ENGN 110  Science for Technical Applications (4 Units)
Course Syllabus (subject to revisions/updates)

INSTRUCTOR:  David Fierro, 388-3731; Alan Jacques 858-204-7002/ Ajacques1@san.rr.com

OFFICE:  David: A-107E (must pass through A-107B; knock & wait for answer or call first).
OFFICE HOURS:  M-W 11am-noon & Th10 am-noon or by appointment. (Hours subject to change or revision due to meetings, etc.)

TEXTS:  
¬ CHEM-C 100L LAB PACKET(Crispen)(PAC11777618) / Packet
¬ Intro. Chemistry Online (18785167) / YOUNG, Lulu.com,
  http://askthenerd.com//chemistryonline/slides.html#
¬ PHYS-C 125 (Murugesan)(PAC12249084) / Packet (Can wait on this.)

MATERIALS:  
¬ Scientific calculator (not a cell phone calculator).  Casio fx-115ms preferred.
¬ Lab coat or apron.
¬ Latex or non-latex (e.g. nitrile) lab gloves.

REQUISITES, Advisory:
MATH 046 with a grade of "C" or better, or equivalent or Assessment Skill Level M40 and
ENGL 049 with a grade of "C" or better, or equivalent or Assessment Skill Level W5 and
ENGL 048 with a grade of "C" or better, or equivalent or Assessment Skill Level R5.

Course Description
This science course presents basic vocabulary, concepts and scientific techniques that are used to analyze and understand technical applications. Students are introduced to the language and tools of chemistry and physics. Students learn to interpret atomic structure, use the periodic table, classify and identify properties of common compounds, analyze chemical bonding and reactions, and relate technical applications to chemical properties. Students also learn to determine the effect of force on linear motion, analyze various physical phenomena, and analyze various forms of energy. This course is intended for beginning students who are enrolling in an engineering technology major.  Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Make-Up Policy
NO make-up quizzes, tests, labs or exams; NO exceptions. If you miss one test due to a verifiable, excusable absence, the test weight will be placed on the other tests, balanced.  Additional missed tests will count as a zero.  All test scores are counted in course grade; there will be no dropped test scores.

Course Format & Evaluation Notes
Course includes lecture, labs, discussion, worksheets, homework, potentially student presentations of homework, class work, and reviews, and small group work; quizzes, tests & exam.  Homework will be assigned regularly.  Class work and worksheets may be assigned for completion during lecture; they will count as homework if they are graded.  Late homework is not accepted.  Tests and exams will be cumulative with focus toward recent material.  To be accepted for grading, homework must be neat, legible and stapled if more than 1 sheet.  Homework with ragged edges is not acceptable.

Schedule: We will cover material working at an average pace of one major topic/chapter/lab every week or so.  You are required to keep pace with the class regardless of absence.  Topics include but are not limited to: units, scientific notation, matter and energy, thermodynamics, atomic theory.  chemical bonding, nomenclature and chemical formulae, chemical reactions and equations, chemical calculations, gases, solutions, acids and bases, kinematics, dynamics and statics, conservation laws of energy, small oscillations and wave motion, fluids, electric and magnetic fields.

Recording Note: No photography, audio or video recording is permitted without prior consent & authorization.

Cell Phone Note: Cell phones are to be "Off", “Silent” or “Vibrate” mode during class.  If a call, or text messages, needs to be taken/made during class time due to an emergency, leave the class quietly and do not return until break or the next class period.  No cell phones are permitted during testing even though some have calculators.

Computer & Electronic Devices
No operation of computers, e.g. laptops, iPods, Nanos, iPad, or other nonessential electronic devices are permitted – calculators or lab computers aside.  Let me know if you need an exception to this.

