Lab	$2,000,000 (match NSF and/or Foundation)	
8	New Science Building	$70,000,000	
9	Renovation of Currens Hall	$16,000,000	
10	Renovation of Waggoner Hall	$16,000,000	
11	Renovation of Morgan Hall	$8,000,000	

X. Summary—New Fund Requests

A. Identify, in priority order, requests for additional funding in a **spreadsheet** (Attachment E). Include all funds requested for new academic programs (VII), operating (VIII), and facilities (IX).

B. On this spreadsheet, please be sure to indicate whether you are seeking one-time or continuous funding. If you are seeking continuous funding, identify whether it is for a period of years or a permanent base increase.

XI. Scholarly/Professional Activities

A. Provide the total number of scholarly/professional activities in your area for the following categories:
   a. Book publications - 6
   b. Chapter/monograph/refereed article publications - 233
   c. Creative activities domestic – 43 / Creative activities international - 5
   d. Conference presentations domestic – 395 / Conference presentations international - 58

ATTACHMENT A Accountability Report for Program Support — FY11
ATTACHMENT B Request for New Academic Degree/Option/Certificate Development — FY12
ATTACHMENT C Budget Request — New Operating/Base Resources — FY12
ATTACHMENT D Budget Request — Facilities over $100,000 — FY12
ATTACHMENT E Summary — New Fund Requests — FY12

Attachment A1

Western Illinois University
Accountability Report for Program Support – FY11

I. Unit submitting request: College of Arts and Sciences

II. Short title of the initiative proposed for incremental funding.
Funding for one year of Mathematica software site license.

III. Describe the specific productivity measures achieved (refer to submitted materials the previous year, or year that funding was requested and provided).

Funding from the Provost has allowed Mathematica to be used by faculty and students across campus in departments including Physics, Mathematics and Economics. In addition, the software is being incorporated into classes in Mathematics and Physics to expose students in these disciplines to a high-level mathematics tool.

IV. Provide a listing of all funds expended to date by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	Enhancement	Department/Unit Funds
Personnel Services	0	0
Equipment and Instructional Materials	0	0
Library Materials	0	0
Contractual Services	11,847	0
Other Operating Funds	0	0
TOTALS	**11,847**	**0**

Western Illinois University
Accountability Report for Program Support – FY11

I. Unit submitting request: College of Arts and Sciences

II. Short title of the initiative proposed for incremental funding.
Phase I of Currens Hall remodeling to accommodate School of Nursing faculty.

III. Describe the specific productivity measures achieved (refer to submitted materials the previous year, or year that funding was requested and provided).

Funds from Provost were committed to a Physical Plant account to begin work on the first phase of remodeling for Nursing. Upon completion, a suite of offices and a departmental office area will be available to house the School of Nursing. Initial Physical Plant estimates are for $30,600 in renovations.

IV. Provide a listing of all funds expended to date by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	Enhancement	Department/Unit Funds
Personnel Services	0	0
Equipment and Instructional Materials	0	0
Library Materials	0	0
Contractual Services	30,600	0
Other Operating Funds	0	0
TOTALS	**30,600**	**0**

Attachment A3

Western Illinois University
Accountability Report for Program Support – FY11

I. Unit submitting request: College of Arts and Sciences

II. Short title of the initiative proposed for incremental funding.
Funding for LINC Conference

III. Describe the specific productivity measures achieved (refer to submitted materials the previous year, or year that funding was requested and provided).

The Third Biennial Summit on Leadership in Interdisciplinarity, Networking & Collaboration (LINC) is intended to facilitate faculty research activities and stimulate broad-based increases in sponsored research and scholarship, interdisciplinary collaborations, and institutional partnerships in the Missouri-Illinois bi-state region. The Office of Sponsored Projects and the College cosponsored a cohort of 6 CAS faculty to attend.

IV. Provide a listing of all funds expended to date by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	Enhancement	Department/Unit Funds
Personnel Services	0	0
Equipment and Instructional Materials	0	0
Library Materials	0	0
Contractual Services	225	225
Other Operating Funds	1,323	1,323
TOTALS	**1,548**	**1,548**

ATTACHMENT B

Western Illinois University, School of Graduate Studies

Request for a New Graduate Program

(All requests for new graduate degree programs must include a feasibility study and follow the WIU new degree development process. www.wiu.edu/provost/curriculum/FeasibilityStudy.pdf)

College: College of Arts & Sciences **Date:** 4/6/2011

Department responsible for the degree program: Institute for Environmental Studies (IES)

Name of department chairperson: Roger C. Viadero, Jr.

Name of graduate program: Environmental Science Doctoral Program with an Emphasis on Large River Ecosystem Science

Proposed date of first offering: __Fall 2010_____

Proposed location(s) of offering: __X___**Macomb** __X___**WIU-QC**

Signatures required:

Department Curriculum Committee (if appropriate)	_____	Date: _____
Department Chairperson	_____	Date: _____
College Curriculum Committee (if appropriate)	_____	Date: _____
College Dean	_____	Date: _____
Graduate Council	_____	Date: _____
Academic Vice President	_____	Date: _____
President	_____	Date: _____

Please provide the following to support the request for a new graduate program:

1. **Statement of educational objectives of the degree program.**

   The Environmental Science Doctoral Program will …

   I. train scholars who create new knowledge based on fundamental research.

   II. produce graduates who are critical thinkers with the skills necessary to develop and manage complex solutions to open ended challenges.

   III. mentor students to become recognized for their distinctive academic training and sought after for positions of responsible charge in academic, government, or private sector employment.

2. **Describe how the proposed degree program will contribute to the University's mission and support the University strategic plan.**

   The Environmental Science Doctoral Program with an emphasis on large river ecosystem science provides direct support for the following elements of "Higher Values in Higher Education 2008–2018: an Action Agenda for Western Illinois University":

   Goal 2. Enrich Academic Excellence

   Action 1. Support strong commitments to teaching and instruction.

   b) Developing and offering new and expanded academic programs in areas of demand and need that are consistent with the academic mission of the University

   c) Supporting interdisciplinary course, program, institute, and center development.

   Action 2. Provide strong commitments and increase opportunities to support research, scholarly/creative activities, and public service and outreach.

   a) Promoting entrepreneurial approaches to research and scholarly/creative activities that are consistent with departmental, college, and University priorities

   d) Augmenting institutional resources to encourage and promote research, creative, and scholarly activities with special emphasis on new and junior faculty members

   Goal 3. Provide Educational Opportunities

   Action 1. Further augment flexibility and responsiveness to student needs and timely degree completion in academic programs.

   h) Maintaining course offering goals in the Quad Cities, including the continued ability for all degree programs to be fully completed on-site or through distance modalities and with an annual review of these commitments at the Provost's annual Summer Retreat

   Goal 4. Supporting Personal Growth

   Action 1. Support learning inside and outside of the classroom.

b) Developing educational opportunities designed to raise awareness of environmental issues

Goal 5. Promote Social Responsibility

Action 3. Provide safe, accessible, responsive campus environments that meet the needs of University constituencies and reflect the core values of the University.

l) Advancing statewide, regional, and national leadership in environmental sustainability within all aspects of university operations (e.g., the curriculum, community and co-curricular events, new construction, and administrative operations)

As a multidisciplinary terminal degree program with a unique focus on large river ecosystems, the Environmental Science (ES) Doctoral Program directly supports WIU's strong commitments to teaching and instruction (Goal 2. Action 1. b) & c)). Through this initiative, WIU will provide greater coherence to the field of large river ecosystem science, broaden the advanced training available to its students, enhance opportunities for faculty engagement in scholarship, directly support regional economic and community development, and advance its position as a leader in environmental research on the upper Mississippi River.

Housed in WIU's multidisciplinary Institute for Environmental Studies, the ES Doctoral Program builds on the strong foundation of current environmental and allied academic offerings at WIU (e.g., Environmental Studies Minor, Post Graduate Certificate in Geographic Information Systems, & discipline-specific Masters Degree programs in Biological Sciences, Geography, et al.) (Goal 2. Action 1. c)).

As a research-based terminal degree program, the ES Doctoral Program is weighted to emphasize the conduct of independent, novel scientific investigation, by its students; thus, demonstrating WIU's strong commitment to research. It is reasonable to believe that the ES doctoral program will also lead to increased recruitment of high quality new faculty, while simultaneously offering new opportunities to current members of the professoriate. (Goal 2. Action 2. a) & d))

To ensure students throughout WIU's service area have access to this program, the Environmental Science Doctoral Program will be offered at both WIU campuses (Goal 3. Action 1. h)). It is believed that this two campus program will also reinforce ties between student, faculty, and staff at the two locales. Due to its explicit focus on the environment, the ES doctoral program will provide further strong affirmation of WIU's commitment to the personal growth of students (Goal 4. Action 1. b)) as well as social responsibility (Goal 5. Action 3. l).

3. Identify similar programs in the state and compare these programs to the proposed program.

The Illinois Board of Higher Education (IBHE) recognizes six doctoral programs in environmental disciplines (environmental science, studies, policy, and/or engineering),

offered through four institutions, as summarized in Table 1. Half of these programs offer engineering and/or engineering science degrees. Currently, there are no other institutions of higher education in Illinois that offer Doctoral Degrees in Environmental Science with an emphasis on large river ecosystem science. Further, there are no institutions in IBHE's Western Region that offer an environmental doctoral program of any kind.

Table 1. IBHE recognized environmental doctoral programs.[1]

Institution Name	Program Name	Region of Authorization
Illinois Institute of Technology[‡]	Ph.D. in Environmental Engineering[†]	Chicago
Southern Illinois University Carbondale	Ph.D. in Environmental Resources & Policy	Southern
University of Illinois at Chicago	Ph.D. in Earth & Environmental Sciences	Chicago
University of Illinois at Urbana	Ph.D. in Environmental Engineering in Civil Engineering[†]	Prairie
	Ph.D. in Environmental Science in Civil Engineering[†]	
	Ph.D. in Natural Resources & Environmental Sciences	

[†] *Engineering and/or engineering science doctoral program.*
[‡] *Independent institution.*

4. Narrative description of the program explaining how the curriculum is structured to meet the program's stated objectives.

To enable students with backgrounds from a variety of physical, life, and/or mathematical sciences to fully understand large river ecosystems, it is necessary to first establish a common set of principles to understand and evaluate environmental processes. In the Environmental Science Doctoral Program, this is achieved through a sequence of core courses (11 s.h.) in which: (1) a theoretical framework is established for the study of the interrelatedness and interaction within and between environmental compartments, (2) advanced methods are developed and applied to the quantitative analysis of environmental science data (including statistics, mathematical modeling, and geospatial analysis and simulation), and (3) principles are integrated in ways that permit informed environmental decision making. To proceed in the program, students must demonstrate the high level of understanding needed to pass a Ph.D. qualifying examination, which is

[1] (Illinois Board of Higher Education, 2007)

drawn from the content of the core courses.

To account for the broad range of student technical preparation, personal interests, and possible dissertation research topics, inherent flexibility is provided through electives (at least 9 s.h.) which are selected by the student and his/her doctoral examining committee to meet the unique learning needs of individual students.

As a research-based terminal degree program, the curriculum for the ES Doctoral Program is weighted to emphasize the conduct of independent, novel scientific investigation, under the close supervision of a faculty advisor and committee (40 s.h. Dissertation/Research).

5. Statement of what students are expected to know and/or be able to do upon completing the program (desired student learning outcomes).

Graduates of the Environmental Science Doctoral Program will…

A. possess an understanding of:
    a. fundamental physical, chemical, and biological processes in large river ecosystems.
    b. the unique interactions, non-ideal conditions, etc. that distinguish environmental processes in large river ecosystems from others.
B. understand and apply the latest scientific methodologies to assess environmental processes in large river ecosystems.
C. develop quantitative tools to model environmental processes in large river ecosystems.
D. independently define problems, formulate hypotheses, design and conduct experiments, interpret data, and report findings on an area relevant to large river ecosystem science.
E. identify gaps in the current knowledge of environmental issues in large river ecosystems and develop approaches to fill those gaps.
F. communicate effectively in writing and orally the results of research findings to the public and other professionals.

Relationships between the educational objectives of the degree program and learning outcomes are presented in Table 2.

Table 2. Relationships between the educational objectives of the degree program and learning outcomes.

Educational Objectives of the Degree Program → "The Environmental Science Doctoral Program will …" / **Learning Outcome ↓** "Graduates of the Environmental Science Doctoral Program will …"	I. train scholars who create new knowledge based on fundamental research.	II. produce graduates who are critical thinkers with the skills necessary to develop and manage complex solutions to open ended challenges.	III. mentor students to become recognized for their distinctive academic training and sought after for positions of responsible charge in academic, government, or private sector employment.
A. possess an understanding of: a. fundamental physical, chemical, and biological processes in large river ecosystems. b. the unique interactions, non-ideal conditions, etc., that distinguish environmental processes in large river ecosystems from others.	■		
B. understand and apply the latest scientific methodologies to assess environmental processes in large river ecosystems.		■	
C. develop quantitative tools to model environmental processes in large river ecosystems.		■	
D. independently define problems, formulate hypotheses, design and conduct experiments, interpret data, and report findings on an area relevant to large river ecosystem science.		■	
E. identify gaps in the current knowledge of environmental issues in large river ecosystems and develop approaches to fill those gaps.	■	■	■
F. communicate effectively in writing and orally the results of research findings to the public and other professionals.		■	■

6. Admission requirements.

Environmental Science Doctoral Program students must hold an earned thesis-based Master's degree in a physical, life, or mathematical science from an accredited institution.

Potential students must meet the academic prerequisites for the three core courses (see below). Applicants who do not meet the prerequisites for the three core courses may be admitted to the program on a provisional basis. Students admitted provisionally will receive a letter from the Director of the Environmental Science Doctoral Program detailing the courses which must be completed before full admission can be granted. Provisionally admitted students must maintain a 3.25 cumulative GPA in those courses taken to meet academic deficiencies.

All students must sit for and submit scores from the *Graduate Record Exam (GRE®)* General Test. Students whose native language is other than English must demonstrate written and spoken English language proficiency. Evaluation of English language proficiency will be based on the student's scores on the *Test of English as a Foreign Language* (*TOEFL*®). Students must meet institutionally mandated minimum *TOEFL*® scores as established by the *WIU Center for International Studies*.

All potential students must file an official application to the *WIU School of Graduate Studies*.

Applicants are also required to provide at least three letters of reference from individuals who can provide meaningful comments on the student's professional and/or academic background; a statement of research interest (not to exceed two pages in length); and a curriculum vitae.

7. Proposed curriculum including core courses, other courses, course descriptions, credit hour requirements, exit options, graduation requirements. Course proposal forms are required for all new courses.

When a student is admitted to the Environmental Science Doctoral Program, he/she will be assigned a faculty advisor. The faculty advisor will be the student's academic advisor up until the student passes the Qualifying Examination (QUAL) and establishes a Doctoral Examining Committee (DEC).

ES Doctoral Program students must complete at least 60 semester hours (s.h.) beyond the Master's degree, in the following areas:

- Core courses, 11 s.h.
- Electives, at least 9 s.h.
- Dissertation/Research, 40 s.h.

It is recognized an appreciated that the proposed structure of the ES Doctoral Program may be greatly different from the requirements of other programs in other disciplines. To establish the proposed model as "typical" of other programs in this area of study, a summary of requirements from three other recognized programs is presented for comparison in Table 0.

Table 0. Requirements for doctoral degrees in environmental science from three representative programs.

Institution, degree	Total s.h.	Core s.h.	Elective s.h.	Research/dissertation s.h.
University of Toledo, Ph.D. in Environmental Science	60 s.h. beyond the M.S.	9 s.h.	12 s.h.	39 s.h.
Indiana University, Ph.D. in Environmental Science	58-60 s.h. beyond the M.S. *	15 s.h. of courses – no stipulation between core and elective courses		39-45 s.h. research
University of South Florida, Ph.D. Geography & Environmental Science & Policy	60 s.h. beyond M.S.	9 s.h.	9 s.h. elective courses	42 s.h. dissertation

*90 s.h. beyond the B.S.; 30-32 s.h. "credit" for M.S.

ES Doctoral Program students must maintain a 3.25 cumulative GPA, calculated at the end of each regular academic semester (Fall & Spring). Any student with cumulative GPA less than 3.25 will be notified in writing by the ES Doctoral Program Chair and given one regular academic semester to meet this requirement. Any student who fails to meet the GPA requirement will be removed from the program and may apply to a suitable master's degree program (*e.g.*, a discipline-specific program or the Master of Liberal Arts & Sciences program).

Core Courses

ENVR 730. Environmental Systems 4 s.h. (lecture)
Catalog description: Through a systems approach, this course examines the outcome of physical and biological component modifications on system function. It provides the background to relate diverse and disparate facts and phenomena to one another in a dynamic environment.
Prerequisites: Graduate standing in the Environmental Science Doctoral Program.

ENVR 740. Advanced Analytic Tools in Environmental Science 4 s.h. (lecture & lab)

Catalog description: Development and use of advanced methods for the collection and analysis of environmental science data including statics, mathematical modeling, molecular techniques, and geospatial analysis and simulation.
Prerequisites: Graduate standing in the Environmental Science Doctoral Program; ENVR 730.

ENVR 750. Integrated Environmental Decision Making 3 s.h. (lecture)

Catalog description: The linkage between scientific data, needs of environmental manager, environmental use by the public and private agencies, and the development of management plans or environmental impact statements in the creation of high quality decisions for use of the environment at the local, regional, national and global scale are examined.
Prerequisites: Graduate standing in the Environmental Science Doctoral Program; ENVR 730 & 740

Qualifying Examination ("QUAL")

Within three regular academic semesters (fall/spring) of completing the core courses, Environmental Science Doctoral Program students must take and pass a Qualifying Examination. The QUAL will be based on topics covered in the three core courses and will consist of a written and an oral component. Upon passing the QUAL, a student is elevated to the status of "Doctoral Candidate". Any student who does not pass the QUAL will be allowed a second attempt, which must be taken within one calendar year of the first attempt. Students who do not pass the QUAL on the second attempt will be removed from the ES doctoral program and may apply to a suitable master's degree program.

Doctoral Examining Committee (DEC)

Within one regular academic semester (fall/spring) of passing the QUAL, ES Doctoral Candidates must establish a Doctoral Examining Committee (DEC) consisting of five members. The DEC will be chaired by the student's "major advisor". The DEC Chair and at least three other DEC members must be full members of the WIU graduate faculty and members of the ES Doctoral Program faculty. With the written approval of the DEC Chair and the ES Doctoral Program Chair, one member of the student's DEC may not meet all of the qualifications above; however, in all cases, DEC members must hold a research-based terminal degree from an accredited institution. This provision is intended to provide an opportunity for students to benefit from the input of faculty from other institutions as well as recognized experts from private industry, government, and/or non-governmental organizations.

Elective Courses

Student will take at least 9 s.h. of elective courses. The selection of elective courses will

be made by the student in consultation with his/her major advisor. Electives courses must be taken at the 500, 600, or 700 levels. Courses taken by provisionally admitted students to meet deficiency requirements cannot be counted as elective courses in the ES Doctoral Program.

Preliminary Examination ("PRELIM")

ES Program Doctoral Candidates must successfully complete a Preliminary Examination consisting of a written and oral defense of the dissertation research plan. The oral component of the candidate's preliminary examination will be open to the University community. The PRELIM is generally completed within three regular academic semesters of establishing a DEC. Completion of elective coursework is not necessary for a student to take the PRELIM. At least four members of the DEC must agree that the research plan presented by the candidate is acceptable for the student to proceed.

Dissertation/Research

ENVR 798. Dissertation Research 0 – 10 s.h. (repeatable)
Catalog description: Research related to a dissertation topic of relevance to environmental science under the supervision of the Chair of the student's doctoral examining committee.

Prerequisites: Graduate standing in the Environmental Science Doctoral Program.
ENVR 799. Dissertation 3 s.h.
Catalog description: Preparation of a dissertation under the direction of the Chair of the student's doctoral examining committee.
Prerequisites: Graduate standing in the Environmental Science Doctoral Program.

Final Examination & Doctoral Dissertation

The candidate will present his/her research to the DEC as a written dissertation. An oral presentation of the dissertation will be made by the candidate following the submission of the written dissertation. The candidate must submit the written dissertation to all members of the DEC at least four weeks prior to his/her oral defense. The oral component of the candidate's Final Examination will be open to the University community. The DEC Chair and at least three other DEC members must agree that the dissertation and oral presentation are acceptable for the student to graduate.

8. Description of the program's assessment plan. Identify measures to be used to assess and improve student learning, curriculum, and instruction.

Assessment Tools/Measures

The following assessment tools/measures will be used to gauge and iteratively improve upon student learning, curriculum, and instruction in the Environmental Science Doctoral

Program:

1. Student performance in qualifying examination, preliminary examination, and final examination.
2. Student self evaluation of progress.
3. Surveys of alumni.
4. Surveys of alumni employers.
5. Production of peer-reviewed manuscripts derived from student's independent research.
6. Delivery of presentations at professional meetings derived from student's independent research.

Relationships between learning outcomes and assessment tools/measurements are presented in Table 3.

Table 3. Relationships between learning outcomes and assessment tools/measurements.

