ECI 306 – Science in the Elementary School
Fall, 2010

Course and Instructor Information
Instructor: Jeff Bloom Office: EEB 143 Phone: 523-0665 Email: jeff.bloom@nau.edu
Office Hours: M 1:00–2:30 pm; W 12:45–3:45; Th 2:15–3:45 Class Times: TTh 11:10–12:25 & TTh 12:45–2:00
Course Website: http://jan.ucc.nau.edu/jwb2/eci306 Exploring Science Site: http://elsci.coe.nau.edu
Exploring Science Wiki: http://exploringsciencewiki.wikidot.com (for posting projects and reflections)

Course Description
This course is designed to help you become a great science teacher. The course will not require students to memorize isolated scientific facts nor will it focus solely on content.

Science is a process by which a body of knowledge is constructed that enables people to develop explanations about the natural world. It will be your responsibility, as a teacher, to help your students acquire the process skills with which they can develop their own explanations.

The current national and state emphases in teaching science in elementary school involve teaching science through inquiry. In order to address this emphasis, this course will focus on engaging in inquiry processes and examining how these processes can be facilitated with children. Related topics may include (a) how children think and learn in science; (b) how to facilitate and manage children’s discourse; (c) how to create a classroom community of young inquirers; (d) how to assess children’s engagement in inquiry, learning, and discourse; (e) how to plan for the uncertainty of teaching through inquiry (i.e., how to plan so that you can follow the interests and questions of children); (f) how the nature of science can impact on how we teach and create conducive environments for inquiry; and (g) how teachers thinking affects the quality of learning for understanding.

Course Goals and Objectives
Abbreviations used in this section:

<table>
<thead>
<tr>
<th>NSES</th>
<th>National Science Education Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPDTS</td>
<td>Standards for Professional Development for Teachers of Science</td>
</tr>
<tr>
<td>SCS</td>
<td>Science Content Standards</td>
</tr>
<tr>
<td>STS</td>
<td>Science Teaching Standards</td>
</tr>
<tr>
<td>NBPTS</td>
<td>National Board for Professional Teaching Standards</td>
</tr>
<tr>
<td>P1</td>
<td>Teachers Are Committed to Students and Their Learning</td>
</tr>
<tr>
<td>P2</td>
<td>Teachers Know the Subjects They Teach and How to Teach Those Subjects to Students</td>
</tr>
<tr>
<td>P3</td>
<td>Teachers Are Responsible for Managing and Monitoring Student Learning</td>
</tr>
<tr>
<td>P4</td>
<td>Teachers Think Systematically About Their Practice and Learn From Experience</td>
</tr>
<tr>
<td>P5</td>
<td>Teachers Are Members of Learning Communities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASS</th>
<th>Arizona Science Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSS</td>
<td>Rationale for Science Standards</td>
</tr>
<tr>
<td>SAI</td>
<td>Science as Inquiry</td>
</tr>
<tr>
<td>HNS</td>
<td>History and Nature of Science</td>
</tr>
<tr>
<td>PSPST</td>
<td>Personal &amp; Social Perspective in Science &amp; Technology</td>
</tr>
</tbody>
</table>

Students in ECI 306 will demonstrate their understanding of:

1. **How children think and learn in science:**
   - NSES–SPDTS/A/B–STS/A/B; ASS–RSS; NBPTS–P1/P3
     - How children individually and socially construct understandings of science.
     - How to develop and use scientific concepts, principles, and theories.
     - How children draw on a variety of different experiences, ways of thinking, and subject matter areas to make sense of scientific phenomena.
     - How children use categorization strategies, multiple styles and propensities, stories, and other approaches to construct conceptual understandings.
     - How to recognize, generate, and evaluate alternative and plausible explanations, models, and other knowledge constructs.
     - How to think critically and logically to develop understandings of the relationships between evidence, predictions, and alternative explanations.

