Instructor Information
Laura Almstead, PhD
307 Jeffords Hall
(802) 656-2919
Laura.Almstead@UVM.edu
Office Hours: Wednesdays 5:30pm – 7:00pm
    Thursdays 11:30am – 1:00pm
    or by appointment (e-mail me to schedule a time)

Pre-Requisites
Honors College sophomore standing. An understanding of basic biology and chemistry concepts (high school level) is also expected.

Course Description
Today’s headlines are filled with science-focused stories that impact our everyday lives. Therefore, the ability to dig more deeply into the underlying scientific analyses and gather information that lets us make more informed decisions is invaluable. Together, we will explore current scientific findings from two perspectives, through news articles and scientific journal publications, with the overarching goal of developing the skills necessary to critically analyze the quality of both the news reporting and the science “behind” the story. The first part of the course will focus on building a foundation of knowledge required for our discussions. This includes addressing key questions such as: What constitutes science news?, Where do most people get their science-related news?, and What kinds of scientific stories are covered in the news? We will also engage in activities geared towards developing a solid understanding of the scientific process with a special emphasis on the basic elements of experimental design, assessing data, source validity, and how to effectively read scientific publications. In addition, we will put ourselves in the shoes of a science journalist to gain insight into how science-related news stories are written.

For the rest of the course, we will apply these foundation concepts to analyze case studies – sets of recently published science-focused news stories and associated scientific analyses – from a wide range of fields. Our two main questions will be 1) how well does the news report the science, and 2) how good is the science. Additionally, we will explore how societal perception can influence the way scientific findings are presented by the media, and in turn, how the media can shape the way science-related issues are perceived by the public. As a capstone to the course, you will select your own science-related news stories, and write a paper discussing how well the news articles reflect the scientific analyses and assessing the validity of conclusions drawn in the scientific publications. You will also have the opportunity to share your project with the class in an oral presentation. Importantly, throughout the course, our discussions and activities will allow you to build skills essential for becoming a thoughtful and effective researcher,
Learning Goals
1) Gain insight into the dynamic nature of science and the process through which we gather scientific knowledge.
2) Learn to assess the validity of sources.
3) Develop the skills required to effectively read scientific publications and critically analyze the findings described.
4) Gain confidence understanding and evaluating scientific analyses from a broad range of fields in order to make more informed decisions.
5) Develop and improve critical thinking and effective communication skills.
6) Practice and improve upon skills essential for becoming an independent researcher.

Required Course Materials
All readings and associated materials will be posted on BlackBoard. You are expected to have access (printed copies or electronic copies) to all readings/materials indicated for each class in the Course Schedule. Smart phones are NOT acceptable devices for accessing electronic versions of the course materials. If you do not have a laptop or tablet you can bring to class or the ability to print the materials, please let me know ASAP so that we can make other arrangements.

Classroom Expectations
Laptops and tablet devices used to access electronic versions of the course materials and/or take notes are welcomed. Phones and all other electronic devices must be turned OFF and kept out of sight. You are expected to be fully engaged in discussions and promote an atmosphere that welcomes and respects the contributions and opinions of others.

Assessment/Evaluation
Final letter grades will be determined based on the overall grade distribution for the class, but will not be more stringent than the standard cut offs. No extra credit will be offered.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>15%</td>
</tr>
<tr>
<td>Homework</td>
<td>55% (total)</td>
</tr>
<tr>
<td>Foundation Assignments (15%)</td>
<td></td>
</tr>
<tr>
<td>Case Study Article Responses (20%)</td>
<td></td>
</tr>
<tr>
<td>Case Study Analyses (20%)</td>
<td></td>
</tr>
<tr>
<td>Final Paper Portfolio (20%)</td>
<td></td>
</tr>
<tr>
<td>Final Presentation (10%)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Participation
A significant portion of this course will be spent discussing the news and journal articles we read as well as related issues. Attendance and active participation in our discussions is mandatory. To be fully engaged, it is essential that you arrive on time having thoroughly and thoughtfully read ALL of the required materials and completed any assignments that are due. As noted above, you must also have access to the relevant readings in class to refer to during our discussions. You are expected to volunteer and can expect to be called on
randomly. Active engagement in our discussions includes asking relevant questions and responding to the contributions of your peers. A participation grading rubric is posted on BlackBoard.

Each student will be allowed ONE missed class. After that, 5% will be deducted from your final participation score for each additional absence. If you know you will miss class due to a UVM sanctioned event or religious holiday, you must contact me at least two weeks in advance. Please note that you are still expected to submit your work on time. Extended illnesses and other emergencies verified by your Dean’s office will be handled on a case-by-case basis.

