Class Syllabus
Fall 2018
CHE 111-005 & 007
Introductory Chemistry I

Instructor:  Dr. Kefa K. Onchoke
Department: Chemistry & Biochemistry
e-mail: onchokekk@sfasu.edu
Office: M-118 (Math Building)
Phone: 936-468-2386
Office Hours: M 10-12, T 11-1; W 11-1; R 4 – 5 p.m.; F 11-12
Lecture times: CHE 111-005: MWF 9:00 – 9.50 am, in Mathematics 132
         CHE 111-007: MWF 8:00 – 8.30 am, in Mathematics 132

TEXT AND MATERIALS:
3. Scientific calculator (non-graphing and non-programmable); for example, SHARP EL-501WBBK, CASIO 115, Texas Instrument 30 XIIS. No programming or graphing calculators are to be used in exams and/or quizzes.
4. Mastering Chemistry Website:
   http://www.pearsonmylabandmastering.com/northamerica/masteringchemistry/
   a. You need first three things to register for the assignments:
      E-mail
         For CHE 111-005: Course Name: CHE_005_F2018 (Course Title: onchoke60508)
         Description: Modified Chem 111. Enrolment Dates: Aug 28, 2018 - Sep 11, 2018

         For CHE111-007: Course Name: CHE_111007_F2018 (Course ID: onchoke53934). Description: For Modified Chemistry 111. Enrolment Dates: Aug 28, 2018 - Sep 11, 2018
         Access Code or Credit Card
   b. You will purchase the access code online or use a Credit card
   c. Instruction for logging to textbook Students:
      1. Go to http://masteringchemistry.com and register at the top right.
      2. (a) If you already have a Mastering Chemistry account, log and go to step 3 in and follow the instructions.
         (b) Choose a password and timezone (Chicago), accept the site policy agreement, and click "Create my new account".
         2c. Click the "Create an Account" link. Supply the requested information and click "Create My Account". Check your email (and spam filter) for a message from Mastering Chemistry Learning and click on the link provided in that email.
      3. Find your course in the list (you may need to expand the subject and term categories) and click the link.
      4. If your course requires a key code, you will be prompted to enter it.
      5. If your course requires payment, select a payment option and following the remaining instructions.

Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments. During sign up or throughout the term, if you have any technical problems or grading issues, Go to Student Support section and explain the issue. The Mastering Chemistry support team is almost always faster and better able to resolve issues than your instructor.

Co-requisite: CHE 111L.

PREREQUISITES: Eligibility for MTH 138.
Program Learning Outcomes: There are no specific program learning outcomes for this major addressed in this course. This course is a general education core curriculum course and a service course.

General Education Core Curriculum Objectives: The Texas Higher Education Coordinating Board has identified six core learning objectives: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. SFA is committed to the improvement of its general education core curriculum by regular assessment of student performance on these six objectives. General Chemistry is a general education core curriculum course and fulfills the Teamwork general education core curriculum requirement. Another, “shell” course has been created to collect student artifacts to meet this state requirement. You will see this course on your D2L list. During this semester, you will receive an assignment in the laboratory portion of the course that fulfills both the requirements of the lab and the needs of Stephen F. Austin State University’s Core Curriculum Assessment Plan with the Texas Higher Education Coordinating Board. When you complete this one assignment, you need to upload the assignment to both the General Chemistry dropbox and the Teamwork dropbox. Please note that this only applies to the specific assignment listed in the matrix below. All other assignments should be submitted according to regular class operations. If you have any questions, please see your instructor or contact the University Assessment Specialist at (936) 468-1267 or jstringfield@sfasu.edu.

The chart below indicates the core objectives addressed by this course, the assignment(s) that will be used to assess the objectives in this course and uploaded to the D2L Teamwork dropbox this semester, and the date the assignment(s) should be uploaded to the D2L Teamwork dropbox. Not every assignment will be submitted for core assessment every semester. Your instructor will notify you which assignment(s) must be submitted for assessment in the D2L Teamwork dropbox.

