Syllabus (Revised) CHEM 102-02
Organic and Biological Chemistry – Spring 2016

Day/Time: Tues / Thurs 1:40-2:55 PM
Place: SSMB 129
CRN: 20222

Instructor Information:
Dr. Paul A. Sessa
E-mail: sessap@cofc.edu
Cell Phone: 843-696-5216
Office: Rm 108 SSMB
Office Hours: Tues 3:30-5:00 PM / Thurs 1:00-1:30 PM & by appointment

Course Description: This course is part of the Gen Ed sequence and is designed primarily for students who would like an overview of organic and biological chemistry as it relates to the world at large. Students will gain fundamental knowledge of organic compounds including hydrocarbons, alcohols, phenols, amines, amides, aldehydes, ketones, carbohydrates, carboxylic acids, esters, polymers, lipids, amino acids, proteins, enzymes, nucleic acids, and vitamins. Students will use this knowledge base to understand how these respective compounds play significant roles in our lives.

Prerequisite: Chemistry 101 or Chemistry 111. Corequisite: Chemistry 102L. If either one of CHEM 102 or 102L is dropped, then the other must be dropped.

Texts:

One of three options can be used to access the additional course material:

ISBN 9781259381003 – Loose leaf binder ready version (COLLEGE OF CHARLESTON)
CHEM 101/102: PPK Chemistry in Context with 1 year access Connect Plus card

ISBN 9781259387692- On-line only version of the book (COLLEGE OF CHARLESTON)
CHEM 101/102: Connect Plus Chemistry 1 Year Physical Access Card for Chemistry in Context


Student Learning Outcomes:
1. Explain the functional groups, structure, of common organic and biochemical families of compounds.
2. Demonstrate the direct relationship of structure of organic- and bio-chemicals with their function.
3. Summarize the basic biochemical processes of protein denaturation, enzymatic action, protein synthesis from DNA, and metabolism.
4. Characterize the role organic and bio-chemistry has in our world and in our body chemistry.
CHEM 101/101L/102/102L General Education Learning Outcomes:
1. Students apply physical/natural principles to analyze and solve problems.
2. Students explain how science impacts society.

To be assessed during CHEM 102L with the Gen Ed Learning Outcomes Assignment

Responsibilities: The instructor is here to explain the material and help you to the best of his time and ability. However, the burden of learning is upon you, the student. It is expected that for every hour spent in lecture that you will spend a minimum of 2-3 hours of study. In order to succeed, it is necessary for the student to actively participate in learning. So, prepare for class every day. You will be asked to participate in the class discussions. You are always encouraged to ask questions and contribute ideas to class.

Honor Code: Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved. Incidents where the instructor determines the student’s actions are related more to a misunderstanding will handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student’s file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student’s transcript for two years after which the student may petition for the X to be expunged. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

Students should be aware that unauthorized collaboration--working together without permission-- is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others’ exams, fabricating data, and giving unauthorized assistance. Projects conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

Attendance Policy: Attendance is expected at all classes. Students are responsible for all information presented in class. It is imperative that you attend class and also to arrive promptly. If you arrive late for a quiz, test, or the final exam, instructions will not be repeated nor will you receive additional time to complete the assignment. Please note that an Absence Memorandum from the Office of Undergraduate Studies only verifies your documentation for missing a class. It does not entitle you to make up or be excused from any work, assignment, quiz, or test. Any work missed due to an absence will be given a zero unless the absence is specifically excused by the instructor.

OAKS: Course material, study tools, and additional information will be provided for students on OAKS. You can access OAKS through the College of Charleston MyCharleston website. Go to https://my.cofc.edu/cp/home/displaylogin, login into MyCharleston using your system login ID and
password. Once you are in the MyCharleston system, click on OAKS icon at the top of the page, and you will be taken to the OAKS site.

**LearnSmart Homework (5% of grade):** An on-line interactive learning tool from McGraw Hill (LearnSmart) developed for this course will be the graded homework system used to develop your skills. Students will need to register the first week of classes using the access code that comes with their textbook. There will be five (5) LearnSmart assignments – the 1st one (LS Ch 5) will be optional, the remaining four (4) will be for credit. The homework will be graded on a percentage completed basis. Each LearnSmart module will take on average 60 minutes to complete. If you have completed the LearnSmart module for the chapter you will earn a full 100% of the assignment. The LearnSmart modules will close at 11:59 pm on the day they are due. If a student experiences operational problems with the McGraw Hill CONNECT and/or LearnSmart systems, the student should contact the McGraw Hill Customer Support Center at 800-331-5094. The lowest of the student’s four LearnSmart scores will be replaced by the Final Exam score if the Final Exam score is higher.

