

## Earth Science Faculty Working Document – Master Strategic Plan Worksheet

### 1. *Preserve & enhance academic distinction*

Build a distinctive, first-choice, comprehensive university that is widely recognized for its high quality academics; strong programs; high caliber students, faculty, and staff; and exceptional and diverse learning experiences.

#### Directions

- 1-1. Establish rigorous standards and assessment measures for quality of teaching and student learning experiences and success. Implement programs to achieve standards and recognize outcomes.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Adopt the Oregon State Geologist Examiners Board geology basics exam as a standardized assessment tool for graduating seniors	To develop a standardized quantitative exam standard to assess student content knowledge	Develop methodology in 2004-05 academic year, implement in	Oregon State Geologist Examiners Board	Faculty development time; exam fees for students
Continue to develop and implement the use of Senior Seminar (ES 407) as capstone course for Earth Science major	To promote use of student seminar presentations as a qualitative exit tool to assess student ability to interpret and present content knowledge	Present / ongoing	WOU Earth Science faculty	Faculty curriculum development time
Continue to develop individual course projects that emphasize multimedia presentation, content interpretation, and problem solving as class assessment tools	To promote use of quantitative and qualitative assessment tools in evaluating course-related content knowledge	Present /ongoing	WOU Earth Science Faculty	Faculty curriculum development time
Continue to participate in WOU faculty evaluation process with annual student and peer review	To provide quantitative and qualitative measure of faculty teaching effectiveness	Present /ongoing	WOU Earth Science Faculty	Class time

- 1-2. Support public relations efforts that create a positive perception of WOU and its programs and enhance academic distinction and expectations, both internally and externally.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to promote WOU Earth Science through public relations activities including: faculty articles in WOU Magazine / WOU This Week, development of WOU Earth Science Web Site, development of program branding via logo coffee mugs/t-shirts, etc.	To spread the news about the quality of the Earth Science program at WOU	Present / ongoing	WOU Earth Science faculty, WOU Earth and Physical Science Dept., WOU service support	Faculty development time
Earth Science faculty participation in the WOU Environmental Science Institute via workshops, summer programs, and field trips.	Community outreach and extended learning opportunities with Earth Science focus	Present / ongoing	WOU Division of Natural Sciences, Division of Extended Programs	Faculty development time; external and internal funding
Continue to develop service learning, professional outreach, and applied research projects (e.g., outreach to Luckiamute Watershed Council, faculty support of Frontier Learning Network, coordination of Oregon Junior Academy-JSHS-ISEF science fairs)	Community and K-12 outreach with science focus	Present / ongoing	Community Partners	Faculty development time, external and internal funding
Community science & mathematics outreach through Western Adventures in Math and Science	Enhance K-12 science & math opportunities for community; promote Division as a community partner.	2004-2006	WOU Division of Natural Sciences and Mathematics	DEP; S. Boomer NSF Grant

1-3. Review and revise Liberal Arts Core Curriculum in coordination with new directions determined by the strategic planning process.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continued development of ES100 series as an option for LACC lab science requirement with an emphasis on applied science, social relevance, and broad-based physical science education	To prepare broadly educated / knowledgeable citizens who understand scientific issues that are socially significant to the state of Oregon; To better prepare K-8 teachers	Present / ongoing	WOU Faculty Senate, Curriculum Committee, and Provost	Faculty development time
Work to maintain requirement for full year of lab science as part of LACC	Well educated citizenry	Present / ongoing	WOU Faculty Senate, Curriculum Committee, and Provost	Faculty development time

1-4. Reexamine funding priorities and find new avenues of support for academic programs, infrastructure, and scholarships.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Establish capital equipment line-item in university general fund budget	To enhance and maintain science equipment infrastructure	Develop plan in 2004-05 academic year, implement in 2005-06	WOU LAS Dean, Provost, President, Academic Infrastructure Committee, Student Tech. Fee Committee	WOU General Fund Dollars
Continue external grant writing endeavors for Earth Science curriculum development, research initiatives, and infrastructure improvement	To improve undergraduate curriculum and research opportunities	Present / ongoing	WOU Dean LAS, Provost, President	Match funds as required by external funding sources
Utilizing the WOU Environmental Science Institute as a means of attracting external funds to the Earth Science Program	To improve undergraduate curriculum, research, and community outreach opportunities	Present / ongoing	WOU Dean LAS, Provost, President	Match funds as required by external funding sources

1-5. Establish and support exceptional and diverse living and learning communities and experiences.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to use/develop field-based learning experiences for Earth Science students (e.g. develop field-based courses and experiential field trips)	To promote the use of “outdoor laboratories” an “field adventures” in the Earth Science curricula	Present/ongoing	WOU Earth Science faculty / Natural Sciences Division	Internal funding and lab fees for curriculum development and field expenses
Charter a chapter of the Earth Science honor society (Sigma Gamma Epsilon) at WOU.	To recognize and promote outstanding student achievement in the Earth Sciences	Implement by end of 2005-2006 academic year	Sigma Gamma Epsilon National Organization	Initiation Dues / National Dues

