

## Chem 102 Summer I 13 Lab Syllabus

**Professor:** Dr. Juliet Hahn  
**office:** LSF L303 H (office hours will be held in my temporary office CEMC 104A \*\*\*)  
**phone:** 843-661-1483\*\*\* **email:** [JHahn@fmarion.edu](mailto:JHahn@fmarion.edu)

\*\*\*\*There are renovations going on in the LSF building so the classroom and office may have to be moved to some other space for some part of the Summer I. I will announce the revised rooms as needed. In case of emergency (because I will probably not have access to my office phone until renovations are complete), you may also call me on my cell phone at 803-955-6008.

**class time:** CHEM 102L lab section section 1455, **MW 1:00 pm to 4:30 pm** The class will meet in LSF 108\*\*\* for a prelab lecture and then move into the lab in **MSB 318**

**office hours:** 9:15am to 9:45 am MTWR & other times by appointment. (Please email me to make an appointment. If you need me, I will always find the time to meet with you.) I will also usually be available before and after the lecture for about 15 to 20 minutes (from 9:45 am to 10:00 am and from 11:50 am to 12:05 or 12:10 noon) after the end of the General Chemistry 102 lectures to answer questions.

Any last minute updates will be posted online at <http://JulietHahn.com>

**For the Lab you will need:** **Textbook**, Francis Marion University **General Chemistry 102 Laboratory Manual** (7-12 Revision edited by T.W. Ragsdale) and **safety goggles** at McNair Science 307 **scientific calculator:** To perform calculations in this course, you will need an inexpensive “scientific calculator”. It does not need to be elaborate but should be able to express numbers in scientific notation (e.g.  $6.02 \times 10^{23}$ ) and must have log (and ln) functions. You can buy such a calculator for around \$10.00 at the local discount store. You should bring your calculator to each lab.

I am also teaching the lecture associated with this lab. CHEM 1454 10:00 to 11:50 am MTWR in LSF 108\*\*\*

Chemistry 102 is a 4 credit class. Your lecture grade makes up 75% of the class grade and **your lab grade is counted as 25% of the CHEM 102 class grade.**

**Grading:** Lab Grading will be based on the following.

8 labs (will be graded as if it is worth 10 pts per lab report) lab report 100 %  
(The first lab has a Safety Quiz which counts as one lab report. Week One and Week Two Lab is Normality of Acid which is done in two weeks so the Normality Lab counts as two labs)

Lab Report Grade will consist of **3 points** (out of 10 pts for the entire lab report grade) for attendance at the beginning of lab (by my signature on your lab report form, and your signing out of the lab at the end of the lab (with time of sign out noted on attendance sheet)

**technique points:** Up to a maximum of **3 pts (from 10 pt lab report grade)** may be removed from your lab report grade for technique. Primarily this will be for anything which will endanger you or your colleagues working in the lab. **(-1 point)** for each incidence of not having your safety glasses on while anyone in the lab is doing any kind of chemical experiment **(Up to -3 points)** for a single incidence of you not following Dr. Hahn’s specific directions such as “Do not go near that open flame with that liter bottle of ether!!!!” Let’s say you go to the open flame with the open liter bottle of ether and set yourself and 2 of your neighboring colleagues on fire. You will have lost 3 points **and** may be scarred for life.

**NOTE:** By department policy, if you do not complete (or do not turn in any work) for **3** of the 12 labs this semester, you will **earn an F** on the entire class.

1. You will receive the lab reports at your weekly lab meeting. Reports can be turned in only for experiments actually performed by the student.

This means that if you turn in a lab report and the report form does not have my signature on it and you did not sign out at the end of lab, it is possible that you will only lose 3 points of a 10 point lab report if I know that you were actually in lab and forgot to sign out and forgot to get my signature. **At my discretion, it could also mean that I opt not to accept your lab report at all because I know that you were not actually in the lab for which you turned in a lab report.**

2. Reports are due the day after the next lab class after the completion of the lab (during the lecture in the first 15 minutes of the lecture period) and points will be deducted for those turned in late at the rate of 20% per day. Reports turned in after 5 days after the due date will receive a grade of 3/10 (3 pts for being in lab and signing in and signing out). For example, if the laboratory period is on Monday (6/3), the report is due in the first 15 minutes of the Thursday lecture class (6/6). If you turn in the lab report on 6/6 R at 10:20 am (5 minutes past deadline) , the report will be worth a maximum of 8 points. If you turn in the lab report on 6/13 R (5 business days from the deadline), the report will be worth **zero** points. (If you have my signature & you signed out you will still get 3 of 10 points for having been in lab and having done the experiment.)

3. **You will get to drop one lab (and only one lab).** The dropped lab can be your lowest grade lab or can be a zero for one missed lab. Labs not attended will count as zeroes. If you attended the lab and performed the experiment (as shown by signature on the lab attendance sheet & my signature on your lab report form, you will have earned a 3 of 10 for the lab. If you missed a lab and cannot show hardcopy documentation which supports a reason why you missed the lab, you will earn a zero on that lab. Valid excuses for missing a lab are: medical excuse, death in the immediate family, working on behalf of the university in an official capacity. It is always in your best interest to ask me if your excuse is valid rather than assuming that it is not.

4. Academic dishonesty on any lab will result in a grade of zero for that report. Repeated violations will result in dismissal from the university. An example is coming to lab with data already in data tables in your notebook.