Assessment Tool/Measurement → **Learning Outcome ↓** "Graduates of the Environmental Science Doctoral Program will …"	1. Student performance in qualifying examination, …	2. Student self evaluation of progress.	3. Survey of alumni.	4. Survey of alumni employers.	5. Peer reviewed manuscripts derived from …	6. Student (or graduate) presentations at professional meetings .
A. Possess an understanding of: a. Fundamental physical, chemical, and biological processes in large river ecosystems. b. The unique interactions, non-ideal conditions, etc., that distinguish environmental processes in large river ecosystems from others.						
B. Understand and apply the latest scientific methodologies to assess environmental processes in large river ecosystems.						
C. Develop quantitative tools to model environmental processes in large river ecosystems.						
D. Independently define problems, formulate hypotheses, design and conduct experiments, interpret data, and report findings on an area relevant to large river ecosystem science.						
E. Identify gaps in the current knowledge of environmental issues in large river ecosystems and develop approaches to fill those gaps.						
F. Communicate effectively in writing and orally the results of research findings to the public and other professionals.						

Data Collection, Results, & Feedback

Details on the data, source(s) of data, frequency of data collection, and corresponding actions/feedback for each assessment tool/measure are presented in Table 4.

Table 4. Data collected, source(s) of data, frequency of data collection, and corresponding actions/feedback for each assessment tool/measurement.

Assessment Tool/Measurement	Source(s) of Data	Data Collected	Frequency of Data Collection	Action/Feedback
Student performance in qualifying examination, preliminary examination, and final examination.	Members of the Doctoral Examining Committee.	Outcome of each examination†; time for student to advance to each subsequent examination; time to graduate. †See Attachment A for evaluation rubrics.	At each examination.	Trends in exam outcomes and times taken to complete each part of the program will be monitored to establish "norms" for future benchmarking and improvement. Summary statistics will be determined for all responses on evaluation rubric and shared with the student and examining committee to facilitate step improvements in student performance and committee effectiveness.
Student self evaluation of progress.	Student.	See evaluation rubric in Attachment B.	Annually.	The student self assessment of progress provides a routine opportunity for the student and his/her advisor and/or doctoral examining committee to evaluate the student's progress relative to priorities set previously by the student. Through this routine and formal evaluation, reasonable goals for future progress can be established.

Survey of alumni.	Program graduates.	See Attachment C.	Once every three years. (Exit interview/survey performed after passing final examination and submission of an acceptable dissertation followed by a survey every three years after graduation.)	Periodic surveys of program graduates permit the assessment of learning outcomes at incremental stages after completing the degree. These data will be used to indentify, and assess the need for potential curriculum adjustments. As evidence of the relevance and quality of the graduate's work, the publications, presentations, and additional scholarly work derived from the dissertation research will be tracked in these surveys.
Survey of alumni employers.	Employers of program graduates.	See Attachment D.	Once every three years. (First survey is made three years after graduation.)	Periodic surveys of those who employ program graduates will provide unique insight into the level of knowledge and relevance of Learning Outcomes B-F. This feedback will be used primarily to inform curriculum content.
Peer-reviewed manuscripts derived from student's independent research.	Student/graduate, and/or dissertation examining committee chair.	Number of peer-reviewed manuscripts derived from student's independent research (1) submitted to, (2) accepted for publication, and/or (3) appearing in reputable journals. Additional lines of research, funding, publications, etc. derived from the student's independent research.	Assessed as part of exit survey and subsequent periodic alumni surveys. Data may also be submitted directly to the Doctoral Program Chair by dissertation examining committee chair.	The production of peer-reviewed manuscripts in reputable journals is a key measure of success for the student, advisor(s), and program, as external validation of the rigor and relevance of the work is provided through external review. Ideally, all program graduates should have at least one peer-reviewed manuscript submitted for consideration in a reputable journal. This measure will be reassessed during periodic alumni surveys to determine the ultimate number of publications derived from the student's independent dissertation research. It is anticipated that at least one peer reviewed publication will have appeared in a reputable journal by the time of the first alumni survey. Graduates will also be

				asked to indicate any additional lines of research, funding, publications, etc. derived from their dissertation as further measures of the relevance of their work and the quality of their doctoral preparation.
Student (or graduate) presentations at professional meetings of work derived from student's independent research.	Student/graduate, and/or dissertation examining committee chair.	Number of presentations at professional meetings of work derived from student's independent research.	Assessed as part of exit survey and subsequent periodic alumni surveys. Data may also be submitted directly to the Doctoral Program Chair by dissertation examining committee chair.	Delivering presentations at professional meetings are opportunities for students to present their work and themselves to an audience of often unknown specialty and skill level. The experience of presenting at professional meetings is one way of demonstrating communication skills. It is generally believed that one's oral communication skills improve with experience.

9. If all or part of the proposed program is to be delivered off-campus and/or via the internet, include the description of the program's mode(s) of delivery.

Lecture-based core courses (ENVR 730 & 750) will be offered simultaneously at WIU's Macomb and Quad Cities Campuses via the CODEC system. The system is currently used to deliver courses in the environmental studies minor as well as courses in the Departments of Biological Sciences and Geography.

10. Indicate additional faculty needed to permit offering of this program.

Two new faculty members are necessary to fully staff this program. Additionally, there will be reassignments for 4 CAS faculty to support the program.

11. Indicate any special equipment needed to permit offering of this program.

The following special equipment is needed to permit offering the ES Doctoral Program:

- Computer workstations and peripherals for geospatial analysis and modeling and other computationally-intensive analytical tasks; PC-based. Resources are to be split between the Macomb and Quad Cities campuses and can be reallocated based on student needs.
  - Computer workstation (x12; for geospatial analysis and modeling and other computationally-intensive analysis tasks; PC-based)
  - Software and/or licenses (Upgrade existing ESRI software license "unlimited" number of users)

- CODEC/distance learning equipment for course delivery and other interaction (*e.g.*, research group meetings, student dissertation committee meetings) between the Macomb and Quad Cities campuses.

- Equipment for advanced environmental analysis laboratory.
  - Spectrophotometer (uv/vis; x1)
  - Multi parameter instrument (field & lab capable) w/ probes (x3)
  - Auto titrator (x1)
  - Muffle furnace (x1)
  - Laboratory drying oven (x1)
  - Analytical-grade balance (x1)
  - Centrifuge (bench top; x1)
  - Glassware and supplies

12. Indicate any special space requirements such as laboratories, clinics, or other special facilities needed to permit offering of this program.

Space is needed for dedicated computing capabilities at the Macomb and Quad Cities campuses. Accommodations for the advanced environmental analysis laboratory are necessary at Macomb. The following locations have been identified to meet the ES

Doctoral Program's space needs:

Macomb Campus

- Tillman Hall
  - 301 Suite, Rooms A – F.
  - Use of G.I.S. laboratory and classroom facilities.
  - Individual research laboratory space of faculty participating as research advisers.

- Waggoner Hall
  - Individual research laboratory space of faculty participating as research advisers.
  - Space for the Advanced Environmental Research Laboratory – third floor (alternate, TL basement).

Quad Cities Campus

- Existing space allocated for science laboratory.
- Future laboratory and office space in new riverfront campus.

13. Indicate journals or other library resources needed to permit offering of this program. Include a statement from the Dean of Libraries.

Due to the specialized nature of the ES Doctoral Program curriculum, it is not expected that the WIU Library will possess all resources necessary to conduct novel research on large river ecosystem science. However, the needs of students and faculty in the program will be well met using the WIU Library's inter-library loan service. Please see enclosed supporting statement from Dean P. Self for additional details.

Environmental Science Doctoral Program
with an Emphasis on Large River Ecosystem Science

Attachment A1. Evaluation Rubric for Qualifying Examination

This form is to be filled out by each member of the ES Doctoral Program Qualifying Exam Committee.

Student name: _____

Respondent name: _____

Exam date: _____

Criteria	Rating				
	Poor 1	**Fair 2**	**Average 3**	**Good 4**	**Excellent 5**
Student demonstrated an understanding of theoretical frameworks used to study environmental systems.					
Student demonstrated knowledge of the interrelations and interactions between and within environmental compartments.					
Student demonstrated an understanding of advanced tools for the analysis of environmental data, their applications, and limitations.					
Student demonstrated knowledge of factors that affect environmental decision making.					
Student demonstrated an understanding of the ways in which multiple factors interact to affect environmental decision making.					

Respondent signature & date: _____

Environmental Science Doctoral Program
with an Emphasis on Large River Ecosystem Science

Attachment A2. Evaluation Rubric for Preliminary Examination

This form is to be filled out by each member of the student's Doctoral Examining Committee.

Student name: _____

Respondent name: _____

Exam date: _____

Criteria	Rating				
	Poor 1	**Fair 2**	**Average 3**	**Good 4**	**Excellent 5**
Student demonstrated a comprehensive understanding of the research in his/her area of study through a complete review of the literature.					
Student identified gaps in current knowledge and identified a focused way in which s/he can make a significant contribution to the field.					
Student presented a plan for collecting and analyzing data using a conceptual framework appropriate for his/her research question.					
Student identified and conveyed the way(s) in which the results of his/her research can contribute to the body of knowledge in his/her field of study.					
Student communicated effectively and appropriately.					
Student presented a research agenda that is likely to prepare him/her to extend his/her research beyond the doctoral degree.					

Respondent signature & date: _____

Environmental Science Doctoral Program
with an Emphasis on Large River Ecosystem Science

Attachment A3. Evaluation Rubric for Final Examination

This form is to be filled out by each member of the student's Doctoral Examining Committee.

Student name: _____

Respondent name: _____

Exam date: _____

Criteria	Rating				
	Poor 1	**Fair 2**	**Average 3**	**Good 4**	**Excellent 5**
Student demonstrated a comprehensive understanding of the research in his/her area of study through a complete review of the literature.					
Student identified his/her research question(s) and conveyed the way(s) in which his/her work was a significant contribution to his/her field of study.					
Student collected, analyzed, and reported results using a conceptual framework appropriate for his/her research question.					
Student interpreted results in a manner which contributes to the understanding in his/her field of study.					
Student communicated effectively and appropriately.					
Student presented a research agenda that has prepared him/her to extend his/her research beyond the doctoral degree.					

Respondent signature & date: _____

Environmental Science Doctoral Program
with an Emphasis on Large River Ecosystem Science

Attachment B. Doctoral Student Self Evaluation of Progress

This form is to be completed by the student and submitted to the Chair of the Environmental Science Doctoral Program by June 30 of each year the student is enrolled in the Program.

Student name: _____

Advisor name: _____

Names of Doctoral Examining Committee members (if applicable): _____

Date of acceptance in ENVR Doctoral Program: _____

Briefly summarize the progress you have made toward your degree over the past year. Please explain any departure(s) from the goals presented in set in the previous year (does not apply to first year students).

Please list the remaining requirements needed to complete your Ph.D. and provide a timeline for meeting these milestones.

Summarize any professional activities (*e.g.*, seminar/conference/workshop attendance, presentation at a professional meeting, submission of a manuscript to a referred journal, *etc*.) in which you have participated during the year.

Student signature & date: _____

Advisor signature & date: _____

Environmental Science Doctoral Program
with an Emphasis on Large River Ecosystem Science

Attachment C. Survey of Alumni

As a graduate of the Environmental Science Doctoral Program at Western Illinois University, we are seeking your input to help guide the future development of our program. We would appreciate your response to this short survey. Please know that your responses are strictly confidential and voluntary.

PART 1.

Please indicate how well you believe the Environmental Science Doctoral Program at WIU has enabled you to …	**Rating**				
	Poor 1	**Fair 2**	**Average 3**	**Good 4**	**Excellent 5**
understand the fundamental physical, chemical, and biological processes in large river ecosystems.					
understand the unique interactions, non-ideal conditions, etc., that distinguish environmental processes in large river ecosystems from others.					
understand and apply the latest scientific methodologies to assess environmental processes in large river ecosystems.					
develop quantitative tools to model environmental processes in large river ecosystems.					
independently define problems, formulate hypotheses, design and conduct experiments, interpret data, and report findings on an area relevant to large river ecosystem science.					
identify gaps in the current knowledge of environmental issues in large river ecosystems and develop approaches to fill those gaps.					
communicate effectively in writing and orally the results of research findings to the public and other professionals.					

PART 2.

Please indicate the total number of peer-reviewed manuscripts derived from your dissertation research.	0	1	2	3	4+

In the space below, please provide full citations and the status of each paper (submitted to, accepted for publication, or appearing in …)

Please indicate the total number presentations you have made on work derived from your dissertation research.	0	1	2	3	4+

Please indicate if any additional lines of research, funding, publications, *etc*., were derived from your dissertation research.	Yes	No	Not sure		

In the space below, please provide details on any additional lines of research, funding, publications, *etc*., derived from your dissertation research.

PART 3.

In the space below, please provide any other comments you feel would be useful as we work to continually improve our doctoral program.

Environmental Science Doctoral Program
with an Emphasis on Large River Ecosystem Science

Attachment D. Survey of Alumni Employers

As the employer of a graduate from the Environmental Science Doctoral Program at Western Illinois University, we are seeking your input to help guide the future development of our program. We would appreciate your response to this short survey. Please know that your responses are strictly confidential and voluntary.

PART 1.

Please indicate how well you believe the Environmental Science Doctoral Program at WIU has produced a student(s) that …	**Rating**				
	Poor 1	**Fair 2**	**Average 3**	**Good 4**	**Excellent 5**
understands the fundamental physical, chemical, and biological processes in large river ecosystems.					
understands the unique interactions, non-ideal conditions, etc., that distinguish environmental processes in large river ecosystems from others.					
understands and applies the latest scientific methodologies to assess environmental processes in large river ecosystems.					
develops quantitative tools to model environmental processes in large river ecosystems.					
independently defines problems, formulates hypotheses, designs and conducts experiments, interprets data, and reports findings on an area relevant to large river ecosystem science.					
identifies gaps in the current knowledge of environmental issues in large river ecosystems and develops approaches to fill those gaps.					
communicates effectively in writing and orally the results of research findings to the public and other professionals.					

PART 2.

In the space below, please provide any other comments you feel would be useful as we work to continually improve our doctoral program.

All new advanced degree programs must also be approved by the WIU Board of Trustees and the Illinois Board of Higher Education.

Western Illinois University, School of Graduate Studies
1 University Circle, Macomb, IL 61455, Phone 309.298.1806, Fax 309.298.2345
E-mail: Grad-Office@wiu.edu

WESTERN
ILLINOIS
UNIVERSITY

5-29-2008

ATTACHMENT B

FEASIBILITY STUDY FOR A DOCTORAL PROGRAM IN ENVIRONMENTAL SCIENCE

with an emphasis on large river ecosystem science

Submitted by:

Dr. Richard V. Anderson
Dr. Iraj Kalantari
Dr. Susan Martinelli-Fernandez
Dr. Christopher J. Sutton
Dr. Roger C. Viadero, Jr.

Environmental Science Doctoral Program Planning Committee
WIU College of Arts & Sciences

Wednesday, April 06, 2011

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Introduction

It is well known that relationships between physical, chemical, and biological processes in environmental systems are complex and often highly inter-related. This is especially true in large ecosystems such as the upper Mississippi River (UMR) floodplain where the scale, interconnectedness of environmental compartments, anthropogenic impacts, and frequent non-ideal conditions combine to create unique challenges for scientists and resource managers.[2] [3] [4] Not surprisingly, the research tools used to assess, understand, and formulate meaningful solutions to these problems are inherently multidisciplinary.

Western Illinois University is uniquely positioned to establish itself as a leader in multidisciplinary doctoral-level research and education related to the environment of large river ecosystems, with the upper Mississippi River floodplain serving as a living laboratory. Through this unique initiative, WIU can provide greater coherence to the field of UMR studies, broaden the advanced training available to its students, provide direct support for regional economic and community development, and advance its position as a leader in environmental research on the upper Mississippi River.

Based on a review and assessment of WIU's capabilities and strengths, the need to ensure academic focus and rigor, and factors related to prospective students and potential future employers, a doctoral program in Environmental Science with an emphasis on Large River Ecosystem Science is proposed. This new program will build on and strengthen the foundation of current environmental and allied academic offerings at WIU (*e.g.,* Environmental Studies Minor, Post Graduate Certificate in Geographic Information Systems, and discipline-specific Masters Degree programs in Biological Sciences, Geography, *et al.*) When combined with recent recommendations from the Carnegie Foundation's five year study on the "Reinvention of Doctoral Education,"[5] the proposed multidisciplinary Environmental Science Doctoral Program will allow WIU to establish a program with a distinctive focus and outcomes while attaining national prominence by embracing and implementing the most current thinking on advanced multidisciplinary graduate education.

Specific evidence of student interest.

To assess the level of interest in the proposed program, a two-part approach was taken:

1. Discussions with individual agency representatives.
2. A survey of stakeholders.

Discussions with individual agency representatives

In the absence of an approved degree program with a defined scope and expectations, it is problematic to obtain commitments from specific students. However, in an endeavor to ascertain the interest and quantify the abundance of potential ES Doctoral Program students, preliminary discussions have been held by WIU Institute for Environmental Studies (IES) personnel with a wide range of stakeholders, including the U.S. Army Corps of Engineers' Rock Island District (COERI), the U.S. Army Corps of Engineers' Environmental Research & Development Command (ERDC), the U.S. Fish & Wildlife Service (USFWS), River Action, and the Natural Lands Institute. Through this engagement, the need for environmental specialists with advanced

[2] (National Research Council's Water Science & Technology Board, 2004)
[3] (National Research Council's Water Science & Technology Board, 2005)
[4] (National Reseach Council's Water Science & Technology Board, 2005)
[5] (Walker, 2008)

graduate training was frequently cited as a key to meeting both existing and emerging needs.

Through these discussions and in the absence of a full advertisement for a formal degree program, twelve students from the organizations cited above were identified as a potential initial cohort. Each prospective student currently resides in WIU's service area, holds at least one graduate degree in biological sciences, geography, anthropology/archaeology, and/or planning, holds a position of responsible charge in an environmental field, and has expressed interest in the ES Doctoral Program as a means to increase their personal knowledge and to advance their respective careers.

> *"I received my masters from WIU in plant ecology and currently work at the Missouri Department of Conservation as a large river systems ecologist/restoration ecologist. I am pleased to see WIU is considering a doctorate program, and especially in large river ecology!"* - *Survey respondent.*

Survey of Stakeholders

To supplement these findings from discussions with agency representatives, a survey was conducted by the College of Arts & Sciences' Western Survey Research Center (WSRC) to ascertain the thoughts of regional environmental stakeholders on the prospect of implementing an Environmental Science Doctoral Program at WIU. Working with the WSRC, the Environmental Science Doctoral Program Committee developed a survey tool to gauge the need for, relevance of, and interest in an Environmental Science Doctoral Program with an emphasis on large river ecosystem science in west central Illinois. A detailed report of the survey of stakeholders is presented in Appendix B.

In the survey, a total of 188 people were contacted via email. Attendees of the recent "Upper Mississippi River Conference: Weaving Multiple Uses into Sustainable River Communities" served as the main body of survey participants. Additionally, the ES Doctoral Program Proposal Committee provided names and contact information for academic institutions which were not represented on the conference list. The 12 potential students identified earlier were not included in the survey of stakeholders.

> *"I would definitely like to see the program happen. Iowa State University would be the next nearest opportunity for me (and it lacks the large river component). I believe that a great deal of emphasis should be placed on hiring high quality faculty to implement the program and make it extremely well-respected nationwide."* – *Survey respondent.*

Respondent Backgrounds

Survey respondents worked mainly in Illinois (54%) and Iowa (28%), with the federal government identified as the largest employer (34%). 72% of respondents cited the WIU Quad Cities Campus as being closest to their place of employment. 60% of respondents worked in science or engineering (28%) or planning (32%) positions, with 63% serving in a supervisory capacity. 41% of respondents held Master's or Professional degrees, while 38% held Bachelor's degrees.

Program Need & Focus

Overall, 92% of survey respondents were either "very supportive" (65%) or "somewhat supportive" (27%) of the development of a Doctoral Program in Environmental Science with an emphasis on large river ecosystem science. When polled on program needs (Question 8), 81% of respondents identified the need for people with advanced training in environmental science as "very important". 74% cited the need for people with advanced training in large river ecosystem science as "very important". Correspondingly, ***93% of respondents cited the availability of advanced training in large river ecosystem science in west central***

Illinois was either "very important" or "somewhat important". This outcome is in agreement with the need for environmental specialists with advanced graduate training identified above.

Program Participation & Support

Through the survey of stakeholders, 11 respondents identified themselves as "very likely" to join the Doctoral Program in Environmental Science. An additional 14 respondents were "somewhat likely" to join. When the 12 likely students identified through engagement with individual agency heads are taken into account, ***it is reasonable to estimate an initial pool of students ranging from 23 to 37 individuals.***

Other notable outcomes included the importance of the proposed program to career advancement with 90% of respondents indicating this as being "very important" or "somewhat important". This finding is consistent with the sentiment expressed individual agency representatives who cited a Doctoral Program in Environmental Science as a means for career advancement.

Of respondents, 49% indicated that their employers would be supportive of the proposed program. Since 38% of respondents were not sure of their employer's interests in participation/support, this should be considered a "baseline" figure, which could be considerably higher. Similarly, respondents cited the need for the program to be integrated with larger regional environmental stewardship efforts and have beneficial ties to regional environmental missions.

> *"I am very excited to hear that this program is being considered. I would definitely support this program and I believe that the Quad Cities would be a great place to base the program." – Survey respondent.*

Regarding the use of technology and distance learning elements in the proposed program, 82% of respondents indicated this as being "very important" (35%) or "somewhat important" (47%). Based on the distribution of respondents (and presumably, potential future students), the effective use of distance learning technologies and techniques will be needed to provide continuity between offerings at the Macomb and Quad Cities Campuses.

Projected Enrollments

Based on the finding presented above, the following enrollments are projected through the first five years of the program:

Table 1. Projected enrollments in the ES Doctoral Program over the first five years.