1-6. Encourage and support distinctive and innovative programs and delivery methods which respond to the changing needs of students and society.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Develop a new minor and/or certificate program in Geospatial Technology as part of engineering-based workforce development in Oregon	Development of an applied program in Geospatial Technology to provide WOU students with vocational training and employment opportunities	Program development in 2005-2006 academic year; program implementation in 2006-2007.	Geography and Earth Science faculty; Industry Partners	Expansion of faculty FTE, external/internal equipment funds
Continue to develop linkages between the WOU Earth Science Program and Teacher Education / Science and Math Education programs (e.g., actively promote the MAT program as a fifth-year augmentation to the B.S. Earth Science degree)	To promote Math and Science education in the state of Oregon; to contribute to a well-trained educational workforce	Present / ongoing	Division of Natural Sciences and Math faculty; College of Education faculty	Faculty development time, internal curriculum budgets

Continue to develop and promote the Earth System Science sequence as part of the LACC at WOU.	Preparing broadly educated / knowledgeable citizens who understand scientific issues that are socially significant to the state of Oregon; Providing base-line training for elementary/middle science	Present / ongoing		Faculty development time, internal curriculum budgets
Continue to promote and develop applied practica and internships as part of the Earth Science curricula	To train well-educated science graduates with applied skills that contribute to the economic and environmental well-being in the state of Oregon.	Present / ongoing	Industry, community, and government partners; Center for Teaching and Learning	Faculty development time, internal curriculum budgets

## 1-7. Establish and support visiting faculty programs.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to promote collaboration between WOU Earth Science faculty and off-campus colleagues (via scientific meetings, off-campus workshops, and collaborative research projects)	Linkages between WOU faculty and external scientific community; Developing a regional to national reputation for high-quality faculty and well-trained graduates	Present / ongoing	Off-campus scientific community	Internal and external funds for travel, research, and professional meetings

## 2. ***Achieve student centeredness***

Create a supportive, personalized, and responsive environment that prepares students for continued university, career, and life success.

### **Directions**

2-1. Create an environment in which student success is paramount and is a responsibility shared by everyone at WOU.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to develop and implement Peer-Leader Teaching Lessons (PLTL) for the introductory Earth System Science sequence (ES 104-106)	To enrich and strengthen student study skills; To provide cooperative learning opportunities for diverse students.	2004-2006	Academic Advising & Learning Center	Internal and external funding for program development; faculty development time
Continue collaboration with Student Enrichment Program and Student Services	To enrich and strengthen student study skills; To provide cooperative learning opportunities for diverse students.	Present/ongoing	Academic Advising & Learning Center	Internal and external funding for program development; faculty development time

2-2. Offer and support quality academic programs that are flexible and innovative and are responsive to the needs of a diverse student body and society.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Develop certificate programs with a focus on applied science and workforce training (e.g. Geospatial Technology Certificate)	Development of an applied program in Geospatial Technology to provide WOU students with vocational training and employment opportunities	Program development in 2005-2006 academic year; program implementation in 2006-2007.	Geography and Earth Science faculty; Industry Partners	Expansion of faculty FTE, external/internal equipment funds

Explore options for offering online/distance courses in the Earth Science LACC electives	Flexible scheduling for students, convenience	2005-2006 academic year	University Computing Services, Division of Natural Sciences	Technology capacity and faculty FTE; faculty development time
Continue to offer summer courses and workshops for Education graduate students and practicing education professionals	Education outreach and extended programs targeting teaching professionals	Present / ongoing	Division of Extended Programs	Summer faculty FTE; faculty development time

2-3. Support learning with a coordinated system of academic and non-academic programs, processes, and resources.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to offer summer courses and workshops via the Environmental Science Institute at WOU	Community outreach and extended programs	Present / ongoing	Division of Extended Programs	Summer faculty FTE; faculty development time

2-4. Ensure that student advising is consistent, accurate, timely, personalized, and collaborative.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Develop a coordinated system of individual and group advising sessions for Earth Science majors	Consistent advising and exposure of students to diverse faculty viewpoints and experience.	Spring 2005	Central advising	Faculty time; departmental funds for advising-related socials

