

Response to GSC Guideline Questions for Conjoint Courses in Reference to Proposed Course,
ENTOM 460/560 & ENVR_SCI 460/560
Prepared by Allan Felsot

1. List the number of faculty in the degree granting area (dept/program area?)
Dept of Entomology: 18 total faculty (only 7 have teaching assignments)
School of the Environment: 32 total faculty, but only 22 associated with ENVR_SCI & NATRS academic programs (the remainder are GEOL faculty)
2. List the number of graduate courses listed on the books for the degree granting area (dept/program area?)
Dept of Entomology: 8 listed under ENTOM; 1 listed under IPM
School of the Environment: 11 listed under ENVR_SCI; 6 listed under NATRS
3. How many courses are currently listed as conjoint in the degree granting area (dept/program area?)
Dept of Entomology: 2
ENTOM 448/558 (Medical & Veterinary Entomology)
IPM 452/552 (Pesticides and the Environment)
School of the Environment (ENVR_SCI & NATRS listings):
ENVR_SCI 444/544 (Environmental Assessment)
ENVR_SCI 445/545 (Hazardous Waste Management)
ENVR_SCI 469/569 (Ecosystem Ecology & Global Change)
ENVR_SCI 486/586 (GIS Spatial Analysis)
NATRS 435/535 (Wildlife Ecology)
NATRS 450/550 (Conservation Biology)
NATRS 454/554 (Restoration Ecology)
NATRS 460/560 (Watershed Management)
4. How often are these conjoint courses taught?
ENTOM 448/558: Alternate Years
IPM 452/552: Annually
ENVR_SCI 444/544: Annually
ENVR_SCI 445/545: Annually
ENVR_SCI 469/569: Annually
ENVR_SCI 486/586: Alternate Years
NATRS 435/535: Annually
NATRS 450/550: Annually
NATRS 454/554: Annually
NATRS 460/560: Alternate Years

5. How many of these courses are designed as graduate courses with a few undergrads enrolled? (versus designed as undergraduate with a few graduate students).

This question is nearly impossible to answer because all of the courses have been listed for very long time spans and have involved different faculty in addition to being offered on three campuses. However, all courses are dominated by undergraduate student enrollment given the disproportionate number of each academic plan type. Nevertheless, all courses require assignments specifically oriented to the graduate students. Furthermore, many graduate students in these specialized courses are coming from more traditional undergrad majors, such

as biology, rather than from majors in environmental or natural resource sciences. Thus, the course design is oriented toward the subject matter, and given the applied nature of the subjects in ENTOM and the SoE, the material must be dynamic from year to year. Thus, I cannot give a specific number but rather offer a nuanced answer, which is likely closer to what is happening.

6. Over the past 3 years, what percentage of courses on Graduate degree programs of study in this degree granting area (dept/program area?) are conjoint courses?

ENTOM: ~25%

SoE (ENVR_SCI; NATRS): ~45%

7. Why is this particular course integral to the graduate program in this degree granting area (dept/program area?)

The proposed course “Biotechnology & the Environment” is specifically developed to address a contemporary issue with deployment of biotechnologies outside of factories. For example, a significant portion of the course is focused on use of genetically engineered crops for pest management and use of crops for production of bioproducts, including biofuels. The course is properly oriented toward graduate students because an examination of undergraduate course offerings on the WSU campus and elsewhere reveals a lack of courses in aspects of deployment of biotechnology and an examination of issues related to risk assessment and communication. Thus, given that a majority of graduate students entering graduate programs in entomology, environmental sciences, and natural resource sciences are likely to have more traditional degrees in biology, these students can be considered as naive about the proposed course subject matter as any undergraduate student. The course is especially relevant to entomology students given the pest management tools in the future will increasingly rely on biotechnological innovations.

The target students graduating with either a B.S., M.S., or PhD are more likely to work for a government regulatory agency, natural resource management agency, consulting firm, or business that deals with environmental issues than they are to work in academia. We are obligated, therefore, to offer courses to all students that deconstruct technologies and aid comprehension of their impacts on the environment. Furthermore, given the greater likelihood that our students at all degree levels will be associated with governmental agencies that have some regulatory authority then they are to be involved with academia, we should feel obligated to provide instruction on how environmental applications of biotechnologies are assessed. Finally, all students regardless of classification are increasingly facing voter initiatives regarding biotechnologies. Should we not feel obligated to at least instruct citizens using evidence-based information and help them critically review the myriad of viewpoints they are most likely to access? In short, the course is integral to all levels of degree aspirants because it is specialized information not covered in other academic courses and yet the subject technologies are already pervasively deployed across vast land areas.

8. How many overall students are in the degree area? (Data from OBIEE Reporting Query for Spring 2015)

Entomology: 31 graduate students (ENTOM is a graduate program)

SoE (Sum of Pullman, TC, Vancouver students enrolled in ENVR_SCI or NATRS):

MS: 53

PhD: 37

Undergrad: 255

Total SoE Enrollments: 345

9. Are there any department policies about the number of conjoint courses on a program of study?

Neither the Department of Entomology or the School of the Environment have written or traditional policies regarding conjoint course offerings.