Graduate Programs—NEW COURSE PROPOSAL

<table>
<thead>
<tr>
<th>DEPARTMENT NAME:</th>
<th>COLLEGE OF:</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOSCIENCES</td>
<td>SCIENCE</td>
</tr>
</tbody>
</table>

**Recommended Course Identification:**

<table>
<thead>
<tr>
<th>PREFIX</th>
<th>COURSE NUMBER</th>
<th>LAB CODE (L or C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLY</td>
<td>6825</td>
<td></td>
</tr>
</tbody>
</table>

*(TO OBTAIN A COURSE NUMBER, CONTACT ERUDOLPH@FAU.EDU)*

**Complete Course Title:**

METHODS IN HYDROGEOLOGY

**Credits:**

3

**Textbook Information:**

No textbook required. Supplementary readings will be made available on Blackboard.

**Grading (Select only one grading option):**

REGULAR   _x___   PASS/FAIL   _____   SATISFACTORY/UNSATISFACTORY   _____

**Course Description, No more than 3 lines:**

This course is designed to introduce students to practical aspects of hydrogeology, including project design, field methods, and data analysis.

**Prerequisites/Minimum Grade:**

Minimum grade of a C in GLY4822 or equivalent or permission of instructor

**Prerequisites, Corequisites & Registration Controls Shown Above Will Be Enforced For All Course Sections.**

**Minimum Qualifications Needed To Teach This Course:**

Other departments, colleges that might be affected by the new course must be consulted. List entities that have been consulted and attach written comments from each. *Civil and Environmental Engineering*

_Tara Root, troot@fau.edu, 561-297-3253_  
Faculty Contact, Email, Complete Phone Number

**Signatures**

Approved by:  
Department Chair: ______________________  
College Curriculum Chair: ______________________  
College Dean: ______________________  
UGPC Chair: ______________________  
Dean of the Graduate College: ______________________

Date: ______________________

**SUPPORTING MATERIALS**

Syllabus—must include all details as shown in the UGPC Guidelines.

Written Consent—required from all departments affected.

Go to: [http://graduate.fau.edu/gpc/](http://graduate.fau.edu/gpc/) to download this form and guidelines to fill out the form.

FAUnewCourseGrad—Revised January 2010
Email this form and syllabus to diamond@fau.edu and eqirjo@fau.edu one week before the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website by committee members prior to the meeting.
Course name: Methods in Hydrogeology

Course number: GLY6825

Pre-requisites: GLY4822-Hydrogeology or permission of instructor

Instructor: Dr. Tara L. Root

Office number: PS345

Telephone: (561)297-3253

E-mail: troot@fau.edu

Office hours: to be announced

Classroom: to be announced

Required text: There is no textbook required for this course. The below supplementary readings will be posted on Blackboard. A field book is required for this course. Information about purchasing field books will be provided on the first day of class.


**Bibliography:**


Course description and instructional objectives: This course is designed to introduce students to practical aspects of hydrogeology, including project design, field methods, and data analysis.

1) Students will develop a working knowledge of the methods and concepts of practical hydrogeology.
2) Students will develop observational skills, data collection skills, and data analysis skills.
3) Students will gain hands-on experience with field work and data manipulation.
Method of instruction: The class will include lectures, field exercises, field trips, laboratory exercises, and computer exercises.

Schedule including topics covered:

<table>
<thead>
<tr>
<th>Classroom Meetings</th>
<th>Field Sessions</th>
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<tbody>
<tr>
<td><strong>Week</strong></td>
<td><strong>Topic</strong></td>
</tr>
</tbody>
</table>
| 1 | Course introduction  
Review of hydro | | |
| 2 | Site reconnaissance  
Field notes  
Surface water - groundwater interaction | | |
| 3 | Surface water gaging | | |
| 4 | Sediment sampling techniques  
Sediment descriptions | Seepage meters  
Sediment sampling and analysis | |
| 5 | Grain size analysis  
K-estimation | | |
| 6 | Drilling techniques  
Well installation  
Hydrostratigraphic correlation | Drilling observation | |
| 7 | Borehole geophysics | Borehole logging observation | |
| 8 | Leveling  
Water level measurements | | |
| 9 | Water quality sampling and data analysis | Piezometer installation, water level measurements, leveling | |
| 10 | Water quality continued | | |
| 11 | Groundwater remediation | Water quality sampling | |
| 12 | Groundwater remediation continued | | |
| 13 | Pumping tests overview, design, data analysis | | |
| 14 | Pumping tests continued | | |
| 15 | Final exam | | |