Homework
You will have an assignment due for virtually every class (see the Course Schedule for specific due dates). The goal of most assignments will be to prepare you for our in-class discussions. Expectations and rubrics for each assignment will be posted on BlackBoard in the folder with the readings for the class where they are due. Your final average for each category of assignment will be determined by the number of points you earn divided by the total points possible for that category. Brief descriptions of the assignments are provided below.

ALL assignments must be TYPED in Arial (size 11) or Times New Roman (size 12) font. Use one inch margins and 1.5 line spacing. Put your NAME, DATE, and the TITLE of the assignment at the top of the paper. If there are individual questions, please make sure that your answers are clearly labeled with the question number. Unless otherwise indicated, assignments must be submitted on BlackBoard as a Microsoft Word or PDF file. Assignments that are not properly formatted (e.g. handwritten) will be marked down 25%. Late assignments submitted within 24 hours of the due date will receive a 25% penalty, and assignments turned in within 48 hours after the deadline will be marked down 50%. If you believe you have extenuating circumstances that warrant an extension, you must contact me BEFORE the assignment is due. Emergencies will be handled on a case-by-case basis.

- **Foundation Assignments**: The goals of these assignments will be to prepare you for our class discussions and help you develop skills essential for evaluating science-related news stories and scientific articles. They will consist of a variety of activities including short response questions related to specific readings and brief reflection essays.

- **News and Science Article Responses**: For the news articles and scientific publications we discuss in our case studies, you will write short response papers addressing specific points, and generate lists of questions you have about the articles. Responses for most articles will also involve finding an additional relevant news story or scientific journal article.

- **Case Study Analyses**: For each case study, you’ll write a short essay comparing the information presented in the news and scientific articles. Your analysis will include an assessment of the accuracy of the news report(s) and the validity of the conclusions drawn by the researchers who performed the analysis(es), as well as a brief discussion of how your own and/or public opinion may have influenced your interpretations. For some case studies, you will also be asked to find a news report that presents a different interpretation of the same or similar findings, or to locate a scientific paper that presents contrasting results.

**Final Paper & Presentation**
To demonstrate the research and critical analysis skills developed through our explorations, you will carry out a more in-depth analysis of a self-selected news story and journal article pair. Your project will involve a written analysis (~6 pages) and an oral presentation (~10 minutes). In addition to the primary news report and journal article, you will also locate additional related news articles and scientific reports, and gather essential background information. The project will be structured so that you receive feedback at multiple points in the process. Please see the Final Project Guidelines document posted on BlackBoard and the Course Schedule for details regarding content and due dates. Presentation dates will be assigned by random drawing.
Below are links to various UVM policies you may find useful.

**Course Materials Property Rights:** Consistent with the University’s policy on intellectual property rights, it is the College of Agriculture and Life Science’s policy that teaching and curricular materials (including but not limited to classroom lectures, class notes, exams, handouts, and presentations) are the property of the instructor. Therefore, electronic recording and/or transmission of classes or class notes (i.e. selling or posting) is prohibited without the express written permission of the instructor. Such permission is to be considered unique to the needs of an individual student (e.g. ADA compliance), and not a license for permanent retention or electronic dissemination to others. For more information, please see the UVM policy on Intellectual Property, sections 2.1.3 and 2.4.1

**Academic Integrity:** The policy addresses plagiarism, fabrication, collusion, and cheating.  
[www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf](http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf)

**Rights and Responsibilities of Undergraduate Students:** Addresses multiple topics including academic conduct and religious holidays.  

**Religious Holidays:** Students have the right to practice the religion of their choice. Each semester students should submit in writing to their instructors by the end of the second full week of classes their documented religious holiday schedule for the semester. You will be permitted to make up work within a mutually agreed-upon time.

**Student Learning Accommodations:** In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus.  
A170 Living/Learning Center; 802-656-7753; [access@uvm.edu](mailto:access@uvm.edu); [www.uvm.edu/access](http://www.uvm.edu/access)  

**Grade Appeals:** If you would like to contest a grade, please follow the procedures outlined in this policy:  
[www.uvm.edu/~uvmppg/ppg/student/gradeappeals.pdf](http://www.uvm.edu/~uvmppg/ppg/student/gradeappeals.pdf)

**Grading:** Information on grading and GPA calculation.  

**Code of Student Rights and Responsibilities:**  
[www.uvm.edu/~uvmppg/ppg/student/studentcode.pdf](http://www.uvm.edu/~uvmppg/ppg/student/studentcode.pdf)

**Final exam policy:** The University final exam policy outlines expectations during final exams and explains timing and process of examination period.  