Core Objectives (CO):
1. Critical Thinking: to include creative thinking, innovation, inquiry and analysis, evaluation and synthesis of information.
2. Communication Skills: to include effective development, interpretation and expression of ideas through written, oral, and visual communication.
3. Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
4. Teamwork: to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.
<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>Course Assignment Title</th>
<th>Date Due in LiveText</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO 1 - Critical Thinking Skills</td>
<td>To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.</td>
<td>Skills developed in this course: solving questions pertaining to equilibrium constants ($K_c$, $K_p$, $K_{sp}$, $K_b$, $K_a$)</td>
<td>Not assessed in this course</td>
</tr>
<tr>
<td>CO 2 - Communication Skills</td>
<td>To include effective development, interpretation and expression of ideas though written, oral, and visual communication.</td>
<td>Written and visual communication skills developed. - Skills in this course</td>
<td>Not assessed in this course</td>
</tr>
<tr>
<td>CO 3 - Empirical and Quantitative Skills</td>
<td>To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.</td>
<td>-Skills in this course</td>
<td>Not assessed in this course</td>
</tr>
<tr>
<td>CO 4 - Teamwork</td>
<td>To include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.</td>
<td>Skills developed and assessed in lab every even spring</td>
<td>See lab syllabus</td>
</tr>
<tr>
<td>CO 5 - Personal Responsibility</td>
<td>To include the ability to connect choices, actions and consequences to ethical decision-making.</td>
<td>NA</td>
<td>Not assessed in this course</td>
</tr>
<tr>
<td>CO 6 - Social Responsibility</td>
<td>To include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities.</td>
<td>NA</td>
<td>Not assessed in this course</td>
</tr>
</tbody>
</table>

**Student Learning Outcomes:** Upon completion of this course, the students are expected to

- apply chemistry concepts using critical thinking skills and the scientific method to analyze and evaluate information to reach conclusions within problem sets and lab experiments. (COs 1 & 3)
- use communication skills to demonstrate their interpretation and analysis of scientific data. (CO 2)
- apply logic, quantitative reasoning, and pattern recognition to analyze and evaluate numerical data/observable facts to reach conclusions within problem sets and lab experiments. (COs 1 & 3)
- demonstrate the ability to cooperate within groups to gather results of an experiment, analyze data, and draw conclusions using communication skills. (COs 2 & 4)
COURSE OBJECTIVES: The student should learn the basic concepts, laws and theories of the topics and apply them to chemistry problems. The student will develop an understanding of the interconnectedness of chemistry to the other sciences and will relate the concepts of chemistry to contemporary, historical, technological and societal issues.

COURSE CALENDER (APPROXIMATE TIME):

Chapters from the text will be covered in the following order. Exam schedule is tentative.

1. The chemical World, Methods and Measurements, Chapters 1 and 2 (5-15%).
2. Matter and Energy, Chapter 3 (5-15%).
3. Atoms and Elements, Ions, and the Periodic Table Chapter 4 (5-15%)

Exam I, Wednesday, September 19.

4. Electrons in Atoms and the Periodic Table (chapter 9)
5. Compounds and Their Bonds: (Structure and Properties of Ionic and Covalent Compounds) Chapt. 5 (5-15%).
6. Inorganic and Organic compounds, Names and Formulas Chapt. 5 & 6 (5-15%)
7. Structures of solids and Liquids, Chemical Bonding (Chapter 10)
8. Chemical Quantities and Reactions Chapt. 7-8 (5-15%)
9. Oxidation and reduction (Chapter 16)
10. Chemical Equilibrium Chapt. 15 (5-15%)

Exam II, Wednesday, October 24.

11. Gases, Chapt. 11 (5-15%)
12. Solutions, Chapter 13 (5-15%)

Exam III, Wednesday, November 14.

13. Acids and Bases, Chapter 14 (5-15%)
14. Nuclear Radiation, The Nucleus, Radioactivity, and Nuclear Medicine, Chapter 17 (5-15%)

Exam IV, Monday, December 3.

Comprehensive makeup: Wednesday; December 5, 6:00 pm - 8:00 pm (in NM 132)

Comprehensive Final Exam: CHEM. 111-005: Monday Dec. 10, (8.00 a.m. - 10.00 am in M-132)

CHEM. 111-007: Wednesday; Dec. 12, (8.00 a.m. - 10.00 pm in M-132)

COURSE CALENDER (APPROXIMATE TIME):