2. **How to facilitate children’s discourse:**
   - NSES–SPDTS/B–STS/B/E; ASS–RSS–SAI–HNS–PSPST; NBPTS–P1/P2/P3
     - How to develop the social skills necessary for engagement in substantive discussions and arguments about specific topics and issues (e.g., recognizing when a speaker has the “floor,” recognizing when a speaker is finished talking, attacking knowledge claims and not attacking the person, listening to and respecting another person’s point of view, etc.).
     - How to generate topics, problems, and issues that engage children in talking science.
     - How to recognize student knowledge claims as opportunities to engage in science talk.
3. How to do and teach through inquiry (i.e., use a variety of different scientific methods):

- How to generate and identify questions that can be answered through scientific investigations.
- How to design and conduct observational and experimental scientific investigations.
- How to use appropriate tools and techniques to gather, analyze, and interpret data.
- How to develop descriptions, explanations, predictions, and models based on evidence.
- How to generate and evaluate multiple, alternative explanations.
- How to communicate the knowledge constructed through inquiry through a variety of different media and approaches.

4. How to create a classroom community of young inquirers:

- How to involve children in democratic processes within the classroom.
- How to provide opportunities for children to develop a sense of ownership and control over the classroom community.
- How to create a caring, respectful, and intellectually stimulating classroom environment that implicitly and explicitly communicates consistent messages about such expectations.

5. How to assess children’s engagement in inquiry, learning, and discourse:

- How to develop and use a variety of different approaches to assessing children’s inquiry, learning, discourse, engagement, and other aspects of student participation in the classroom.
- How to use assessment approaches: (a) to plan instruction; (b) to continually monitor the status of learning, conceptual understandings, instruction and participation; (c) to develop a summative evaluation; and (d) to improve one’s practice.

6. How to plan for the uncertainty of teaching through inquiry (i.e., how to plan in ways that build upon and explore the interests and questions of children):

- How to plan for opportunities to develop understandings and skills across all curricular areas.
- How to plan in ways that address cross-curricular goals and objectives.
- How to plan curriculum & instruction to raise expectations beyond state & national standards.
- How to plan instruction that is relevant and meaningful.
- How to develop clusters and sequences of activities that help children construct complex conceptual understandings.
- How to develop activities that challenge children’s misconceptions.

7. How the nature of science can impact on how we teach and create conducive environments for inquiry:

- How science works as a socially mediated process of developing understandings of our physical and biological world.
- How science has affected and contributed to society and how society and politics affect science.
- How the notion of a community of scientists can be used to create classroom communities of young scientists.

8. How teachers’ thinking affects the quality of learning for understanding:

- How to think and reflect critically on one’s own learning and teaching.
- How to reflect in and on practice.
- How to utilize continuous assessment of children’s learning, thinking, and engagement in order to adjust, change, and refine instructional approaches and one’s practice.

Course Expectations

Students in ECI 306 are expected to:
1. Actively participate and engage in all classroom activities and discussions.
2. Complete all reading assignments.
3. Read beyond what is required.
4. Think critically and analytically about all topics and activities.
5. Work diligently on all assignments and activities.
6. Demonstrate a passion for learning, teaching, and working with children.
7. Take on the attitude and intentions of professionals.
8. Work both independently and cooperatively, and take initiative.
Course Structure and Approach
Models for Teaching and Learning

• Participating in class discussions
• Developing and participating in individual and small-group activities and presentations
• Engaging self and others in inquiry
• Working with children
• Reading required text, articles, and outside readings
• Using of a variety of technological tools
• Completing in-class activities (which may extend into work outside of class time)
• Completing projects and assignments
• Planning for and bringing in guest speakers
• Planning and implementing field studies
• Integrating mathematics, language arts, and other content areas

Course Policies

1. Regular attendance is expected. Points will be deducted from the final grade average for unexcused or work not made up for excused absences. Tardiness and leaving early will be deducted from final grade average. The number of points deducted and what accounts for excused absences beyond University Policy are at the discretion of the instructor.

2. If you must be absent, arrange for another student to pick up handouts for you. You are responsible for getting class notes, announcements, etc. from another student and for making up any missed work.

3. You must take the exam at the regularly scheduled time. It is at the discretion of the instructor to allow for and/or make alternative arrangements, if you are unable to take the exam at the regularly scheduled time.

