

Crop and Soil Environmental Sciences'
DRAFT response to UCCLE's request for clarification of
a DRAFT plan for meeting guidelines to develop graduates' skill in
Discipline-Specific Spoken, Visual, and Written Communication

The Department of Crop and Soil Environmental Sciences offers the Bachelors of Science degree for two majors. This describes a ViEWS plan for the major in Crop and Soil Environmental Sciences (CSES). We separately describe a ViEWS plan for the major in Environmental Science (ENSC).

Within the CSES major, there are five approved options, and all CSES majors must enroll in at least one option to meet graduation requirements. In addition to 62 credit hours of general requirements (to include those for the University's Curriculum for Liberal Education), each option has at least 38 credit hours of coursework specific to the option. Option-specific courses come from within the Department and from other associated departments and majors on campus. The five options are:

- Agroecology
- Biotechnology and Genetics
- International Agriculture
- Soil-Environmental
- Turfgrass Management

The spoken, visual and written requirements are met through a communication across-the-major approach as well as by incorporating at least two writing-intensive courses. Students write, speak, and/or communicate with visual media and get to see such modes patterned in nearly every class in the major. Furthermore, the variety of assignments ensure that students graduating in CSES are proficient in writing and speaking to technical as well as popular audiences and in using visual media that are appropriate to their audiences.

Goals: Students who graduate in CSES will be able to:

- Communicate clearly and effectively in writing and by speaking to technical audiences and a variety of non-technical audiences (ranging from children to adults and from interested citizens to policy makers).
- Employ effective and appropriate visual communication techniques that complement their writing and speaking.
- Employ a wide variety of written and oral communication techniques (as well as accompanying visual communication tools) that are appropriate to their intended audiences.

Objectives: Upon completion of the Bachelors of Science degree in CSES, the student will be able to:

1. Describe and explain scientific principles and results of research in a variety of technical formats, including but not limited to, journal-quality manuscripts, technical reports, and reports of laboratory investigations.
2. Describe and explain scientific principles and results of research in a variety of non-technical formats, including but not limited to, executive briefs, newspaper articles, popular magazine articles, and opinion-editorials.
3. Effectively portray data in tabular and graphic formats to support both technical and non-technical publications.
4. Design and deliver effective presentations for both technical and non-technical audiences in either oral or poster format.
5. Effectively utilize graphics, photographs, and other visual media to support oral and poster presentations.

Implementation—Crop and Soil Environmental Sciences: Communication objectives in CSES will be met in the following suite of courses required in the major and/or by the College of Agriculture and Life Sciences, all of which have components that provide students significant opportunities to pattern and to practice visual, written, and spoken communication:

1. AAEC 1005 – Economics of Food and Fiber System (microeconomics)
2. AAEC 1006 – Economics of Food and Fiber System (macroeconomics)
3. COMM 2004 – Public Speaking
4. CSES 1004 – Intro to Crop and Soil Environmental Sciences (freshman year)
5. CSES 1054 – Intro to Crop and Soil Environmental Sciences Lab (freshman year)
6. CSES 2444 **or** 3444 – Agronomic Crops **or** World Crops and Cropping Systems
7. CSES 3604 – Fundamentals of Environmental Science
8. CSES 3114 – Soils
9. CSES 3124 – Soils Lab
10. CSES 4004 – Senior Seminar (Writing Intensive)
11. CSES 4214 – Soil Fertility and Management
12. ENGL 3764 **or** 3774 – Technical Writing **or** Business Writing (Writing Intensive)
13. STAT 2004 – Introductory Statistics

In addition to these major-wide requirements, some of the specific CSES options require other coursework in the Department of Crop and Soil Environmental Sciences. The following options include CSES coursework rich in visual, written, and/or spoken communication but not shown above:

- Agroecology
 - CSES 4344 – Crop Physiology and Ecology
 - CSES 4444 – Advanced Crop Management
- Soil-Environmental
 - CSES 4124 – Soil Survey and Taxonomy
 - CSES 4134 – Soil Genesis

- CSES 4164 – Environmental Microbiology
- Turfgrass Management
 - CSES 2564 – Turfgrass Management
 - CSES 356 4 – Golf and Sports Turf Management
 - CSES 4564 – Integrated Management of Turf Systems

Throughout this suite of courses, students write a wide variety of technical and non-technical articles, reviews of case studies, and analyses of scientific data to support hypothesis-based results. Written feedback is provided to the students for required assignments either directly on the submitted assignment or in an attached document. Students also make presentations (both technical and non-technical) in multiple classes, employing a variety of visual media. Presentations range from brief summaries of class projects to reports of laboratory scientific investigation to analyses of field data. Students use increasingly sophisticated analysis and graphical displays to support their writing and speaking as they progress through the curriculum. Both team and individual presentations are made.

Assessment:

We will assess outcomes associated with this Spoken, Visual, and Written Communication Requirement in our curricula via several mechanisms:

1. Graduating student exit interviews will specifically refer to the communication requirement.
2. Through the assessment procedures employed for the Department by the University through the Assessment Office.
3. Through periodic surveys of employers of our graduates. The surveys will ask employers to rate the performance of graduates of our program on all items related to the objectives listed above.
4. Via class-specific course evaluations that will include questions regarding the communications requirement.