Year	1	2	3	4	5
Projected enrollment	10-12	10-12	12-14	12-14	12-15

Relevance to University Initiatives

The proposed ES Doctoral Program also directly supports efforts to meet the existing and future needs of WIU students in addition to key University initiatives as outlined in "Higher Values in Higher Education 2008-2018: an Action Agenda for Western Illinois University". As a multidisciplinary terminal degree program with a unique focus on large river ecosystems, the Environmental Science (ES) Doctoral Program directly supports

WIU's strong commitments to teaching and instruction (Goal 2. Action 1. b) & c)). Through this initiative, WIU will provide greater coherence to the field of large river ecosystem science, broaden the advanced training available to its students, enhance opportunities for faculty engagement in scholarship, directly support regional economic and community development, and advance its position as a leader in environmental research on the upper Mississippi River.

Housed in WIU's multidisciplinary Institute for Environmental Studies, the ES Doctoral Program builds on the strong foundation of current environmental and allied academic offerings at WIU (*e.g.,* Environmental Studies Minor, Post Graduate Certificate in Geographic Information Systems, & discipline-specific Masters Degree programs in Biological Sciences, Geography, *et al.*) (Goal 2. Action 1. c)).

As a research-based terminal degree program, the ES Doctoral Program is weighted to emphasize the conduct of independent, novel scientific investigation, by its students; thus, demonstrating the Institution's strong commitment to research. It is reasonable to believe that the ES doctoral program will also lead to increased recruitment of high quality new faculty, while simultaneously offering new opportunities to current members of the professoriate. (Goal 2. Action 2. a) & d))

To ensure students throughout WIU's service area have access to this program, the Environmental Science Doctoral Program will be offered at both WIU campuses (Goal 3. Action 1. h)). It is believed that this two campus program will also reinforce ties between student, faculty, and staff at the two locales. Due to its explicit focus on the environment, the ES doctoral program will provide further strong affirmation of WIU's commitment to the personal growth of students (Goal 4. Action 1. b)) as well as social responsibility (Goal 5. Action 3. l).

Specific job openings for which the degree program applies.

Based on the diverse nature of the field, graduates of environmental science doctoral programs occupy a wide variety of positions ranging from college and university faculty to managers of national environmental regulatory programs to independent environmental researchers and policy advisors. To quantify specific opportunities among these various segments of the employment market, data were collected from the federal government in addition to the Chronicle of Higher Education, the National Council for Science and the Environment's (NCSE) Council of Environmental Deans and Directors (CEDD), and the Association of Environmental Engineering and Science Professors (AEESP). Additional supporting information of a more general nature was obtained from the Illinois Department of Employment Security (IDES) and is presented below.

During a recent search of employment opportunities with the federal government, 351 new positions were available in which environmental expertise and a Ph.D. were included in the position "Qualifications & Evaluations". A representative sample of federal job openings, job series, and corresponding hiring agencies are presented in Table 2.[6] Notably, 54 of these openings were cited as "interdisciplinary".

To ensure the relevance of findings, search terms were stated to exclude positions for which engineering qualifications were mandatory. However, positions were included in the results when training as an engineer was one of several pathways to qualify (*e.g.*, Interdisciplinary Physical Scientist OR General Engineer positions).

[6] (US Office of Personnel Management, 2008)

As a direct result of heightened and growing interest on environmental issues and programming in higher education, there has been an increased demand for tenured/tenure track environmental faculty. For instance, from November 2007 to January 2008, there were solicitations for 24–25 tenured or tenure track environmental faculty positions at colleges or universities in the U.S. An additional 45–50 faculty positions were available in closely allied fields for which many ES Doctoral Program graduates would likely qualify. Notably, results included one "focus area" hire at Michigan Technological University (Houghton, MI) consisting of 4–5 faculty with an allocation for one endowed position. Regionally, the University of Illinois at Springfield (a WIU–Quad Cities "benchmark institution"; Springfield, IL) and Knox College (Galesburg, IL) solicited applications for environmental faculty. [7] [8] This assessment of faculty openings did not include positions for which engineering credentials were required. However, prospective WIU ES Doctoral Program graduates may qualify for such positions, depending on their particular pre-doctoral academic training.

It should also be noted that advanced graduate education is often a means for advancement in an individual's present place of employment and does not necessarily result in the creation of a new position. For example, in WIU's service area, there are a substantial number of Masters degree educated biologists, geographic information systems analysts, environmental managers and planners, *etc.*, working for state and federal scientific, resource management, and regulatory agencies (*e.g.*, U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service, U.S. Geologic Survey) as well as conservation groups with a national and/or international presence (the Nature Conservancy, the Natural Lands Trust, *etc.*). Due to the lack of opportunities for advanced environmental graduate training in WIU's service area, students interested in pursuing a doctoral degree in an environmental field must relocate away from western Illinois. By filling this void, the ES Doctoral Program will make a substantial contribution to the development and retention of a world-class intellectual workforce in western Illinois, with clear positive effects on regional employment and economic and community development.

Based on the inherent degree of specialization and the diversity of environmental doctoral programs in the U.S., it is difficult to predict meaningful career placement outcomes for graduates of the proposed ES Doctoral Program. However, as a more broad-based indicator, the National Science Foundation (NSF) predicted that employment in science and engineering positions will increase at a rate three times greater than that of all occupations, over the period from 2000 to 2010. It was further expected that employment in the physical and natural sciences will increase by approximately 18%, of which "slightly less than one-half of these projected job gains are for environmental scientists". [9] This report of robust national growth in environmental science careers is supported by evidence from the NCSE's Council of Environmental Deans and Directors, who cited faster than average growth in careers for environmental scientists.[10]

As a sign of commitment on the part of federal stakeholders, on December 10, 2007, WIU and COERI entered into a Memorandum of Agreement (MOA) which establishes a long term commitment to partner on issues of regional and national environmental relevance. A key aspect of the Agreement includes support for environmental education, which is of clear benefit to students and faculty in the proposed ES Doctoral Program. Discussions have also been initiated with COERI and USFWS to address the need for well trained environmental professionals and the corresponding capabilities and opportunities to team with WIU. Outcomes also include the exploration of the federal student employment ("STEP") program as a means to support the work of prospective environmental doctoral students on meaningful and timely issues of

[7] (National Council for Science and the Environment, 2008)
[8] (Chronicle of Higher Education, 2008)
[9] (National Science Foundation, 2002)
[10] (National Council for Science and the Environment, 2004)

scholarly significance. Further, WIU IES personnel are actively working with USFWS personnel on a formal agreement similar to the WIU-COERI MOA. It is anticipated that this agreement will be signed during the Spring 2009 semester. In all cases, these efforts are intended to support the recruitment of high-quality graduate students from the region and beyond.

Table 2. Representative federal job openings and associated details for positions requiring environmental expertise and a doctoral degree (April 14, 2008).[11]

Position Title/ Federal Job Series	Hiring Agency
Biological Scientist/0401	Forest Service
Deputy Director, Office of Biological Infrastructure/0401	National Science Foundation
Environmental Protection Specialist/0028	Environmental Protection Agency
	Federal Highway Administration
	Federal Railroad Administration
	Defense Logistics Agency
Interdisciplinary: Physical Scientist (or General Engineer)/1301	Department of Energy
Interdisciplinary: Research Ecologist or Entomologist/0408	Agricultural Research Service
Natural Resource Program Manager/0401	National Park Service
Natural Resource Specialist/0401	Farm Service Agency
	National Oceanic & Atmospheric Administration
NEPA Planner/0401	Forest Service
Planning & Environmental Coordinator/0301	Bureau of Land Management
Technical Writer (Science)/1083	National Park Service
Wildlife Biologist/0486	Fish & Wildlife Service

Impact on local and Illinois economy.

The Illinois Department of Employment Security (IDES) reported a 4.2% long-term (2004–2014) projected growth for environmental scientists/specialists. No data were provided on the particular level of graduate training required for these positions. However, the IDES also projected long-term growth of 16% for environmental science faculty, for whom advanced graduate education is necessary. [12]

> *"We have a B.S. degree program in Environmental Science. I would be VERY interested in the possibility of sending students on to work on graduate degrees, both MS and Ph.D. The more formal we could make that link, the better!" – Survey respondent.*

[11] (US Office of Personnel Management, 2008)
[12] (Illinois Department of Economic Security, 2007)

As noted previously, the creation and retention of highly qualified ES Doctoral Program graduates can have a positive impact by meeting the existing and future needs of the state, the region, and beyond. The ES Doctoral Program will also strengthen the considerable efforts to build and grow Western's presence in the Quad Cities.

> *"With the funding problems that the Illinois DNR has had this could be a great opportunity to partner and accomplish projects that have not been possible in the past." – Survey respondent.*

Comparable degree programs at peer institutions and success in job placement.

Peer institutions

As a comprehensive university, WIU has a limited number of peer institutions which offer advanced graduate degrees – none of which offer a doctoral degree in environmental sciences or a closely related field. Likewise, none of the WIU's recognized benchmark institutions (for either the Macomb or Quad Cities campuses) offer a doctoral program in environmental science. Consequently, a more detailed comparison of the number, size, and scope of programs at peer and/or benchmark institutions is not instructive.

State-wide

The Illinois Board of Higher Education (IBHE) recognizes six doctoral programs in environmental disciplines (environmental science, studies, and/or engineering), offered through four institutions, as summarized in Table 3.[13] Half of these programs are engineering and/or engineering science degrees. Currently, there are no other institutions of higher education in Illinois that offer ES Doctoral Programs with an emphasis on large river ecosystem science. Further, no institutions in IBHE's Western Region offer environmentally-related doctoral programs of any kind.

[13] (Illinois Board of Higher Education, 2007)

Table 3. IBHE recognized environmental doctoral programs.[14]

Institution Name	Program Name	Region of Authorization
Illinois Institute of Technology[‡]	Ph.D. in Environmental Engineering[†]	Chicago
Southern Illinois University Carbondale	Ph.D. in Environmental Resources & Policy	Southern
University of Illinois at Chicago	Ph.D. in Earth & Environmental Sciences	Chicago
University of Illinois at Urbana	Ph.D. in Environmental Engineering in Civil Engineering[†]	Prairie
	Ph.D. in Environmental Science in Civil Engineering[†]	
	Ph.D. in Natural Resources & Environmental Sciences	

[†] *Engineering and/or engineering science doctoral program.*
[‡] *Independent institution.*

Regionally

In the upper Midwest (IA, IL, MN, WI), 10 institutions offer doctoral degrees in environmental disciplines, as summarized in Table 4. However, there are no other institutions of higher education in Illinois, or the upper Midwest region that offer ES Doctoral Programs, with a focus on the upper Mississippi River floodplain as a "living laboratory". This is not to imply that there are no other investigators and/or research teams studying such issues. However, their efforts are typically very discipline-specific. In programs where a multidisciplinary approach is taken (*e.g.,* University of Minnesota's system–wide doctoral program in Water Resources Science[15]), the academic and research foci are almost exclusively on the Great Lakes[16] [17] with relatively little attention given to upland freshwater streams and rivers.

Notably, no institutions in the upper Midwest offer a doctoral degree in Environmental Studies. The lack of advanced graduate programs offered in environmental studies is consistent with input from stakeholders who emphasized the need for a doctoral program with a strong science focus. A science focus is further supported by the examination and analysis of employment needs and opportunities for prospective ES Doctoral Program graduates, presented previously.

Table 4. Institutions in the Upper Midwest that Offer Doctoral Degrees in Environmental Disciplines.

	Environmental doctoral degree(s) offered in:

[14] (Illinois Board of Higher Education, 2007)
[15] (University of Minnesota, 2007)
[16] (Minnesota Sea Grant, 2008)
[17] (University of Minnesota, 2008)

	Science	Studies	Engineering	Other (specify)
Illinois				
SIUC	x†			x (Env. Resources & Policy)
U. of IL at Chicago	x†			x (Env. & Urban Geography)
U. of IL at Urbana	x†		x	
IIT			x	
Iowa				
U. of IA			x	x (Occup. & Env. Health)
IA St. U.	x†		x	x (Biorenewable Res. & Tech†.)
Minnesota				
U. of MN			x	x (Water Resources Science† a system-wide program; Conservation Biology†; Environmental Health)
Wisconsin				
Marquette U.			x	
U. of WI at Madison			x	x (Env. Chem. & Tech.; Env. Monitoring†; Land Resources†; Wildlife Ecology)
U. of WI at Milwaukee		*	x	x (Ph.D. in Geography w/ conc. in Physical Geog. & Env. Studies*)

† Multidisciplinary doctoral degree program.
**Institution offers a doctoral degree with a concentration in Environmental Studies – not a major.*

Nation-wide

The exact character of environmental graduate programs varies greatly, due in large part to the diverse nature of environmental issues and related approaches to problem solving. According to the Association of Environmental Engineering & Science Professors (AEESP), there are approximately 100 institutions offering doctoral degrees in environmental engineering and/or science.[18] In some instances, doctoral degrees in environmental science are offered through traditional academic departments (*e.g.,* Departments of Biology or Geology). Other institutions focus their environmental offerings at the college level (*e.g.,* College of Agriculture and/or Natural Resources) to promote the participation of students and faculty from a wider range of disciplines. Due to the very diverse nature of the subject areas and the large number of discrete

[18] (Association of Environmental Engineering & Science Professors, 2007)

academic disciplines that conduct work in related fields, a meaningful characterization of the depth and breadth of these programs is not practical.

Impact for the department structure.

WIU possesses a core of recognized leaders with the ability to conduct cutting edge research on topics of pressing relevance to the *environment of the upper Mississippi River*. Active research programs have grown from this expertise, resulting in the creation and delivery of new academic programs and the formation of the Institute for Environmental Studies. The proposed ES Doctoral Program will build on the critical mass created through the combined efforts of these faculty members and will serve to advance a new level of integrated environmental scholarship.

Currently, 11 faculty representing 3 academic departments and 3 research institutes/centers (see Table 5) will serve as the initial academic core of the ES Doctoral Program. To meet programmatic needs, the core faculty will be supported by an additional 10 faculty, presented in Table 6. Through these synergistic relationships, rapid startup of the ES Doctoral Program is expected. Further, as a multidisciplinary program, the degree of potential impact on the structure of any single department is anticipated to be less than expected for a discipline-specific program.

A detailed listing of personnel, equipment, and space needs, along with associated budget estimates is presented in "APPENDIX A. Budgetary Needs". Based on the expertise of current WIU faculty, it is anticipated that two new faculty positions will be required to bring the ES Doctoral Program to full strength (see APPENDIX A, Table A1). These new faculty appointments should transcend disciplinary boundaries and would thus, be amenable to appointments across disciplines, when appropriate. This approach has been used to good effect in the case of Dr. Susan P. Romano, an Assistant Professor with faculty appointments in the Department of Biological Sciences and the Department of Geography. Dr. Romano is assigned full-time to WIU's Quad Cities campus and currently holds an appointment as a Research Fellow in the Institute for Environmental Studies, where she has played an important role in supporting environmental research and outreach activities with numerous regional environmental stakeholders. The experiences obtained in developing and implementing Dr. Romano's unique appointment will serve as a model to effectively engage other new faculty in the proposed ES Doctoral Program.

Since the ES Doctoral Program will be offered at both WIU campuses, space will be needed to house computing and instructional resources requested in APPENDIX A, Table A2. Facilities and equipment/furnishings for an advanced environmental analysis laboratory are needed only at the Macomb campus.

Due to the specialized nature of the ES Doctoral Program curriculum, it is not expected that the WIU Library will possess all resources necessary to conduct novel research on large river ecosystem science. However, the needs of students and faculty in the program will be well met using the WIU Library's inter-library loan service.

Impact for faculty workload assignments.

The multidisciplinary nature of the ES Doctoral Program is expected to mitigate the potential for asymmetric distribution of an increased workload onto any single academic department. In this regard, impacts of the multidisciplinary ES Doctoral Program will be less than expected for a discipline-specific degree program.

However, it is anticipated that each new cohort of ES Doctoral Program students would further populate existing upper-level graduate electives. Likewise, with increased demand from students, the addition of new advanced graduate courses as well as increased faculty and student activity at WIU field sites (*e.g.*, the Alice L. Kibbe Life Science Station, the Ira & Reatha T. Post Wildlife Sanctuary, and the Rodney & Bertha Fink Environmental Studies Field Laboratory & Conservancy) are reasonable expectations.

To meet these growing needs, three new faculty positions will be required to bring the ES Doctoral Program to full strength, as noted previously. Any new faculty appointments will be designed to transcend disciplinary boundaries with the intention to best fit and enhance the multidisciplinary nature of the ES Doctoral Program, while providing meaningful support to individual academic departments.

Table 5. Initial core ES Doctoral Program faculty, departmental affiliations, and expertise.

Name	Department(s)/Units(s)	Expertise
Prof. Richard Anderson	Biological Sciences	**Freshwater invertebrate ecology.**
Assoc. Prof. Steven Bennett	Geology	Field-based physical hydrogeology, stream sediment transport, & contemporary eolian processes.
Prof. Peter Calengas	Geology	Industrial minerals, coal, & environmental geology.
Assoc. Prof. Sean Jenkins	Biological Sciences & Alice L. Kibbe Life Science Station	*Landscape & fire ecology, forest & grassland ecology, plant ecology; Director, Kibbe Life Science Station.*
Prof. **Christopher Merrett**	Geography & Illinois Institute for Rural Affairs	Geographic philosophy and literature.
Assoc. Prof. Richard Musser	Biological Sciences	*Plant-herbivore interactions, molecular ecology, physiological ecology.*
Assoc. Prof. Eric Ribbens	Biological Sciences	Botany; Curator, WIU Herbarium.
Prof. **Christopher Sutton**	Geography	Urban, transportation, regional and cultural geography.
Prof. Jeanette Thomas	Biological Sciences	*Marine & terrestrial mammalogy, bioacoustics, zoo animal enrichment.*
Prof. Roger Viadero	Biological Sciences & Institute for Environ. Studies	Comprehensive ecosystem monitoring and assessment, watershed-scale remediation and restoration of impaired natural systems.
Prof. Dan Wise	Geography	Meteorology.

Table 6. ES Doctoral Program supporting faculty, departmental affiliations, and expertise.

Name	Department	Expertise
Asst. Prof. David Casagrande	Anthropology	Human ecology, environmental anthropology & policy, medicinal plants, ecology, ecological restoration
Asst. Prof. Yongxin Deng	Geography	Environmental modeling, digital terrain analysis, and fuzzy classification methods.
Asst. Prof. **Redina Herman**	Geography	Impact of aircraft emissions on the environment and analysis of interactions between gravity waves and large-scale atmospheric flows.
Asst. Prof. Brian Peer	Biological Sciences	**Ornithology, behavioral ecology, coevolution, molecular ecology**
Assoc. Prof. David Rohall	Sociology & Western Survey Research Center	Survey research, social psychology, social attitudes.
Asst. Prof. Susan Romano	Biological Sciences, Geography	*Large river vegetation & landscape ecology, forest & wetland management, GIS.*
Asst. Prof. Timothy Spier	Biological Sciences	*Ichthyology, fresh-water fish ecology and management, GIS*
Assoc. Prof. Heather McIlvaine-Newsad	Anthropology	Gender, agriculture and the environment, community development
New faculty†	Mathematics	Environmental modeling
New faculty†	Geography	Physical geography, geomorphology, GIS

*†Position approved previously to meet existing departmental needs and will be filled in Fall 2008/Spring 2009. Position **is not** designated specifically for the ES Doctoral Program.*

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APPENDIX A. Budgetary Needs

Personnel

Estimated costs of personnel are presented in Table A1. To support the Environmental Science Doctoral Program, it is anticipated that two faculty lines are needed to enhance existing faculty strength. Further, a fraction of the IES Director's time and reallocation of faculty time will be supported through CAS.

Table A1. Estimated costs of ES Doctoral Program personnel.

			Extended Cost		
Item	**Unit cost**	**# units**	**Funds requested centrally**	**CAS re-allocations**	**Frequency**
New faculty (assistant professor; 9 mo.)	$55,000	2	$110,000		Continuous
Faculty reassignments to Ph.D. program (20% time based on 9 mo. salary of $55k) – funded "in load" by CAS/Departments	$11,000	4		$44,000	Continuous; variable after startup
Allocation of 20% time of IES Director to direct ES doctoral program	$26,800	1		$26,800	Continuous
Graduate research assistantship – funded through CAS Dean's Office	$11,200	2		$22,400	Continuous
		Totals	**$110,000**	**$93,200**	

Space

Physical space is needed on the Macomb and Quad Cities campuses to accommodate: (1) program personnel and (2) computing/instructional facilities. On the Macomb campus, space is needed for the advanced environmental analysis laboratory. Specific locations/spaces on the Macomb and Quad Cities Campuses include:

Macomb Campus

- Tillman Hall
  - 301 Suite, Rooms A – F.
  - Use of G.I.S. laboratory and classroom facilities.
  - Individual research laboratory space of faculty participating as research advisers.

- Waggoner Hall
- Individual research laboratory space of faculty participating as research advisers.
- Space for the Advanced Environmental Research Laboratory – third floor (alternate, TL basement).

Quad Cities Campus

- Existing space allocated for science laboratory.
- Future laboratory and office space in new riverfront campus.

Equipment

Equipment needs include the following (estimated costs are presented in Table A2):

- Computer workstations and peripherals for geospatial analysis and modeling and other computationally-intensive analytical tasks; PC-based. Resources are to be split between the Macomb and Quad Cities campuses and can be reallocated based on student needs.

- CODEC/distance learning equipment for course delivery and other interaction (*e.g.,* research group meetings, student dissertation committee meetings) between the Macomb and Quad Cities campuses.

- Equipment for advanced environmental analysis laboratory.

