

**NR 5884 Watershed Systems Stewardship**  
Offered: Fall Semester

**INSTRUCTOR:** James Egenrieder, Ph.D., [jime@vt.edu](mailto:jime@vt.edu)

**REQUIRED TEXT:** Do NOT purchase any texts before the first class meeting; the instructor will recommend resources based on specific student interests and project focus.

**COURSE DESCRIPTION:**

This course was developed as an interdisciplinary course covering: watershed identification and mapping; watershed characteristics and evaluation; stormwater engineering; stream corridor restoration; water quality monitoring; native plants and animals; exotic and invasive species; public education; volunteer coordination and training; roles and activities for teachers and students; and advocacy training.

**COURSE REQUIREMENTS AND GRADING:**

Students will enjoy a great deal of ownership in addressing the scope of the assignments listed below. Assignments are designed to provide students with products that can be immediately implemented in their work or advocacy, and these products will be shared with all course participants for their use. Time at the end of some class meetings is available to work on course products with the help of the instructor and fellow students.

Evaluations will consist of some combination of the following:

- Watershed assessment
- Equipment research
- Watershed organization research
- Invasive plant research
- Dendrology (tree and woody plant ID and taxonomy)
- Watershed wiki or blog
- Reflective practice
- Watershed unit plan
- Lesson Plans
- Topic introduction

**COURSE TOPICS:**

The topics and sequence listed below do not reflected a suggested time allocation for each topic—topics may change based on class discussions.

- Watershed Identification
- Comparative Watershed Land Use Characteristics and Impacts
- Watershed Physical Structure and Scale
- Watershed Evaluation and Monitoring
- Stormwater Engineering and Management Plans
- Stream Corridor Restoration
- Wetlands
- Education
- Advocacy Training
- Overview of Existing Programs and Partnerships

SAMPLE