

ANNE ARUNDEL COMMUNITY COLLEGE
ARNOLD, MARYLAND

CHE 214 LAB
Professor Maureen Sherer
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Spring 2017
Office: DRGN Science Building 226
Email: masherer@aacc.edu
Office Hours: _____

Canvas content: log in through <http://myaacc.edu> ; Then click on CHE 214 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
Jan 24	Safety & Check-in; Infrared (IR) Spectroscopy; Chemical Literature Research	Chap 11 & Chap 15.1 – 15.7 (Klein)
Jan 31	Gas Chromatography: Analyzing Alkene Isomers Exp 3, pp 217 - 218	Chapter 10
Feb 7	Borohydride Reduction of a Ketone Exp on p 669	Chap 55
Feb 14	Oxidation of Cyclohexanol Exp 3, pp 361 - 363	Chap 22
Feb 21	Grignard Reaction Exp 1, pp 495 - 497	Chap 38
Feb 28	Grignard Reaction continued Exp 2, pp 497 - 499	Chap 38
Mar 7	Nitration of Methyl Benzoate Exp 1, pp 402 - 403	Chap 28
Mar 13-19	Spring Break : Mon Mar 13 – Sun Mar 19; AACC Closed.	
Mar 21	Nuclear Magnetic Resonance (NMR); Synthesis of Acetylsalicylic Acid (Aspirin) Exp, pp 531-532	Chap 12 & Chap 16 (Klein) Chapter 41
Mar 28	Esterification: Synthesis of Butyl Acetate Exp 1, pp 520 - 521	Chap 40
Apr 4	Cyalume; Exp 1 & 2, pp 706 - 707	Chap 61
Apr 11	Aldol Condensation; Lab Quiz Exp on pp 485 – 486 Chemical Literature Assignment	Chap 37
Apr 18 4/18 W day	Structure Determination & Qualitative Analysis (QA); pp 287 – 290; IR & NMR	Chap 14, 11, 12, Handout
Apr 25	Structure Determination & Qualitative Analysis (QA); pp 287 – 290; IR & NMR	Chap 14, 11, 12
May 2	Structure Determination & QA; Check-out; Deadline for all lab reports & lab notebook.	

* Williamson text unless otherwise specified.

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 214 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 on a subsequent page.

All CHE 214 students agree to acquaint themselves with the Lab Safety & Operational Rules and to abide by them.

GRADING:

9 Lab Reports @ 10 points.....	90 points
Structure Determination & QA Report.....	15
Chemical Literature Research.....	10
Lab Quiz.....	20
Worksheets, Lab Practical Assessments.....	5
Laboratory Notebook (see a subsequent page).....	10
Total.....	150 points

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

Withdrawal: In order to receive a “W” for the course, a student must submit the appropriate form at the Records Office by Apr 18. 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 214 Expected Learning Outcomes.

Academic Integrity and Civil Discourse: Read the AACC policy on Academic Integrity at www.aacc.edu/studentpolicies 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. During exams these devices must be turned off and in a backpack, purse or closed tote bag.

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 REPORT GRADING – general guidelines. 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%

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 www.aacc.edu/disability. 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/studentpolicies/default.cfm>) 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/studentpolicies/default.cfm>) 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: www.aacc.edu/stayinformed.