

ANNE ARUNDEL COMMUNITY COLLEGE
ARNOLD, MARYLAND

CHE 213 LAB

Professor Maureen Sherer

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Fall 2017

Office: DRGN Science Building 226

Email: masherer@aacc.edu

Office Hours: _____

Web Page: <http://ola4.aacc.edu/masherer> ; Class webpage: Click CHE 213 from this webpage

Canvas content: log in through <http://myaacc.edu> ; Then click on CHE 213 lab under My Classroom

TEXT & Equipment	1) Williamson et al., <u>Macroscopic and Microscale Organic Experiments</u> , AACC ed., Cengage Learning, 2011.
	2) bound notebook (sewn-in pages, not spiral or perforated).
	3) Scientific Calculator (programmable calculator not allowed for quizzes).

TENTATIVE SCHEDULE

Date	Experiment	Lab Text Reading
Aug 29	Introduction, Safety, Waste Disposal, Check-in; Chemical Literature Research	Chapters 1 & 2
Sep 5	Melting Point Determination Exp 1-4, pp 53 - 54	Chapter 3, pp 41-55
Sep 12	Recrystallization of Acetanilide, macroscale (Handout)	Chapter 4
Sep 19	Solubility Tests & Recrystallization (semi- microscale) Exp 1 & 2 (Phthalic Acid), pp 78-79	Chapter 4
Sep 26	Thin Layer Chromatography, Exp 1, pp 175-177 GC syringe practice	Chapter 8
Oct 3	Column Chromatography Exp 4, pp 200 – 201 Mid-Term Lab Quiz	Chapter 9
Oct 10	Boiling Point Determination, pp 56 – 58; Distillation w/ Analysis by Gas Chromatography (GC) (Handout)	Chapter 3, pp 55-60 Chapter 5
Oct 17	Distillation, continued	Chapter 5
Oct 24	Extraction: Separation of a Carboxylic Acid, a Phenol, & a Neutral Substance, rev. Exp 1(Handout)	Chapter 7
Oct 31	Extraction, continued	Chapter 7
Nov 7	Radical Initiated Chlorination & GC Analysis Exp 1, pp 330 - 331	Chapter 18
Nov 14	Synthesis of Divanillin Handout	
Nov 21	Divanillin, continued; Sublimation of an Unknown Substance, pp 127 – 128	Chapter 6
Nov 28	Suzuki-Miyaura Coupling Reaction (Handout)	
Dec 5	Final Lab Quiz & Check-out Deadline for lab notebook & all lab reports.	

Closure of the College for any reason: when the College reopens, this class/lab will meet regardless of the remaining amount of class time. **OVER**

Experiments are to be performed during your scheduled laboratory period. In case of an unavoidable absence, with documentation of a compelling reason, **one** make-up lab may be granted. Also, if you do not finish an experiment during the scheduled time you may be granted make-up time. All lab work must be made-up in a regularly scheduled CHE 213 lab. A student must obtain permission of the involved instructors prior to the lab work, and the Lab Notebook must be signed by the instructor in the make-up lab. The penalty for late lab reports is 10% during the first week, 20% during the 2nd, 50% thereafter. Style & content guidelines for lab reports will be given in lab – a general guideline is below.

All CHE 213 students agree to acquaint themselves with the Lab Safety & Operational Rules and to abide by them.

GRADING:

11 Lab Reports @ 10 points.....	110 points
2 Lab Quizzes @ 10 points.....	20
Laboratory Notebook (see a subsequent page).....	10
Worksheets, Lab Practical Assessments.....	10
Total.....	150 points

Both lecture & lab must be passed (with 60% or greater) in order to pass this course.

Pre-Lab Preparation: It is essential that the student prepares for each lab ahead of time. This includes reading relevant materials, thinking about the procedure(s), preparing his/her lab notebook, and any other assignments made by the professor.

LAB REPORT GRADING – general guidelines. A *Writing Style Guide* and specific rubrics are given in lab.

Performance: on time, pre-lab preparation, appropriate attire, good use of time, effort, following directions & safety procedures, lab technique, post-lab clean-up	Deduction if lacking
Descriptive Title – do not use a separate title page. (Do include your name.)	Deduction if missing
Abstract – <i>briefly</i> give purpose, mention method, & give all results. E.g., for a solid compound synthesized, give its melt pt & % yield.	20%
Procedure – only cite & include page numbers, but do give any modifications from text procedure.	Deduction if missing
Discussion: Data, Analysis, & Results - include relevant literature (database) values; calculations if applicable (using sig figs), Error / Modifications Discussion ('Lessons Learned'); post lab questions if assigned	40%
Accuracy / Identification; or Percent Yield & Purity	20%
References – source of procedure, databases consulted, your lab notebook (It is the source of your original data. List yourself as author, its title is <i>CHE 214 Lab Notebook</i>), etc. Note: If you copy a structure from an electronic source, you must attribute it.	Deduction if missing
Execution, holistic presentation, use of impersonal voice, format - must be typed, must be neat.	20%

Withdrawal: In order to receive a “W” for the course, a student must submit the appropriate form at the Records Office by Nov 20. If you stop attending class, but do not formally withdraw with the Records Office, be aware that you will receive a grade based on your earned points out of the course total .

Additional Learning Resources:

1. Professor's Office Hours
2. Science Tutoring Center in the basement of the Dragun Science Bldg, Rm 5.
3. *Solutions to Problems Manual* (Bookstore & Library Reserve)
4. Computer Lab in DRGN 120 – open schedule posted by door.
5. Current course textbook is also at the Library Reserve Desk.
6. Time Management & Study Skills see <http://ola2.aacc.edu/vc/timemanagement/TimeManagementWebShop>

Please read the accompanying information on College-wide Competencies & CHE 213 Expected Learning Outcomes.