Table A2. Estimated costs of equipment for the ES Doctoral Program.

Item	Unit cost	# units	Extended cost	Frequency
Computer workstations (for geospatial analysis and modeling and other computationally-intensive analysis tasks; PC-based)	$2,250	12	$27,000	Periodic (every 3 yrs.)
Software and/or licenses ($10,000 upgrade to "unlimited" users of ESRI software†)	$10,000	1	$10,000	Continuous (annual)
Spectrophotometer (uv/vis)	$6,500	1	$6,500	Periodic (every 5-6 yrs.)
Multi parameter instrument (field & lab capable) w/ probes	$2,600	3	$7,800	Periodic (every 5-6 yrs.)
Auto titrator	$8,000	1	$8,000	Periodic (every 5-6 yrs.)
Muffle furnace	$4,000	1	$4,000	One-time
Laboratory drying oven	$2,000	1	$2,000	One-time
Analytical-grade balance	$2,800	1	$2,800	One-time
Centrifuge (bench top)	$2,500	1	$2,500	Periodic (every 5-6 yrs.)
Glassware and supplies	$10,500	1	$10,500	One-time
		Total	**$81,100**	

†*GIS Center currently has a license for 20 users @ $15,000/yr.*

APPENDIX B. Survey of Stakeholders

A survey was conducted by the College of Arts & Sciences' Western Survey Research Center (WSRC) to ascertain the thoughts of regional environmental stakeholders on the prospect of implementing an Environmental Science Doctoral Program at WIU.

Working with the WSRC, the Environmental Science Doctoral Program Committee developed a survey tool to gauge the need for, relevance of, and interest in an Environmental Science Doctoral Program with an emphasis on large river ecosystem science in west central Illinois. The cover email and questionnaire sent to recipients are presented in Figures B1 & B2, respectively.

Attendees of the recent "Upper Mississippi River Conference: Weaving Multiple Uses into Sustainable River Communities" were polled in this assessment. (Note that only those who indicated permission for contact beyond the scope of the conference were included in this survey.) Additionally, the ES Doctoral Program Proposal Committee provided names and contact information for academic institutions which were not represented on the conference list. Survey participants included representatives from: 16 regional institutions of higher education, 6 state (IL, IA, MO, & MN) natural resource management agencies, 6 federal environmental and/or natural resource management agencies, 7 county or municipal governments, 7 private corporations, and 23 nongovernmental organizations.

An email-based solicitation was sent to 188 recipients. Seven addresses contained errors or were otherwise not able to be received; consequently, 181 total surveys were successfully sent to recipients (N = 181). Recipients submitted their feedback online to the WSRC. Data were collected from January 8 to January 16, 2009. A follow-up email was sent on January 16, 2009. A total of 68 responses were recorded (n = 68) resulting in a 38% response rate.

Results from the survey are presented in Tables B1 & B2.

Survey Summary - respondent background

A summary of survey results on respondent background is presented in Table B1. Survey respondents overwhelmingly (82%) worked in Illinois (54%) and Iowa (28%), with the federal government identified as the largest employer (34%). 72% of respondents cited the WIU Quad Cities Campus as being closest to their place of employment. 60% of respondents worked in science or engineering (28%) or planning (32%) positions, with 63% serving in a supervisory capacity. 41% of respondents held Master's or Professional degrees, while 38% held Bachelor's degrees.

Survey Summary – program need, focus, participation, & support.

A summary of survey results related to program need, focus, potential participation, and support is presented in Table B2.

Program Need & Focus

Ninety-two percent of survey respondents were either "very supportive" (65%) or "somewhat supportive" (27%) of the development of a Doctoral Program in Environmental Science with an emphasis on large river ecosystem science (Question 9). Notably, only 3% responded as "not very supportive". No one responded as

being “not supportive” and there were three “non responses” (4%) to Question 9.

When polled on program needs (Question 8), 81% of respondents identified the need for people with advanced training in environmental science as “very important”; 74% cited the need for people with advanced training in large river ecosystem science as “very important”. Likewise, 90% of respondents thought the availability of advanced training in environmental sciences in west central Illinois was either “very important” or “somewhat important”. ***93% of respondents cited the availability of advanced training in large river ecosystem science in west central Illinois was either “very important” or “somewhat important”.***

Program Participation & Support

In the survey, 11 respondents were “very likely” to join the Doctoral Program in Environmental Science and 14 were “somewhat likely” to join. Independent of the survey, the Environmental Science Doctoral Program committee identified a total of 12 individuals who were very interested in joining the proposed program. None of the 12 people identified earlier participated in the survey. Consequently, ***it is reasonable to estimate an initial pool of students ranging from 23 to 37 individuals.***

Other notable outcomes included the importance of the proposed program to career advancement with 90% of respondents indicating this as being “very important” or “somewhat important”. Of respondents, 49% indicated that their employers would be supportive of the proposed program. Since 38% of respondents were not sure of their employer’s interests in participation/support, this should be considered a “baseline” figure, which could be considerably higher. Similarly, respondents cited the need for the program to be integrated with larger regional environmental stewardship efforts and have beneficial ties to regional environmental missions.

Regarding the use of technology and distance learning elements in the proposed program, 82% of respondents indicated this as being “very important” (35%) or “somewhat important” (47%). Based on the distribution of respondents (and presumably, potential future students), the effective use of distance learning technologies and techniques will be needed to provide continuity between offerings at the Macomb and Quad Cities Campuses.

Figure B1. Cover letter sent to survey recipients via email.

Environmental Science Doctoral Program Survey — Thursday, January 08, 2009 505521 2:06:55 PM

From: DM-Rogers@wiu.edu

To: undisclosed-recipients:;

Western Illinois University is considering the establishment of a doctoral program in environmental science with an emphasis on large river ecosystems. This program will provide opportunities for those who hold master's degrees in the physical or biological sciences/engineering to obtain the advanced academic training needed to become leaders in the assessment, understanding, integration, and development of science-based solutions to the unique environmental challenges faced on large navigable river ecosystems. This multidisciplinary program will capitalize on WIU's close proximity to and historic presence on the Mississippi River, which will serve as a living laboratory for students to conduct cutting-edge research of relevance to large river ecosystems, world-wide.

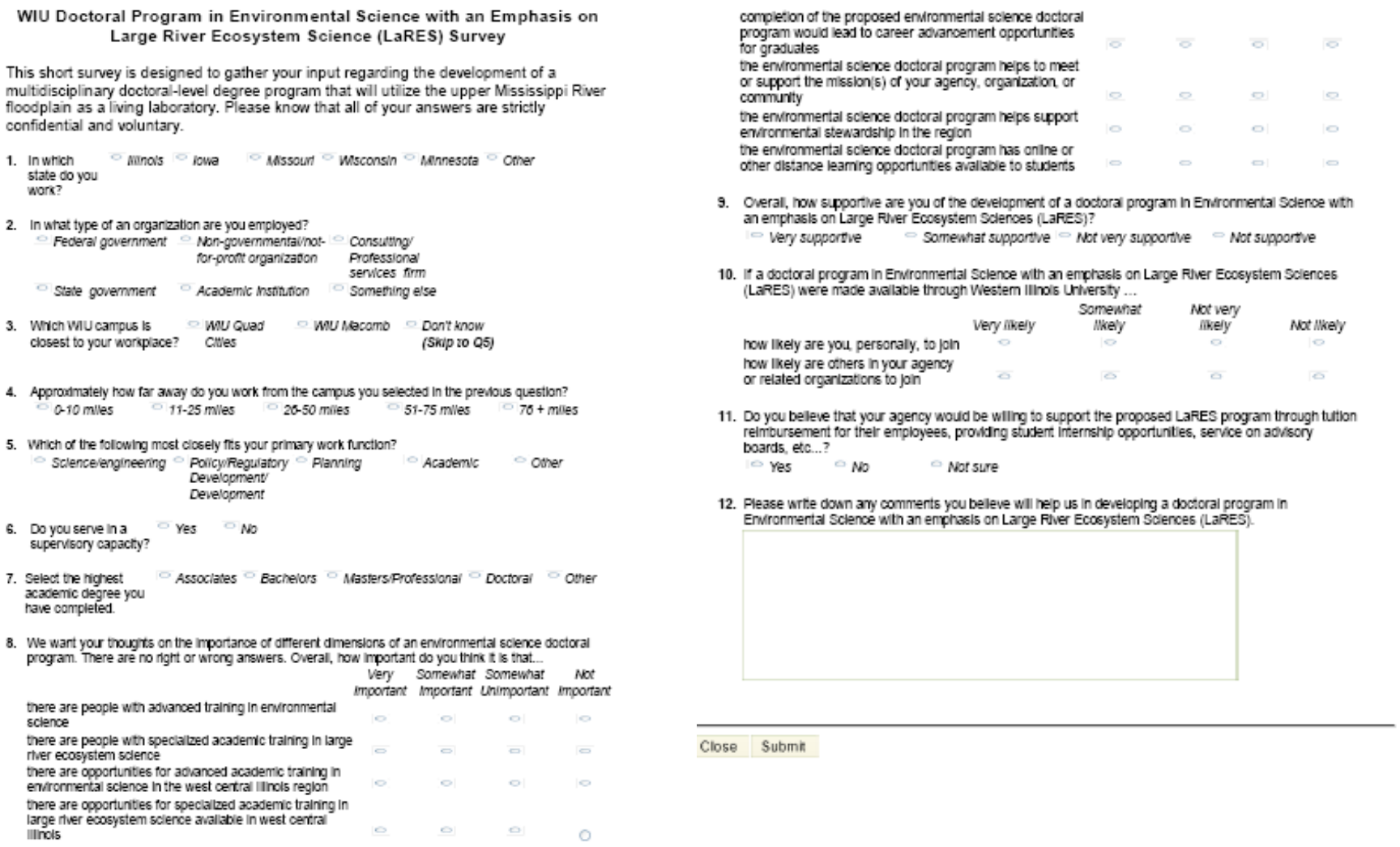
As an important part of assessing the feasibility of this program, we are contacting stakeholders throughout the region to obtain feedback which will help guide our further development. Please click on the link below (or copy and paste into your browser)to access the survey.

http://www.wiu.edu/users/miiira/ecosystem_science_doctoral_program_survey.htm

We greatly appreciate your time and input. If you have any questions about the survey please contact Danielle Rogers by replying to this email or calling 800-526-9943.

Respectfully,
Roger C. Viadero
Director of Environmental Studies
Western Illinois University

Figure B2. Online survey questionnaire.



WIU Doctoral Program in Environmental Science with an Emphasis on Large River Ecosystem Science (LaRES) Survey

This short survey is designed to gather your input regarding the development of a multidisciplinary doctoral-level degree program that will utilize the upper Mississippi River floodplain as a living laboratory. Please know that all of your answers are strictly confidential and voluntary.

1. In which state do you work? ○ Illinois ○ Iowa ○ Missouri ○ Wisconsin ○ Minnesota ○ Other

2. In what type of an organization are you employed?
○ Federal government ○ Non-governmental/not-for-profit organization ○ Consulting/ Professional services firm
○ State government ○ Academic Institution ○ Something else

3. Which WIU campus is closest to your workplace? ○ WIU Quad Cities ○ WIU Macomb ○ Don't know (Skip to Q5)

4. Approximately how far away do you work from the campus you selected in the previous question?
○ 0-10 miles ○ 11-25 miles ○ 26-50 miles ○ 51-75 miles ○ 76 + miles

5. Which of the following most closely fits your primary work function?
○ Science/engineering ○ Policy/Regulatory Development/ Development ○ Planning ○ Academic ○ Other

6. Do you serve in a supervisory capacity? ○ Yes ○ No

7. Select the highest academic degree you have completed. ○ Associates ○ Bachelors ○ Masters/Professional ○ Doctoral ○ Other

8. We want your thoughts on the importance of different dimensions of an environmental science doctoral program. There are no right or wrong answers. Overall, how important do you think it is that...

	Very Important	Somewhat Important	Somewhat Unimportant	Not Important
there are people with advanced training in environmental science	○	○	○	○
there are people with specialized academic training in large river ecosystem science	○	○	○	○
there are opportunities for advanced academic training in environmental science in the west central Illinois region	○	○	○	○
there are opportunities for specialized academic training in large river ecosystem science available in west central Illinois	○	○	○	○
completion of the proposed environmental science doctoral program would lead to career advancement opportunities for graduates	○	○	○	○
the environmental science doctoral program helps to meet or support the mission(s) of your agency, organization, or community	○	○	○	○
the environmental science doctoral program helps support environmental stewardship in the region	○	○	○	○
the environmental science doctoral program has online or other distance learning opportunities available to students	○	○	○	○

9. Overall, how supportive are you of the development of a doctoral program in Environmental Science with an emphasis on Large River Ecosystem Sciences (LaRES)?
○ Very supportive ○ Somewhat supportive ○ Not very supportive ○ Not supportive

10. If a doctoral program in Environmental Science with an emphasis on Large River Ecosystem Sciences (LaRES) were made available through Western Illinois University ...

	Very likely	Somewhat likely	Not very likely	Not likely
how likely are you, personally, to join	○	○	○	○
how likely are others in your agency or related organizations to join	○	○	○	○

11. Do you believe that your agency would be willing to support the proposed LaRES program through tuition reimbursement for their employees, providing student internship opportunities, service on advisory boards, etc...?
○ Yes ○ No ○ Not sure

12. Please write down any comments you believe will help us in developing a doctoral program in Environmental Science with an emphasis on Large River Ecosystem Sciences (LaRES).

Close Submit

Table B1. Survey results – respondent background (n = 68).

Question (comments)	**Response Count (%)**					
1. In which State do you work? (1 non response)	IL 37 (54%)	IA 19 (28%)	MO 4 (6%)	WI 1 (2%)	MN 2 (3%)	Other 4 (7%)
2. At what type of organization are you employed? (1 non response)	Federal gov. 23 (34%)	State gov. 11 (16%)	Non-govt. /not-for-profit 9 (13%)	Academic 7 (10%)	Consulting / profess. services 4 (6%)	Other 13 (19%)
3. Which WIU campus is closest to your work place? (2 non responses)	WIU Quad Cities 49 (72%)	WIU Macomb 11 (16%)	Don't know 6 (9%)			
4. Approximately how close do you live from the campus location you selected above? (7 non responses)	0-10 mi. 27 (40%)	11-25 mi. 5 (7%)	26-50 mi. 10 (15%)	51-75 mi. 5 (7%)	76+ mi. 14 (21%)	
5. Which most closely fits your primary work function? (1 non response)	Sci. / engrg. 19 (28%)	Policy/regul. devel. … 7 (10%)	Planning 22 (32%)	Academics 8 (12%)	Other 11 (16%)	
6. Do you serve in a supervisory capacity? (2 non responses)	Yes 43 (63%)	No 23 (34%)				
7. Select the highest academic degree you have completed. (1 non response)	Associates 2 (3%)	Bachelors 26 (38%)	Masters/ Prof. 28 (41%)	Doctoral 10 (15%)	Other 1 (2%)	

Table B2. Survey results – program need, focus, participation, & support (n = 68).

Question (comments)	**Response Count (%)**			
8. Overall, how important do you think it is that …	**Very important**	**Somewhat important**	**Somewhat unimportant**	**Not important**
there are people with advanced training in people with environmental science? (1 non response)	55 (81%)	12 (18%)	0 (0%)	0 (0%)
there are people with advanced academic training in large river ecosystem science? (2 non responses)	50 (74%)	15 (22%)	1 (2%)	0 (0%)
there are opportunities for specialized training in environmental science available in west central Illinois? (3 non responses)	34 (50%)	27 (40%)	4 (6%)	0 (0%)
there are opportunities for specialized advanced training in large river ecosystem science available in west central Illinois? (2 non responses)	38 (56%)	25 (37%)	3 (4%)	0 (0%)
completion of the proposed environmental science doctoral program would lead to career advancement opportunities for graduates? (2 non responses)	34 (50%)	27 (40%)	5 (7%)	0 (0%)
the environmental science doctoral program helps to meet or support the mission(s) of your agency, organization, or community? (3 non responses)	31 (46%)	24 (36%)	8 (12%)	2 (3%)
the environmental science doctoral program helps to support environmental stewardship in the region? (3 non responses)	40 (59%)	21 (31%)	4 (6%)	0 (0%)
the environmental science doctoral has online or other distance learning opportunities available to students? (2 non responses)	24 (35%)	32 (47%)	6 (9%)	4 (6%)

Table B2. Continued.

Question (comments)	Response Count (%)			
9. Overall, how supportive are you of the development of a doctoral program in Environmental Science with an emphasis on large river ecosystem science? (3 non responses)	**Very supportive** 44 (65%)	**Somewhat supportive** 18 (27%)	**Not very supportive** 3 (4%)	**Not supportive** 0 (0%)
10. If a doctoral program in Environmental Science with an emphasis on large river ecosystem science were made available through Western Illinois University…	**Very likely**	**Somewhat likely**	**Not very likely**	**Not likely**
how likely are you, personally, to join? (3 non responses)	11 (16%)	14 (21%)	19 (28%)	21 (31%)
how likely are others in your agency or related organizations to join? (2 non responses)	21 (31%)	24 (35%)	15 (22%)	6 (9%)
11. Do you believe that your agency would be willing to support the proposed program through tuition reimbursement for their employees, providing student internship opportunities, service on advisory boards, etc…? (1 non response)	**Yes**	**No**	**Not sure**	

12. Please write down any comments you believe will help us in developing a doctoral program in Environmental Science with an emphasis on Large River Ecosystem Sciences.

Having completed a couple years of graduate study coursework in environmental sciences from 1974-1976 and many courses in environmental and water resource planning since then, I wish WIU's graduate study program could either include masters' level degrees, or accommodate coursework elsewhere toward WIU's doctorate level work.

Make the class schedule, class work requirements, and course requirements as flexible as possible so that people with full time jobs, families, work travel/absence from their home duty station, etc. can complete the course curriculum.

Is there a Masters Degree Program in place for this locally? Would be nice just to have more conferences locally on these subjects. Many planners just don't have the time to add advanced degree study on top of family and a full time job that already has night meetings.

I am unsure if this is offered through the Quad City Campus but I think participation in this program would increase in the Quad City Area if it were a

Masters Program rather than a Doctoral Program, I am not likely to join because I don't have a Masters Degree, but if a only a bachelor degree was required I would very likely participate in the program. Also, the requirements of having a previous degree in physical or biological sciences/engineering seems stringent, I have a degree in landscape architecture with work experience on water quality and the river. I think people with work experience related to the field should not be excluded because of their bachelors. It is the variety in backgrounds that would enrich a degree program such as this.

There are many programs around the country that are similar and there is increasing work being done at Iowa in this field as well. I think a new program should be focused on quantitative aspects of river, don't build it around descriptive ecology. If there is a knock against environmental scientist it is that sometimes they are not very good with math and I think this perception needs to be changed. A quantitative bent for your new program would help set it apart from other programs around the nation.

While maintaining a focus on academic integrity, I would suggest that the program be broad enough to accommodate those potential students with interests and previously earned degrees and course study in environmental/life science as well as other related fields such as environmental planning, environmental policy, environmental engineering, etc. It has been my experience that there is enough common ground between the above disciplines to support undergraduate and graduate(masters)degree programs, and I hope this could be the case with your proposed doctoral program. I personally would be interested in exploring such a program and my undergraduate and graduate degrees are in geography and planning.

SIU has a River program and UI has a River Program. I don't know that either are necessarily oriented toward a doctoral program for the students, but it does not appear that there is much (any?) coordination/collaboration between the three universities in meeting student or management information needs on the UMRS. Even if my perception is correct, that might not be a bad thing as it likely results in fresher perspectives and avoids "group think". Make it clear what resources you bring to the table, financial, staff expertise, equipment, etc. A departmental CV would be helpful because I'm not sure we're aware of accomplishments at WIU.

I would definitely like to see the program happen. Iowa State University would be the next nearest opportunity for me(and it likely lacks the large river component). I believe that a great deal of emphasis should be placed on hiring high quality faculty to implement the program and make it extremely well-respected nationwide.

I would like to see a policy based masters or doctoral program available as well so that those without science/engineering degrees could take advantage of a higher education program in the Quad Cities that relates to river issues. This could even be part of masters level education program in landscape architecture.

I am very excited to hear that this program is being considered. I would definitely support this program and I believe that the Quad Cities would be a great place to base the program.

We have a B.S. degree program in Environmental Science. I would be VERY interested in the possibility of sending students on to work on graduate degrees, both MS and Ph.D. The more formal we could make that link, the better!

With the funding problems that the Illinois DNR has had this could be a great opportunity to partner and accomplish projects that have not been possible in the past.

I received my masters from WIU in plant ecology and currently work at the Missouri Department of Conservation as a large river systems ecologist/restoration ecologist. I am pleased to see WIU is considering a doctorate program, and especially in large river ecology!

ALL REQUESTS SHOULD BE PRESENTED IN THE FORMAT SHOWN BELOW. PLEASE EXPAND THE FORM AS NEEDED SO THAT APPROPRIATE EXPLANATION CAN BE PRESENTED. REMOVE INSTRUCTIONS IN ITALICS BEFORE SUBMITTING.

