Course Information
Co-requisite: Chemistry for Health Sciences, Chem 1107
Class Meeting Time: Chem 1117, 21 M, 1.30 – 3.20 pm
Chem 1117, 23 M, 10 – 11.50 am

Classroom: Dickinson Hall, 5504

Instructor Information
Instructor: Dr. Anna Debska-Chwaja
Office: Dickinson Hall, room 4418
Office Hours: by appointment and via e-mail
Phone Number: (201) 692 2330
Email: debskan@fdu.edu

Course Description
This lab course is complementary to the “Chemistry for health sciences” lecture course and is intended to be taken concurrently with that course. The experiments were chosen to reinforce ideas and concepts that are introduced in the lecture course. Students will perform experiments as listed in the laboratory schedule (see p.3-4).

Course Objectives
In this course, students will learn to work effectively in small groups to solve experimental problems in chemistry. Students will learn the following chemical experimental techniques: using analytical balance, measuring volume with graduated cylinder and by pipetting, precipitation, crystallization, filtration, extraction, titration, some synthesis, and some analytical techniques pertinent to the experiments listed in the laboratory schedule on p.3 and 4.

Students will gain important data recording skills by writing lab reports in the format requested in the lab manual and by graphing the results.

Students who have completed this lab class are expected to know how to follow independently the instruction in the lab manual, perform an experiment in a safe manner and to critically evaluate the results.

Electronic Forms of Communication
I will use your FDU email address to communicate with you regarding all course-related matters. Please monitor daily your FDU e-mail for important information regarding this lab.
**Texts, Readings, Materials**


On occasion, additional literature to be read will be provided.

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**COURSE REQUIREMENTS**

**Lab Reports**

A total of 12 experiments will be performed. Lab reports will be written in the pages provided in the Lab Manual using permanent ink. Extra pages can be included if needed for calculations or more comments -which is encouraged. The reports include pre-laboratory exercises, data sheets, and post-laboratory exercises. All entries into the report must be in permanent ink and must be initialed by me at the end of the lab, be it in the lab manual or be it on separate pages, later to be attached to the report.

The reports need to be neat and clean, as is fit for a future health professional. Each assignment is considered complete when the lab report is turned in before the next week’s lab. Late reports will not be accepted.

**Class Preparation Policy**

I request that you read the experiment description from the Lab Manual before coming to the lab.

**Calculators**

The use of a calculator is encouraged during the laboratory session. A simple scientific calculator is sufficient for this course.

**Safety in the Lab**

- Lab goggles, lab coat, and shoes that cover the toes must be worn at all times
- Protective gloves -whenever instructor recommends use of the gloves
- Follow instructions exactly as written in the lab manual unless advised otherwise by your instructor
- Dispose of waste in accordance with directions provided by your instructor

**Attendance Policy**

Regular class attendance is required. Two or more absences will result in a failing grade. There will be no make-up of any missed lab.

**Grading Policy**

The course grade will be based on the average score of all lab reports. You are expected to make corrections requested by me in the corrected lab reports. This will be taken into consideration during grading, at my discretion. I can increase or decrease your grade accordingly.
The lowest lab report grade will be dropped from the calculation of the final course grade.

Student work is graded according to:
- lab preparedness
- answers to pre-lab and post-lab questions
- mastery of chemical experimentation techniques
- quality of the results
- the student’s ability to communicate results in lab reports
- returning lab reports on time

**Grade Distribution**
The course will not be graded on a curve.

**Letter Grades**
> 90.0 A
87.0 – 89.9 A-
84.0 – 86.9 B+
81.0 – 83.9 B
78.0 – 80.9 B-
74.0 – 77.9 C+
70.0 – 73.9 C
65.0 – 69.9 C-
60.0 – 64.9 D

**Religious Observances**
Students must inform their lab instructor during the first week of classes if they wish to reschedule a lab period with another lab class because it coincides with a religious observance. This courtesy is requested during the first week so that your instructor can make proper accommodations well in advance of the date.

**Policy on Academic Integrity**
Students are expected to read and understand the FDU Academic Integrity Policy, which can be found on line. Members of the FDU community are expected to be honest and forthright in their academic endeavors.

**Students with Disabilities**
If you have a documented disability, please talk to me or send me an email.

**LABORATORY PROCEDURES**

**Before the Experiment**
Students will report to the lab for the scheduled experiment, having prepared by reading the entire lab module.
**During the Experiment**
Students will write their name, partner's name, experiment title, and date in their lab manual. All data and observations will be recorded in their lab manual as the experiment is performed. Separate pages are allowed but have to be initialed by the instructor and attached to the lab report.

**After the Experiment**
After performing an experiment, students must have their instructor inspect and sign their lab results. The instructor will sign the lab manual pages and additional pages if any. Students' work area must be left clean and tidy. Students have one week to turn in the lab report. Laboratory reports are due at the beginning of the next lab session following the experiment.

**Laboratory Schedule.**

<table>
<thead>
<tr>
<th>Week</th>
<th>Experiment number and title</th>
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<tbody>
<tr>
<td>1.</td>
<td>Check-in. Safety video</td>
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<tr>
<td>2.</td>
<td>Laboratory Techniques:</td>
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<tr>
<td></td>
<td>Making laboratory measurements</td>
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<tr>
<td>3.</td>
<td>Density determination</td>
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<tr>
<td>4.</td>
<td>Calorimetry: determination of the specific heat of a metal</td>
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<tr>
<td>5.</td>
<td>Analysis of vinegar by titration</td>
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<td></td>
<td>Analysis of antacid tablets</td>
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<tr>
<td>6.</td>
<td>Structure in organic compounds: use of molecular models</td>
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<td>7.</td>
<td>Preparation and properties of a soap</td>
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<tr>
<td>8.</td>
<td>Preparation of a hand cream</td>
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<tr>
<td>9.</td>
<td>Preparation of aspirin</td>
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<tr>
<td>10.</td>
<td>Isolation of caffeine from tea leaves</td>
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<tr>
<td>11.</td>
<td>Carbohydrates</td>
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<tr>
<td>12.</td>
<td>Casein in milk</td>
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<tr>
<td>13.</td>
<td>Quantitative analysis of vitamin C contained in foods</td>
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