

ENVR 981: Practicum in Environmental Sciences

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Overview. The practicum is a planned, supervised and evaluated practice experience. The student will carry out a meaningful environmental health-related task or project in a professional setting, under the supervision of a qualified Preceptor who is a practicing Public Health professional and is identified ahead of time. The practicum may be paid or unpaid. ENVR 981 may be taken for a variable number of hours (minimum 1 hour), depending on the scope and duration of the proposed practical experience. Each ESE faculty member will have a section identified for this course and may serve as instructor/Departmental Representative (see below). The student must register for ENVR 981 for at least one semester before graduation, and may register for more than one semester. The experience is:

- planned by the student, the Department Representative and the Preceptor;
- supervised by the Preceptor; and
- evaluated by the Department Representative, the Preceptor, and the student.

Learning Objectives. Students who complete the practicum will be able to:

- Apply classroom knowledge on effective actions and interventions to resolve real environmental health problems,
- Explain the role of their organization/agency in contributing to environmental health and public health solution,
- Demonstrate professionalism by working collaboratively and practicing effective time and project management,
- Demonstrate written communication skills related to environmental sciences and engineering issues within a public health context.

The Preceptor must be a qualified professional in a field relevant to public health. Most preceptors are expected to be external to the University but can also be a credentialed faculty or staff member (such as a Certified Industrial Hygienist).

Planning and Supervision. Planning for the practicum involves identifying an experience and developing, with the Faculty Advisor, a set of competencies to be achieved. When the Faculty Advisor or an acceptable substitute is not available, the Director of Graduate Studies or the faculty contact listed above will be designated to fill this role. Meet with the contact above if you wish to discuss whether your proposed project fits the guidelines for the practicum in ESE or if you wish to learn about organizations & preceptors with whom our students have previously worked.

The format of the practicum experience is flexible. The fundamental requirement is that the basic stipulations (planned, evaluated and supervised, in a Public Health context) be met. Placements may be on an ad hoc basis consistent with the student's own initiative, through professional contacts of the student's Faculty Advisor, or arranged through the offices of the Practicum Committee. Examples of appropriate experiences include:

- Service projects undertaken at the request of external organizations such as Health Departments or community groups. The possibility of this type of placement occurs regularly (but unpredictably) in response to outbreaks of environmentally -transmitted diseases (e.g., Hepatitis A, Norovirus) or local sanitation issues (e.g., air or water quality issues, solid or liquid waste disposal). A qualified Preceptor can usually be identified from among the Health Department staff or Community Organizers.
- Volunteer outreach projects under the auspices of organizations such as Engineers Without Borders (EWB), a volunteer organization that partners with communities to design, implement and maintain sustainable projects aimed at providing drinking water, sanitation, energy, and other necessities selected by the community. The UNC-Chapel Hill's Daniel A. Okun Chapter has current projects in Peru, Ecuador, Mexico and Moldova, and is providing technical support to the local Rogers-Eubanks Neighborhood Association on water and sanitation issues. Many of our students already participate in these activities. For every activity a local preceptor is de facto in place, and a Departmental Representative has been identified in advance by the Daniel A. Okun Chapter of EWB.
- Field experiences in on-site data collection. These may involve both an internal professional preceptor and an external preceptor. Examples of these include:
 - Occupational Hygiene. For example, sampling of airborne contaminants at workplace sites such as auto body shops or pesticide application areas.
 - Environmental sampling in the vicinity of concentrated animal feeding operations (CAFOs), which pose health problems in eastern North Carolina.
- Internships with agencies such as water and energy utilities, environmental consulting firms, Public Health and Environmental Health Departments, non-governmental organizations (NGOs), federal agencies (e.g., US Environmental Protection Agency, National Institute for Environmental Health Sciences, Centers for Disease Control and Prevention), or international agencies (e.g., World Health Organization). These include paid positions such as Student Contractor and competitive summer internships. The Preceptor would usually be the workplace supervisor.
- Participation in a Project-based Course to which an external professional contributes substantially.
- Public Health Practice (PHP) component of a student's master's technical report project. Placement would usually be arranged through the student's Faculty Advisor. Agencies such as those identified above under Internships may provide suitable environments.

Opportunities such as service projects, project-based courses, and internships will be advertised through the ESE Student Services Office and administered (i.e., participant selection, matching) through the Practicum Committee.

Field experiences and PHP research components will be arranged by the respective Faculty Advisor.

Documentation. The student shall keep a log of the hours dedicated to the practical experience that must include at least the following information: date, number of hours, and brief description of the tasks performed on each day. The log shall be signed by the student and the Preceptor, and submitted to the Department Representative and the ESE Student Services Office at the end of the semester. This document shall remain part of the student's file.

Evaluation. At the end of the practicum the student should turn in to the ESE Student Services Office an exit survey, adapted from current course evaluation forms. A 2-3 page paper in which the context, goals, accomplishments and impact of the practicum experience are succinctly and thoughtfully summarized should be submitted to the Department Representative and the Preceptor. This paper should, if appropriate, be incorporated into the section of the student's Technical Report in which the public health relevance and impact of the student's work is discussed. The student's committee is encouraged to pay special attention to this section when evaluating the student's Technical Report. Additional evaluation criteria may be established by each instructor and, if any, communicated to the students registering for that instructor's section of ENVR 981 at the beginning of the relevant semester. The Department Representative and the Preceptor in consultation award a grade for the course based, in part, on the paper and any additional evaluation criteria (see above).

Course Credit will be awarded for ENVR 981 based on the time and effort commitment on the part of the student. Forty-five (45) hours of active effort will be considered equivalent to one credit hour. Since the level of effort may not be predictable at the outset (particularly for service projects), the student should register for a conservatively low number of credits at the outset, and adjust registration in subsequent semesters as appropriate.

Completion of the practicum requirement is documented by the UNC School of Public Health Student Practicum Form, which includes: Proposed Title and Activities (200 words), List of Cross-cutting Competencies to be developed during the Practicum, and List of Discipline-specific Competencies to be developed during the Practicum.

The Practicum Form is available online at <http://www.sph.unc.edu/forms/practicum/> and http://www.sph.unc.edu/student_affairs/practicum/. This form is to be completed prior to the practicum experience (when the competencies to be achieved are being planned) and after the experience has ended. At this time the activities and competencies actually achieved, and the duration of the practicum, will be reported.