4. The instructor may require that all assignments be typed or completed on a word processor. Writing errors, such as spelling, punctuation, grammatical errors, etc., will be taken into consideration and will lower the grade. All assignments should be professional in appearance, such as what you would submit to a principal or parent.

5. Students are permitted and encouraged to proofread each others’ assignments.

6. Assignments are occasionally lost. Make a copy of every assignment before you submit it to the instructor.

7. Assignments should be submitted on the due date to receive full credit (at discretion of instructor). Any assignment may be turned in earlier than the due date.

8. At the discretion of the instructor, assignments may be redone. Additional assignments may not be done for extra credit.

9. Assignments submitted as a requirement for another class may not be submitted for credit in this class unless prior written consent is acquired. All assignments should be the original work of the student completed for this class. Plagiarism or duplicate submissions may result in an “F” in the course.

10. Plagiarism is considered a willful act when a person knowingly uses the work of others and attempts to present it as his/her own. Obviously, the submission of such work cannot be permitted. Academic dishonesty includes cheating on tests or lying about the work involved in class. If an individual engages in these activities, the instructor reserves the right to use all appropriate measures at his or her disposal to correct the situation. The policy in the NAU Student Handbook may be applied.

Readings and Materials

Required Texts and Materials:

Arizona Science Standards. AVAILABLE on-line.

* See later in the syllabus and for a list of other readings. *
Course Requirements

Class attendance and participation policy. Since the most significant opportunities to learn and grow as a professional will occur through participation in class activities, attendance is of great importance. Participation is defined as respectful, relevant, and consistent contribution in a manner appropriate for a teacher. Points are deducted for unexcused absences. Points can be deducted for excused absences (see University Policy), if the student does not make up the work missed. Tardiness and leaving class early also may result in a deduction of points.

Reading assignments: You are expected to read the assigned text and other materials prior to the class session on each topic. Lecture and discussion material will not necessarily duplicate the text. You are encouraged to read beyond the required material.

Computer requirement: One of the requirements of this class is that you demonstrate basic computer literacy. Most assignments are to be completed on the computer and submitted electronically. This requirement is automatically fulfilled if you have taken or are taking ECI 447.

Assignments/Activities: The assignments and activities in this course address the development of expertise in the following areas: (a) science processes involved in observational and experimental inquiry, (b) pedagogical knowledge, (c) pedagogical content knowledge, (d) nature of science, (e) children’s learning, (f) critical and reflective thinking, (g) assessment for identifying and challenging children’s misconceptions, (h) planning and implementation, and (i) issues facing science and social studies education.

✦ Most assignments can be submitted electronically.
✦ Use of any outside references (including websites) should be cited according to APA Style. Failure to do so could reduce your grade or even result in a failure for the assignment, if the omission is deemed to be cheating.
✦ Any cheating, such as extensive use of outside references without citation, or any evidence that an assignment was not completed as described in the syllabus or in class will result in at least of failure on the assignment.
✦ Be sure that all assignments have your name at the top of the first page, along with the name of the assignment.
✦ From time to time, assignments may be lost or misplaced. **KEEP a copy** (preferably an electronic copy) of all assignments (for hand-written assignments, make a photocopy to keep in your records). In addition, it is highly recommended that you turn in a CD with copies of all assignments, including, for those assignments that have been graded and returned, a scan of the page with the grade on it, at the end of the semester. A CD burner and scanner are available in the Science and Math Room.

**Assignments, Activities, & Other Gradable Aspects of Course**

*** SEE Class Schedule near the end of the Syllabus for Readings and their Due Dates ***

NOTE: It is highly recommended that you use the “Patterns Project,” “Unit Project/TaskStream,” and “Critical Analytical Reflection” projects to develop one topic more thoroughly. In other words, the same topic should be used to develop each of these assignments.

SEE SEPARATE DESCRIPTIONS OF INDIVIDUAL ASSIGNMENTS DOCUMENTS for detailed information on the requirements for each assignment.

