

Three Rivers Community College  
ENV K265: Fundamental Measurements and Applications  
Fall 2017  
Tentative Course Syllabus – subject to change

Lecture: Tuesday 5:30 pm – 6:20 pm, Room B210  
Lab: Tuesday 6:21 pm – 9:51 pm, Room B212

Instructor:

Bruce G Gregoire  
Office: Room B210/B212  
bgregoire@qvc.comnet.edu  
Office Hours: By appointment

Textbook:

Required readings on Blackboard or in handouts.

Materials:

Required: Topographic map – Norwich, CT, Scientific calculator, field book  
Recommended: USB-flash drive (minimum 2 GB), Waterproof field book, and a clear plastic ruler (mm/cm/in).

Learning Objectives:

This course will familiarize students with environmental analysis, instrumentation and sampling methods. Students will have hands-on training and experience with various sampling equipment and techniques. This course will prepare students for more advanced environmental courses utilizing measurements and quantitative approaches. Students completing this course will be able to:

1. Apply quantitative skills in environmental measurements, unit conversions and univariate statistics.
2. Collect and record field data.
3. Prepare laboratory reports.
4. Read maps and orient themselves in the field.
5. Sample and inventory flora and fauna.
6. Measure abiotic components of the environment, such as air, water, and energy.
7. Utilize computer software for the analysis of environmental data.

Grading:

Lab Assignments/Homework	50%
Midterm exam	25%
Comprehensive final	25%

Course Grading:

Final letter grades for the course generally mean the following percentage of points:

Letter grade	Percentage of points	Percentage range
A	95	93.3 - 96.7
A-	91.65	90.0 – 93.2
B+	88.3	86.7 – 89.9
B	85	83.3 – 86.6
B-	81.65	80.0 – 83.2
C+	78.3	76.7 – 79.9
C	75	73.3 – 76.6
C-	71.65	70.0 – 73.2
D+	68.3	66.7 – 69.9
D	65	63.3 – 66.6
D-	61.65	60.0 – 63.2
F	<60.0	< 60.0

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<i>Week</i>	<i>Date</i>	<i>Topic</i>	<i>Lab Topic</i>
1	Aug 29	Introduction to Excel, Units	Introduction, Lab Safety, Lab Format Lab 1: Unit conversions and significant figures
2	Sep 5	Sampling statistics Maps and Spatial Measurements	Lab 2: Pacing back and forth
3	19	Sampling	Lab 3: Map orienteering
4	26	Forest measurements/ Forest measurements and tools	Lab 4: Browse and M&M's of the woods
5	Oct 3	Biodiversity and habitat Measurements	Lab 5a: Forest measurements (Plot)
6	<b>Oct 10</b>	<b>Exam Review</b>	Lab 5b: Forest measurements (Point)
7	<b>17</b>	<b>Reading Day – No Classes</b>	<b>No Lab</b>
8	<b>24</b>	<b>2-Hour Mid-term Exam</b>	<b>No Lab</b>
9	31	NRCS Web Soil Survey	Lab 6: Habitat measurements Lab 7: TRCC Soil Mapping
10	Nov 7	Water quality/Urban stormwater/USLE	Lab 8a: TRCC Stormwater Tour Lab 8b: Rational Formula (CIA) & Universal Soil Loss Equation (USLE)
11	14	BMP's for stormwater management/Green roofs	Lab 9: Green Roofs as BMP's
12	21	Fisheries Sampling	Lab 10a: M & M Sampling Lab 10b: Fish Sampling
13	28	Water and watersheds	Lab 11a: Calibration of Discharge Lab 11b: Watershed Mapping
14	Dec 5	Hydrologic measurements	Lab 12a: Streamflow Lab 12b: Weir is the water
<b>15</b>	<b>12</b>	<b>Final Exam</b>	<b>Final Exam Review</b>

Laboratory/Field work:

Most labs will be outside in the field, rain or shine. Therefore, come prepared to work in rain, snow, and wet/muddy conditions with field appropriate clothing.

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Lab Reports:

Lab reports are due within one week of being assigned. Late reports will receive grade reductions as follows: 10% within one week late; 20% within one and two weeks late; No lab reports will be accepted greater than two weeks late. All lab reports must be typed, written in complete sentences using correct English and spelling. All data sheets and graphs will be constructed in a spreadsheet and a hard copy handed in. Electronic copies will not be accepted. Data sheets and graphs will be titled and labeled in standard scientific formats.