**Quizzes (10% of grade):** During the semester seven (7) quizzes will be given using the McGraw Hill online CONNECT system. The quizzes will be based on the material covered in class and assigned readings, and should be used by the student to assess where additional effort is needed to ensure understanding of critical elements in the course material. The quizzes will close at 11:59 pm on the day they are due. Whatever your progress is at that point in time will be the graded result you will receive.

**Tests (60% of grade):** There will be four (4) Tests covering the course material – see Schedule for dates and topics covered. Tests can be taken early with the permission of the Instructor. Tests that are missed cannot be made up and will count as zero. The only exception to this is if the Student has a documented, justifiable excuse (as judged by the Instructor), and in this case the Student will be assigned a score on the missed Test equal to their score on the Final Exam. The lowest score on the four Tests will be replaced by the Student’s score on the Final Exam if the Final Exam score is higher than the lowest Test score.

**Final Exam (25% of grade):** The Final Exam will be held on Tuesday, April 26th at 4:00 pm in room 129 SSMB. The Exam will be a cumulative / 70 minute / 80 question / multiple choice / American Chemical Society Standardized test. There may be a second part to the Final Exam consisting of an additional set of department-wide questions. Absence from the Final Exam will result in the grade of "X" being assigned which converts to an "F" within 48 hours unless an excused absence has been granted by the dean in the Office of Undergraduate Studies. Requests for an alternate Final Exam time must be processed through the Office of Undergraduate Studies no later than 5 p.m. on the last day of class.

**Grading Weight:**

- LearnSmart Homework: 5%
- Quizzes: 10%
- Tests: 60%
- Final Exam: 25%
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## Organic and Biological Chemistry – Spring 2016

### Grading Scale:
- **A** 92% & above
- **A-** 90 - 91%
- **B+** 87 - 89%
- **B** 82 - 86%
- **B-** 80 - 81%
- **C+** 77 - 79%
- **C** 72 - 76%
- **C-** 70 - 71%
- **D+** 67 - 69%
- **D** 60 - 66%
- **F** below 60%

**SNAP:** Any student eligible for and in need of academic adjustments or accommodations because of a disability is requested to speak with the professor during the first two weeks of classes and to provide documentation indicating the Student’s registration in SNAP.

**Electronics Device Policy:** Electronic devices are allowed in class but the sound must be off unless otherwise specified by the instructor. During tests, exams, and quizzes no electronic devices (except approved calculators) are allowed to be on or in sight, unless otherwise specified by the instructor.

**Email:** Email is considered an official method for communication at the College of Charleston. If a student wishes to have email redirected from their official college issued account to another email address, they may do so, but at their own risk. Having email redirected does not absolve the student from the responsibilities associated with official communication sent to his or her College account. Students are expected to check their College of Charleston official email on a frequent and consistent basis in order to remain informed of College related communications. Checking email on a daily basis is recommended.

**Tips For Success:**
- **Attend all classes**
- **Be an active learner**
- Put in 2-3 hrs/day for each 1-hr lecture class period.
- Read textbook & do homework problems after each lecture
- Use resources to study – chapter study goals, class notes, sample problems, homework, end-of-chapter reviews, and key terms in textbook
- When confused, ask for help – from instructor, friends, tutors
- **Stay Healthy**
- **DO NOT FALL BEHIND**
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Class Schedule

Thurs Jan 7  
PPt 0 - Introduction / Syllabus  
PPt 1 – 1st Week Review: Bonding & Intermolecular Forces

Tues  Jan 12  
PPt 1 – cont.

Thurs Jan 14  
PPt 2 - Introduction to Organic Chemistry

Tues  Jan 19  
PPt 2 – cont.  
PPt 3 – Color

Thurs Jan 21  
PPt 3 – cont.

Tues  Jan 26  
Test 1: PPt 1 – Bonding & Intermolecular Forces  
PPt 2 - Introduction to Organic Chemistry  
PPt 3 - Color

Thurs Jan 28  
PPt 4 – Hydrocarbons / Saturated

Tues  Feb 2  
PPt 4 – cont.

Thurs Feb 4  
PPt 5 – Hydrocarbons / Unsaturated

Tues  Feb 9  
PPt 5 – cont.  
PPt 6 – Polymers & Plastics (Chapt 9 – Chem. in Context)

Thurs Feb 11  
PPt 6 – cont.

Tues  Feb 16  
PPt 7 – Alcohols, Phenols, Thiols & Ethers

Thurs Feb 18  
PPt 7 – cont.

Tues  Feb 23  
Test 2: PPt 4 – Hydrocarbons / Saturated  
PPt 5 – Hydrocarbons / Unsaturated  
PPt 6 - Polymers & Plastics  
PPt 7 – Alcohols, Phenols, Thiols & Ethers

Thurs Feb 25  
PPt 8 – Aldehydes, Ketones & Chiral Compounds

Tues  Mar 1  
PPt 8 – cont.