- Assignments printed on paper should be **stapled in upper left hand corner** - NO binders, plastic covers, etc.
- Journals should be in spiral notebooks.
- SEE Separate “Assignments Description” Document

Primary Assignments:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Analysis Cards</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Lottery Task</td>
<td>15%</td>
<td>09/23/2010</td>
</tr>
<tr>
<td>Patterns Project</td>
<td>15%</td>
<td>11/02/2010</td>
</tr>
<tr>
<td>Final Project (TaskStream)</td>
<td>35%</td>
<td>11/16/2010</td>
</tr>
<tr>
<td>Moon Study</td>
<td>15%</td>
<td>10/19/2010</td>
</tr>
</tbody>
</table>

Components that can Positively or Negatively Affect Grade

(added or subtracted from final average -- note that the final average is on a 12 point scale):
Writing Proficiency (errors are subtracted) - 0.1 @ error
Absences (after 2) - 1.0 @ absence
Participation and Professionalism (SEE COE Dispositions) + 3.0 to - 6.0
Additional Activities (you can do up to 3 pre-approved activities) 0.5 @ (max. 1.5)

Evaluation Methods

Grades range from A+ (12 points) to F (0 points). Final grades are computed as a weighted average of the 7 primary assignments.

**Grading Scale:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>12</td>
</tr>
<tr>
<td>A</td>
<td>11</td>
</tr>
<tr>
<td>A-</td>
<td>10</td>
</tr>
<tr>
<td>B+</td>
<td>9</td>
</tr>
<tr>
<td>B</td>
<td>8</td>
</tr>
<tr>
<td>B-</td>
<td>7</td>
</tr>
<tr>
<td>C+</td>
<td>6</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
</tr>
<tr>
<td>C-</td>
<td>4</td>
</tr>
<tr>
<td>D+</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
</tr>
<tr>
<td>D-</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
</tbody>
</table>

Criteria and Explanation of Grades

**A**
- Excellent work.
  - All written work and presentations are well thought out, thorough, and complete.
  - Considerable evidence of critical, original, and/or creative thinking with sound rationales is present in all work and classroom participation.
  - Depth of understanding is highly evident.
  - Student participation and engagement is respectful and relevant, and the student consistently makes valuable contributions to investigations and discussions in the classroom and beyond.
  - Effort is well-beyond basic expectations.
  - Consistently scores at the highest levels on formative and summative assessments.

**B**
- Good to very good work.
  - Written work and presentations are generally well thought out, thorough, complete, and of high quality.
  - Thinking and understandings exceed basic expectations.
  - Students put in substantial effort during classroom activities and in completing assignments.
  - Students score nearly all of the time at the high to highest levels on formative and summative assessments.

**C**
- Satisfactory Work
  - Written work and presentations range from generally well thought out, thorough, complete, and of high quality to needing significant editing, re-thinking, re-structuring, and re-submission for final assessment; inconsistent quality.
  - Thinking and understandings are consistent with basic expectations.
  - Students put in sufficient effort during classroom activities and in completing assignments.
  - Students score nearly all of the time at average levels on formative and summative assessments.

**D**
- Unsatisfactory Work
  - Written work and presentations need significant editing, re-thinking, re-structuring, and re-submission for final assessment; consistently poor quality.
  - Thinking and understandings are generally below basic expectations.
  - Students put in little effort during classroom activities and in completing assignments.
  - Students score nearly all of the time at below average levels on formative and summative assessments.

**F**
- Unacceptable work.
  - Generally unprepared for class.
  - Low class attendance and participation.
  - Little or no effort demonstrated.
  - Assignments are incomplete or never turned in
  - Thinking is minimal with regard to classroom concepts and procedures.
  - Insufficient conceptual understanding of content and/or pedagogy.

Basic Criteria:

1) Participation and attendance
Participation as might be expected of professionals who are engaged, motivated, curious, and active learners and inquirers is expected from all students. This course is based on theoretical frameworks that see learning as an active social process. Therefore, attendance and participation is of the utmost importance. Grades will be affected by attendance, punctuality, and participation. Attendance: all students can miss the equivalent of one week of class with no penalty (except for the Field Study); 10 points will be deducted from the final grade for each absence exceeding one; all excused absences (see university policy) MUST be made up. For make-up assignments, the student is responsible for finding out what work was missed; the student and instructor will negotiate an appropriate make-up assignment; and the student must complete and turn in the “make-up assignment contract.” If a make-up assignment is not completed, the student will not receive credit for an excused absence.