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Computer Skills Advisory
Computer skills sufficient for e-mail/basic tasks are expected, e.g. lab reports.
Safety: It is imperative that students wear specified safety goggles, gloves, lab coat or apron, closed-toe shoes, and clothes that cover the knees at all times when in the laboratory. If you fail to wear appropriate lab apparel for the lab session, you may be asked to leave. Eating, drinking, and smoking are prohibited in the lab.
Other Responsibilities: As outlined in the City College Code of Conduct (policy 3100) in the college catalog, student handbook, or the Office of the Dean of Student Affairs, disruptive behavior will not be tolerated in the laboratory. Please show respect for your instructor and peers and the same treatment will be reciprocated.
Lab Reports
Lab reports will consist of neatly submitted pages, e.g. from the lab manual and any required graphs and analysis. Each lab report is worth 100 points. The lab grade may be influenced by qualitative considerations including proper lab attire, degree of participation in carrying out the lab, and adherence to lab practices and procedures, e.g. safety. In order to receive credit for a lab experiment, the student must be present and carry out the experiment on the day it is assigned as well as turning in the report which is due at the beginning of the next lab. There will be several lab experiments carried out over the semester with no makeup labs. Students who are absent for a lab experiment will receive no credit for that lab. In consideration for unavoidable absences, the lowest lab scores will be dropped for all students when determining the semester grade for the course. It is the student’s responsibility to submit reports that are complete, legible, and on time. Late lab reports will be penalized ten percent per day. Students are expected to be honest and ethical at all times in their pursuit of academic goals. Students who are found in violation of district Procedure 3100.3 Honest Academic Conduct, will receive a failing grade on the assignment in question and may be referred for disciplinary action in accordance with Procedure 3100.2, Student Disciplinary Procedures.

GRADING [Scoring: 90-100:A; 80-90:B, 70-80:C, 60-70:D, <60=F]
1. Homework 20%
2. Labs & Lab Reports 40%
3. TEST 1 10%
4. TEST 2 10%
5. TEST 3 10%
6. TEST 4 (Last day of class) 10%
TOTAL 100%

The instructor reserves the option to adjust the grading scale for a test(s). Tests are reviewed prior to returning them. Tests are typically closed book, closed notes, with approved calculators. Sufficient valid and coherent work resulting in correct answer(s) must be shown on quiz, tests, and the exam for full credit, for other than multiple choice questions. A grade of zero will be assigned in the event of an unexcused absence during a test. There are no make-up quizzes, tests, labs or exam.

Cheating/Plagiarism
Students are expected to be honest and ethical at all times in the pursuit of academic goals. Students who are found to be in violation of Administrative Procedure 3100.3 Honest Academic Conduct, will receive a grade of zero on the assignment, quiz, or exam in question and may be referred for disciplinary action in accordance with Administrative Procedure 3100.2, Student Disciplinary Procedures.

Attendance, Drop Policy and
• Attendance is expected and will be taken at various times during the semester.
• It is the student’s responsibility to drop all classes in which he/she is no longer attending.
• It is the instructor’s discretion to withdraw a student after the add/drop deadline (see current schedule of classes for date) due to excessive absences. [More than 10% of the total number of classes is defined as an excessive number of absences for this class.]
• Students, who remain enrolled in a class beyond the published withdrawal deadline, as stated in the class schedule, will receive an evaluative letter grade in this class.
• If you do miss a class, you are responsible for all announcements made and it is your responsibility to learn all the material covered in class.

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Students with Disabilities
A student with a verified disability may be entitled to appropriate academic accommodations. Please contact the Disabled Students Office for further information, http://www.sdcity.edu/dsps/default.asp. Those who may need academic accommodations should discuss options with their professors during the first two weeks of class.

WHERE TO GET HELP
Do not get behind; seek help. There are several sources of help available to the student. These are:
1. Your instructor
2. Lab Assistant.
3. Tutorial Center (L-205), 619-388-3685: http://www.sdcity.edu/CollegeServices/StudentSupportResources/TutorialLearningCenter.aspx Tutoring in Chemistry & Physics is available through the Learning Resource Center by peer tutors who have a background in the material covered – though they may not have taken this specific course.
4. Your classmates. Consider starting a small study group.
5. Internet sites, e.g.
   http://askthenerd.com/chemistryonline/slides.html#
   http://www.lightandmatter.com/lm/
   http://www.ptable.com/

6. Math Center:
   http://www.sdcity.edu/CollegeServices/StudentSupportResources/MathCenter/Programs/Tutoring

Homework & lab report criteria:
1. Multiple pages must be stapled in the upper left hand corner in an appropriate manner or be subject to 10% penalty. Use one-sided of the paper, preferred.
2. Homework must be neat/legible/in order or be subject to a 10% penalty.
3. Write down each question, or a summary thereof, before answering.
4. Show sufficient work (correct & coherent) to justify answers.
5. No paper with ragged edges.
6. Use paper sized 8.5x11 inches, or metric equivalent.
7. Lab reports need a lab cover page and all pages numbered. An example is on following page.