Date: February 28, 2011
Course Number: FOR 201
Course Title: Introduction to Watershed Hydrology

<table>
<thead>
<tr>
<th>New Course</th>
<th>OR</th>
<th>Changes in existing course (check all that apply):</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Prefix</td>
<td></td>
<td>☐ Description</td>
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<tr>
<td>☑ Number</td>
<td></td>
<td>☐ Course Format</td>
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<td>☑ Credits</td>
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<td>☐ Content</td>
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<td>☑ Title</td>
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<td>☐ Semester Offered</td>
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This course meets the General Education standards in the following knowledge and skills area (check all that apply):

- American History
- The Arts
- Basic Communication
- Humanities
- Mathematics
- Natural Sciences
- Other World Civilizations
- Social Sciences
- Western Civilization

Prequisites or co-requisite requirements:

- Prerequisites: [ ]
- Co-requisites: [ ]

Institutional Impact:

Anticipated Enrollment: 10 per semester

Technology and Classroom Resource Demands: Use of online software, currently using Adobe Connect

Computing Resources: See technology above

Library Resources: Students may access the online databases of the library resources for class activities

Transportation Requirements: NONE

Forest Properties or Field Practicum Facilities Required: NONE
Health and Safety Considerations:

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<th>Conditions or situations present in association with the course?</th>
<th>Yes / No</th>
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<tbody>
<tr>
<td>1. Will substances with any of the following properties be used during instruction: flammability, toxicity, corrosivity, reactivity, registered pesticide, legally controlled, or other characteristics with the potential to cause harm or injury?</td>
<td>No</td>
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<tr>
<td>2. Will any physical hazards be present during instruction? (e.g., machines that need safety guards; razor blades or syringes; compressed gases, etc.).</td>
<td>No</td>
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<tr>
<td>3. Will any biological hazards be present during instruction? (e.g., handling animals (rabies or hantavirus); cultures or stocks of infectious agents (fungal spores, viruses, bacteria, etc.).)</td>
<td>No</td>
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<tr>
<td>4. Will any radiation hazards be present during instruction? (e.g., radioisotopes, X-rays, ultraviolet rays, lasers, etc.).</td>
<td>No</td>
</tr>
<tr>
<td>5. Will any electrical equipment that, due to its design, location, or method of use, pose any threat to safety during instruction? (Give considerable thought to electrical use outdoors, or any potentially wet location.)</td>
<td>No</td>
</tr>
<tr>
<td>6. Will there be any personal safety issues related to the class? (e.g., due to time of day or location, at the end of any organized class exercise, will students be in danger of physical assault, etc.).</td>
<td>No</td>
</tr>
<tr>
<td>7. Will any students be driving official state or research sponsored land or water vehicles during any class or instructional exercise?</td>
<td>No</td>
</tr>
<tr>
<td>8. Will any type of personal protective equipment be necessary during class exercises? (e.g., hard-hats, eye/face protection, hearing protection, hand/foot protection, lab coat, visibility clothing, etc.)</td>
<td>No</td>
</tr>
</tbody>
</table>

If the answer was “Yes” to any of the HEALTH AND SAFETY questions, please explain:

CATALOG DESCRIPTION (Please provide using the precise format currently used in the ESF catalog, please do not exceed 500 characters):

One hour of online lecture per week. Introductory survey of the distribution of water throughout the atmosphere, biosphere, and the physical earth. Topics include major storages and flows of water including precipitation, evaporation, runoff, urban stormwater, and soil storage, as well as water budgets and watershed management. Spring, fall, summer.
DETAILED COURSE DESCRIPTION

COURSE: FOR 201 – Introduction to Watershed Hydrology
1 credit hour – spring, fall, summer semesters
1 hour online lecture per week
Prerequisite(s): none

SCOPE:

1. **Level of Instruction:**
   a. FOR 201 is an introductory elective course (200-level) offered through ESF Online

2. **Relation to curriculum or to other ESF or Syracuse University courses:**
   a. FOR 201 is an elective course offered through ESF Online to non-matriculated students and is open to all disciplines at ESF and S.U. on a space available basis.
   b. FOR 201 is an introductory course that aims to develop student interest in water resources. FOR 201 is related to other water courses at ESF, e.g., FOR 340 Watershed Hydrology and FOR 442 Watershed Ecology and Management as an introduction to water topics. It is not a replacement for these other concept-based, higher division courses.
   c. Shared resource requirements: none, a graduate offering is not planned

STUDENT LEARNING OUTCOMES:

After completing this course the student should be able to:

1. Describe the hydrologic cycle, and all major storages and flows within it.
2. Define and describe the term watershed, and why it is an important unit for water resources management.
3. Demonstrate ability to delineate a watershed by hand.
4. Describe all the abiotic and biotic functions of a watershed and why each is important to watershed managers.
5. Describe individual roles and responsibilities in watershed management
6. Describe the purpose of watershed management.
7. Demonstrate the ability to access data from governmental websites for precipitation and stream flow
8. Describe the current human alterations to each major storage and flow in the hydrologic cycle.

MAJOR CONCEPTS OR METHODOLOGIES:

The course presents an introduction to the distribution and movement of water throughout the Earth, as it interacts with the atmosphere, living organisms, and the physical earth. Through concise and thorough online lectures, discussions, modules utilizing educational and government websites, and scientific papers, participants will explore topics including water budgets and major storages and flows of water on the earth (precipitation, evaporation, runoff, urban stormwater, soil storage, etc.). This course will increase participant understanding of water in the environment. It will provide a foundation on which participants can better understand timely issues such as urban runoff generation, green infrastructure, rain gardens, and stream restoration.

CATALOG DESCRIPTION (Please provide using the precise format to be included in the ESF catalog, please do not exceed 50 words)

FOR 201. Introduction to Watershed Hydrology

One hour of online lecture per week. Introductory survey of the distribution of water throughout the atmosphere, biosphere, and the physical earth. Topics include major storages and flows of water including precipitation, evaporation, runoff, urban stormwater, and soil storage, as well as water budgets and watershed management. Spring, fall, summer.
Prerequisite(s): none

COURSE HISTORY:

This course has been taught through ESF Online three times, once in fall 2009, Spring 2010, and Summer 2010.

Last approved: never.