Thurs Mar 3  
PPt 9 – Carboxylic Acids & Esters
<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Tues Mar 8</td>
<td>Spring Break</td>
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<td>Thurs Mar 10</td>
<td>Spring Break</td>
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<td>Tues Mar 15</td>
<td>Ppt 9 – cont.</td>
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<td>Ppt 10 – Amines &amp; Amides</td>
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<td>Thurs Mar 17</td>
<td>Ppt 10 – cont.</td>
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<td>Tues Mar 22</td>
<td>Test 3: Ppt 8 – Aldehydes, Ketones &amp; Chiral Compounds</td>
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<td>Ppt 9 - Carboxylic Acids &amp; Esters</td>
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<td>Ppt 10 – Amines &amp; Amides</td>
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<td>Thurs Mar 24</td>
<td>Ppt 11 – Manipulating Molecules &amp; Designing Drugs (Chapt 10 –</td>
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<td>Chem. In Context)</td>
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<td>Tues Mar 29</td>
<td>Ppt 11 – cont.</td>
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<td>Ppt 12 – Nutrition / Food For Thought (Chapt 11 – Chem. In Context)</td>
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<td>Thurs Mar 31</td>
<td>Ppt 12 – cont.</td>
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<td>Tues Apr 5</td>
<td>Ppt 12 – cont.</td>
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<td>Thurs Apr 7</td>
<td>Ppt 12 – cont.</td>
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<td>Ppt 13 – Genetic Engineering &amp; The Molecules of Life</td>
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<td>(Chapt 12 - Chem. in Context)</td>
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<td>Tues Apr 12</td>
<td>Ppt 13 – cont.</td>
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<td>Thurs Apr 14</td>
<td>Ppt 13 – cont.</td>
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<tr>
<td>Tues Apr 19</td>
<td>Last class day</td>
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<td>Test 4: Ppt 11 – Manipulating Molecules &amp; Designing Drugs</td>
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<td></td>
<td>Ppt 12 - Nutrition / Food For Thought</td>
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<tr>
<td></td>
<td>Ppt 13 – Genetic Engineering &amp; The Molecules of Life</td>
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<tr>
<td>Tues Apr 26</td>
<td>FINAL EXAM 4:00 pm Rm 129 SSMB</td>
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Other Important Dates
- Wed Jan 11: “Drop/Add” Day
- Sat Jan 30: Storm Make Up Day
- Fri Mar 18: “W” Day
- Fri Apr 22: Reading Day
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### On-Line Assignment Schedule

(Each assignment due at 11:59 pm on date shown)

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<thead>
<tr>
<th>Due Date</th>
<th>Assignment</th>
<th>Material Covered</th>
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</thead>
<tbody>
<tr>
<td>Wed Jan 13</td>
<td>LS Chapt 5</td>
<td>Water For Life (Ch 5-Chemistry in Context, sec’s 5-1,2,6,7,8) Optional / no credit</td>
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<tr>
<td>Wed Jan 20</td>
<td>Quiz 1</td>
<td>PPT 1 - Bonding &amp; Intermolecular Forces</td>
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<td>PPT 2 - Introduction to Organic Chemistry</td>
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<tr>
<td>Wed Feb 10</td>
<td>Quiz 2</td>
<td>PPT’s 4 &amp; 5 – Hydrocarbons – Saturated &amp; Unsaturated</td>
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<td>Fri Feb 12</td>
<td>LS Chapt 9</td>
<td>Polymers &amp; Plastics (Ch 9-Chem. in Context) / PPT 6</td>
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<tr>
<td>Fri Feb 19</td>
<td>Quiz 3</td>
<td>PPT 6 – Polymers &amp; Plastics</td>
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<td>PPT 7 – Alcohols, Phenols, Thiols &amp; Ethers</td>
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<td>Wed Mar 30</td>
<td>LS Chapt 10</td>
<td>Manipulating Molecules &amp; Designing Drugs  (Ch 10-Chem. In Context) / PPT 11</td>
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<tr>
<td>Mon Apr 4</td>
<td>LS Chapt 11</td>
<td>Nutrition / Food For Thought (Ch 11-Chem. In Context) / PPT 12</td>
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<tr>
<td>Fri Apr 8</td>
<td>Quiz 6</td>
<td>PPT 12 – Nutrition / Food For Thought</td>
</tr>
<tr>
<td>Wed Apr 13</td>
<td>LS Chapt 12</td>
<td>Genetic Engineering &amp; The Molecules of Life (Ch 12-Chem. In Context) / PPT 13</td>
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<tr>
<td>Fri Apr 15</td>
<td>Quiz 7</td>
<td>PPT 13 – Genetic Engineering &amp; The Molecules of Life</td>
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