2) **Written communication**
1 point will be subtracted from the grade for each writing error or other problem with writing, including spelling, grammar, sentence structure, punctuation, awkwardness of writing, lack of clarity or organization, etc. A maximum of 20 points can be deducted.

3) **Course assignments**
All assignments must demonstrate one’s developing professionalism. See “Criteria and Explanation of Grades” (discussed previously) for a description of what is expected.
- All written assignments must be completed on a word processor, unless otherwise indicated.
- Always put your name on first page, along with the title of the assignment.
- Use 12-point font and double-spacing.
- Submit electronically by attaching document to an email and send to jeff.bloom@nau.edu.
- Written portion of final project should be turned in as a hard copy on paper and as a Microsoft Word email attachment. The best projects will be put on our science teaching web site.
- Most important qualities for these assignments include: (a) evidence of high levels of creative and critical thinking, (b) evidence of curiosity and inquiry skills, (c) evidence of diligent effort, and (d) high quality writing and communication.
- See previous information on grading.

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**Tentative Class Schedule**

**Abbreviations Used for Reading Assignments:**
- **CCCYS** = textbook (*Creating a Classroom Community of Young Scientists*)
- **RU = science content book* (The Really Useful Elementary Science Book)***
- **NSES** = National Science Education Standards
- **ASS** = Arizona Science Standards
- **V** = available on the Vista class page