2-5. Enrich the learning community with engaging experiences, activities, and environments that contribute to a successful and fulfilled citizenry.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Grant writing to improve Earth Science curriculum, laboratory infrastructure, and to promote undergraduate research.	Expansion of academic infrastructure, research facilities, and curricular systems	Present /ongoing	Dean of LAS, Provost, external funding agencies	Match funds from university; faculty development time
Continue to use/develop field-based learning experiences for Earth Science Students (e.g. develop field-based courses and experiential field trips)	To promote the use of “outdoor laboratories” an “field adventures” in the Earth Science curricula	Present / ongoing	WOU Earth Science faculty / Natural Sciences Division	Internal funding and lab fees for curriculum development and field expenses

2-6. Enhance academic knowledge with practical experiences including mentoring, internships, research, service learning, and independent studies.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to promote and develop applied practica and internships as part of the Earth Science curricula	To train well-educated science graduates with applied skills that contribute to the economic and environmental well-being in the state of Oregon.	Present / ongoing	Industry, community, and government partners; Center for Teaching and Learning	Faculty development time, internal curriculum budgets
Faculty collaboration with external graduate institutions; research-based thesis supervision	Linkages between WOU faculty and external scientific community; Developing a regional to national reputation for high-quality faculty and well-trained graduates	Present / ongoing	Off-campus scientific community	Internal and external funds for travel, research, and professional meetings

## 2-7. Implement and support technological applications for personalized and efficient student-centered transactions.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to develop and support active-learning curricula, problem-based labs, and technology-based curriculum	To train well-educated science graduates with applied skills and technology proficiencies that contribute to the economic and environmental well-being in the state of Oregon.	Present / ongoing	WOU Administration, Natural Sciences Division, University Computing Services, WOU Student Technology Fee Committee, external funding agencies	Internal and external funds for capital improvements; faculty development time
Grant writing to external funding agencies to support technology infrastructure and curriculum development	To train well-educated science graduates with applied skills and technology proficiencies that contribute to the economic and environmental well-being in the state of Oregon.	Present / ongoing	WOU Administration, Natural Sciences Division, University Computing Services, WOU Student Technology Fee Committee, external funding agencies	Internal match funding; faculty development time
Continue to support Earth Science faculty/student research facilities, including the GeoData Processing Laboratory, laboratory facilities for the study and processing of Earth materials, and paleontology storage and processing	To train well-educated science graduates with applied skills and technology proficiencies that contribute to the economic and environmental well-being in the state of Oregon.	Present / ongoing	Division of Natural Sciences and Mathematics, Dean of LAS	Internal budgets, external grant funds, student fees, faculty development time

### 3. ***Acquire and keep diverse & distinguished people***

Increase the recruitment and retention of outstanding and diverse students, faculty, and staff.

#### **Directions.**

3-1. Increase access to and availability of financial support for students.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Devise and implement an Earth Science Scholarship program	To attract talented and underserved students to the WOU Earth Science program	2005-2007	WOU Foundation, public and private donors	Minimum \$10,000 endowment to establish an Earth Science scholarship; faculty development time, WOU Foundation staff support
Devise and implement an Earth Science Student Travel Award program (for off-campus research and scholarship)	To provide Earth Science students with financial support to promote diverse and enriching academic experiences	2005-2007	WOU Foundation, public and private donors; funding agencies	Internal match funds, external grant funds, faculty development time

3-2. Maintain and enhance support mechanisms for students.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to support and promote the academic services program at WOU	A successful student body	Present / ongoing	WOU Academic Services	Faculty development time
Continue to provide personalized advisement	A successful student body	Present /ongoing	WOU Academic Services	Faculty development time

3-3. Advance the means to increase salaries of faculty and staff to competitive levels.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Faculty support of the campus union system and lobbying for state support of higher education	Faculty/staff retention, fair and just compensation proportional to regional cost of living	Present / ongoing	WOU Administration	Funding

3-4. Increase flexibility of responsibilities, job assignments, workload, and scheduling.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Encourage administration to adopt initiatives for reduced teaching load to 27 credit hrs / academic year.	Increased faculty productivity in areas of professional service, campus service, teaching, and research; faculty retention	2004-2006	Dean LAS, WOU Administration	Increased adjunct / tenure-track faculty lines
Initiate an FTE book-keeping system in which science faculty receive 1hr for 1 hr contact time in lab courses (presently at 66% contact time).	Increased faculty productivity in areas of professional service, campus service, teaching, and research; faculty retention	2004-2006	Dean LAS	Increased adjunct / tenure-track faculty lines

3-5. Improve support, recognition, and reward of quality performance.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Promote development of a merit pay / merit promotion system in addition to the present union-negotiated step-system (based on years of service)	Increased faculty retention, increased faculty incentives for excellence in teaching, service, and research	2005-2007	WOU Faculty Union; WOU Administration	External and internal funds

- 3-6. Develop academic and non-academic programs to promote diversity and meet the needs of all, especially non-traditional and minority students, staff, and faculty.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Promote development of the Environmental Science Institute as a vehicle for community outreach to diverse populations	Increased science training and preparation for minority populations	2005-2007	WOU Administration, local community / educational organizations; Division of Natural Sciences	WOU Academic Services, external funding

- 3-7. Encourage greater participation in and advancement of programs that facilitate understanding and the exchange of people and ideas in international, multicultural, and cross-cultural arenas.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
<i>No activities planned at this time.</i>				

#### 4. ***Focus on meeting cross-unit needs***

Provide an efficient and reliable infrastructure that meets physical, human, technological, and financial needs.

