

**Special Organic Chemistry I – CHM 246 001A. Spring 2018**  
**Lab meets: Thursday 2 – 5 PM Room AA-0485.**  
**Northern Virginia Community College, Alexandria Campus**

**Instructor:** Dr. Monica Feazell    **Office:** Room 352, Bisdorf Building    **Phone:** 703-845-4627  
**Email:** [mfeazell@nvcc.edu](mailto:mfeazell@nvcc.edu)    **Webpage:** <http://blogs.nvcc.edu/mfeazell/>

**Office Hours (AA 352):**

M 1 pm – 3 pm  
T 9:30 am – 12:30 pm  
Th 9:30 am – 12:30 pm  
2 hours of office hours on-line per week (flexible)

**Course Description** CHM 245/246 is a sequence of laboratory courses to be taken concurrently with CHM 241/242, Organic Chemistry lecture. It explores the physical properties and reactivity of organic compounds including common methods of separation, purification, and instrumental analysis.

**Course Objectives**

- Maintain a laboratory notebook
- Perform simple laboratory operations (melting and boiling points, simple and fractional distillations, recrystallization, extractions, use of various laboratory instruments: gas chromatograph, refractometer, UV/Vis and IR.
- Perform simple organic syntheses
- Analyze and characterize the organic products formed in synthesis

**Course Pre & Co-requisites:** The prerequisites for this course are CHM241 & CHM245 or their equivalent. CHM 242 is a pre or co- requisite. This course assumes that you can competently perform techniques introduced in CHM 245 including distillation, extraction, and operation of melting point apparatus.

**Text:** *Online Lab Manual* <https://blogs.nvcc.edu/alchm/lab/chm245/>

Many students find the online lab materials to be sufficient. If you want more detailed or alternative explanations of lab techniques, purchase an Organic Lab textbook. I like *The Organic Chem Lab Survival Manual* because it is readable and concise, but all texts will contain the relevant background information. Basic techniques haven't changed – old editions of laboratory texts can be found inexpensively online.

**Other Required Materials**

- 1) Splash-proof laboratory goggles of the kind sold in the college bookstore are the only approved goggles for this course. You are responsible for bringing your goggles to lab every week. If you do not have goggles, you will not be allowed to participate in lab.
- 2) Bound laboratory notebook – no spiral bound, no loose leaf, you will need a composition notebook or something similar.
- 3) Proper attire – feet must be completely covered and you should also be covered from

shoulders to knees. If you are not dressed appropriately you will not be allowed to participate in lab.

4) Reliable access to the Internet – pre-lab assignments and quizzes will be delivered through Blackboard.

**Laboratory Behavior** Organic lab is dangerous. Any student who I believe poses a danger to him/herself or others will be asked to leave lab. I expect students to be both on time and prepared for class every week. Not understanding the procedure or chemical hazards is dangerous therefore students who have not sufficiently prepared for lab in their notebook will not be allowed to participate in lab. Use of cell phones is not allowed in the laboratory. If you are unsure about a safety or waste protocol please ask before doing!

**Audits and Withdrawals** I do not allow audits in laboratory classes. The last day to drop this course and get a refund is **January 29th** The last day to withdraw without penalty or permission is **March 22nd**. Past the withdrawal deadline a student must fill out an Add/Drop form and submit a written petition with supporting documentation to the instructor. Performing poorly is not a valid reason for withdrawing after the deadline. If the petition is not granted or not submitted, the student will be given a grade based on the work completed to that point.

### **Attendance**

*In Person Meetings* - Laboratory is a participatory course and students are expected to attend every class meeting. If you are not present at the start of class or leave before your group has completely cleaned up, you will lose participation points. If you arrive more than 10 minutes late *you will not be allowed to participate in that lab*. If you miss one class, your missed postlab will be dropped but you receive a zero for laboratory performance that day. Missing two labs will result in a zero for the postlab grade and a second zero for performance. If you miss three labs, you will either be withdrawn from the class or given an "F" (if after **January 29**).