**Absolute deadline for all assignments is December 10, 2010.**

<table>
<thead>
<tr>
<th>Wk</th>
<th>Dates</th>
<th>Module(s)</th>
<th>Activities</th>
<th>Readings DUE</th>
<th>Assignments DUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aug. 31</td>
<td>Introduction&lt;br&gt; The Profession</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sept. 2</td>
<td>Inquiry—Part I</td>
<td></td>
<td>• CCCYS – Chs 1 &amp; 10&lt;br&gt; • Gen. Reading Guide (OL)&lt;br&gt; • Speed Reading Guide (OL)&lt;br&gt; • Assumption &amp; Orientations (OL)&lt;br&gt; • Banned Words (OL)&lt;br&gt; • Hawkins—Messing About… (external site) &lt;br&gt; • Crit. Analysis Card #1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sept. 7</td>
<td>Inquiry—Part II</td>
<td>→ <strong>BEGIN</strong> Final Project&lt;br&gt;</td>
<td>• CCCYS – Ch 6&lt;br&gt; • Designing Experiments (OL)&lt;br&gt; • Final Project Instructions (OL)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sept. 9</td>
<td>Nature of Science—Part I</td>
<td>→ <strong>BEGIN</strong> Lottery Task</td>
<td>• Lottery Task Instructions (OL)</td>
<td>• Crit. Analysis Card #2</td>
</tr>
<tr>
<td>Date</td>
<td>Subject</td>
<td>Start/End</td>
<td>Notes</td>
<td></td>
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</tr>
</tbody>
</table>
| Sept. 14   | Patterns—Part I                              | → BEGIN Moon    | CCCYS – App H, I  
Moon Study Instructions (OL)  
Moon Study Data Collection Sheets (OL)  
Crit. Analysis Card #3 |
| Sept. 16   | Patterns—Part II                             | → BEGIN Patterns Project | CCCYS – App D  
Systems & Pattern Thinking (OL)  
Patterns Project Instructions (OL)  
Crit. Analysis Card #3 |
| Sept. 21   | Complex Learning                             |                 | Complex Learning Model (OL)  
Levels of Cognition (OL)  
Crit. Analysis Card #3 |
| Sept. 23   | Nature of Science—Part II                    |                 | Lottery Task Presentations  
CCCYS – Ch 3  
RUESB – pp. 57—61, 63—66, 72—91  
Signed Field Trip Release Forms (OL)  
Lottery Tasks |
| Sept. 25   | FIELD STUDY – Saturday, 8:45 am – 3:30 pm    |                 |                                                                   |
| Sept. 28   | Learning & Discourse—Part I                  |                 | CCCYS – Ch 4, App F  
Crit. Analysis Card #5 |
| Sept. 30   | Learning & Discourse—Part II                 |                 | CCCYS – Ch 5  
Gallas – Talking their way… (V)  
Crit. Analysis Card #6 |
| Oct. 5     | Assessment—Part I                            |                 | CCCYS – Ch 7  
Crit. Analysis Card #7 |
| Oct. 7     | Assessment—Part II                           |                 | CCCYS – Ch 8, App E  
Crit. Analysis Card #8 |
| Oct. 12    | Planning—Part I                              |                 | Moon Studies  
Crit. Analysis Card #9 |
| Oct. 14    | Planning—Part II                             |                 | Moon Studies  
Crit. Analysis Card #9 |
| Oct. 19    | Inquiry—Part III                             |                 | Patterns Project Presentations  
Patterns Projects  
Crit. Analysis Card #10 |
| Oct. 21    | Models & Modeling                            |                 | RUESB – pp. 201—206  
Patterns Projects |
| Oct. 26    | Inquiry—Part IV                              |                 | Models & Modeling  
Patterns Projects  
Crit. Analysis Card #10 |
| Oct. 28    | Community                                    |                 | Models & Modeling  
Patterns Projects  
Crit. Analysis Card #10 |
| Nov. 2     | Patterns—Part III                            |                 | Patterns Project Presentations  
Patterns Projects  
Crit. Analysis Card #10 |
| Nov. 4     | Patterns—Part IV                             |                 | Patterns Project Presentations  
CCCYS – Ch 9  
Patterns Projects  
Crit. Analysis Card #10 |
| Nov. 9     | Inquiry—Part V                               |                 | Models & Modeling  
Patterns Projects  
Crit. Analysis Card #10 |
| Nov. 11    | Inquiry—Part VI                              |                 | Models & Modeling  
Patterns Projects  
Crit. Analysis Card #10 |
| Nov. 16    | Final Project Presentations                  |                 | Final Projects  
Crit. Analysis Card #10 |
| Nov. 18    | Final Project Presentations                  |                 | Final Projects  
Crit. Analysis Card #10 |
| Nov. 23    | Inquiry—Part VII                             |                 | Final Projects  
Crit. Analysis Card #10 |
| Nov. 25    | THANKSGIVING HOLIDAY – NO CLASSES            |                 | Final Projects  
Crit. Analysis Card #10 |
| Nov. 30    | Inquiry—Part VIII                            |                 | Final Projects  
Crit. Analysis Card #10 |
| Dec. 2     | Inquiry—Part IX                              |                 | Final Projects  
Crit. Analysis Card #10 |
| Dec. 7     | Profession                                   |                 | CCCYS – Ch 11  
Crit. Analysis Card #10 |
| Dec. 9     |                                                |                 | Final Projects  
Crit. Analysis Card #10 |
Additional Information

➢ The Exploring Science Wiki at: http://exploringsciencewiki.wikidot.com
➢ Schools—Teachers—Parents at: http://schoolsteachersparents.wikidot.com
➢ Exploring Science Site at: http://elsci.coe.nau.edu/

Links to other sites:

➢ Arizona State Science Education Standards at:
  http://www.ade.state.az.us/standards/science/
➢ National Science Education Standards at:
  http://www.nap.edu/readingroom/books/nses/html/

Other Recommended Readings:


Other Important Information

If the fire alarm sounds, please leave the building immediately through the nearest exit door. If this occurs during an exam or quiz, place your exam face down on the table and then depart. Please take valuables (purses, etc.) with you, if they are at your present location. Otherwise, leave them behind. The room door will be locked after the last person leaves.

Email: If you do not use your dana account, please go into the dana account, access “Manage Your Email Account”, and make the change to have your email forwarded to the address you do use.

Course evaluations: Please take a few minutes during the last couple of weeks in the semester to complete a course evaluation. This is very important. Course evaluations can be accessed at http://www.nau.edu/course_evals/.

Cells Phones: The university has requested that all cell phones be turned off and put away during class.

Food and drinks may be brought into the room during class. Please do not disrupt others while eating and drinking. However, if we are handling potentially dangerous substances, including animals and saltwater from the aquarium, do not eat or touch your face until after you have washed your hands.

