1. **Catalog Description:** (3 credits) Stormwater system design including: time of concentration, peak runoff rate, open-channel flow, gravity storm sewer, culvert, stormwater pumping, filtration systems, hydrograph generation, flood routing, site layout, site grading and permitting.

2. **Pre-requisites or Co-requisites:** CWR 4202 Hydraulics (Hydraulics can be a co-requisite with this class).

3. **Course Objectives:** Students will gain an in-depth understanding of the design, modeling, and permitting of urban stormwater systems.

4. **Instructor:**
   
   Dr. Mark A. Newman  
   Office location: 580A Weil Hall  
   Telephone: (352) 294-7813  
   E-mail address: mark.newman@essie.ufl.edu  
   Web site: http://www.essie.ufl.edu/~markn/  
   Office hours: Monday, Wednesday, Friday 11:45AM—12:35PM (or by appointment).  

   **Email communication** is highly encouraged as it allows information to be shared more readily with the entire class. The class email list is automatically generated based upon the class roll maintained by the Registrar’s Office.

5. **TA:** None

6. **Meeting Times:** Monday, Wednesday & Friday 4th Period (10:40 AM – 11:30 AM)

7. **Meeting Location:** Weil Hall, Room 270

8. **Course materials**  
   All Course Material including lecture packets, reading and assignments are provided on the UF e-Learning site http://elearning.ufl.edu/

   **Referenced Texts (these books are NOT required, but will be referenced frequently throughout the semester)**

   **Required permitting documents and technical publications (available online)**
Environmental Resource Permit Applicant’s Handbook, Volume I (General and Environmental) from St. Johns River Water Management District (SJRWMD)
https://www.sjrwmd.com/documents/permitting/#erp
Permit Information Manual (includes ERP Volume II) from St. Johns River Water Management District (SJRWMD)
https://www.sjrwmd.com/documents/permitting/#erp
   Available from United States Department of Agriculture, Natural Resources Conservation Service (NRCS)

Additional textbooks referenced in course notes include the following

9. Course Outline:
   Week 1 Course introduction / Precipitation
   Week 2 Precipitation and design storms
   Week 3 Site and basin delineation
   Week 4 Rainfall and runoff—estimating peak runoff/unit hydrographs
   Week 5 Stormwater conveyance and detention/retention
   Week 6 Stormwater routing
   Week 7 Regulations and Environmental Resource Permits (ERPs)
   Week 8 **Midterm Project**
   Week 9 Final Project Problem Statement / Sustainability and Low Impact Development (LID)
   Week 10 Design project
   Week 11 Design project
   Week 12 Design project
   Week 13 Design project
   Week 14 Design project
   Week 15 Design project
   Week 16 **Design Project Due**

10. Attendance and Expectations: There is no specific penalty for missing a class; however, students are responsible for the content of each lecture, which may or may not be contained in the course notes.
11. Grade Distribution:

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<tbody>
<tr>
<td>Homework/Quizzes</td>
<td>30%</td>
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<tr>
<td>Midterm Project</td>
<td>30%</td>
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<tr>
<td>Final Design Project</td>
<td>40%</td>
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**Note:** Undergraduate Students (CWR 4306) will complete **team design projects**. Graduate students (CGN 6905) will complete **individual design projects**.

12. Grading Scale:

<table>
<thead>
<tr>
<th>Final Average</th>
<th>Course Grade</th>
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<tbody>
<tr>
<td>94-100</td>
<td>A</td>
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<tr>
<td>90-93</td>
<td>A-</td>
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<td>87-89</td>
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<td>60-63</td>
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13. Make-up Exam Policy: Make-up exams are to be scheduled with the instructor.

14. Honesty Policy: All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action.

**UF Honor Code:**
http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/

**ASCE Code of Ethics:**
http://www.asce.org/code-of-ethics/

15. Accommodation for Students with Disabilities: Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

16. UF Counseling Services: Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

17. **Software Use:** All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.