REQUEST FOR NEW OPTION: B.S. Chemistry-Pharmacy Option

COLLEGE: Arts and Sciences UNIT: Chemistry

CHAIRPERSON/DIRECTOR: Rose McConnell

****ORIGINAL SIGNATURES REQUIRED BELOW:***

*CHAIR/DIRECTOR:_____ Date:_____

*COLLEGE CURR. COMM.:_____ Date: _____

*DEAN/VICE PRES.:_____ Date:_____

UTEC *(if Teacher Ed)*:_____ Date:_____

CCPI:_____ Date:_____

SENATE:_____ Date:_____

PROVOST:_____ Date:_____

B.S. Chemistry - Pharmacy Option

	PROPOSED Option Requirements	Sem. Hrs.
1. University General Ed.:	College of Arts and Sciences General Education: English and Communication: 9 s.h. Natural Sciences and Mathematics: 16 s.h. (completed by requirements for Option) Social Sciences: 12 s.h. Multicultural: 3 s.h. Humanities: 12 s.h. Human Well Being: 3 s.h.	(55-16 =) 39
2. Core Courses:	Chemistry 201# Inorganic Chemistry I (4 s.h.) Chemistry 202# Inorganic Chemistry II (4 s.h.) Chemistry 331 Organic Chemistry I (5 s.h.) Chemistry 332 Organic Chemistry II (4 s.h.) Chemistry 341 Analytical techniques (3 s.h.)	20
3. Option Courses:	Pharmacy Option 1. Special Courses: a. Chemistry 370 Elementary Physical Chemistry (4 s.h.) b. Chemistry 416 Chemical Literature (1 s.h.) c. Chemistry 421 Biochemistry (4 s.h.)	46-49

	d. Chemistry 422+ Advanced Biochemistry (4 s.h.) e. Chemistry 263 Elementary Pharmacology (3 s.h.) f. Chemistry 264 Pharmacy Methods (3 s.h.) g. Chemistry 463 Advanced Pharmacology (3 s.h.) h. Chemistry 492: Safety Practices in Chem (1 s. h.) 2. Directed Electives a. Chemistry 490: Senior Project Laboratory (3 s.h.) OR Chemistry 485 Internship in Chemistry (3 s.h.) b. Chemistry 363 Rational Drug design (3 s.h.) c. OR Chemistry 440 Elementary Forensic Techniques (4 s.h.) 3. Minor: Choose between: Zoology minor (required; 17 s.h.), Microbiology minor (required; 17 s.h.), or Neuropsychology minor (required; 19-21 s.h.)	
4. Open Electives:	None	0
5. Other:	1. Statistics: 171# General Elementary Statistics (3 s.h.) OR 276# Introduction to Probability and Statistics (3 s.h.) 2. Zoology: 230 Human Anatomy and Physiology I (4 s.h.) AND 231 Human Anatomy and Physiology II (4 s.h.) 3. Math: 133# Calculus with Analytical Geometry I (4 s.h.) 4. Physics: 124 General Physics I (5 s.h.) & 125 General Physics II (5 s.h.)	25
	TOTAL PROPOSED HRS	130-133

* New course # Gen. Ed. course + WID course

- Give **number, name and hours** of all courses listed in each area.
- Mark with an asterisk * all new courses which do not presently exist.
- Mark with the pound sign # all Gen. Ed. Courses. Specify actual number of hours in Gen Ed category even though the same courses may be listed in the "Other" category.
- Mark with a plus sign + all WID courses. Inclusion of new WID courses must go to WID Committee.

ADDITIONAL EQUIPMENT REQUIREMENTS:
None. Existing chemistry equipment can be utilized unless enrollment significantly increases as a result of this option.

WIU LIBRARIES OFFERS AN ARRAY OF INSTRUCTIONAL SUPPORT FOR CLASSES. WHAT LIBRARY MATERIALS OR INSTRUCTION WILL BE HELPFUL TO SUPPORT THE TEACHING OF THIS COURSE OF STUDY?
None. Current library funding for Chemistry will provide resources for this option.

OFFERED AT MACOMB, QUAD CITIES, OR BOTH: Macomb
RATIONALE: The option courses will provide a more focused approach to pharmacy, and so will better prepare chemistry majors for careers in pharmacy. The current two year pre-pharmacy plan does not well serve the majority of the students seeking careers as a pharmacist. Pharmacy schools primarily offer the doctorate of Pharmacy (Pharm. D.) or Ph.D. in Pharmacology as their only programs. Therefore, greater than 97% of students admitted to pharmacy schools have a bachelorette degree. In fact, Western Illinois University has established an affiliation agreement with the University of Illinois-College of Pharmacy for implementation of guaranteed admission of WIU students into the Doctorate of Pharmacy program at the UIC College of Pharmacy. The conditions for retention and matriculation include that students earn a baccalaureate degree within 5 years of freshman enrollment, complete specific pre-pharmacy coursework with a 3.5 GPA or higher, take the Pharmacy College admissions Test, and demonstrate an interest in pharmacy through internship, research, etc. This new affiliation agreement is likely to attract students interested in pharmacy to WIU over other regional universities. The Bachelor of Science in Chemistry with Pharmacy Option is designed to better prepare students interested in careers in pharmacy for either Pharm. D. or Ph.D. programs in pharmacology.

The core courses in this proposed option are identical to that listed for the B.S. Chemistry degree, as well as biochemistry option, and science/chemistry teacher certification. The option courses will provide a more focused approach to pharmacy, and so will better prepare chemistry majors for careers in pharmacy or pharmacology.

The proposed B.S. Chemistry-Pharmacy option will also serve students who seek to enter the pharmaceutical or biotech industries at the B.S. level. The program will also aid students who plan careers in pharmacy sales, or as certified pharmacy technicians or pharmacy assistants. Many students who initially enter an institutions' pre-med or pre-nursing program will ultimately turn to such alternate careers in the health care industry. With an aging U.S. population employment opportunities in all aspects of the health care industry are likely to rise.

Department of Chemistry

Feasibility Study for BS Chemistry-Pharmacy Option

Introduction

The Department of Chemistry has a long tradition of preparing students to enter reputed pharmacy schools across the nation to complete their Doctor of Pharmacy (Pharm D), the licensure degree available nationwide which allow them to work as pharmacists, or a Ph.D. in Pharmacology. The traditional pre-pharmacy program in the Department of Chemistry is a two year program that provides students with the minimum required coursework for admission to pharmacy school and prepares students to pass the PCAT (Pharmacy College Admission Test). The traditional pre-pharmacy program in the Department of Chemistry has averaged 17-25 students per year over the past several years. However, many WIU students realize that pharmacy school admission is highly competitive and that most students who gain admission to pharmacy school do so after having completed a Bachelor of Science degree. In fact less than 2% of students admitted to the University of Illinois-Chicago College of Pharmacy's Pharm. D. program in the past year did not have a bachelor of science degree. As a result, many students who plan careers in pharmacy, or the pharmaceutical industry, declare a major early on in either chemistry or biology, and are, therefore, not listed on the pre-pharmacy program downloads. Therefore, although the minimal coursework for pharmacy school acceptance has not changed from those offered in our traditional two year pre-pharmacy program, most pharmacy schools prefer to admit students who have completed a baccalaureate degree. Students are advised of this by the pre-pharmacy advisor.

A new articulation agreement between University of Illinois-Chicago College of Pharmacy and WIU was established in May 2009 demonstrates that pharmacy admission specialists prefer students with baccalaureate degrees. In this affiliation agreement UI-Chicago College of Pharmacy has agreed to reserve five seats for WIU students per year in the Pharm.D. program on the condition that they maintain a 3.50 GPA in undergraduate coursework, complete all coursework required for pharmacy acceptance (primarily chemistry, biology, and math courses), and complete a baccalaureate degree within 5 years of freshman enrollment at WIU, as well as take the PCAT. Because of this articulation agreement, established in May 2009, with the UI-Chicago College of Pharmacy the enrollment in our traditional two year (non-degree) pre-pharmacy program has dropped over the past two years (see table below), as students who hope to take advantage of this UIC-C agreement are now seeking baccalaureate degrees.

Chemistry majors for Fall semesters 2006 – 2010

	2006	2007	2008	2009	2010
Chemistry	36	36	47	49	58
Chemistry Ed	5	7	6	2	2
Pre-Chemical Engineering	3	1	3	1	1
Pre-Pharmacy	23	24	25	17	15
Forensic Chemistry	32	58	77	91	95
Total	**99**	**126**	**158**	**160**	**171**

Enrollment of chemistry majors have steadily gone up over the last several years (numbers, and % increase) which we attribute, in addition to the WIU-UIC Pharmacy articulation agreement, to the quality of the program that we offer and the outlook for employment and graduate work opportunities for our graduates upon the completion of their degree.

Chemistry faculty members strongly believe that the establishment of a pharmacy option in the BS chemistry program will provide a large segment of our students with a wider scope of instruction and training that would result in readily marketable skills and expertise for those students to be successful in the demanding job market and/or in furthering their education at graduate level in medical and related fields.

The proposed B.S. Chemistry-Pharmacy option will serve the following main purposes:

- It will provide our majors who are inclined to seek employment in the pharmaceutical industry or seek admission into medical or pharmacy schools with a strong and relevant subject background to succeed in their new environment.

- It will provide a pool of exceptionally qualified students for the WIU-UIC-Chicago Pharmacy Scholar program.

- It will allow us to better monitor the enrollment of pre-pharmacy students who are seeking a baccalaureate degree in order to qualify for the UI-Chicago College of Pharmacy articulation agreement (WIU-UIC Pharmacy Scholar program).

- It will also benefit those students who wish to enter pharmaceutical or biotech industries at the B.S. level, as well as those seeking careers in pharmaceutical sales, or as certified pharmacy technicians or pharmacy assistants.

- There are several schools in the country that offer BS degree in pharmaceutical chemistry. The B.S. in pharmaceutical chemistry programs are very narrow in focus to serve students entering the pharmaceutical industry in research and development positions and serve as institutional pipelines for research and development careers in major pharmaceutical companies. However a pharmacy option for a BS in Chemistry, as a broader scope program, is not currently offered by any university listed with the American Chemical Society. Our proposed program is more focused than a general B.S. in Chemistry or biochemistry, but not as narrow of a focus as the BS pharmaceutical chemistry programs. Therefore, our proposed program should appeal to students seeking several different technical careers in the health care industry. Thus this proposed option will enhance the stature of our program among today's career oriented students.

The following chemistry courses have been approved by CCPI to be utilized in the proposed B.S. Chemistry-pharmacy option.

CHEM 263: Pharmacology (3 sem. hours): This course introduces the students to the basic concepts of pharmacology, describes major categories of pharmacologic agents, including myths and facts about vitamins, nutritional supplements, and common herbal medicines.

CHEM 264: Pharmacy Methods (3 sem. hours): The course describes methods used in pharmacy, including receiving and processing prescriptions, drug calculations, dosage and formulations,
pharmacy law, and inventory control.

CHEM 363: Rational Drug Design (3 sem. hours): The course will emphasize the process of drug development, from the identification of novel drug targets to the introduction of new drugs into clinical practice, including the basic principles of target identification and validation, chemical libraries and screening, receptor mechanisms and receptor targeting, and ligand-based drug design.

CHEM 463: Advanced Pharmacology (3 sem. hours): This course introduces the students to the chemical aspects of drug-receptor interactions, pharmacokinetics, and pharmacodynamics of major categories of pharmacologic agents.

Required Information

- **Specific evidence of student interest, including projected enrollments in years 1-5**

In order to access the potential benefits of instituting the proposed pharmacy option for our BS degree we conducted a survey among pharmacy students from three different universities with Pharm. D. programs where our pre-pharmacy students apply, and also among our former graduates who are currently working in the pharmaceutical industry as research chemists. The survey used for this purpose is attached with this feasibility study report; the responses received, and testimonials from former students who are currently working in the pharmaceutical sector are given below.

Questions on the Survey	Highly unlikely	unlikely	possibly	likely	Highly likely
Do you think that your interest in pursuing a career in pharmacy would have increased if you had taken coursework with pharmacy content during your pre-pharmacy studies?	2	2	6	16	6
Do you think that if you would have been better prepared you for coursework in pharmacy school if you had taken coursework with pharmacy content during your pre-pharmacy studies?	0	3	4	10	13
Do you think that taking lower level courses in pharmacy methods/pharmacology would recruit "undecided" students into a pre-pharmacy program?	1	1	15	11	4
Do you think whether the subject matter discussed in the four pharmacy option courses (CHEM 263, 264, 363 AND 463) would likely instill interest in our 'undecided' students to seek a career in Pharmacy?	0	2	12	14	5
Do you think that a pre-pharmacy student would find his/her transition into a major pharmacy school easier if the student had taken all of the above courses and completed a pharmacy option BS chemistry degree?	0	1	5	14	13
A pre-pharmacy student who plans to spend only two years at WIU would benefit by taking CHEM 263/264 in addition to the required pre-pharmacy curriculum before entering a Pharmacy School	0	3	4	14	11
The availability of the planned pharmacy option as an undergraduate degree will streamline more students to consider health related areas for their higher education and eventual area of profession and expertise	0	0	8	21	3

Testimonial from Michael Bowsher, BS 2003, MS 2005; Research Chemist at Bristol Myers-Squibb

A student taking this program would benefit greatly in that it would make them more competitive in a job market that is already very competitive.

With respect to Chem 263 an introduction to pharmacology looks to be a good starting point for someone interested in pharmaceutics. One suggestion I think would help is having some lessons on major drugs (along with their chemical structure) on the market and what they target(disease areas), just so they can get an idea of what they can expect to synthesize in this

field. I think this would be a great informative course for interested students.

The Chem 264 course seems better suited for a student interested in obtaining a Pharm D degree. If I would have taken this course, I don't feel it would have given me a competitive advantage over someone else. However I do feel that this is a course that a pre-pharmacy student would/should need.

I will include Chem 363 and 463 in the same note since they are very related in all that one would do as a medicinal chemist. Each of these courses hits on everything that I had to learn when I joined the industry. Most PhD's do not have this knowledge when they enter this field. Even though the chemistry knowledge is the most important thing a pharmaceutical company looks for, these courses would give the competitive advantage since they would already know the medicinal concepts. The receptor/ligand and pharmacokinetics and pharmacodynamics are very important in the design of molecules. This is pretty much how the industry develops SAR (structure activity relationship) and is how they progress the design of a drug.

I am glad to see WIU's chemistry program advancing! It will definitely provide a competitive edge for students!

Testimonial from Michael Curtis, MS 2001; Research Chemist at Pfizer Pharmaceuticals

Dear Dr. Vinod,

I have read your proposals for the pharmacy option to the BS degree program in chemistry at WIU and think overall it is a very good idea. Teaching rational drug design and pharmacology would give students a good overview of how drug discovery works and make them stronger candidates for pharmaceutical internships. Lastly, I think the pharmacy option would be beneficial to students seeking careers as pharmacists in research or private practice, which has continued to provide opportunities for qualified graduates.

Projected* enrollments for years 1-5.

	Budget Year (Fall 2011)	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**
Number of program majors	5	15	25	30	35
Annual full time equivalent majors	5	15	25	30	35
Annual credit hours in existing courses	836	1,688	1,965	2,368	2,662
Annual credit hours in new courses	---	90	135	180	345
Annual number of degrees awarded	--	--	--	4	12

*It is projected that the enrollment in the proposed pharmacy option will increase as the success of the program is demonstrated and publicized. Initially some of the students who previously changed from the existing two-year pre-pharmacy program into one of the baccalaureate degree programs (such as the B.S. chemistry/biochemistry) in order to meet the qualifications for the WIU-UIC Pharmacy scholar program may switch to the new option.

- **Comparable options, concentrations, certificates, or other programs of study at peer institutions**

- Currently there are no colleges or universities, identified (either on the web or through the American Chemical Society or the American Institute for Biological Sciences) that offer a pharmacy option to their BS degree programs in either chemistry or biology. Therefore, the proposed program would be a unique niche for WIU. However, there are a few universities that offer a 4-year pharmaceutical chemistry degree. These programs target students seeking (or in existing) positions in pharmaceutical and biotech industries as employee workforce development/ career advancement programs in research and development.

  Our proposed program is more focused than a general B.S. in Chemistry or biochemistry, but not as narrow of a focus as the BS pharmaceutical chemistry programs and so should appeal to students seeking several different technical careers. Thus this proposed option will enhance the stature of our program among today's career oriented students.

- The proposed WIU B.S. Chemistry—Pharmacy option program targets those students who seek a career as a pharmacist (Pharm. D) or pharmacologist (Ph.D.), but would also benefit students who wish to work in the pharmaceutical or biotech industries at the B.S. or M.S. level.

- The proposed pharmacy option will also be very useful to those students who are seeking careers in pharmaceutical sales, or as certified pharmacy technicians, or pharmacy assistants. Many students who initially enter an institution's pre-med or pre-nursing programs ultimately change to these and other similar careers in the health care industry. With an aging population in the United States employment in the health care industry is likely to increase over the next couple decades.

- **Results/impact for the department structure, including budgetary needs (equipment needs, special space requirements, and library resources needed)**

The physical sciences library in Currens Hall has already purchased several library resources to support the previously approved pharmacy courses (CHEM 263, 264, 363, and 463G).

Initially, as current WIU students change from other BS Chemistry programs into the new option, no new resources will be required.

However, if many new students are attracted into the program (as new freshmen or transfer students), additional funding for consumable lab supplies may be needed to fund the associated enrollment increases in core chemistry laboratory based courses. These are the typical needs associated with all significant growths in enrollment in service and core chemistry courses.

- **Results/impact for faculty workload assignments (including need for new faculty)**

Initially, few additional resources would be required for the new program. However, more frequent offerings of CHEM 263, CHEM 264, CHEM 363, and CHEM 463 would be needed at the point majors begin their sophomore, junior, and senior years. These courses are currently offered only occasionally.

The new option is expected to draw more students into our program, and if that is the case there will be a need for an additional faculty member. In that case we expect that an individual with a Ph. D. in medicinal chemistry would be needed. This individual would not only teach some of the relevant coursed, as well as general education chemistry courses, but will also be our liaison to pharmaceutical industries to direct our students to potential internship opportunities as well as permanent employment opportunities.

- **Department Chair and Dean Recommendations**

As Chair of the Department of Chemistry I fully support the proposed B.S. Chemistry Pharmacy option proposal. As a medicinal chemist who teaches CHEM 263, 264, and 463G on occasion, I understand the benefits that a focused program of study in a pharmacy option would offer students who pursue a career in pharmacy, or in the

pharmaceutical industry. If the new program attracts more students to WIU who are interested in pharmacy this new program could be used to expand the articulation agreement with UIC College of Pharmacy and establish additional articulation agreements with pharmacy schools throughout the region.

Rose McConnell
Chair and Professor
Department of Chemistry
Western Illinois University

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___1 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Nursing Program Requirements for Full Implementation of Pre-Licensure (4-yr.) BSN program

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
The nursing program was developed to support regional needs for baccalaureate-trained nurses and at the request of WIU central administration and community leaders. The RN-to-BSN completion degree was initiated in FY09, and despite receiving state approval late in the year, the 4-year BSN program first admitted students in the Fall of 2010. The program is poised for significant growth; currently 159 students are identified as pre-nursing and 48 have been accepted into the nursing program. Moreover, the rate of accepted applications for Fall '11 is up sharply, with accepted freshmen applications up 73% and accepted transfer applications up 45% over the previous year. To accommodate the expected influx of students and maintain student-faculty ratios required by Nursing's accrediting body, CCNE, an additional PhD tenure-track nursing faculty is needed. Additionally, one adjunct faculty position each in Biology and Chemistry are needed to provide the basic science courses required of all Pre-Nursing students.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
The Nursing programs will serve the region by producing nurses trained at the baccalaureate level. The requested resources will allow the program to be offered.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	80,000	0	0
Faculty-Non Tenure Track	62,154	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	77,945	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**142,154**	**77,945**	**0**
TOTAL NEW FUNDING REQUIRED	**220,099**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X_ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___2 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Unfilled CAS faculty positions

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
There are a number of unfilled faculty and staff positions open due to budgetary concerns for FY10 and FY11. All open positions represent existing lines that are needed to continue offering and supporting a diverse and robust curriculum. Each year we will review any renewed requests to fill these positions.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Faculty with diverse expertise are needed to maintain a robust curriculum for students with a variety of career goals.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	0	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**0**	**0**
TOTAL NEW FUNDING REQUIRED	**TBD**		TBD

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X_ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___3 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
University Wide Licenses for ArcGIS and Mathematica

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
These software packages support both instructional and research applications on both Macomb and Quad Cities campuses. The ArcGIS software is used by a number of departments across several colleges. Mathematica is similarly used by several departments across two colleges. Curriculum is integrating both packages, so central, continuous funding is required for continuity. (Supports Goals 1,1.a.1; 2.1.b; 3.1.c)

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Continuous funding of the software will allow current and future curriculum to incorporate these package, forgoing the need to redesign courses to use other, less capable software. In addition, the university license will increase opportunities for various departments, e.g., Biology and Geology, to seek external funding.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	0	0
Library Materials	0	0	0
Contractual Services	27,827	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**27,827**	**0**	
TOTAL NEW FUNDING REQUIRED	**27,827**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __X__ Yes __ _ No
If yes, please describe:
Additional GIS software will be provided by the College of Arts and Sciences

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___4 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Replace Faculty/Staff Computers

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
The College was required to develop a 4-year computer replacement plan for faculty/staff computers and for department computer classrooms. Central administration was to supplement with computers provided through the Faculty and Staff Computer Replacement Plan. No computers have been provided by that Plan for two years, and budget rescissions have prevented the College from supplementing with funds from our Personnel Reserve. As are result, we have fallen seriously behind and the number of aging and failing computers has grown. Needing to be replaced are: 24 pre-2005 computers, 178 computers from 2005 and 73 computers purchased in 2006. (Supports Goals 2.3.a; 2.3.b)

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
New computers will decrease instructional time lost when classroom computers fail. Faculty require state-of-the art computers for their research and to teach their courses. Replacing aging computers will also allow us to upgrade more of our machines from Windows XP, which has reached end-of-life.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	263,550	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**263,550**	**0**
TOTAL NEW FUNDING REQUIRED	**263,550**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __X__ Yes ___ No
If yes, please describe:
In recent years, before the recent budget problems, the college provides at least $65,000 per year to replace computers and convert classrooms to electronic classrooms. We wish to continue to do so.

