Course Number: ED 550.1270
Course Title: Science Camp - Photosynthesis
Instructor: Bill Ebner/ Amy Christopherson/
Semester Credit(s): 1  Total Cost for Credit: $60.00

Students must register and pay online by May 25, 2009 www.nnu.edu/cereg.

1. Educational Goals for the Course:
   - Provide a broad-based survey of biology, chemistry, physics, and mathematics to show the interconnectedness of knowledge.
   - Develop a discerning individual.
   - Practice critical thinking and problem solving skills.
   - Reinforce reading, writing, speaking, and quantitative skills.
   - Encourage and inspire life-long learning.
   - Encourage creativity.

2. Instructional Learning Objectives:
   a. The ability to understand scientific facts, concepts, theories and laws.
      i. Matter, energy, and the organization of living systems
      ii. Interdependence of organisms within the environment
   b. The ability to inquire using the scientific method for conducting research.
      i. Formulate testable hypotheses
      ii. Design and conduct scientific investigations
      iii. Use technology to enhance investigation of quantifiable results
      iv. Learn laboratory and field skills and techniques
   c. The ability to use critical thinking skills to identify problems, analyze solutions and to make informed decisions.
   d. The ability to accurately communicate scientific information.
   e. The ability to collaborate on scientific study.

3. Course Requirements:
   In Class:
   - Attend all preparatory class sessions and science camp, participate in all activities
   Out of Class:
   Students will put together an e-Portfolio to include the following:
   - Lesson plans
   - Daily journal
   - Learning resources
   - Outcomes assessments
   Submit to Bill Ebner BEbner@csi.edu 208-732-6808

4. Dates, Times and Location of Proposed Course:
   (1 Semester Credit Equals 15 Professor Contact Hours plus an additional 30 Hours Outside Work)
   Class Dates: June 9 - 10, 2009, 8:00am - 3:00pm; CSI; Science Camp: June 15, 16, 17, and 18, 2009, 8:00am to 4:00pm; Burley, Idaho.

5. Due Dates for Completion of Course Requirements: July 15, 2009

6. Learning Resources and Required Text: On-line books and course activities via Pearson Publishers Course Compass
   - See attached Appendix I for details

7. Evaluation Procedure: Pass/Fail
NNU Course Syllabus

CSI faculty members from Biology and Physical Science Departments will provide a dynamic, investigative, learning environment, in alignment with Idaho Content Standards (http://www.sde.idaho.gov/site/content_standards/), to promote a deep conceptual understanding of science, its exploration and application, for elementary teachers in a classroom setting. Emphasis will be placed on delivering content using innovative, scientific approaches based on hands-on delivery. The teachers taking the class will apply and refine communication of these concepts, in an interactive setting, with children who enroll in CSI’s summer Science Camp. CSI and its faculty will continue to provide academic and material support as teachers bring deeper scientific conceptual understanding to life in their own classrooms throughout the school year. The theme of Summer Science Camp 2009 will be photosynthesis with specific conceptual content revolving around the question: “What does it mean to be green?” Follow link for brochure: http://communityed.csi.edu/summerPrograms/scienceTechCamps.asp

1. Educational Goals
   a. Provide a broad-based survey of biology, chemistry, physics, and mathematics to show the interconnectedness of knowledge.
   b. Develop a discerning individual.
   c. Practice critical thinking and problem solving skills.
   d. Reinforce reading, writing, speaking, and quantitative skills.
   e. Encourage and inspire life-long learning.
   f. Encourage creativity.

2. Student Learning Objectives
   a. Learn and apply scientific concepts behind classroom demonstrations.
   b. Develop lesson plans that incorporate scientific concepts into existing reading activities
   c. Develop lesson plans that incorporate scientific concepts that are Idaho Content Standard, grade level, specific.
   d. Create, develop, implement, and refine original experiments that provide grade level, dynamic, student driven, investigation of science concepts.
   e. Implement all of the above into a weeklong, fun, educational, summer science camp for elementary age kids.
   f. Mentor and direct interns (CSI Education Department pre-service teachers).
   g. Provide reflective commentary on activities and experiments to facilitate future applications and possible refinements.
   h. Catalog activities, revise, and update Summer Science Camp website.
   i. Remain active in the Discussion Board on the Summer Science Camp website
      i. Mentor a teacher in your school
      ii. Become a part of the resource network to assist others
      iii. Plan future Science Camp themes and activities
      iv. Advise and recruit interns