*There are no make up labs – you must attend your own lab section.* Please consider your work schedule and Northern Virginia traffic. *If you cannot reliably get to this class on time, please withdraw.*

*This syllabus is meant to give an outline of the course and is subject to change with prior notification.*

**Disability Services for Services** Students requiring special needs in accordance with the ADA must provide me with a current NOVA Accommodation Form. Every effort will be made to meet student's special needs when the student makes those needs known appropriately. Accommodations will begin as soon as the form is received and are not retroactive. Please read the section titled Disability Services for Students in the Student Handbook and visit the [Disability Support Service \(DSS\)](#) NOVA website for additional details and a list of Disability Counselors by Campus. <http://www.nvcc.edu/current-students/disability-services/>

**Academic Dishonesty** Academic Dishonesty **will not** be tolerated. Academic dishonesty includes cheating, plagiarism, and other forms of dishonorable conduct. Penalties can range from the

issuance of failing grades (on an assignment, an exam, or the course) to being referred to the Dean of Students for further disciplinary action, including possible expulsion from the college. Students involved in cheating will receive a grade of "F" on the activity during which cheating occurred and may fail the course. Please read the section titled *Student Conduct, Rights, and Responsibilities: F. Academic Dishonesty* in the **Student Handbook**.

*Academic dishonesty, as a general rule, involves one of the following acts:*

1. Cheating on an examination or quiz; including the giving, receiving, or soliciting of information and the unauthorized use of notes or other materials during the examination or quiz.
2. Buying, selling, stealing, or soliciting any material purported to be the unreleased contents of a forthcoming examination, or the use of such material.
3. Substituting for another person during an examination or allowing such substitution for one's self.
4. Plagiarism. This is the act of appropriating passages from the work of another individual, either word for word or in substance, and representing them as one's own work. This includes any submission of written work other than one's own. You are responsible for understanding what constitutes plagiarism. A [helpful handout](#) can be found on my homepage.
5. Collusion with another person in the preparation or editing of assignments submitted for credit, unless the instructor has approved such collaboration in advance.
6. Knowingly furnishing false information to the College; forgery and alteration or use of College documents or instruments of identification with the intent to defraud.

*Be aware of the following:*

- Any attempt to give or receive information on a quiz or exam will result in an immediate zero that cannot be dropped.
- Plagiarism or falsification of data in a post lab will result in a zero that cannot be dropped.
- A second instance of academic dishonesty or cheating on the final exam will result in an automatic "F" for the course.
- All submitted work must be *in your own words*, otherwise it constitutes plagiarism. Both the student that copied and the student copied from will be penalized.

**Glassware** Students will check out a glassware kit as a group. The group is responsible for paying to replace any broken or lost glassware. Unless negligence of one person can be shown, the entire group will be responsible for paying back the cost of the glassware. Payments can be made to Corenda Clark in AA352. You must show your receipt to me by the end of the semester or a hold will be put on your records.

**Instructor/Student Communications Policy** The primary means of communication outside the classroom between the Instructor and the student is via Blackboard Announcements and e-mail. Students should check Blackboard and their e-mail daily for any Instructor communications.

Failure on the part of the student to check Blackboard and e-mail on a regular basis is not an excuse for missed /late assignments or exams. The Instructor turn-around time to respond to e-mails is 24-to-48 hours Monday through Friday. I will email you at your VCCS email address. If you do not check this address frequently, I would recommend you set it up for automatic forwarding to an email address you do check more frequently. When emailing me, always send email from your VCCS email address.

**Safety Training** No student will be allowed to participate in lab without completing all portions of the online lab safety. As part of the training is a quiz which must be passed with an 80% or better. The training is in a separate Blackboard course which you will be automatically registered for. On your Blackboard homepage you will find the course labeled "Alexandria Science Lab Safety – CHM". If a student does not complete the safety by the second week of class he/she will be administratively withdrawn.

*This syllabus is meant to give an outline of the course and is subject to change with prior notification.*