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___5 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Sciences Equipment Repair Manager

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
Large equipment is essential in the offering of lab-based science programs. This position would be responsible for performing routine maintenance on lower cost lab equipment and also larger pieces of older but essential scientific instruments.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
No single department can justify the hiring of such a technician, but one technician shared across the science departments would obviate the need for service maintenance agreements for older instruments. These agreements are quite costly and a trained technician would allow those departments to continue using older equipment whose maintenance agreements have become prohibitively expensive.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	55,000	0	0
Equipment & Instructional Materials	0	0	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**55,000**	**0**	**0**
TOTAL NEW FUNDING REQUIRED	**55,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X_ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___6 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Move University Writing Center to Malpass Library

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
Moving the main University Writing Center (UWC) to Malpass would improve accessibility for individuals with disabilities or mobility problems; the current location is inaccessible to persons in wheelchairs and locating the Center in Malpass would eliminate many potential ADA issues. In addition, the central location on campus would emphasize that the Center is for all university students and faculty, not just those in English and Journalism.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
The new location will eliminated access problems for persons with disabilities to the UWC; it should also increase the usage of the center by classes and disciplines outside of English and Journalism.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	18,750	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**18,750**	**0**
TOTAL NEW FUNDING REQUIRED	**18,750**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __x__ Yes ___ No
If yes, please describe: The College will reallocate $7000 to support this project in addition to requested funds.

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___7 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Instructors for smaller sections of Math 099N

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
In conjunction with the proposal to require completion of Math 099N by the first semester of the sophomore year, we believe it is to the benefit of students to take MATH 099 in smaller section sizes. Accordingly, we request funding in the form of resources to hire one additional Unit B instructor and two additional graduate assistants in FY12 and to hire another Unit B faculty and two more graduate assistants in FY13.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
It is expected that students will complete Math 099N sooner in their college careers and the success rate and quality of that experience should increase as well.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	31,077	0	31,851
Graduate Assistants	8,400	0	8,400
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	0	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**39,477**	**0**	**40,251**
TOTAL NEW FUNDING REQUIRED	**79,728**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X__ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___8 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Testing/Evaluation Materials for English and Journalism and Foreign Languages and Literatures

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
Provide resources to assess writing and language skills of students for placement in appropriate courses.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Better student placement in appropriate courses will occur, and allow also inform the development of curriculum that will meet student needs.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	11,300	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**11,300**	**0**
TOTAL NEW FUNDING REQUIRED	**11,300**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X_ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___9 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Geology Equipment (Drill)

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
A gear-reduced core drill will facilitate the collection of geologic samples for the purpose of classroom studies and undergraduate research projects (supports Goals 1 & 2).

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
The drill will allow for precise sampling of geologic materials in a way that cannot be accomplished by less precise means (e.g., sledge hammer). Sample of geologic materials from flat surfaces is extremely difficult and a core drill will permit the acquisitions of samples from rock outcrops that otherwise could not be obtained.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	3,100	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**3,100**	**0**
TOTAL NEW FUNDING REQUIRED	**3,100**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X_ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number _10 _____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Upgrade electronic classrooms

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
Continue to upgrade electronic classrooms and support cyclic replacement of electronic equipment (Supports Goals 2.3.a; 2.3.b)

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Upgrading electronic classrooms improve the teaching/learning environments for students and faculty.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	175,000	0	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**175,000**	**0**	**0**
TOTAL NEW FUNDING REQUIRED	**175,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __X__ Yes ___ No
If yes, please describe:
The college provides at least $65,000 per year to replace computers and convert classrooms to electronic classrooms.

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number __11 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Support Fall 2011 Mock Presidential Election.

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
Another way to emphasize experiential learning opportunities is through the proposed 2011 Mock Presidential Election. This event will be a follow-up of the successful 2007 MPE, which took place over five nights, and involved over 1,000 students in the final simulation of the general election/Electoral College. This initiative will build on at least three of the university's core values (i.e., academic excellence, personal growth, and social responsibility). It is also consistent with at least two of the university's strategic plan goals. First, it helps attain Goal 1 (Focused Recruitment and Retention), since WIU will be collaborating with area community colleges to encourage widespread participation in the simulation. Second, it promotes Goal 3 (Providing Educational Opportunity), as this experience will give students hands-on opportunities to understand the American political system that they would be unable to get in the classroom setting alone. The simulation also works closely with the FYE program, and many of the student participants come from FYE courses.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
As was true for the last simulation, exit surveys and other instruments can be used for faculty and student research presentations. As suggested above, the simulation should increase the numbers of area community college students transferring to Western after receiving a two-year degree.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	15,000	0
Library Materials	0	0	0
Contractual Services	0	15,000	0
Other Operating Funds	0	20,000	0
SUBTOTALS	**0**	**50,000**	**0**
TOTAL NEW FUNDING REQUIRED	**50,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __X__ Yes ___ No
If yes, please describe:
Possible grant funding.

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___12 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Digital Scanner, Microscopes, Skeletal Models for Sociology/Anthropology

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
The requested equipment includes osteometric boards, a digital caliper and a Fordisc computer to be used instructionally in Anthropology 111 and 417 courses. The skeletal collection is required for physical anthropology instruction.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Acquisition of these materials will allow for more contemporary and complete instruction of Anthropology students and richer laboratory and field experiences.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	4,893	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**4,893**	**0**
TOTAL NEW FUNDING REQUIRED	**4,893**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X_ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___13 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Nuclear Magnetic Resonance Spectrometer

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
The current NMR is malfunctioning on a regular basis. A new unit will cost $230,000. The grant we are seeking requires matching funds of $100,000 from the University. We request $50,000 from the Provost's Office which CAS will match.

This will encourage and promote research activities with special emphasis on new and junior faculty members as well as promote academic excellence in undergraduate and graduate programs. (Supports Goals 1.1a.1; 2.1.b; 3.1.c)

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
A new NMR will improve student learning and faculty research and grant opportunities

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	50,000	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**50,000**	**0**
TOTAL NEW FUNDING REQUIRED	**50,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __X__ Yes __ _ No
If yes, please describe:
CAS Match ($50,000) plus NSF Instrumentation Grant ($180,000-$200,000)

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___14 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Computers for new faculty (5)

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
Purchase up-to-date computers for new incoming faculty to meet teaching and research needs.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Faculty will be able to meet classroom teaching and research requirements of their positions.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	5,250	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**5,250**	**0**
TOTAL NEW FUNDING REQUIRED	**5,250**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X_ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___15 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Chemistry Equipment - Vault

III Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
The Department of Chemistry needs funding to renovate and refurbish a portion of Currens 525 to serve as a vault with individual lock boxes. This vault will serve to teach forensic chemistry students state and federal protocols for log-in and log-out procedures for evidence handling and handling of controlled substance standards.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Programs accredited by AAFS have such training facilities. Enhancement results will be measured through alumni and exit interviews and job placement records for both forensic chemistry and pre-pharmacy students, as well as accreditation application to AAFS.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	50,000	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**50,000**	**0**
TOTAL NEW FUNDING REQUIRED	**50,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes _X_ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___16 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Geology Carry-all Vehicle

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
The Geology Department wants T54 (a Suburban) to allow towing of a trailer-mounted Giddings drilling machine, which is used in undergraduate and faculty research. (Supports Goals 1 and 2).

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
The department currently is limited to using a 15-person van to tow the Giddings rig. While these can be used for towing, they are not designed for such nor does the WIU Garage allow them to be taken off-road. Transfer of the T54 vehicle to Geology would allow taking the drill into potentially rugged terrain to take soil boring and/or install monitoring wells. This would directly benefit undergraduate and faculty research.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	15,000	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**15,000**	**0**
TOTAL NEW FUNDING REQUIRED	**15,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __X__ Yes ____ No
If yes, please describe:
Transfer of vehicle to Geology would occur when Biology receives replacement for T54

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___17 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Biology – Two carry-all vehicles ($55,000 each))

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
Replace T8 at Kibbe and T54 for field use at Macomb and Kibbe. The Site Manager must have a heavy duty all-wheel drive service vehicle to carry out his responsibilities at the field station The Department also needs a similar service vehicle for towing boats and carrying equipment for field courses on campus and during the summer at the field station. Geology also will use this vehicle as well.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
The results will be evaluated by facilitation of class field trips with less equipment repair and subsequent down time for such repairs. The new vehicles will be able to hall the new large landing-craft boat used for class field work on the Mississippi River as well as other regional rivers.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	110,000	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**110,000**	**0**
TOTAL NEW FUNDING REQUIRED	**110,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes _X__ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___18 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Chemistry Equipment – GS Mass Spectrometer and FT-IRs

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
This equipment is required to replace existing equipment. We have spent $10K to $20+K each year for instrument repair of the NMR, GC, MS, GC and FT-IRs. The repairs are becoming much more costly and parts are increasingly becoming obsolete and more difficult to find. These replacements will allow better research involvement of students and increase the usage of GS-MS and IR instrumental techniques in the undergraduate teach labs, organic chemistry, physical chemistry and inorganic chemistry.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
We will have appropriate equipment to provide and academically excellent learning environment for general education students and science majors. Students and faculty satisfaction with science labs will be evaluated and we will assess student learning and evaluate the degree to which the academic environment has been meaningful and successful.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	55,000	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**55,000**	**0**
TOTAL NEW FUNDING REQUIRED	**55,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? _X___ Yes _ _ __ No
If yes, please describe:
Chemistry will be submitting instrumental grant applications, which require matching funds.

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___19 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Biology equipment – Two 96-Wesll, PCR Machines

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
This equipment is used in conjunction with the DNA sequencer and for teaching upper division labs. One machine would be housed in an adjoining lab next to the sequencer and would be used to amplify samples to be immediately loaded into the sequencer. The second machine would be housed in the molecular equipment room 241A and would be used for amplifying samples for the genetics and microbiology labs located in that area. (Supports Goals 1.1.a.1; 2.1.b; 3.1.c)

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
We will have appropriate equipment to provide and academically excellent learning environment for general education students and science majors. Students and faculty satisfaction with science labs will be evaluated and we will assess student learning and evaluate the degree to which the academic environment has been meaningful and successful.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	9,000	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**9,000**	**0**
TOTAL NEW FUNDING REQUIRED	**9,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X__ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___20 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Chemistry – General Equipment

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
The program in Chemistry is heavily dependent on equipment. The equipment will allow them to offer meaningful teaching and research experiences to their students. (Supports Goals 1.1.a.1; 2.1.b; 3.1.c)

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
We will have appropriate equipment to provide an academically excellent learning environment for general education students and science majors. Students and faculty satisfaction with science labs will be evaluated and we will assess student learning and evaluate the degree to which the academic environment has been meaningful and successful.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	24,900	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**24,900**	**0**
TOTAL NEW FUNDING REQUIRED	**24,900**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X__ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number __21 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Physics – General Equipment and Consumables

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
Physics is heavily dependent upon the use of equipment. The cost of equipment and consumables used in teaching and general education courses as well as the courses for the major has increased significantly yet the operating budget has remained the same. Funds are needed to replace obsolete or broken equipment. (Supports Goals 1.1.a.1; 2.1.b; 3.1.c)

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Classes must be taught with functioning, modern equipment. The requested funds when used in combination with the department operating budget will allow for the purchase of necessary equipment and consumables. We will have appropriate equipment and stocked teaching labs to provide and academically excellent learning environment for general education students and science majors. Students and faculty satisfaction with science labs will be evaluated and we will assess student learning and evaluate the degree to which the academic environment has been meaningful and successful.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	92,956	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**92,956**	**0**
TOTAL NEW FUNDING REQUIRED	**92,956**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __X__ Yes _____ No
If yes, please describe:
The College will maintain existing and new equipment. Also, student lab fees if proposal approved (see Section V.E.)

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number __22 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Enhanced funding for Instruction Science Material (Consumables for Biology, Physics and Chemistry)

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
In the sciences, hands-on learning is the only way to gain the depth of understanding necessary to appreciate and do science. This requires an ongoing investment in disposable materials. Departments having to allocate resources to restock continually depleted stockrooms have few opportunities to invest in advanced technologies. The College and its departments are unable with current budgets and other demands to ensure replenishments to necessary stores. (Supports Goals 1.1.a.1; 2.1.b; 3.1.c; 5.3.a)

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
We will have appropriately stocked teaching labs to provide and academically excellent learning environment for general education students and science majors. Students and faculty satisfaction with science labs will be evaluated and we will assess student learning and evaluate the degree to which the academic environment has been meaningful and successful.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	173,145	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**173,145**	**0**
TOTAL NEW FUNDING REQUIRED	**173,145**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __X__ Yes ___ No
If yes, please describe:
Student lab fees if proposal is approved (see Section V.E.)

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number __23 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Equipment – Biology (Microscopes & precision balances)

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
Because of the laboratory-based curriculum as well as student and faculty research, the department has an extensive set of equipment. There is need to replace routine lab equipment for research and teaching. The microscopes in freshman and introductory labs need to be replaced.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
We will have appropriate equipment for our teaching labs to provide and academically excellent learning environment for general education students and science majors. Students and faculty satisfaction with science labs will be evaluated and we will assess student learning and evaluate the degree to which the academic environment has been meaningful and successful.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	80,000	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**80,000**	**0**
TOTAL NEW FUNDING REQUIRED	**80,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? __ __ Yes _X__ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number __24 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Purchase chemical cabinets that meet standards for proper storage of volatile chemicals in the large chemical storage room (Currens 125) and the fourth floor chemical stockroom (Currens 425).

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
For many years chemicals had been stored in glass cabinets which are not designed for proper storage of chemicals. Those cabinets are degrading from the corrosive chemicals. The Department of Chemistry has been gradually replacing the glass cabinets with proper regulation chemical storage cabinets. However, more funding is needed to continue this process.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Proper storage cabinets will lessen fumes and provide a safer work environment for graduate assistants and faculty who work in these chemical stockrooms.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	75,000	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**75,000**	**0**
TOTAL NEW FUNDING REQUIRED	**75,000**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ___ Yes _X__ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number __25 ____
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Purchase of a shatterbox and ceramic grinding container.

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
The Geology Department wants to purchase a shatterbox and ceramic grinding container for the purpose of grinding geologic samples into powder for geochemical analysis. This equipment will facilitate the acquisition of geochemical data for the purpose of classroom studies and undergraduate research projects. Having a shatterbox will allow us to continue to meet Actions 1 (Support strong commitments to teaching and instruction) and 2 (Provide strong commitments and increase opportunities to support research, scholarly/creative activities, and public service and outreach) of Goal 2 (Enrich Academic Excellence) as defined in the document "Higher Values in Higher Education 2008-2018".

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Geochemical analysis requires rock samples to be powder to a very fine grain size. Most analytical labs require a minimum of 20 grams of sample. This amount of sample is best prepared by using a shatterbox and ceramic grinding container. Rock chips are placed into the container along with a grinding puck. The container is place in the shatterbox which then shakes the container at high speeds. The sample is then pulverized by the puck within the container. The pulverized sample can then be analyzed for major and minor elements using a variety of analytical techniques. Having this equipment will facilitate numerous undergraduate research projects that require geochemical data.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	0	0	0
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	10,600	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**0**	**10,600**	**0**
TOTAL NEW FUNDING REQUIRED	**10,600**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X__ No
If yes, please describe:

Western Illinois University

Budget Request — New Operating/Base Resources — FY12

Note: Use Attachment B for new academic degrees/certificates.

I. Unit submitting request: Priority Number ___26 ___
College of Arts & Sciences

II. Provide a short title of the initiative/project proposed for incremental funding.
Forensic Physics Minor

III. Provide a short description of the initiative/project proposed for incremental funding and how it relates to the University's goals, mission statement, or strategic plan.
The request consists of one tenure-track position and equipment and instructional materials required to deliver the minor. The minor would consist of the calculus-based introductory physics sequence of Physics 197, 198, 200, and 201 as well as a new laboratory capstone course. This would help strengthen and enhance the offerings of one of the university's most popular signature programs in forensic chemistry and increase its attractiveness to student who are more technically and mathematically inclined.

IV. Describe the specific accomplishments and increases in productivity expected from this initiative/project and how results will be measured or evaluated.
Increase in enrollments in both the chemistry and physics programs should result, as well as enhance, recruitment and retention of students in both of these programs.

V. Provide a listing of all incremental funds requested by the following categories:

(Double-click to edit Microsoft Office Excel worksheet.)

Fund Type	FY2012* Increase to Base	FY2012* One-Time Request	FY2013* Increase to Base
Personnel Services			
Faculty-Tenure Track	0	0	0
Faculty-Non Tenure Track	53,703	0	
Graduate Assistants	0	0	0
Administrative	0	0	0
Other	0	0	0
Equipment & Instructional Materials	0	34,000	0
Library Materials	0	0	0
Contractual Services	0	0	0
Other Operating Funds	0	0	0
SUBTOTALS	**53,703**	**34,000**	**0**
TOTAL NEW FUNDING REQUIRED	**87,703**		

* Please indicate if new positions are to be hired in FY2012 or FY2013. Also, indicate if the FY2012 request is for one-time funding or a continuous increase to the base.

VI. Will the initiative/project be supplemented by other funds? ____ Yes __X_ No
If yes, please describe:

Western Illinois University

Attachment D.1
Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number __1__
College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

Safety Issue – Currens Hall.

The current state of the fume hoods in both the instructional and research labs, together with the increasing number of undergraduate students becoming involved in chemistry research, has led to safety concerns. To address this safety issue, we request funds to replace 40 fume hoods in instructional labs and 20 fume hoods in student research labs. We also need to upgrade and, in some instances, replace sprinkler and plumbing systems. *(Supports Goal 5.3.a; 5.3.j)*

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

A safe environment for student learning is a high priority. This is a request to improve safety conditions for students and faculty who must work in the vicinity of noxious chemicals. The primary gain expected is a decrease in the exposure of these individuals to potentially dangerous compounds. This upgrade will increase the safety of our students, faculty, and staff as well as contribute to the goals set for the University Emergency Operations Planning Committee

IV. Please include cost estimates if they are available.

$1,758,000

Contact Person If Questions: Susan Martinelli-Fernandez 298-1828
Name Phone Number

Western Illinois University

Attachment D.2
Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number ____2___
College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

School of Nursing Room Renovation

Monies are requested to remodel the office space in Currens Hall to meet the needs of the School of Nursing and to create a nursing resource center (skills lab) for student learning and practice. Additionally, this space in Currens Hall must be renovated to add additional laboratory facilities and faculty offices. While part of this work is currently underway, it is imperative for the remainder of the renovation to be completed to meet accreditation requirements.

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

The Nursing Programs – R.N.-B.S.N. and B.S.N. – will serve the region and will have 120 majors by FY12. Obtaining and maintaining accreditation depends heavily on the Nursing program having sufficient facilities to train pre-licensure students and to house faculty. This renovation will provide essential space for those needs.

IV. Please include cost estimates if they are available.

$100,000

Contact Person If Questions: Susan Martinelli-Fernandez 298-1828
Name Phone Number

Western Illinois University

Attachment D.3
Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number 3
College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

Renovation of Obsolete/Non-functional Space – Simpkins 341.

Simpkins 341, which currently houses the Writing Center and graduate students in English, should be remodeled. The current configuration of Simpkins 341 results in a large amount of unused space. Remodeling of Simpkins 341 would result in a redesigned Writing Center to better serve its clients, adequate space for English graduate/teaching assistants, the construction of a 35-seat classroom, and an office complex large enough to hold faculty responsible for the program promoting excellence in undergraduate and graduate education, and improving opportunities to train teaching assistants about teaching strategies. *(Supports Goals 5.3.g, h, i, j)*

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

The Writing Center serves undergraduate students, graduate students, and faculty from the entire university. The ability to house a small to house faculty and staff and will alleviate the over-crowding of faculty in other areas.

IV. Please include cost estimates if they are available.

$285,000

Contact Person If Questions: Susan Martinelli-Fernandez (Name) 298-1828 (Phone Number)

Western Illinois University

Attachment D.4

Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number 4

College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

Renovation of Obsolete/Non-functional Space – Waggoner 05, 07, 09 to Neuroscience Lab Space.

The Neuroscience Program continues to grow. It is a viable minor within the Psychology Department and has become a major focal point for faculty research. This will encourage and support faculty and student research activities as well as promote excellence in undergraduate and graduate education.
(Supports Goals 5.3.g, h, i, j)

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

The creation of laboratory space for Neuroscience will enhance the educational opportunities of our Psychology majors. In addition, we expect increased grant applications from faculty with expertise in this area and increased undergraduate and graduate research productivity in neuroscience.