NORTHERN ARIZONA UNIVERSITY POLICY STATEMENTS

SAFE ENVIRONMENT POLICY

NAU’s Safe Working and Learning Environment Policy seeks to prohibit discrimination and promote the safety of all individuals within the university. The goal of this policy is to prevent the occurrence of discrimination on the basis of sex, race, color, age, national origin, religion, sexual orientation, disability, or veteran status and to prevent sexual harassment, sexual assault or retaliation by anyone at this university.

You may obtain a copy of this policy from the college dean’s office or from the NAU’s Affirmative Action website http://www4.nau.edu/diversity/swale.htm. If you have concerns about this policy, it is important that you contact the departmental chair, dean’s office, the Office of Student Life (928-523-5181), or NAU’s Office of Affirmative Action (928-523-3312).

STUDENTS WITH DISABILITIES

If you have a documented disability, you can arrange for accommodations by contacting the office of Disability Support Services (DSS) at 928-523-8773 (voice), 928-523-6906 (TTY). In order for your individual needs to be met, you are required to provide DSS with disability related documentation and are encouraged to provide it at least eight weeks prior to the time you wish to receive accommodations. You must register with DSS each semester you are enrolled at NAU and wish to use accommodations.
Faculty are not authorized to provide a student with disability related accommodations without prior approval from DSS. Students who have registered with DSS are encouraged to notify their instructors a minimum of two weeks in advance to ensure accommodations. Otherwise, the provision of accommodations may be delayed.

Concerns or questions regarding disability related accommodations can be brought to the attention of DSS or the Affirmative Action Office. For more information, visit the DSS website at http://www2.nau.edu/dss/.

INSTITUTIONAL REVIEW BOARD

Any study involving observation of or interaction with human subjects that originates at NAU—including a course project, report, or research paper—must be reviewed and approved by the Institutional Review Board (IRB) for the protection of human subjects in research and research-related activities.

The IRB meets monthly. Proposals must be submitted for review at least fifteen working days before the monthly meeting. You should consult with your course instructor early in the course to ascertain if your project needs to be reviewed by the IRB and/or to secure information or appropriate forms and procedures for the IRB review. Your instructor and department chair or college dean must sign the application for approval by the IRB. The IRB categorizes projects into three levels depending on the nature of the project: exempt from further review, expedited review, or full board review. If the IRB certifies that a project is exempt from further review, you need not resubmit the project for continuing IRB review as long as there are no modifications in the exempted procedures.

A copy of the IRB Policy and Procedures Manual is available in each department’s administrative office and each college dean’s office or on their website: http://www4.nau.edu/ovp/regulatorycompliance/irb/index.htm. If you have questions, contact Melanie Birck, Office of Grant and Contract Services, at 928-523-8288.

ACADEMIC INTEGRITY

The university takes an extremely serious view of violations of academic integrity. As members of the academic community, NAU’s administration, faculty, staff and students are dedicated to promoting an atmosphere of honesty and are committed to maintaining the academic integrity essential to the education process. Inherent in this commitment is the belief that academic dishonesty in all forms violates the basic principles of integrity and impedes learning. Students are therefore responsible for conducting themselves in an academically honest manner.

Individual students and faculty members are responsible for identifying instances of academic dishonesty. Faculty members then recommend penalties to the department chair or college dean in keeping with the severity of the violation. The complete policy on academic integrity is in Appendix G of NAU’s Student Handbook http://www4.nau.edu/stulife/handbookdishonesty.htm.

ACADEMIC CONTACT HOUR POLICY

The Arizona Board of Regents Academic Contact Hour Policy (ABOR Handbook, 2-206, Academic Credit) states: “an hour of work is the equivalent of 50 minutes of class time…at least 15 contact hours of recitation, lecture, discussion, testing or evaluation, seminar, or colloquium as well as a minimum of 30 hours of student homework is required for each unit of credit.”

The reasonable interpretation of this policy is that for every credit hour, a student should expect, on average, to do a minimum of two additional hours of work per week; e.g., preparation, homework, studying.