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter Topics &amp; Exams</th>
<th>Chapter Topics &amp; Exam Dates</th>
<th>Approximate Online assignment due dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chapters 1 and 2: Chemistry &amp; Measurements</td>
<td>8/27, 8/29 &amp; 8/31 (3 lectures)</td>
<td>9/16</td>
</tr>
<tr>
<td>2</td>
<td>Chapter 3: Matter and Energy</td>
<td>9/3 - 9/7 (3 lectures)</td>
<td>9/17</td>
</tr>
<tr>
<td>3 &amp; 4</td>
<td>Chapt. 4: Elements, Atoms, Ions, and the Periodic Table</td>
<td>9/10 - 9/21 (2 to 6 lectures)</td>
<td>9/21</td>
</tr>
<tr>
<td>4</td>
<td>Exam I</td>
<td>Sept. 19 (6.00- 8.00 p.m.)</td>
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</tr>
<tr>
<td>5 &amp; 6</td>
<td>Chapt. 9: Electronic Structure and Periodic Trends</td>
<td>10/1 - 10/12</td>
<td>10/7</td>
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<tr>
<td></td>
<td>Chapt. 5 &amp; 6: Names and Formulas of Compounds</td>
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<tr>
<td></td>
<td>Chapt. 10: Structures of solids and Liquids (Structure and Properties of Ionic and Covalent Compounds); Compounds and Their Bonds</td>
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<tr>
<td></td>
<td>Chapt. 7: Chemical Reactions</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Chapt. 8: Chemical Quantities in Reactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Chapter 16: Oxidation and reduction</td>
<td>10/17 – 10/19</td>
<td>10/21</td>
</tr>
</tbody>
</table>
## Strategies for Succeeding in Chemistry 111:

1. Attend every lecture because the topics covered in this course build on each other.
2. Prior to class, read the chapter which will be covered in lecture.
3. Review your lecture notes after each class. Correct obvious errors and note topics which require further study or clarification.
4. Work on homework problems until you can solve them without any help or guidance.
5. Spend the necessary amount of time studying chemistry. The rule of thumb for succeeding in Chemistry is three hours of study for every hour of lecture. This means that you should plan to study Chemistry for a minimum of nine hours each week.

<table>
<thead>
<tr>
<th>8</th>
<th>Chapt. 15: Chemical Equilibrium</th>
<th>10/17-10/21</th>
<th>10/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Exam II</td>
<td>October 24 (6.00- 8.00 p.m.)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Chapt. 11: Gases</td>
<td>10/22 - 10/26 (3 lectures)</td>
<td>10/28</td>
</tr>
<tr>
<td>11</td>
<td>Exam III</td>
<td>Nov. 14 (6.00- 8.00 p.m.)</td>
<td></td>
</tr>
<tr>
<td>12 &amp; 11</td>
<td>Chapter 14: Acids and Bases</td>
<td>11/2-11/26 (6 lectures)</td>
<td>11/28</td>
</tr>
<tr>
<td></td>
<td>Saturday, November 17 - 25, 2018</td>
<td>Thanksgiving Holiday</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Chapter 17: Radioactivity</td>
<td>11/26-12/30 (3 lectures)</td>
<td>12/9</td>
</tr>
<tr>
<td></td>
<td>Exam IV</td>
<td>Dec. 3 (6.00- 8.00 p.m.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comprehensive Make-up</td>
<td>Dec. 5 (6.00-8.00 p.m.)</td>
<td></td>
</tr>
</tbody>
</table>

### Comprehensive Final Exam:

**CHEM. 111-005: Tuesday; Dec. 12, (8 - 10 a.m. in M130)**

**CHEM. 111-007: Tuesday; Dec. 12, (8 - 10 a.m. in M130)**

*Final Exam:*
- Your final exam will be a comprehensive, nationally-standardized exam developed by the American Chemical Society (ACS).
- The exam consists of multiple-choice questions, and is graded on a scantron. **YOU WILL NEED TO OBTAIN A SCANTRON FORM 882-E FOR THE FINAL (bookstore).**
- More specific info about the final will be given during dead week.
- You need to study hard for the final. All of your course grades will be posted on d2l.sfasu.edu throughout the semester. You may check your grade at any time on D2L.sfasu.edu.

### Course Requirements:
There will be four semester exams (100 pts each), and a comprehensive Final (100 points) cumulative with emphasis on the material covered since the last exam. The regular exams will be given in the evening from 6.00 p.m. - 8.00 p.m. These exams will consist of problems that must be set up and solved, discussion questions, and/or multiple choice, true/false, math problems, fill-in-blanks or essay type questions. **Partial credit will be given for short answer problems worked partially correct;** therefore, it is crucial to show your solutions to the problems, not just the answer. Students have one week from the day any graded item is returned to notify professor of grading error or ask questions about the grade of an item. After one week no points will be returned. The professor has the prerogative of also re-grading the entire item. **Credit will not be given for correct answers** unless you show how you arrived at the answer. Multiple choice questions will have no partial credit. In addition, homework problems will be assigned. Continuous quizzes will be given in class. These quizzes will test your understanding of material covered in class.