3. Anticipated Student Competencies
   a. The ability to understand scientific facts, concepts, theories and laws.
      i. Matter, energy, and the organization of living systems
      ii. Interdependence of organisms within the environment
   b. The ability to inquire using the scientific method for conducting research.
      i. formulate testable hypotheses
      ii. design and conduct scientific investigations
      iii. use technology to enhance investigation of quantifiable results
      iv. learn laboratory and field skills and techniques
   c. The ability to use critical thinking skills to identify problems, analyze solutions and to make informed decisions.
Professional Development

d. The ability to accurately communicate scientific information.
e. The ability to collaborate on scientific study.

4. Due Dates
   b. Orientation: 5/20/09; 4:00 to 6:00pm, Evergreen A15, CSI.
   c. Class Dates: June 9 – 10, 2009; 8:00am to 3:00pm, CSI.
   d. Science Camp: June 15 – 18, 2009; 8:00am to 4:00pm, Burley, Idaho

5. Learning Resources
   a. On-line books and course activities via Pearson Publishers CourseCompass
      i. See Appendix I for details

6. Evaluation Procedures
   a. Students will put together an e-Portfolio to include the following:
      i. Lesson plans
      ii. Daily journal
      iii. Learning resources
      iv. Outcomes assessments

Link to more info on e-Portfolio

Appendix I

Biology: Concepts and Connections, 6/E
Neil A. Campbell, University of California, Riverside
Jane B. Reece, Berkeley, California
Martha R. Taylor, Cornell University
Eric J. Simon, New England College
Jean L. Dickey, Clemson University
ISBN-10: 0321489845
Publisher: Benjamin Cummings
Copyright: 2009
Format: Cloth; 928 pp
Published: 02/18/2008

Suggested retail price: $150.00
Buy from myPearsonStore

http://www.pearsonhighered.com/educator/academic/product/0,3110,0321489845,00.html
Screen clipping taken: 3/16/2009, 4:14 PM
Appendix I Continued

**Introductory Chemistry, 3/E**

*Nivaldo J. Tro, Westmont College*

ISBN-10: 0136003826  
Publisher: Prentice Hall  
Copyright: 2009  
Format: Cloth; 848 pp  
Published: 01/07/2008  

Suggested retail price: $135.80  
[Buy from myPearsonStore](http://www.pearsonhighered.com/educator/academic/product/0,3110,0136003826,00.html)

**Conceptual Physical Science Explorations, 2/E**

*Paul G. Hewitt, City College of San Francisco*  
*John A Suchocki, St. Michael's College*  
*Leslie A. Hewitt*

ISBN-10: 0321567919  
Publisher: Addison-Wesley  
Copyright: 2010  
Format: Paper, 864 pp  
Published: 01/25/2009  

Suggested retail price: $110.67  
[Buy from myPearsonStore](http://www.pearsonhighered.com/educator/academic/product/0,3110,0321567919,00.html)
Professional Development

Developmental Mathematics: Basic Mathematics and Algebra, 2/E
Margaret L. Lial, American River College
John Hornsby, University of New Orleans
Terry McGinnis
Stanley A. Salzman, American River College
Diana L. Hestwood, Minneapolis Community and Technical College
ISBN-10: 0321599208
Publisher: Addison-Wesley
Copyright: 2010
Format: Paper, 1368 pp
Published: 02/04/2009

Suggested retail price: $149.33
Buy from myPearsonStore

Pearson - Developmental Mathematics: Basic Mathematics and Algebra, 2/E
http://www.pearsonhighered.com/educator/academic/product/0,3110,0321599209,00.html
Screen clipping taken: 3/16/2009, 4:47 PM

Electronic Portfolios: Students, Teachers, and Life Long Learners
http://eduscapes.com/tap/topic82.htm
Screen clipping taken: 3/16/2009, 5:07 PM