##### **Directions**

4-1. Create an infrastructure that enhances quality of life and encourages social interaction on campus and within the local community.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Promote establishment of faculty club on campus	Collegial interaction across campus	2005-2007	WOU Administration, WOU faculty union	Space and funds
Continue to promote the Natural Sciences Seminar Series	On-campus / off-campus community outreach	Present / ongoing		Faculty development time

4-2. Provide quality facilities to meet the instructional, technological, and communication needs of the campus.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to support development of the Academic Infrastructure Committee	Provide faculty voice and decision making process for academic infrastructure needs.	Present / ongoing	WOU Division faculty representatives	Faculty development
External grant writing for technology, laboratory, and curriculum development	Increased funds and equipment for academic infrastructure	Present / ongoing	WOU Division of Natural Sciences, Dean LAS	WOU Match Funds

4-3. Provide efficient services by streamlining systems, communications, and organizational procedures.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Promote development of centralized electronic class scheduling system (web-based)	Create a seamless digital version of the schedule	2005-2006	Dean LAS, Registrar	UCS Software development

4-4. Increase cross-disciplinary and inter-institutional cooperation and collaboration.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to promote and support interdisciplinary minors in environmental studies and paleobiology	Interdisciplinary collaboration between faculty and students	Present / ongoing	Social Science Division, Dept. of Biology	Faculty development / advisement time
Continue to promote and support cross-collaboration between NSM Division and the College of Education	Collaborative grant proposals and projects between LAS and COE; fostering science education at WOU and in the state of Oregon.	Present / ongoing	Deans of LAS and COE	Faculty development time

4-5. Develop a systematic and inclusive approach to improving the campus infrastructure.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to promote and support the faculty Academic Infrastructure Committee	Development of campus infrastructure	Present / ongoing	Division faculty from LAS and COE; WOU Administration	Faculty development time
Continue to promote and support the Natural Sciences and Math Technology Planning Committee	Development of NSM Division infrastructure	Present / ongoing	NSM Division faculty	Faculty development time

## 5. *Develop and promote a cooperative internal & external environment*

Enhance communication, collaboration and understanding among students, faculty, staff, administration, alumni, and local and global communities

### Directions

5-1. Utilize market research and campus-wide participation to develop a public relations plan to promote the goals of the university.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to promote campus wide public relations activities by contributing articles to WOU Magazine / WOU This Week, and other appropriate venues.	To spread the news about the quality of the Earth Science program at WOU	Present / ongoing	WOU Earth Science faculty, WOU Earth and Physical Science Dept., WOU service support	Faculty development time

5-2. Establish collaborative partnerships linking community and professional individuals with related campus units.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue involvement in outreach activities such as Luckiamute Watershed Council, Frontier Learning Network, and Oregon Junior Academy-JSHS-ISEF science fairs.	Community and K-12 outreach with science focus	Present / ongoing	Community Partners	Faculty development time, external and internal funding
Community science & mathematics outreach through Western Adventures in Math and Science	Enhance K-12 science & math opportunities for community; promote Division as a community partner.	2004-2006	WOU Division of Natural Sciences and Mathematics	DEP; S. Boomer NSF Grant

5-3. Serve as a resource to the surrounding communities, region, and state.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Support the WOU Environmental Science Institute as a resource and collaborative partner for surrounding communities, region, and state	To improve community outreach and support of natural resource initiatives in the state of Oregon.	Present / ongoing	Industry, community, and government partners	Faculty development time, laboratory facilities, internal and external support funds
Continue to contribute volunteer professional services to the community (e.g. GIS / mapping services to the Ash Creek Trail project in Independence; water quality monitoring on the Luckiamute Watershed)	Community outreach, public relations, student service learning opportunities	Present / ongoing	Industry, community, and government partners	Faculty development time, laboratory facilities, internal and external support funds

5-4. Create a working environment that fosters open communication and recognizes both individual and collective contributions.

<i>Activity</i>	<i>Outcomes</i>	<i>Timeline</i>	<i>Partners</i>	<i>Resources</i>
Continue to conduct regular meetings and retreats that include both Earth Science faculty and Earth System Science adjunct instructors	To foster an open and collaborative work environment	Present / ongoing		Faculty development time