IV. Please include cost estimates if they are available.

$75,000

Contact Person If Questions: Susan Martinelli-Fernandez 298-1828

Name Phone Number

Western Illinois University

Attachment D.5

Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number __5___
College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

Modernization of Obsolete Classrooms, Labs, and Storage Areas

The physical environments in which we strive to teach our students in all our college academic buildings have not changed since the buildings were built and furnished thirty to forty years ago. Renovations are essential to take account of what we now know about how people learn and in what kind of spaces and facilities that learning is most likely to occur. With the exception of the new instructional technologies that we have introduced to a large minority of college classrooms, a look into virtually any and all of our classrooms and labs gives one a snapshot of higher education circa 1960. Academic excellence is only an abstract concept in such environments. The modernization of all obsolete classrooms and lab facilities should be one of the highest priorities of the university. We also require appropriate storage space to properly house consumables and equipment. The College of Arts and Sciences requests that the university begin its initiative to underscore academic excellence as a value with completing the modernization of all classrooms Morgan Hall which has twenty of the most used classrooms in the university, being the site of a significant portion of general education courses taken by students across the university. All of these classrooms should be carpeted and refitted to improve acoustics. Any not yet fitted with new instructional technologies should be provided such facilities. This modernization needs to include laboratory space in Currens, Tillman, and Waggoner Halls which have not been upgraded since the buildings were completed. Laboratory benches, electronics, as well as gas, air, and water lines need to be inspected and repaired or replaced as needed. This will encourage and support scholarly, creative, and research activities, as well as promote excellence in undergraduate and graduate education. Storage drawers and spaces, fume hoods, and sinks need extensive maintenance and repair. We request $192,845 to begin this renovation process. *(Supports Goals 5.3.g, h, i, j)*

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

The modernization of classrooms, labs, and storage areas will enhance teaching through improved use of technology, furniture (tables and chairs rather than student desks) that fosters learning, and better lighting and acoustics for a better learning environment.

IV. Please include cost estimates if they are available.

$192,845

Contact Person If Questions: Susan Martinelli-Fernandez (Name) 298-1828 (Phone Number)

Western Illinois University

Attachment D.6

Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number 6

College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

Upgrade Greenhouse

Instructional and research needs of students and faculty have exceeded the space available in the current greenhouse facility which is used by Biology as well as other departments at WIU, especially Agriculture. Additionally, upgrading of the Greenhouse requires sophisticated temperature and humidity control.

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

This renovation/upgrade will provide an academically excellent learning environment for general education students as well as biology and agriculture majors. Student and faculty satisfaction with the greenhouse will be evaluated, and we will assess student learning and evaluate the degree to which the academic environment has been enhanced for students

IV. Please include cost estimates if they are available.

$250,000

Contact Person If Questions: Susan Martinelli-Fernandez 298-1828

Name Phone Number

Western Illinois University

Attachment D.7

Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number _7___
College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

Construction of a new laboratory/teaching facility at Kibbe Life Sciences Station.

The College currently delivers biology courses on-site at the Kibbe Life Sciences Station, offering experiential learning experiences for undergraduate and graduate students as well as outreach activities for K-12 partners such as those participating in Earthwatch. The current classroom and lab facilities are becoming increasingly obsolete. This construction will encourage and support scholarly, creative, and research activities, as well as promote excellence in undergraduate and graduate education.

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

We will have appropriately equipped teaching labs and learning centers to provide an academically excellent learning environment, including important hands-on experience for general education students and science majors. Students and faculty satisfaction with science labs will be evaluated, and we will assess student learning and evaluate the degree to which the academic and facilities environment has been enhanced for students.

IV. Please include cost estimates if they are available.

$2,000,000. The National Science Foundation will pay up to $500,000, with a required match from the University. The remaining $1 million will be funded through external agencies and donor solicitations.

Contact Person If Questions: Susan Martinelli-Fernandez 298-1828

Western Illinois University

Attachment D.8

Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number _8___
College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

New Science Building, supporting expanded degree programs in Nursing, Neurosciences, Forensic Science, and others.

The College currently teaches science classes in three buildings: Tillman Hall (Geology and Geography), Currens Hall (Chemistry and Physics), and Waggoner Hall (Biology and Psychology). Tillman Hall was partially renovated about 12 years ago, and we plan to keep Geology and Geography as well as the CAS Research and Outreach Center in Tillman. However, Currens and Waggoner Halls were built in the late 1960s and do not meet the current needs of the departments housed in those buildings. With new programs (e.g., Forensic Chemistry, AMO Physics, Neuroscience, and Nursing) the facilities are inadequate.

The university, in cooperation with our college and the Physical Plant, hired Hastings and Chivetta to do a preliminary study of a new science building. As you might expect, their initial assessment indicates that budget constraints will not allow us to design a building that can service all four departments and Nursing.

Thus, the new building will house largely laboratory space that requires sophisticated temperature and humidity control, specialized laboratory space, and other laboratory related uses. Classroom space will be assigned to remodeled space in another building. *(Supports Goals 1.1.a.1; 2.1.b; 3.1.e; 5.3.g, h, i, j)*

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

We will have appropriately equipped teaching labs to provide an academically excellent learning environment for general education students and science majors. Students and faculty satisfaction with science labs will be evaluated, and we will assess student learning and evaluate the degree to which the academic environment has been enhanced for students.

IV. Please include cost estimates if they are available.

Library Materials	$ 5,000,000
Contractual Services	$65,000,000
Other Operating Funds	
TOTAL	$70,000,000

Contact Person If Questions: Susan Martinelli-Fernandez 298-1828
Name Phone Number

Western Illinois University

Attachment D.9

Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number 9
College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

Remodel Currens Hall to complement the proposed new Science Building.

The proposed Science Building will not be able to accommodate the departments currently in Currens and Waggoner Halls. The new Science Building and Currens Hall will house Biology, Nursing, Psychology, and Chemistry.
(Supports Goals 1.1.a.1; 2.1.b; 3.1.c; 5.3.g, h, i, j)

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

The current science buildings are in poor mechanical condition and do not meet the needs of modern-day science. To provide our students (both majors and those in general education classes) with meaningful science experiences, it will be necessary to augment the new science building with a renovated Currens Hall. This will encourage and support faculty and student research activities as well as promote excellence in undergraduate and graduate education.

IV. Please include cost estimates if they are available.

$16,000,000
$ 3,000,000 in equipment
$13,000,000 in renovation costs

Contact Person If Questions: Susan Martinelli-Fernandez 298-1828
Name Phone Number

Western Illinois University

Attachment D.10

Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number 10

College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

Remodel of Waggoner Hall.

Remodel Waggoner Hall to house the Department of Physics, Department of Recreation, Park and Tourism Administration, and Women's Studies – currently housed in Currens Hall. In addition, a department currently housed in Morgan Hall will also be housed in this renovated space.
(Supports Goals 1.1.a.1; 2.1.b; 3.1.c; 5.3,g, h, i, j)

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

The renovation of Currens Hall and the building of a new Science Building will not have sufficient space to house Physics and the other departments displaced from Currens.

IV. Please include cost estimates if they are available.

Estimated at $16,000,000
(consulting firm is currently working on an estimate)

Contact Person If Questions: Susan Martinelli-Fernandez 298-1828

Name Phone Number

Western Illinois University

Attachment D.11

Budget Request — Facilities Over $100,000 — FY12

I. Unit submitting request: Priority Number __11___

College of Arts and Sciences

II. Provide a description of the facility request and how it relates to the University's goals, mission statement, or Strategic Plan.

Remodel Morgan Hall.

This is the final stage of remodeling necessary to provide an environment in support of academic excellence. All classrooms must be carpeted, have improved acoustics, and have modern electronic capabilities. Faculty offices should be converted to single office space. This can be accomplished by moving a department currently in Morgan (e.g., Mathematics) to the remodeled space in Waggoner. *(Supports Goals 5.3.g, h, i, j)*

III. Describe the specific accomplishments and increases in productivity expected from the proposed facility enhancement and how results will be measured or evaluated.

The modernization of classrooms, labs, and storage areas will enhance teaching through improved use of technology, furniture (tables and chairs rather than student desks) that fosters learning, and better lighting and acoustics for a better learning environment. In addition, the availability of single offices should help in recruitment of high quality faculty to the university by providing appropriate space for scholarship and research activities.

IV. Please include cost estimates if they are available.

Estimated at $8,000,000
(consulting firm is currently working on an estimate)

Contact Person If Questions: Susan Martinelli-Fernandez 298-1828

Name Phone Number

ATTACHMENT E

Western Illinois University
Summary — New Requests — FY12

Unit: College of Arts and Sciences

List all funding requests in priority order. (Double-click tables to edit Microsoft Office Excel worksheets.)

New Academic Degree/Option/Certificate Development

Priority Number	Title of New Program	1st Year Funding Requirements
1	Ph.D. in Environmental Science	284,300
2	Pre-Pharmacy Option in the B.S. in Chemistry	0
3		0
4		0
5		0
6		0
TOTALS		284,300

New Operating/Base Resources
Not Associated with New Degree/Option/Certificate Development

Priority Number	Title of Funding Request	Continuous Funding (Beginning FY2012)	One-Time Funding (FY2012 only)	Continuous Funding (Beginning FY2013)
1	Nursing – Faculty Position (continuous) and Nursing Lab Equipment (one-time) and two Adjunct Faculty Positions in Biology and Chemistry to cover increase in basic science courses due to Nursing	$142,154	$77,945	
2	Any unfilled faculty positions put on hold due to budget constraints	TBD		TBD
3	University Site Licenses for General Use Software: Mathematica and ArcGIS	$27,827		
4	Replace faculty, staff and department classroom computers purchased in 2005 or before (178) and in 2006 (73)		$263,550	
5	Sciences equipment repair person (Chem, Physics, Biology)	$55,000		
6	Move University Writing Center		$18,750	
7	Mathematics – Unit B Faculty & TAs to offer smaller sections of MATH 099N	$39,477		$40,251
8	Testing Materials – English and Journalism & Foreign Languages and Literatures		$11,310	
9	Geology – Drill		$3,100	
10	Upgrade Electronic Classrooms	$175,000		
11	Support Mock Election (Poli Sci)		$50,000	
12	Sociology/Anthropology – Digital Scanner, Microscopes, & Skeletal Models		$4,893	
13	Nuclear Magnetic Resonance Spectrometer		$50,000 (match to NSF)	

14	Computers for New Faculty (5)		$5,250	
15	Chemistry – Vault		$50,000	
16	Geology – Carry-all vehicle		$15,000	
17	Biology – 2 Carry-all vehicles ($55,000 each)		$110,000	
18	Chemistry – GC Mass Spectrometer & FT		$55,000	
19	Biology – PCR		$9,000	
20	Chemistry – General Equipment		$24,900	
21	Physics – General Equipment & Consumables		$92,956	
22	Consumables for Biology, Chemistry & Physics		$173,145 (w/o lab fees)	
23	Biology – Microscopes		$80,000	
24	Ventilated storage cabinets for chemicals (Chemistry)		$75,000	
25	Shatterbox and ceramic grinding container for Geology		$10,600	
26	Forensic Physics Minor – Faculty and Equipment	$87,703		
Totals		**$527,161**	**$1,180,399**	**$40,251**

Facilities over $100,000

Priority Number	**Title of Funding Request**	**Amount Requested for One-Time Funding (FY12 only)**	**Amount Requested for Continuous Funding***
1	Improve ventilation in Currens Hall: replace fume hoods, sprinkler system & plumbing	$1,758,000	
2	Nursing Room Renovation	$100,000	
3	Simpkins 341 – convert to office and classroom space	$285,000	
4	Waggoner 05,07,09 – convert to neuroscience lab space	$75,000	
5	Modernization of Obsolete Classrooms, Laboratories & Storage Areas	$192,845	
6	Upgrade Greenhouse	$250,000	
7	Upgrade Kibbe Science Lab	$2,000,000 (match NSF and/or Foundation)	
8	New Science Building	$70,000,000	
9	Renovation of Currens Hall	$16,000,000	
10	Renovation of Waggoner Hall	$16,000,000	
11	Renovation of Morgan Hall	$8,000,000	
Totals		$114,660,845	

Appendix 1.

Request for Policy for
Early Taking of Math 099N

A REQUEST FOR ADOPTING A POLICY:

STUDENTS PLACED IN MATH 099

SHOULD TAKE AND COMPLETE IT AS EARLY AS POSSIBLE

SUMMARY. WE WISH TO REQUEST THAT A POLICY BE ADOPTED TO REQUIRE OF THE STUDENTS WHO ARE PLACED IN MATH 099 TO SUCCESSFULLY COMPLETE THAT COURSE AS EARLY AS POSSIBLE. WE NOTE THAT THIS POLICY COULD EFFECTIVELY IMPROVE THE EDUCATION OF A LARGE NUMBER OF OUR STUDENTS, THAT IT HAS PRECEDENT IN SPIRIT, AND THAT IT IS SUPPORTED BY VARIOUS WIU CONSTITUENCIES.

CONTENTS:

DEPARTMENT OF MATHEMATICS AND COLLEGE OF ARTS & SCIENCES. FEBRUARY 21, 2011

1 THE WORDING OF THE POLICY ON EARLY TAKING OF MATH 099

WE REQUEST THAT THE FOLLOWING PROPOSED POLICY BE APPROVED BY ALL APPROPRIATE GOVERNING BODIES AT WIU.

POLICY CONCERNING MATH 099:
ALL FRESHMEN WHO ARE PLACED IN MATH 099 ARE REQUIRED TO PASS THE COURSE BEFORE THE START OF THE SECOND SEMESTER OF THEIR SECOND YEAR. TRANSFER STUDENTS WHO ARE PLACED IN MATH 099 ARE REQUIRED TO PASS IT DURING THEIR FIRST YEAR AT WIU.

THE MECHANISM OF ENFORCEMENT (FOR THOSE PLACED IN MATH 099) WOULD BE: A FRESHMAN STUDENT WHO HAS NOT PASSED MATH 099 (AT WIU OR ELSEWHERE) BY THE BEGINNING OF HER/HIS THIRD SEMESTER WOULD NOT BE ABLE TO REGISTER UNLESS MATH 099 IS INCLUDED. A TRANSFER STUDENT WHO HAS NOT PASSED MATH 099 WOULD NOT BE ABLE TO REGISTER UNLESS MATH 099 IS INCLUDED ON HER/HIS SECOND SEMESTER.

2 SOME FACTS & HISTORICAL DATA

• DUE TO AN ASSORTMENT OF CIRCUMSTANCES, OVER 50% OF THE INCOMING FRESHMEN ARE NOW PLACED IN MATH 099 BECAUSE OF THEIR UNDER-PREPARATION IN HIGH SCHOOL. OUR PLACEMENT PROCESS IS THROUGH OUR OWN WELL-EXAMINED RUBRIC AND/OR COMPASS (A NATIONALLY RECOGNIZED INSTRUMENT THAT IS HIGHLY RESPECTED FOR ITS RELIABILITY).

SEMESTER	NUMBER OF FRESHMEN PLACED IN MATH 099	NUMBER OF NEW FRESHMEN	% OF FRESHMEN IN MATH 099
FALL 04	735	2085	35%
FALL 05	738	1816	41%
FALL 06	759	1922	50%
FALL 07	968	1893	49%
FALL 08	968	1799	52%
FALL 09	795	1588	47%
FALL 10	909	1664	55%

TABLE 1: THE PERCENTAGE OF INCOMING FRESHMEN PLACED IN MATH 099

THE HISTORICAL DATA, THE STATE OF MATHEMATICS PREPARATION IN ALL SCHOOLS IN ILLINOIS, THE EXISTENCE OF LIGHT EXPECTATIONS (CONTENT AND/OR NUMBER OF YEARS OF MATHEMATICS COURSES) ARE STRONG FACTORS IN FORMING THE BELIEF THAT THE PERCENTAGE OF INCOMING FRESHMEN NEEDING MATH 099 IS *NOT* GOING TO DECLINE.

• MANY STUDENTS ARE UNHAPPY ABOUT BEING PLACED IN MATH 099, CONSIDER THAT PLACEMENT A STIGMA, AND DO NOT COMMIT TO THE COURSE ENDING UP DROPPING IT. OTHERS DELAY THE TAKING OF THE COURSE, DESPITE DIRECT ADVICE, AND SOMETIMES END UP TAKING MATH 099 (AND THEREFORE MATH 100, CORE COMPETENCY) IN THEIR SENIOR YEAR.

3 OUR RATIONALE FOR THE POLICY

THE BENEFIT OF THE SKILLS THAT COULD BE LEARNED IN MATH 099 AND MATH 100 ARE DIRECTLY NOTICEABLE AND EFFECTIVELY APPLICABLE IN GENERAL EDUCATION SCIENCE COURSES AS WELL AS IN QUANTITATIVELY-ORIENTED ONES. IT APPEARS THAT A COHESIVE AND EXAMINED CURRICULUM SHOULD PROMOTE THE CONNECTEDNESS OF ALL TOPICS, PARTICULARLY ITS FUNDAMENTALS. AS MATH 100 (CORE COMPETENCY) IS A FUNDAMENTAL ELEMENT OF GENERAL EDUCATION, WE BELIEVE STUDENTS SHOULD BE *STRONGLY ADVISED* TO TAKE IT THEIR EARLIER SEMESTERS. IT IS THEN CLEAR THAT *EARLY* SUCCESSFUL COMPLETION OF MATH 099, A PREREQUISITE TO MATH 100, SHOULD BE *REQUIRED*.

THOSE STUDENTS WHO CARRY A NON-CONSTRUCTIVE FEELING TOWARD MATH 099 (OR OTHER BASIC REQUIREMENTS) ARE MOST LIKELY 'AT RISK' STUDENTS WHOSE RETENTION IS CHALLENGING. IT WOULD BE REASONABLE FOR US AS A UNIVERSITY TO PROMOTE ALL EARLY REPAIR OF DEFICIENCIES, REPLACING THEM WITH RESULTS AND VALIDATIONS OF BELONGING TO THE COMMUNITY. WE SEE SUCH A STEP AS A MARKED ELEMENT OF EFFECTIVE RETENTION IN MOST CASES, AS WE BELIEVE THAT OUR STUDENTS *ARE* CAPABLE OF MEETING SUCCESS IN MATH 099.

IT IS THE CASE THAT THE PROPOSED POLICY ALREADY HAS A PRECEDENT IN ITS SPIRIT IN THE EXISTING REQUIREMENT THAT ENG 100 (ALSO CONSIDERED DEVELOPMENTAL) IS TO BE COMPLETED AS SOON AS POSSIBLE. (QUOTE FROM THE CATALOG ON ENG 100: "REQUIRED OF STUDENTS PLACED IN THE COURSE DURING INITIAL REGISTRATION.")

4 SUPPORT FOR THE PROPOSED POLICY

THE PROPOSED POLICY HAS BEEN RECEIVED BY THE COUNCIL OF ADVISORS IN PRINCIPLE, AND HAS BEEN UNANIMOUSLY SUPPORTED BY THE CAS'S FACULTY COUNCIL, BY THE CAS'S CHAIRS' COUNCIL; AND BY THE UNIVERSITY TEACHER EDUCATION COMMITTEE.

Appendix 2.

PROPOSAL FOR A UNIVERSITY POLICY TO SUPPORT
SCIENCE LAB USAGE FEES

Appendix B – Science Departments Lab Use Fee Proposal

PROPOSAL FOR A UNIVERSITY POLICY TO SUPPORT SCIENCE LAB USAGE FEES

I. Statement of Purpose

Described below is a proposal for a policy to implement a scientific laboratory usage fee of $35 per laboratory course per semester as a supplement to address rising costs of expendable laboratory supplies and scientific instrument maintenance.

Introduction

Western Illinois University seeks to provide higher values in higher education through academic excellence, educational opportunity, personal growth, and social responsibility. WIU is in a transitional period. WIU strives to create, adapt, and disseminate new learning materials and teaching strategies to reflect advances both in STEM disciplines and in what is known about the process of teaching and learning science. Yet, with the recent economic downturn state revenues are unpredictable, and have been increasingly insufficient to provide for the rising cost of modern scientific training. The development of sound policies to support student scholarship will be a wise investment in the future of the university.

A serious problem has arisen as a result of many years of static departmental appropriated budgets while laboratory costs continuously rise. In order to meet the cost of hands-on laboratory training in undergraduate courses, budgets have increasingly been consumed to meet these costs, leading to the suspension of maintenance agreements on equipment and maintenance of physical infrastructure. Over time this has become a recruitment issue for both new faculty and students. For example, many of our students come from high schools in Illinois supported by a high tax base. These students have laboratory facilities that may be well-maintained. If our facilities do not compare favorably, many students choose to go elsewhere. At the same time, if we have important pieces of equipment fail that have no maintenance agreements, we can not get them repaired, and so students do not receive training on the technologies used in their discipline. All of these factors make it difficult to recruit new faculty as well as students. We need a supplement to the current funding provided through appropriated budgets. If we do not either receive a substantial increase in the departmental appropriated budgets (unlikely given current budgetary problems), or pass the increased costs along to the students in the form of a laboratory usage fee, we will soon come to a point where we can no longer offer a quality scientific program.

This document proposes a policy to address the growing financial problems associated with providing academic excellence in modern scientific training. These problems include:

- increase in student enrollments with growing/new programs
- increase in the cost of consumable laboratory supplies
- increase in the cost and usage of DNA kits and other forensic/molecular biology, nursing, supplies
- static appropriated budgets.
- increase in the cost of routine instrument maintenance
- increase in the cost of instrument upgrades and modernization

II. Need for a Lab Use Fee

A. Increasing enrollments with growing/new programs

WIU offers several unique programs in laboratory science disciplines. These programs provide students specialized scientific training not readily available at community colleges or other regional colleges and universities. Enrollments have been increasing with the popularity of the new "**Signature Program**" in Forensic Chemistry and Meteorology, as well as molecular biology, nursing, engineering physics, and other health sciences. The number of students majoring in forensic chemistry has increased steadily over the past four years. In addition the number of students enrolling in laboratory chemistry courses as part of a minor or support curriculum for LEJA, geology, meteorology, nursing, psychology, pre-medicine, pre-pharmacy, agriculture, dietetics, kinesiology, and many other fields has also dramatically increased.

The use of science has expanded into many traditionally non-science diverse fields, such as computer systems, art, and even human resources. This trend is predicted to increase, as many more students enroll in science courses to strengthen their background in order to be more competitive in a struggling economy.