Lab reports, unless otherwise specified, should use the following general format:

All lab reports should be written in past tense (No “ I”, “We”, “John”, etc)

Title of Lab

Student name

Date

Introduction/objective:

Briefly describe the exercise and include any objectives (answer the “why is this being done?” question here).

Methods:

Describe the means used to accomplish the objectives in complete sentences , including the location, instruments used and enough information that someone could pick up your report and redo it at the same site using the same procedures. **Do not use bullet or list format.**

Results:

Results are a succinct text explaining what you found and generally include the following: tables, data sheets, figures, and answers to questions asked for in the assignment. All tables and figures must be mentioned in the text before presentation as a table or figure.

Conclusions:

Answer the “so what” question here and re-summarize key finding and conclusions

Literature Cited (as appropriate)

Appendices (as appropriate)

These may include copies of field data, conversions and calculations. Letter the appendices as A, B, etc. Figures and Tables in Appendices are numbered as Figure A1, A2, Table B2, etc.

Figures

Figure numbers and titles should be located below the figure.

Tables

Table numbers and titles should be located above the table. The title should be complete enough that the figure could drop on the floor and who ever picked it up would still know where it came from.

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Example lab report (see Blackboard Learn)

Field data book

Purpose: documentation for report, court case, hearings, etc.

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**Name:**

**Contact Info: Phone**

**Email:**

**Dates: Start \_\_\_\_\_ End \_\_\_\_\_**

**Book \_\_\_\_\_ of \_\_\_\_\_**

**Rules for Field Notebook:**

1. Leave two pages for table of contents
2. Number pages
3. Never erase; errors should be crossed out and correct values penciled in and initialed
4. No blank pages or large spaces unless filled with “This page/space purposely left blank” and date and initialed.
5. Do not rip out pages.

Each date. A new day typically begins on a new page. At the top of the page, on the left side give the date and names of those present (e.g. B. Gregoire, D. Bureau).

Include the start and end times, weather (i.e. clear, overcast, raining, etc.), field observations, and any other pertinent or unusual observation (i.e. numerous trees blown down in study site since last visit).

The US EPA administrative manual provides guidance on field notebooks.

<http://www2.epa.gov/sites/production/files/2015-03/documents/2105-p-02.pdf>

**Important Dates**

*Add/Drop:* The last day to drop and obtain partial tuition refund for this course is September 11, 2017.

*Withdrawal:* The last day to withdrawal from this course is December 11, 2017.

Religious Holidays:

**Sec. 10a-50. (Formerly Sec. 10-334g). Absence of students due to religious beliefs.** No person shall be expelled from or refused admission as a student to an institution of higher education for the reason

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that he is unable, because the tenets of his religion forbid secular activity on a particular day or days or at a particular time of day, to attend classes or to participate in any examination, study or work requirements on such particular day or days or at such time of day. Any student in an institution of higher education who is unable, because of such reason, to attend classes on a particular day or days or at a particular time of day shall be excused from any examination or any study or work assignments on such particular day or days or at such particular time of day. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school because of such reason an equivalent opportunity to make up any examination, study or work requirements which he has missed because of such absence on any particular day or days or at any particular time of day. No special fees of any kind shall be charged to the student for making available to such student such equivalent opportunity. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this section. For the purposes of this section, "institution of higher education" shall mean any of the schools comprising the state system of higher education, as defined in section 10a-1. (P.A. 75-367, S. 1.)

myCommNet Alert: is a system that sends text messages and emails to anyone signed up in the event of a campus emergency. Additionally, TRCC sends messages when the college is delayed or closed due to weather.

All students are encouraged to sign up for myCommNet Alert. A tutorial is available on the Educational Technology and Distance Learning Students page of the web site. This link should be shared with students.

[http://www.trcc.commmnet.edu/div\\_it/educationaltechnology/Tutorials/myCommNetAlert/MIR3.html](http://www.trcc.commmnet.edu/div_it/educationaltechnology/Tutorials/myCommNetAlert/MIR3.html)

## KEYS TO SUCCESS

### Readings:

To ensure success in the classroom and to take active participation in your learning, each assigned reading should be read prior to the week assigned. Reading the material ahead of time will allow you to gain a familiarity with the concepts prior to learning about the concept in class. This will increase your understanding and allow you to participate by asking questions on the material that you find complex or confusing.