5. Anytime a problem is worked, the answer alone is not sufficient, you must show the calculations. **Showing the calculations** does not mean just showing me all your additions and divisions. Showing calculations means: (a) you show the equation (b) then you show the equation with all of the numbers filled in and (c) then you show what your calculator spits out as the final number answer.

## Laboratory Schedule:

The laboratory experiments Title (and number in the manual) to be completed during the semester are listed opposite the scheduled week. *Students should consult the laboratory schedule each week to be certain they are preparing for the proper experiment.*

<u>Lab #</u>	<u>Date</u>	<u>Lab #</u>	<u>Experiment Name</u>	<u>Manual Pages</u>
Zero	5/29W	no lab		
1	6/3M	14	Check-in, Safety, Acids & Base Titration & Normality	19
2.	6/5W	14	Acids & Base Titration & Normality	19
3	6/10M	17	Thermochemistry: Enthalpy of Neutralization	43
4	6/12W	15	Types of Intermolecular Forces	29
5	6/17M	20	Kinetics - Rate of Reaction (microscale)	62
6	6/19W	22	Measurement of pH, K <sub>sp</sub> & Strong acid Titration	78
7	6/24M	27	Qualitative Analysis of Cation (one day version)	100
8	6/26W	no lab		
9	7/1M	no lab		

**See Dr. Hahn immediately if you miss a lab or know that you will be missing a lab.** If your absence has a documented excuse acceptable to me, then I will substitute your missing grade with your average prorated for the class's average.

Example:  $\text{your missing grade lab 2} / \text{your average on labs} = \text{class average on lab 2} / \text{class average all labs}$

**Notes:** The following should be noted concerning the laboratory period.

A. Some medical conditions make exposure to certain chemicals unwise. If you are currently under treatment by a health professional and/or you have a concern about possible exposure to chemicals in the laboratory required for this course, please discuss this matter with your physician.

B. The three-hour laboratory period will be divided into a one-hour recitation or problem-working session with the remaining two hours for performance of the assigned experiment. All experiments are expected to be done individually and independently unless otherwise specified by the instructor. However, you will find it useful to find other students to discuss your reports for different perspectives on questions, etc.

C. Video pre-labs have been prepared for most experiments. The videos are available in the Cauthen Media Center. Every student is required to view the prelab video before attending his or her scheduled laboratory period. Only minimal detailed laboratory instructions will be given at the laboratory period. The experimental procedure for each experiment is detailed in the laboratory manual. Please read the procedure in the lab manual before viewing the video. A picture ID card is required for using their headset. The time-length of each video is given in the *Lab Manual*. If you like, you can copy the pre-lab videos into your USB memory and view them whenever you want to view them. (I think viewing the videos will save you hours of lab performance time.)

E. Students are expected to be ON TIME for the laboratory period. ON TIME means to be in your seat when it is time to start the period. **If you come to lab (meaning the beginning of the prelab recitation period) 15 minutes after the start of the lab period, you will lose 3 points. (You may also set yourself on fire because you do not know the safety instructions discussed in the prelab lecture.)** It is possible that any student who misses the recitation period may be banned from performing the experiment during their scheduled laboratory period.

F. The laboratory attendance policy requires all laboratory periods to be attended and all required reports turned in prior to the final exam for the lecture. If the required laboratory reports are not turned in, a grade of F will be assigned ***FOR THE COURSE (meaning including the lecture)*** because all the required work for the course has not been completed.

**Only one missed laboratory period may be dropped during the semester.**

H. The departmental policy concerning eye protection in the laboratory is as follows:

For proper eye protection ALL students enrolled in chemical laboratory courses are REQUIRED to purchase and wear **chemical splash goggles** (NOT GLASSES) which meet departmental requirements for impact and splash protection. The goggles must be worn by everyone including those who normally wear glasses and those who wear contacts. Those students who wear contacts but do not have eyeglasses may wear contacts in the laboratory with a **label** on the goggles so indicating. These labels are available in the lab.

The ACS Committee on Professional Training specifies:

Anyone working or visiting in the lab must be wearing goggles, and consumption of food or drinks must not be permitted. A clean, uncluttered laboratory is more likely to encourage careful work. Laboratory Safety, 2012

I. All students must have on file in the department a signed statement agreeing to abide by all departmental safety regulations including clothing and to abide by the departmental eye-safety program. The Safety Agreement Form is found in the laboratory manual.

### **Computer Lab**

For your convenience we have a computer lab in LSF 310. This has twelve computers with Internet access, word processing, spreadsheet, molecular modeling and drawing and graphing programs. Several times during the semester you will be required to produce graphs, etc. from computers. **Have a memory “stick” available.** You may need to provide your own paper in order to use the Departmental laser printers in L310. Do not attempt to install any software on the computers or remove any from them. A table is also available for students studying together. We also have a Tutoring Center in MSB 315, also with computers, if you need help. Consult the posted schedules. (\*\*\*) due to the renovation some of this may not be true this semester)

**Syllabus Agreement Form**

I have read and understand the policies stated in the syllabus for Dr. Hahn's CHEM 102-L class for the Summer semester of 2013. All questions have been answered to my satisfaction. By signing this sheet I agree to abide by the policies stated therein.

Your signature \_\_\_\_\_

Print your name: \_\_\_\_\_

Date submitted: \_\_\_\_\_