Tentative Schedule					
Week	Online and HW Assignments		Quiz	Lab Activity	Post Lab Due
	01/11	No Labs			
1	01/18	•Read Lab Safety documents •Read Syllabus	Complete Safety Agreement & Quiz 01/17	Safety and Check In	
2	01/25	•Notebook Prep: Melting Points • Videos	Melting points Quiz 01/24	Melting points	
3	02/01	•Notebook Prep: Recrystallization. •Videos	Recrystallization Quiz 01/31	•Recrystallization	•Melting Point
4	02/08	•Notebook Prep: Acid-Base Properties and Solubility •Videos	Acid-Base Properties and Solubility Quiz 02/07	•Acid-Base Properties and Solubility •Melting point for Recrystallization	
5	02/15	•Notebook Prep: Extraction •Videos	Extraction Quiz 02/14	•Extraction	•Recrystallization •Acid-Base Properties and Solubility
6	02/22	•Notebook Prep: TLC •Video	TLC Quiz 02/21	•TLC •Melting point for Extraction	
7	03/01	•Notebook Prep: Simple Distillation •Video	Simple Distillation Quiz 02/28	•Simple Distillation	•Extraction •TLC
8	03/08	•Notebook Prep: Fractional Distillation •Video	Fractional Distillation Quiz 03/07	•Fractional Distillation	•Simple Distillation
	03/15	No Lab			
9	03/22	•Notebook Prep: GC •Video	No Quiz	•GC	
10	03/29	•Notebook Prep: Unknown •Video	Unknown Quiz 03/28	•Unknown	•Fractional Distillation/GC
11	04/05	Results	No Quiz	•Unknown	
12	04/12	•Notebook Prep: Substitution w/ mole table •Video	Substitution Quiz 04/11	•Substitution	• Unknown

13	04/19	•Notebook Prep: Dehydration w/ mole table •Video	Dehydration Quiz 04/18	•Substitution melting points  •Dehydration	None
14	04/26	Final Exam			•Dehydration  •Substitution

**Grades** are based on a points out 320 from quizzes, post-labs, performance, notebook, final exam, and unknown identification, awarded as follows:

288 pts or greater = **A**, 256 pts or greater = **B**, 224 pts or greater = **C**, 192 pts or greater = **D**, Less than 160 points = **F**

	Blackboard Quiz	Performance	Notebook	Post Lab	Other
Safety	Pass/Fail				
Melting Point	10	5	5	10	
Recrystallization	10	5	5	10	
Simple Distillation	10	5	5	10	
Fractional Distillation + GC	10	5	5	10	
TLC	10	5	5	10	
Acid/Base & Solubility	10	5	5	10	
Extraction	10	5	5	10	
Identification of an Unknown	10	5	5	-	20
Substitution	10	5	5	10	
Dehydration	10	5	5	10	
Final Exam					40
Total Points	90	45	45	80	

*This syllabus is meant to give an outline of the course and is subject to change with prior notification.*

**Quizzes** Quizzes for each lab will be taken on Blackboard and must be completed by 11:59 pm the day before the lab. They assess understanding of concepts and techniques from previous labs and knowledge of procedure and safety hazards associated with the current week's lab. Many quiz questions can be answered easily if you have properly prepared your notebook. The lowest of 10 quizzes will be dropped; each is worth 10 points for a total of 90 points. There will be no makeup or late quizzes. You will have two attempts at each quiz in case in one of them you encounter technical difficulties. No additional attempts will be given.

**PostLabs** Post labs are worksheets where you will write data, analysis, and conclusions and answer questions related to the lab. Post labs can be submitted through Blackboard or in class. They are due at the beginning of class the week after the lab is completed unless otherwise instructed. The lowest post-lab grade out of 9 will be dropped; each is worth 10 points for a total of 80 points. *Note: you must be present for the main portion of the lab to get credit for the PostLab.* Late post labs will not be accepted.

**Laboratory Performance** I will assign a score of 0-5 for each of the 10 mandatory class meetings. No grades will be dropped for your performance average – if you miss a class your performance grade for that class will be a zero. The performance grade is based on the following criteria:

punctual attendance adherence to safety rules notebook preparation ability to follow instructions

apparatus setup equipment use use of chemicals participation

proper waste disposal

efficient use of time

proper return of materials and clean up lack of excessive dependence on others

respect for others attitude

patience

**Notebook** Preparation is an important part of the course. Preparing in your notebook will allow you to perform the lab more safely and efficiently. Detailed information about what to write in your notebook is discussed in the Notebook Guidelines. I will check that you that you have the minimum preparations in your notebook at the beginning of each lab. Students who have not adequately prepared may be asked to leave and will receive a zero.

**Unknown** (20 points) Each individual will be given one unknown to identify and will submit a summary of results and a discussion. You will be graded on correctly identifying your unknown and the logic of your reasoning.

**Final Exam** (40 points) The final exam will cover techniques, reactions, and spectroscopy in the course. The format will be some multiple choice, some free answer similar to postlab questions. A review sheet will be provided at the end of the semester.