### Attendance:

Although attendance is not mandatory, attendance is necessary to succeed in this course.

### Academic Dishonesty:

**Plagiarism means using someone else's statement word-for-word without quotation marks (even if you cite it) or using someone else's ideas, even if you paraphrase them, without proper attribution of credit through a citation.**

Student Code of Conduct: All students should be aware of the guidelines for the Student Code ([http://www.trcc.commmnet.edu/Div\\_StudentServices/StudentPrograms/PDF/TRCC-StudentHandbook.pdf](http://www.trcc.commmnet.edu/Div_StudentServices/StudentPrograms/PDF/TRCC-StudentHandbook.pdf))  
College Policies: Student Conduct and Discipline Policy, a portion of which is repeated below:

### **Section 3: Expectations for Student Conduct**

Consistent with the Student Conduct Philosophy set forth in Section 1 of this Policy, students are expected to:

*“2. Demonstrate academic integrity by not engaging in conduct that has as its intent or effect the false representation of a student’s academic performance, including but not limited to: cheating on an examination, collaborating with others in work to be presented, contrary to the stated rules of the course, plagiarizing, including the submission of others’ ideas or papers (whether purchased, borrowed or otherwise obtained) as one’s own, stealing or having unauthorized access to examination or course materials, falsifying records or laboratory or other data, submitting, if contrary to the rules of a course, work previously presented in another course, and knowingly assisting another student in any of the above, including an arrangement whereby any work, classroom performance, examination, or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.”*

**The penalty for plagiarism on Lab reports is a zero.**

**The penalty for cheating on a quiz or exam will be a zero on the affected assignment.**

#### Counseling and Student Development Services at TRCC:

If you have a question regarding a special learning need that may affect your progress in this course, please contact Student Services, Room A-119 (860-383-5217) as soon as possible. *Please note that I cannot provide special learning accommodations until I receive the necessary paperwork from the college’s Office of Counseling and Student Development Services. Accommodations cannot be provided retroactively.*

#### Available Support Services:

If you need additional assistance for this course, tutors, study skill workshops, and other course assistance can be arranged by contacting the Tutoring and Academic Success Centers, Room C117 (860-892-5713). If you have not yet used the library to obtain information and search scientific articles, you may contact the Library for more training and information (860-885-2346).

#### Class Etiquette:

The use of cell phones and personal handheld electronic devices during class detracts from the learning environment for both yourself and your classmates. Please place all cell phones on silent during the class. If you must answer a call, please leave the classroom quietly to do so. During exams and quizzes, please turn in your exam/quiz prior to leaving, as it will be considered complete.

Board of Regents for Higher Education and Connecticut State Colleges and Universities Policy Regarding Sexual Misconduct Reporting, Support Services and Processes Policy:

### **Public Act No. 14-11: An Act Concerning Sexual Assault, Stalking and Intimate Partner Violence on Campus:**

“The Board of Regents for Higher Education (BOR) in conjunction with the Connecticut State Colleges and Universities (CSCU) is committed to insuring that each member of every BOR governed

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college and university community has the opportunity to participate fully in the process of education free from acts of sexual misconduct, intimate partner violence and stalking.”

**Title IX Statement of Policy:**

“Title IX of the Education Amendments Act of 1972 protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination, including discrimination based on gender identity or failure to conform to stereotypical notions of masculinity or femininity. All students are protected by Title IX, regardless of their sex, sexual orientation, gender identity, part or full-time status, disability, race, or national origin, in all aspects of educational programs and activities.”

Please Report Student Incidents to: Edward A. Derr, Student Diversity and Title IX Coordinator  
Admissions Welcome Center \* Office A116  
574 New London Turnpike, Norwich CT 06360  
860.215.9255 \* EDerr@trcc.commnet.edu

**Digication:**

As a student you will maintain an online learning portfolio using a college-designed template in Digication. Through this electronic tool you will have the opportunity to monitor your own growth in college-wide learning. It may even help you determine a major that is best suited to you. You will be able to keep and maintain your learning portfolio after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the college experience for all. If your work is selected and reviewed for assessment purposes, it will remain anonymous and private. Digication provides a “place” where you will connect your learning from the classroom, college, and life in general. Sometimes when you review all of the work you have done and think about it, you end up learning something different and perhaps unexpected. Please review your course outlines to determine what assignments to upload into the TRCC Digication template and please post your own choices, as well. Have fun in learning!