Assessment procedures and dates and times of tests and quizzes:
Graded components of the course include
1) Field notebooks: 50 points (Due on the day of the final exam)
2) Six projects: 50 points each for a total of 300 points (Due Week 3, Week 6, Week 8, Week 10, Week 13, and Week 15)
3) Final exam: 50 points (Week 15)
**Policy on make-up test and quizzes:** Unless arrangements have been made with me prior to the due date, the score on all late assignments will be decreased by 20% for every day beyond the due date. Assignments turned in more than 5 days late will receive a score of zero. If you miss the final exam, you will receive a score of zero unless you have made prior arrangements with me or have a verifiable personal emergency.

**Grading criteria:**
Total points possible: 400

Letter grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
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<tbody>
<tr>
<td>A</td>
<td>372-400</td>
</tr>
<tr>
<td>A-</td>
<td>360-371</td>
</tr>
<tr>
<td>B+</td>
<td>348-359</td>
</tr>
<tr>
<td>B</td>
<td>332-347</td>
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<tr>
<td>B-</td>
<td>320-331</td>
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<td>C+</td>
<td>308-319</td>
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<tr>
<td>D</td>
<td>252-267</td>
</tr>
<tr>
<td>D-</td>
<td>240-251</td>
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<tr>
<td>F</td>
<td>less than 240</td>
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**Extra credit:** No extra credit will be given.

**Classroom etiquette:** No disruptive talking or disrespectful comments will be tolerated. Cell phones, beepers, watch alarms, etc. should be turned off prior to class.

**University “Students with disabilities” policy:** In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute course work must register with the Office for Students with Disabilities (OSD) -- in Boca Raton, SU 133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures.

**University “Honor code” statement:** Students at Florida Atlantic University are expected to maintain the highest ethical standards. Dishonesty is considered a serious breach of these ethical standards, because it interferes with the University mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. For further details see http://www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf, last accessed 10/8/10.
From: Pete Scarlatos (pscarlat@fau.edu)
To: troot@fau.edu;
Date: Mon, September 20, 2010 10:10:52 AM
Cc: ivy@fau.edu; croberts@fau.edu;
Subject: RE: New course proposals

Dr. Root,

After consultation with the CEGE faculty members, there is no conflict between our courses and those that you propose.

Good Luck,

Pete S.

**********************************************************************
Dr. Panagiotis (Pete) D. Scarlatos, Chair & Professor
Department of Civil, Environmental and Geomatics Engineering (CEGE)
College of Engineering and Computer Science
Florida Atlantic University
777 Glades Road, Engineering West (Bldg EG-36), Room 204
Boca Raton, Florida 33431-0991
Tel: 561-297-0466 (Office)
Tel: 561-699-2579 (i-phone)
Fax: 561-297-0493
E-mail: pscarlat@fau.edu
**********************************************************************

From: Tara Root [mailto:troot@fau.edu]
Sent: Friday, September 17, 2010 3:47 PM
To: scarlatos@civil.fau.edu
Cc: Russ Ivy; Charles Roberts
Subject: New course proposals

Dr. Scarlatos,
I am going through the process of getting two new hydrogeology-related courses approved by the university. Since your department has some hydro-related interests, I thought I should check with you about any potential conflicts. The syllabi for the two courses, Benchmark Developments in Hydrogeology and Methods in Hydrogeology, are attached. Please let me know if your department has any conflicts with us offering these courses. And, if there are no conflicts, would you please send me an e-mail to that effect, which I can include with the course approval paperwork?

Thanks,
Tara

Tara Root
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dx: (561)297-2745
http://www.geosciences.fau.edu/people/root.html