Academic Integrity and Civil Discourse: Read the AACC policy on Academic Integrity at www.aacc.edu/policies and in the *AACC Catalog*. It is understood that students will abide by this and all college policies. The consequences of an academic integrity violation are very serious. A report is filed with the dean's office and the penalty is substantial: It may include failure for the course or suspension, depending on the gravity of the violation. Impolite behavior will not be tolerated in this course.

E-mail correspondence: Please include your name and class section in all correspondence with the professor. All written communication must follow the conventional rules of grammar, punctuation, spelling, composition, and etiquette. This includes email messages, discussion postings, essay questions, and lab reports. Communication is one of the AACC Competences addressed by this course.

Cell phones and all electronic communication devices must be silent & not used during all class and lab times unless directed by the instructor. During exams these devices must be turned off and in a backpack, purse or closed tote bag.

AACC Catalog Description for CHE 213, Organic Chemistry 1

4 credit hours – three hours of lecture and three hours of laboratory weekly; one term. Study the chemistry of hydrocarbons and their simple derivatives, emphasizing their structures, properties, and mechanisms of reactions. Use general laboratory techniques and procedures in organic chemistry and learn modern methods of analysis, including gas chromatography. Lab fee \$50.

Prerequisite CHE 112

Note: Credit is not given for both CHE 113 and CHE 213.

This CHE 213 Lab Syllabus is a supplement to the overall course syllabus given in lecture.

Science Office Address and Phone Number:

Anne Arundel Community College
101 College Pky
Dragun Science Building, Room 226
Arnold, MD 21012
410-777-2260

LAB NOTEBOOKS

All students must obtain a bound notebook (sewn-in pages) to use as a Laboratory Notebook. It should be brought to each lab and maintained in ink according to the following directions:

1. **All entries in ink**; no erasures, no white-out, line through mistakes.
2. Table of Contents, and then several skipped pages. The Experiment Title and its page numbers are to be filled in as the course proceeds.
3. All pages numbered sequentially.
4. An entry for each experiment which includes:
 - Title
 - Abstract Draft (Purpose + how; brief)
 - Reactions &/or Structures
 - Procedure (*Outline only*) & reference lab textbook with page numbers. Do not insert photocopied pages from the lab textbook.
 - Pre-Lab Lecture notes
 - Reference Information (if any, e.g., accepted value of a melting point, cited)
 - Data & Observations recorded **directly** into notebook. **Do attach** original print-outs from instruments, TLC plates, etc.
 - Calculations (if any)
 - Discussion
 - Problems with the procedure, errors, things you would do differently if you did it again...
 - What do the results mean, what can you conclude?...
 - Reference Citations
5. Sign (not just initial) and date the bottom of each page.
6. Blank pages which may occur in the body of the notebook should be lined through, signed and dated.
7. Organization is essential. Neatness is desirable, but it is more important to be thorough than neat.

Lab Quizzes are open lab notebook. A well maintained lab notebook will be very beneficial. 😊

Disability Support Services Statement: The Disability Support Services Office (DSS) provides equal access to educational opportunities for qualified students with disabilities. Students interested in course accommodations must provide relevant documentation in order to receive accommodations. For information, please call Courtney Sales, Program Manager for DSS, at 410.777.2306, email her at cjsales@aacc.edu or visit <http://www.aacc.edu/resources/disability-support-services> . Deaf and hard of hearing students can reach the office by calling Maryland Relay 711 or by emailing dss@aacc.edu.

Canvas ADA Statement: Canvas provides a user experience that is easy, simple, and intuitive. Special attention has been paid to making Canvas screen-readable. The Rich Content Editor encourages users to create universally accessible content. Canvas is designed to allow limited customization of colors and schemes to be accessible for all users. The National Federation of the Blind granted Canvas the Gold Level Web Certification in 2010. Find more information here: <http://www.instructure.com/accessibility>

Notice of Nondiscrimination: AACC is an equal opportunity, affirmative action, Title IX, ADA Title 504 compliant institution. Call Disability Support Services, 410-777-2306 or Maryland Relay 711, 72 hours in advance to request most accommodations. Requests for sign language interpreters, alternative format books or assistive technology require 30 days' notice. For information on AACC's compliance and complaints concerning sexual assault, sexual misconduct, discrimination or harassment, contact Suzanne Boyer, federal compliance officer at 410-777-1239 or complianceofficer@aacc.edu or Felicia Patterson, Title IX coordinator at 410-777-2256, or Maryland Relay 711.

Student Conduct Policy: Students shall at all times conduct themselves in a manner that demonstrates mutual respect and courtesy, displays appropriate standards of behavior, and refrains from any actions or inactions that impinge on the rights of others or disrupt the teaching and/or learning process or the operations of the college. A student found in violation of this policy or any other College policy shall be subject to appropriate sanctions in accordance with the student conduct procedures. The full text of the policy is available on the AACC website (<http://www.aacc.edu/policies>) and in the Student Handbook and College catalog.

Acceptable Use of Information Technology Resources: This policy governs the acceptable use of the college information resources by anyone. This policy applies to students enrolled in this course at any time they are using college resources. The goal of the usage policy is to encourage an environment of learning in which all students can interact in an open, legal, and ethical manner. The full text of the policy is available on the AACC website (<http://www.aacc.edu/policies>) and in the Student Handbook and College catalog.

Emergency Class Cancellation: If an emergency arises in which the college is closed, the planned activity for that day or assignment will occur or be due the next day that classes resume on campus. Students can also check www.aacc.edu. You can sign up for text messaging to your cell phone using the following website: <http://www.aacc.edu/campusalerts> .