According to the National Institute of Justice there is 2-4 year backlog of criminal cases waiting on DNA analysis of evidence in most states in the US, due to a shortage of scientists trained to perform DNA analysis. In recent years the use of DNA technology has become more widespread as law makers and corporate leaders are recognizing DNA's impact on medical and health issues and criminal justice. Therefore, many lawmakers are endeavoring to empower the entities that can harness and use the power DNA affords in the solving of missing persons identification, hereditary issues, genetic diseases, insurance issues and human resources, as well as rapes, homicides and other violent crimes. Therefore, the increasing demand for DNA testing is likely to dramatically increase the need for more trained forensic scientists in the future. Numbers to as high as 10,000 new forensic practitioners needed, have been suggested by the American Academy of Forensic Science (AAFS) over the next five to 10 years.

WIU is one of the few institutions that can address the need to recruit, educate, and train this large number of new personnel. In addition, many crime labs are looking for more forensic scientists trained at the master's and doctorate level. Therefore, enrollment increases in laboratory science courses that provide such training are expected to continue for the foreseeable future.

In January 2006, the Illinois Board of Higher education approved the B.S. Forensic Chemistry program application, to begin Fall 2006. In that application **projected enrollments** were presented as follows:

	Budget Year (Fall 2006)	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**
Projected number of forensic chemistry majors described in the IBHE program application	10	22	34	46	48
Actual number of forensic chemistry majors	32	58	77	99	

As shown above, the actual enrollment of forensic chemistry majors has greatly surpassed the projected enrollment, as students recognize the advantages offered by unique WIU programs.

Additionally, DNA technology is the major tool in the growing area of conservation genetics and is now a major component of modern resource management. The Department of Biological Sciences has contracts in place with the U.S. Fish and Wildlife Service to genetically characterize some critically threatened or endangered species in Illinois. While a few graduate students can be supported and trained in molecular biology, we must provide training for undergraduate students to allow them to compete with programs elsewhere. While we have the equipment and expertise to carry out such training, our current budget cannot support the consumables required for the hands-on laboratory experience we need to provide. This coupled with the increasing costs of more traditional materials such as preserved specimens, field materials and travel to field sites for field-oriented courses has seriously compromised the current budget.

The Department of Biological Sciences has had a long tradition of conducting field courses associated with ecology and resource management. Such courses have always been expensive to conduct and are becoming increasingly more expensive because of increases in the cost of travel, advanced equipment, and technology. Other universities in Illinois curtailed many such field offerings years ago, leaving Western in a unique position of having the strongest field offerings on campus as well as at the Kibbe Field Station. This has led to a great demand for our students by natural resource management departments in many states, and has also led to high placement of WIU biology students in highly regarded ecology/environmental graduate programs. This is a notable strength of the WIU Biological Sciences program that provides an edge over

other programs in the state. Laboratory fees that provide revenue to the Department of Biological Sciences will enable WIU to maintain it's outstanding curriculum in field biology.

Western Illinois University has established an affiliation agreement with the University of Illinois-College of Pharmacy for implementation of guaranteed admission of WIU students into the Doctorate of Pharmacy program at the UIC College of Pharmacy. The conditions for retention and matriculation include that students earn a baccalaureate degree within 5 years of freshman enrollment, complete specific pre-pharmacy coursework with a 3.5 GPA or higher, take the Pharmacy College admissions Test, and demonstrate an interest in pharmacy through internship, research, etc. This new affiliation agreement is likely to attract many students interested in pharmacy to WIU over other regional universities. The WIU affiliation agreement may be strengthened as UIC College of Pharmacy is developing new courses in forensic pharmacology.

To better serve all pre-pharmacy students WIU Department of Chemistry is conducting a feasibility study to determine the benefit of a adding a new Bachelor of Science in Chemistry with Pharmacy Option, designed to better prepare students interested in careers in pharmacy for either Pharm. D. or Ph.D. programs in pharmacology. From the responses we have received thus far from pharmacy students and admissions directors at regional pharmacy schools, a pharmacy option to a B.S. chemistry degree would be highly unique and extremely beneficial to students who plan careers in pharmacy. Properly publicized, such a program could cause a significant increase in enrollment.

In addition, the Department of Chemistry has established collaboration with Savannah State University's (SSU) as part of their NSF-HBCU-UP program MAGEC in STEM disciplines. As part of this collaboration WIU commits to provide at least 1-2 summer research experiences each summer to qualified students from SSU into our Summer Research Program. This collaboration agreement is expected to aid in recruitment of minority students.

Similarly, the Department of Physics has new expanding programs in Atomic, Molecular, and Optical Physics (AMO Physics), and is the only M.S. level institution in the state of Illinois to offer both theoretical and experimental AMO research training opportunities for our students, which is currently in high demand in industrial job settings that await physics graduates. Recently, we have also established connections with the National Radio Astronomy Observatory which allows our students to be trained and obtain time on remote use of their facility. While the expertise is firmly in place to carry out such types of training, continuous updating of our equipment in these exciting areas is required to keep this training at the quality needed to maintain these unique opportunities. As the cost of our lower level instructional laboratory materials and replacement components increase, the ever growing share of our appropriated budget that they consume takes away from the ability to maintain these unique programs.

The Department of Geography offers a Major and Minor in Geography, a Major in Meteorology and Minors in Meteorology and Geographic Information Systems (GIS).

The department has a proud tradition of producing quality graduates with applied knowledge gained from laboratory experiences. To continue to offer a premium undergraduate education in Geography, Meteorology and GIS, as well as specific subfields, there is a need to replace and/or maintain laboratory equipment and instruments to keep up with new knowledge in the discipline. Some of the instruments are 30 years old such as the Psychrometers. These mercury-filled Psychrometers must be replaced with Digital Psychrometers, which are much safer to handle by both instructors and students. Other instruments requiring frequent replacement include mobile wind monitors, anemometers, precipitation gauges, radiation shields, temperature trackers, atlases, and reflective radar, to mention a few. By training with these instruments, students get hands-on experience which positions them competitively in the 21st century. As one of the departments with a Signature Program, we want to maintain a solid state of the arts technology and offer majors and non-majors top-notch educational experiences. The lab fees will assist the department in accelerating the replacement of old instruments and equipment. The cost of replacing these instruments is prohibitive in the department appropriated budget.

Also, several science departments are increasing their summer offerings of laboratory science courses in an effort to develop a vigorous summer school program at WIU. These summer offering would provide greater opportunities to biology, chemistry, and physics majors and minors, as well as agriculture, nursing, dietetics, kinesiology, geology, meteorology students, and those from several other disciplines. While these new summer offerings are planned for laboratory science courses, no additional funds are provided for expendable lab supplies.

WIU distinguishes itself from other mid west colleges and universities by providing unique scientific programs and training in expanding modern technologies. Therefore, enrollments in laboratory courses at WIU will likely increase in the future. Unfortunately, the cost of training students in modern laboratory technologies will also likely increase at an accelerated rate. Given the unpredictable nature of state appropriation funds in the near future, the prudent course of action is for WIU to assess a laboratory usage fee directly from all students who enroll in laboratory science courses.

Table 1 demonstrates actual enrollment increases in WIU laboratory courses

Table 1. Enrollments and SCH

	2006 – 2007			**2007 - 2008**			**2008 - 2009**			**2009 – 2010**		
Dept	majors	Students Taking Lab Courses	SCH	majors	Students Taking Lab Courses	SCH	majors	Students Taking Lab Courses	SCH	majors	Students Taking Lab Courses	SCH
Biology	526	4,207	12,718	544	4060	12,618	543	4,082	13,854	477	3,784	13,850
Chemistry	128	1,178	4,988	150	1254	5,271	188	1,316	5,355	196	1,349	5631
Physics	55	450	1,350	51	424	1,272	43	383	1,149	65	388	1164
Nursing							6	6	18	29	29	171
Geography	80	1127	4,508	92	974	3,996	101	929	3716	88	729	2916
Total	789	6,962	23,564	837	6,712	23,158	875	6,716	24,092	855	6,179	22,568

B. Increasing Cost of Expendable Laboratory Supplies

The cost for consumable laboratory supplies, including chemicals, glassware, and biological samples, has snowballed over the past several years. New hazardous material packaging, and security issues in shipping has exacerbated the cost for chemical and biological supplies. In addition, the use of prepackaged DNA and other biological and chemical test kits commonly employed by law enforcement, medical personnel, and others in the public sector, has made the utilization of such prepackaged kits an essential part of student training. The purchase of these prepackaged test kits is extremely expensive, and thus the cost for consumable supplies is significantly higher for courses that train students in the use of these test kits.

In the Department of Chemistry enrollment has been growing dramatically, along with an increase in the purchase price for needed expendable supplies. departmental costs for chemicals and consumable supplies for the lower level instructional labs has greatly increased over the past three years, as has the cost for upper level specialized courses. In 2006-2007, the Chemistry Department spent $20,000 of it's appropriated budget just for commodities for the lower level instructional lab courses, not including more specialized chemicals and supplies and DNA test kits for upper level forensic courses. This increased to $23,000 in 2007-2008, and to $29,000 in 2008-2009, and has a predicted cost of $33,000 for 2009-2010 for consumable chemicals used in lower level courses. This increase is due partly to the increase in cost per student for chemicals and other consumable supplies, and to the increase in enrollment of students in chemistry lab courses.

Much of the increase in chemistry enrollment over the past few years has been due to a dramatic increase in the number of forensic chemistry majors. Therefore, it is expected that the enrollment in upper level forensic courses that utilize DNA and other expensive test kits will significantly increase over the next few years. Accordingly, the cost for supplies for the most expensive lab courses is expected to snowball. An application for accreditation from the American Academy of Forensic Science (AAFS) will be submitted in Fall 2011 (after two graduating classes have completed the program). The utilization of AAFS approved DNA and drug test kits in the program will be critical for accreditation approval. While the College of Arts and Sciences recognizes the problems associated with the growing forensic program, the economic downturn and its unpredictable impact on budgets has made it difficult for CAS to address these problems.

In the School of Nursing, students are practicing and testing out on skills for the four semesters of the program. All materials are prepackaged and sterile. While we repackage and reuse for students to practice, the students use new kits for the test out. Each student must practice and test out on 60 skills in the entire program plus the physical assessment. While the students purchase a nurse pack that has basic materials in it at a cost of $160.00 at the beginning of their program, this pack cannot, by law, contain much of the supplies needed.

C. Increasing cost of instrument maintenance and needed instrument upgrades

As a result of the increasing costs of laboratory supplies, and the increasing percentages of the departmental appropriated budgets that they consume, instrument maintenance has often been deferred and critical equipment updates have been postponed to the point where much of the existing laboratory equipment is severely outdated, and some is totally non-functional and in need of immediate replacement. Costs of repair have continued to increase and much of both the large and moderate equipment needs immediate attention. A number of computer laboratory interfaces are now severely outdated and also need to be updated to reflect current educational trends and the results of research concerning student learning.

Because of the rising cost of expendable supplies and increasing enrollments, the Departments of Chemistry and Physics can no longer afford to support maintenance agreements for their major instruments. The aging instruments require more and more frequent repair. While the College and Provost's office has provided the Department of Chemistry some supplementary funding ($10,000 – $20, 000 per year over the past few years) for purchase of small equipment items and/or instrument repair, most of that funding has gone for major instrument repair.

However, each of the science departments needs to replace existing major equipment, as well as to acquire additional major equipment used in modern scientific laboratories. One example is the upgrade/replacement of computers (purchased in 2006) in Currens 529 and associated forensic comparison microscopes. The 2006 computers do not have the graphics capability for fine structure fingerprint and glass fragment comparisons, nor to run forensic facial recognition software. The repairs of large aging equipment, such as the NMR, GC-MS, GC, and FT-IR, which are 10+ years old, are becoming much more costly and the antiquated parts are becoming harder to find. Unless these instruments are replaced with modern equivalents, and/or funds become available for maintenance agreements, one or more of these instruments will fail permanently and the teaching and research program will suffer greatly.

The equipment in the School of Nursing is new and must be maintained. Not all of the program equipment has been purchased, and there are service agreements yet to be purchased.

Table 2 shows the rising cost of instrument maintenance per student as well as the increasing cost of consumable supplies per student over the past four years.

Table 2: Increasing Cost of Consumable Supplies and Instrument Maintenance

	2005 – 2006		**2006 - 2007**		**2007 - 2008**		**2008 - 2009**		**2009 - 2010**	
Dept	Cost of lab supplies per student	Cost of instrument maintenance per student	Cost of lab supplies per student	Cost of instrument maintenance per student	Cost of lab supplies per student	Cost of instrument maintenance per student	Cost of lab supplies per student	Cost of instrument maintenance per student	Cost of lab supplies per student	Cost of instrument maintenance per student
Biology	$9.98	$8.56	$12.38	$8.87	$12.45	$9.06	$16.91	$8.72	$16.18	$9.71
Chemistry	$16.98	$23.45	$18.32	$31.12	$24.67	$39.66	$32.45	$47.22	$40.89	$55.21
Physics	$9.46	$37.85	$7.41	$29.64	$6.39	$25.56	$17.23	$68.92	$11.60	$51.55
Nursing									$62.44	$688.89

D. Static Permanent Appropriated Budget

The costs of consumable supplies per student and the cost of instrument maintenance per student have increased significantly each year. Enrollment in laboratory courses has also increased, while permanent appropriated budgets have remained static.

In 2006 with the establishment of the B.S. Forensic Chemistry program approved by the Illinois Board of Higher Education an increase by $10,000 per year of chemistry appropriated budget was promised by the college. In FY08 a supplement of $5,000 was provided by the college to the chemistry budget for purchase of forensic expendable supplies (DNA analysis kits, etc.). In FY09 a supplement of $10,000 was added to the chemistry budget by the college for forensic supplies. An additional supplement of $10,000 has been promised by the college for forensic expendable supplies for FY10. While the Department of Chemistry did receive the promised increase in FY09, and will likely receive it in FY10, it has not been added as a permanent increase to the appropriated budget for chemistry. Although CAS recognizes the problems with the unpredictability of the state revenues for WIU in the foreseeable future, the promised permanent increase in the appropriated budget for chemistry may not be realized for some time. Also, actual enrollment figures in forensic chemistry B.S. program are now more than double the projected figures for FY10 in the original IBHE proposal. Therefore, even with yearly $10K supplements, the costs far exceed the appropriated resources. Due to the economic downturn and it's unpredictable impact on budgets, the College of Arts and Sciences has had a difficult time addressing the problems associated with the growing forensic program.

Similarly, the Department of Physics received some supplemental laboratory funding from the College in FY09, and from the Provost in FY10, which allowed long needed repairs and upgrades in lower level instructional physics laboratories, but more than half of the physics instructional laboratories still operate with outdated equipment. This problem can only be addressed in the long term if supplementary funding is provided by a long term guaranteed revenue source.

Thus, a lab use fee would provide needed funds to supplement current static appropriated departmental budgets.

Below is a table showing the permanent appropriated of Science department budgets over the past four years.

Table 3: Static Permanent Appropriated Budgets

Dept	2006-07	2007-08	2008-09	2009-10
Biology	$106,127	$106,127	$106,127	$106,127
Chemistry	$59,500	$59,500	$59,500	$59,500
Physics	$48,792	$48,792	$48,792	$48,792
Nursing			$40,000	$40,000

3. Lab Fees at Peer Institutions

Several peer institutions in the mid west charge their students lab use fees for each lab course. In many institutions the fees are scaled according to the level of the course or according to the actual cost of expendable supplies utilized in the course. These lab fees range up to $200 for some courses which involve the use of DNA test kits or other such molecular biology supplies.

The proposed flat fee of $35 per lab course is significantly lower than that charged by many peer institutions. As most science lab courses provide four of more semester hours or credit, even senior science majors rarely enroll in more than three lab courses in a given semester.

Below is a table showing tuition costs and lab fees at several peer institutions.

Table 4: Survey of Lab Use Fees and Tuition Costs at Peer Institutions

Institution	Tuition Cost/sem	Biology Lab Fees	Chemistry Lab Fees	Physics Lab Fees	Nursing Fees
Eastern Illinois Univ	$2,059	$10 to $30*	$25 to $50*		no program
Northern Illinois Univ	$3,630	$10 to $410*	$40		Grant covers fees
SIU Carbondale	$3,645	$15 to $60*	$32 & $50**	$20	no program
Univ of Northern Iowa	$5,756	$7 to $30*	$35 to $75*		no program
Valparasio Univ	$13,815	$30 to $65*	$30 to $65*	$30 to $65*	$140
Indiana University	$3,462	$35 to $75*	$35 to $75*	$35 to $75*	$813
Missouri State Univ	$3,138	$15 - $40*	$20 to $25*	$15-$30*	$545
Huntington University	$10,410	$45-$200*	$45-$200*	$45-$200*	
Roosevelt University	$11,500	$30-$200*	$30-$200*	$30-$200*	
SIU Edwardsville	$4,168	$20 - $87*	$30 - $55*		$75 - $195*
Aurora University	$9,000	$50	$50	$50	$144
UIC	$3,754	$233	$233	$233	$438
Hannibal LaGrange College	$7,410	$55 - $65*	$55	$55	$200

All fees are per student per course.
Tuition is based on 15 semester hours without added fees for in-state resident.
* Lab fees vary with the course

4. Description of Proposed Fee Plan

A. Proposed Fee

A student lab use fee of $35 per semester for each laboratory science course is proposed. This fee will be utilized by the science departments to provide consumable supplies (chemicals, glassware, test kits, etc.), and/or instrument maintenance and upgrade. The fee would be assessed along with tuition and other fees of students who register for laboratory science courses.

When comparing the proposed lab use fee to other fees assessed of WIU students, the lab use fee is significantly lower than other fees for undergraduate students at WIU. A typical undergraduate student at WIU who enrolled in 15 semester hours of coursework pays an athletic fee of $202.05, and a computer use fee of $64.95 per semester. A typical undergraduate student currently enrolls in only two laboratory science courses over their four year bachelor degree. Therefore, the typical non-science undergraduate student would pay only $70 over the course of their four year bachelor degree. For science majors the proposed lab use fee would cost less per semester than the student pays in computer use and athletic fees. As most science lab courses provide four of more semester hours of course credit, and so even senior science majors rarely enroll in more than three lab courses in a given semester.

B. Disbursement Plan

As the proposed lab use fee is to be assessed only of students who enroll in laboratory science courses, it is expected that administrative costs would be required initially to set up the fee assessment program. Once the fee assessment program is established it is expected that administrative costs would reduce somewhat.

Therefore, this proposed plan provides for 25% of the revenue to be used for administrative costs during the first year, with 75% of revenues to be returned to the appropriate departments. During the second year 20% of the revenues generated would be used for administrative costs, with 80% of revenues returned to appropriate science departments. During the third year 15% of revenues generated would be used for administrative overhead, while 85% of revenues are returned to the appropriate science departments. By the fourth year the administration of the program should be well established. Therefore during the fourth year and thereafter 10% of revenues generated would be used for administrative costs, and 90% would be used by appropriate science departments to provide for consumable lab supplies and/or equipment maintenance.

C. Estimation of Revenue

If enrollments in laboratory science courses continue to increase as predicted both administrative and departmental funds would correspondingly increase. However, in the unlikely event that enrollment remains static at the FY10 level an estimation of revenues generated by the proposed fee plan demonstrates that significant funding can be generated.

Table 5 shows an estimation of revenues generated from the proposed lab use fee, assuming static enrollments at the FY10 level.

It is clear when comparing the number of students enrolled in lab courses (shown in Table 1) and the cost of expendable laboratory supplies (Table 2) that the revenue generated from the proposed $35/course lab use fee (shown in Table 5) will not be sufficient alone to cover the supply costs per student and provide enough to cover the cost of instrument maintenance per student. However, revenues generated from the proposed lab use fee will provide a desperately needed supplement to appropriated budgets for each department.

Table 5: Estimation of Fee with Enrollment (FY10) @ Uniform $35 fee/lab course

			Year 1		Year 2		Year 3		Year 4 and after	
Dept	**Enrollment (FY10)**	**Total fee**	**Dept (0.75)**	**Adm (0.25)**	**Dept (0.80)**	**Adm (0.20)**	**Dept (0.85)**	**Adm (0.15)**	**Dept (0.90)**	**Adm (0.10)**
Biology	3784	$132,440	$99,330	$33,110	$105,952	$26,488	$112,574	$19,866	$119,169	$13,244
Chemistry	1349	$47,215	$35,411	$11,804	$37,772	$9,433	$40,133	$7,082	$42,494	$4,722
Physics	388	$13,580	$10,185	$2,716	$10,864	$2,716	$11,543	$2,037	$12,222	$1,358
Nursing	29	$1,015	$761	$254	$812	$203	$863	$152	$914	$103
Geography	729	$25,515	$19,136	$6,379	$20,412	$5,103	$21,688	$3,827	$22,964	$2,552
Total										

5. Summary Statement

WIU is an institution that offers several unique and signature programs in laboratory science disciplines. These programs offer students specialized programs not readily available at community colleges or other regional colleges and universities. Therefore, student enrollments will likely continue to increase despite the downturn in the economy. However, appropriated budgets remain flat while the cost of expendable supplies per student increases, as does the cost of instrument maintenance.

Therefore, in order to maintain quality in our science programs with unpredictable state revenues the wisest course of action is to look for alternative sources of funding. With enrollments increasing, and the cost per student for laboratory training also increasing, it is difficult to maintain quality and provide the students with the expected training in the modern laboratory techniques. The proposed lab fee would alleviate some of the funding concerns and help WIU maintain the high quality of our programs. Even with the proposed laboratory fee WIU will continue to be one of the best values for a quality education in the Midwest.