

UW-Superior
Natural Sciences Credits
Program Differential Tuition Proposal – November 2009

Request: UW-Superior Student Government Association is asked to approve a differential tuition for undergraduate students at UW-Superior beginning the 2010-11 year. Undergraduate students taking a natural science lab course would be charged \$10.00 per credit of lab coursework in biology, geology, chemistry, physics, and GIS. The estimated annual income is projected at \$49,000. This differential tuition is proposed to be in addition to tuition cap amounts being considered by the legislature or UW System Administration. This differential tuition would replace existing special course fees and laboratory breakage fees being assessed.

Rationale: The Department of Natural Sciences offers a variety of science classes in support of the general education mission at UW-Superior. The department annually generates approximately 3,500 credit hours of general education coursework in environmental and laboratory science. In addition, the department generates over 2,400 credit hours of upper level classes for students with majors or minors in biology, broad field science, chemistry, earth science, GIS, and physics. The department attempts to develop meaningful laboratory experiences for students utilizing modern analytical equipment and incorporating field trips that explore local sites. As part of the campus' service learning initiative the department is also trying to get our students more involved with local environmental issues.

Over the past ten years, the costs of laboratory supplies and field trips have grown exponentially while the departmental budget has remained the same. The department annual operating budget is divided between faculty computer supplies (\$12,000), photocopying and office supplies (less than \$1,000 per faculty member), chemicals, biological specimens, glassware and other laboratory related items (\$24,000), and field trips (\$4,000.)

The department has been very fortunate to receive between \$10,000 and \$25,000 per year from laboratory modernization funds. However our requests for additional microscopes, laptop computers, software, chemical and physical data acquisition units, biological models, and field sampling equipment currently exceeds \$300,000. The department is not able to set aside funds for maintenance and repair of existing equipment.

The department of natural sciences relies heavily on student assistance and work study funds to hire students to prepare the labs, assist the instructor with lab activities, and to tutor students needing help. The department would like to provide increased funding so that more student assistants can be hired within the department. The department would also like to be able to fund supplies and equipment that our majors and minors need to complete hands-on research projects as part of the capstone experiences.

As the department annual expenses continue to grow and much of our scientific equipment reaches the end of its useful life, we must explore alternative ways to fund laboratory activities. The department has implemented lab fees for some of the coursework to cover the costs of field trips. However, special course fee policy is very restrictive in what may be funded; this differential proposal will eliminate those funding challenges. Special course fees also have not kept pace with the rising transportation costs of field trips. Faculty members are incorporating more field experience into their courses as our teaching styles change.

Proposal: The proposed differential tuition amount of \$10 per credit would be added to each credit of laboratory coursework in biology, geology, chemistry, physics, and GIS. If this differential tuition proposal is approved the existing laboratory fees and chemistry breakage fees would be eliminated. It is

expected that the differential fee would generate approximately \$49,000 based on 4,900 laboratory credit hours.

This funding would be allocated as follows:

Laboratory equipment maintenance and replacement	\$30,000
Field Trip expenses	\$5,000
Capstone research projects support	\$4,000
Natural Science student assistants	<u>\$10,000</u>
Total	\$49,000

Impact on students:

- All UWS students are required to take a minimum of four credits of science lab coursework. This proposal would raise their tuition costs approximately \$40 over the course of their academic program, but would most likely be offset by the elimination of special course fees.
- Science majors are required to have 34 science credits for their major, resulting in a differential cost of \$340 for biology or chemistry majors.
- Students with a 22-credit science minor would pay a total of \$220 under this proposal.
- Students with a comprehensive or broad field science major would pay approximately \$560 in additional fees under this proposal.
- While students taking science credits would be assessed this differential tuition fee, they would not be assessed the existing special course laboratory or breakage fees, offsetting the differential fees by up to \$200. The existing special course fee and breakage fee schedule is found in Attachment 1.

Summary:

Providing additional funding for equipment maintenance and replacement, student research support, science tutors and lab assistants would enhance the science learning experience for all students. Integrating more field experiences into the curriculum will allow students to more fully explore the science field. As laboratory equipment is upgraded, students would be able to experience state of the art instrumentation that they will experience in the workplace after graduation.

Attachment 1:
 Schedule of Natural Sciences Special Course Fees – November 2009

Subject Area	Catalogue #	Description	Amount
Biology	100	Environmental Science	\$10
	111	General Botany	\$5
	112	General Zoology	\$10
	115	Human Biology	\$5
	123	Concepts in Biology	\$13
	132	Principles of Biology	\$5
	260	Forestry	\$25
	270	Human Anatomy and Physiology	\$5
	309/509	Phycology and Mycology	\$25
	312	Biogeography	\$20
	315	Plant Physiology	\$15
	325	Plant Taxonomy	\$25
	330	Genetics	\$0
	335	Aquatic Entomology	\$20
	340/540	Ecology	\$10
	345/545	Population & Community Analysis	\$5
	350/550	Limnology	\$25
	355	General Microbiology	\$5
	360	Physical Processes and Soils	\$5
	365	Entomology	\$16
	367/567	Ornithology	\$25
	382/582	Ichthyology	\$15
	400/600	Animal Physiology	\$10
	420	Field Biology	\$25
	440	Cell Biology	\$5
	445	Lab Tech & Cell Molecular Biology	\$10
	465	Lab Techniques	\$25
	481/681	Aquaculture	\$10
	484/684	Fish Population Ecology	\$15
Geology	110	Physical Geology	\$10
	130	Environmental Geology	\$10
	170	Earth Science	\$8
	300	Watershed Hydrology	\$9
	360	Surficial Processes & Soils	\$10