**Homework** – Homework will total 50 points (#points correct*50/ total points available).
Online homework will be assigned and due dates posted on MasteringChemistry.com Website. The due dates will be announced in class. Homework will **not be graded after the due date** without legitimate documentation (NO EXCEPTIONS).

**Quizzes** - Quizzes will total 50 points (#points correct*50/ total points available). Continuous in-class quizzes will be given on dates announced in class. To receive full credit, your work needs to be legible and comprehensible. You will get zero credit for illegible and/or incomprehensible scribbles.

**Strategies for Succeeding in Chemistry 111:**
1. Attend every lecture because the topics covered in this course build on each other.
2. Prior to class, read the chapter which will be covered in lecture.
3. Review your lecture notes after each class. Correct obvious errors and note topics which require further study or clarification.
4. Work on homework problems until you can solve them without any help or guidance.
5. Spend the necessary amount of time studying chemistry. The rule of thumb for succeeding in Chemistry is three hours of study for every hour of lecture. This means that you should plan to study Chemistry for a minimum of nine hours each week.
week.
6. Don’t procrastinate. The concepts take time to sink in, and you may have to practice these exercises over a period of many days in order to master the necessary skills.
7. Form a study group. This is your first avenue for getting help. Be able to communicate with each other on short notice, not just before class.

**METHOD OF EVALUATION:** The final grade will be based upon percentage of points obtained in the following:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter Grade</th>
<th>Points</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>540—600</td>
<td>90.0—100.0 %</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>480—539.99</td>
<td>80.0—89.9 %</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>420—479.99</td>
<td>70.0—79.9 %</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>360—419.99</td>
<td>60.0—69.9 %</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>&lt; 383</td>
<td>0.0—59.9 %</td>
<td></td>
</tr>
</tbody>
</table>

Four exams will be given during the scheduled afternoon time periods. No one coming in late may start an exam after the first person has left. Each exam will be worth 100 points. The final ACS exam will be comprehensive and will be worth 100 points.

<table>
<thead>
<tr>
<th>Exam Schedule</th>
<th>Day/Date</th>
<th>Approximate Material Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>Sept. 19 (Wedn.)</td>
<td>Chapt. 1-4</td>
</tr>
<tr>
<td>Exam II</td>
<td>Oct. 24 (Wedn.)</td>
<td>Chapt. 5, 6, 7, 8, 9,10,15 &amp; 16</td>
</tr>
<tr>
<td>Exam III</td>
<td>Nov. 14 (Wedn.)</td>
<td>Ch.11, Ch.13, 15</td>
</tr>
<tr>
<td>Exam IV</td>
<td>Dec. 3 (Mon.)</td>
<td>Ch.14, Ch.17</td>
</tr>
<tr>
<td>Final Exam</td>
<td>ACS 111-005: Dec.12 (Tue.) 8:00 am. - 10:00 a.m.</td>
<td>Comprehensive</td>
</tr>
</tbody>
</table>

- The Exam schedule is Tentative.
- Comprehensive make-up exam will be given on **Wednesday, December 5 (6 p.m. - 8.00 p.m.)**

**Please note:** In order for you to have enough time to complete exams, all exams (except for the final) will be given at night from 6.00- 8.00 p.m. **It is your responsibility to make any needed adjustments in your class/work/extracurricular schedule to accommodate for this.** Please keep in mind that 1.5 - 2 hours are allotted for the exams for a reason. You should expect exams that are thorough and challenging. Plan to stay for the entire two-hour period.

**MAKE-UP POLICY:** A comprehensive make-up exam will be given on **Wednesday, December 5, 6- 8.00 p.m.** Everyone is allowed to take the make-up test. If one does well in the make-up test, the make-up test will replace any one of the lowest grades of the first 4 exams. Makeup quizzes will not be given.