**Cell phones, Smartphones, Laptops and Other Electronic Devices** Turn off or silence all electronic equipment when in class. Except for calculators, use of personal electronic equipment is not permitted in lab. You may leave your cell phone/pager on vibrate mode if you are expecting an important phone call and attend the call by excusing yourself quietly.

**IT Help Desk** The IT Help Desk provides first-level technical support to all faculty, staff and students of Northern Virginia Community College. Additional details and resources are located at <http://www.nvcc.edu/ithd/>.

Hours: Mon-Fri: 8 am - 9 pm; Sat: 8 am -5 pm Phone: 703.426.4141 Email: [ithelpdesk@nvcc.edu](mailto:ithelpdesk@nvcc.edu)

*This syllabus is meant to give an outline of the course and is subject to change with prior notification.*

**EMERGENCY AND SAFETY INFORMATION SYLLABUS INSERT TO REPORT AN EMERGENCY OR SUSPICIOUS ACTIVITY**

NOVA Police at 703-764-5000 Police and Fire at 9-1-1

## **SAFETY PREPARATION**

Your ability to react effectively during an emergency takes preparation. The Office of Emergency Management and Safety wants you to be prepared to react immediately. To start, you should know the locations of: the two safest and most direct evacuation routes (see posted evacuation route signs in classrooms), the locations of designated Assembly Areas outside the facility, shelter-in-place areas for a severe weather event, and the nearest automated external defibrillators (AEDs). For additional emergency preparedness information, visit the Office of Emergency Management and Safety website at: [www.nvcc.edu/emergency](http://www.nvcc.edu/emergency).

## **FIRE/EVACUATION**

- Activate the nearest fire alarm and call 9-1-1 if possible. If there are no fire alarms nearby, knock on doors and yell “fire” as you exit the building.
- Evacuate the building. Do not use elevators!
- Feel closed doors with the back of your hand. Do not open if doors are hot.
- Move well away from the building when evacuating, and assemble at designated assembly areas.
- Do not re-enter the building until cleared by authorized personnel.

## **SEVERE WEATHER/SHELTER-IN-PLACE**

If the area is under a Severe Weather/Tornado **WARNING**, or if notified to shelter:

- Seek shelter immediately in a Severe Weather Shelter Area or go to an interior hallway or room; at the lowest level in the building; and/or an area free of windows or glass.
- Protect your body from flying debris with any available furniture or sturdy equipment.
- Use your arms to protect your head and neck.
- Wait for the “All Clear” before leaving your shelter area.

## **VIOLENCE/ACTIVE SHOOTER**

Determine the most reasonable way to protect your own life and call 9-1-1 or 703-764-5000 when it is safe to do so.



- **Run** and evacuate if you can. This may be your best chance of survival. Have an escape route in mind. Leave valuables behind and keep hands visible.
- **Hide** in an area outside of the shooter's view. Block entry to your hiding place and lock doors. Turn off lights and silence electronic devices.
- **Fight** as a last resort and only when your life is in imminent danger. Attempt to incapacitate the shooter. Act with physical aggression.

## **EMERGENCY COMMUNICATION**

In the event of an emergency you may be notified by various means depending on the emergency. Some of the ways you may be notified include:

- classroom telephones, computer pop-ups, digital flat panels,
- NOVA Access through [www.facebook.com/NOVAaccess](http://www.facebook.com/NOVAaccess) and [www.twitter.com/novaaccess](http://www.twitter.com/novaaccess)), or
- Text messaging through NOVA Alert.  
NOVA Alert is a free notification service. You are automatically signed up for email alerts through your NOVA email address. To add a mobile phone number or an additional email account, you must register by going to: <https://alert.nvcc.edu>.
- NOVA may use some or all notification channels to notify you. For a complete list, visit the NOVA website at [www.nvcc.edu](http://www.nvcc.edu) and search for Alert Notification Systems.

## **Closing/Class Cancellations**

If the College is closed or delayed for any reason, a text alert will be sent to cell phones registered on NOVA Alert and a notice will be posted on the home page of the College's website. In addition, a message will appear on our cable television station and on local radio and TV stations. The home page of the College's website will always have the most reliable and up-to-date information about closures or delays.

More Info: [www.nvcc.edu/emergency](http://www.nvcc.edu/emergency)

*This syllabus is meant to give an outline of the course and is subject to change with prior notification.*