**ATTENDANCE POLICY:**
(1) Attendance of class is mandatory. Nine (9) or more absences will result in an "F" for the course.
(2) Ten points will be added to the point total for anyone with zero absences.
(3) Six points will be added to anyone with only one absence
(4) Three points will be added to anyone with only two absences
(5) For purposes of the bonus attendance points there is **NO distinction** between excused and unexcused absences

**Definition of Academic Dishonesty**

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Any student found cheating will be subject to the penalties as stated in the Student Code of Conduct handbook; including but not limited to a score of zero on exam or laboratory experiment, expulsion from the class or expulsion from the University.
Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

SEMESTER WITHDRAWALS: Last day to drop/withdraw from the course without obtaining WP or WF grade is Wednesday October 24.

WITHHELD GRADES SEMESTER GRADES POLICY (A-54): Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

ACADEMIC DISABILITIES POLICY: Students with Disabilities – To obtain disability – related accommodations and/or auxiliary aids, students with disabilities must contact the Office of Disability Services, Human Services Building, Room 325, 468-3004/468-1004 (TDD) as early as possible in the semester. Once verified, DS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided.

CLASSROOM BEHAVIOR POLICY: To ensure a classroom environment conducive to learning, any forms of classroom disruptions will not be tolerated (examples but not limited to – talking, use of cell phones/beepers, sleeping, reading other material, eating/drinking). Students who violate these rules will be asked to leave. Repeat offenders will be subject to disciplinary action in accordance with University policies as described in the Code of Student Conduct.

Note: If you are taking this course in preparation for the TEKS (to become a teacher) you need to contact The Chair in Room 119 of the Math Building.

CALCULATION OF YOUR FINAL GRADE

You can calculate your grade in any one of the two ways: (A) As a % of average, or (B) By the total points, as shown below;

(A) % FINAL GRADE (This assumes 7 quizzes (each worth 10 points), and 7 homework sets 10 pts each, are done)

\[
\text{Final Average} = \frac{\text{Total of 400 pts in 4 exams} + 50 \frac{\text{Total Quizzes}}{70} + 50 \frac{\text{Total Homeworks}}{70} + \text{FinalExam (100 pts)}}{600} \times 100 \%
\]

(B) POINT TOTAL of Final GRADE:

\[
\text{Final Average Grade} = \frac{\text{Total of 400 pts in 4 exams} + 50 \frac{\text{Total Quizzes}}{70} + 50 \frac{\text{Total Homeworks}}{70} + \text{FinalExam (100 pts)}}{}
\]
<table>
<thead>
<tr>
<th>My Expectations and Class actions/Behavior</th>
<th>Expected action for conducive learning</th>
<th>Consequences if not followed</th>
<th>Your Expectations of the Professor</th>
</tr>
</thead>
</table>
| 1. No talking when professor is talking | Pay attention, participate and take notes. | - The offender will be sent out of class. No warning will be given to the offender. | - Will respect you, when talking to him/you  
- Will instruct you to the highest level. |
| 2. No lateness or tardiness to class.   | Attend *every* lecture because the topics covered in this course build on each other; doors locked. | Will be counted absent from class. | Will start class on time and not keep you late. |
| 3. Roll will be taken first 5 minutes. Anyone coming late will be marked absent. Anyone leaving class before class ends will be marked absent | | | |
| 4. Students are allowed to speak **Only** when the professor says so. | | | - Will not want to embarrass you in front of other students |
| 5. No use of cell phones in class  
No text messaging in class. | All cell phones are turned off during class time. | - offender will be asked to leave class. | Professor will not text or talk on phone. |
| 6. No sleeping during class time. | | - offender will be asked to leave class | Will not talk down to you |
| 7. No reading of other material. | Only class material to be covered for that day to be read | - offender will be asked to leave class | Will not go off on tangents not related to class material. |
| 8. No eating/ drinking in class. | | - Will be asked to leave class. | |
| 9. Respect other students during class. | Rude behavior is not to be tolerated. | | Will respect you and not be rude to students |
| 10. No copying of other students’ work | Honesty ensures learning. | Both students will be given a zero. | |
| 11. No late homeworks/Quizzes.  
Homeworks are due at the start of class. Homeworks turned in at the end of class will not be accepted. | Prepare ahead of time | - A zero will be assigned to any homework not turned in. | Graded work will be returned in a timely manner. |
| 12. No use of graphical calculators in quizzes or exams. | | | |
| 13. Students have one week from the day any graded item is returned to notify professor of grading error or ask questions about the grade of item. | The professor has the prerogative of also **re-grading the entire item.** | Professor must be notified one week from the day any graded item is returned to notify professor of grading error or ask questions about the grade of item. | The professor will be fair in grading homeworks, quizzes and exams. |