COURSE INFORMATION

COURSE TITLE
CHE102 Introduction to Chemistry II with Lab: GT-SC1

COURSE DESCRIPTION
This course focuses on introductory organic and biochemistry (sequel to Introduction to Chemistry I). This course includes the study of hybridization of atomic orbitals for carbon, nomenclature of both organic and biochemical compounds, physical and chemical properties of various functional groups of organic chemistry, and physical and chemical properties of biochemical compounds along with their biochemical pathways. Laboratory experiments are included. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

This course is one of the Statewide Guaranteed Transfer courses.

• gtPathways Requirement Course Information Page

CREDIT HOURS
5

SUGGESTED PREREQUISITE KNOWLEDGE
Students should complete CHE101 prior to this course.

CCCOnline Course Policies
The CCCOnline Course Policies page contains information about the student's role in the classroom, grading policies, and rights and responsibilities.
COURSE MATERIALS

Your textbook is available online as an eText. You do not need to purchase any additional materials. For specific information on refund policies and the optional black and white textbook available for purchase please contact the CCCOnline bookstore.

MINIMUM COMPUTER REQUIREMENTS

To complete this course, you will need regular access to a computer from which you can get to the Internet and use email. In order to ensure that your course functions properly, you must run the System Check. This is a CRITICAL STEP, and taking the time to do it now will eliminate a tremendous amount of frustration for you later. To run the System Check, click Tools in the course NavBar and then click System Check.

REQUIRED eTEXT

MAIN eTEXT


DIGITAL MATERIALS ACCESS AND SETUP

This course uses MyLabsPlus which contains the eText in addition to interactive media content to help you remember what you learn.

- Visit the Pearson MyLabsPlus Course Start page for details on first access of the materials.

To make sure your computer is set up correctly to access the eText and other digital content, review the Pearson Technical Support page, also linked in the Technical Support Module.

REQUIRED LAB KIT

Your required lab kit will be shipped to you after the drop date for this semester. You do not need to purchase the lab kit separately. It is included in your course fees.

On the first day you access the course, submit your shipping address one of two ways:

1. Via a pop-up window that appears in your course for you to submit your shipping address. This must be done prior to the drop date.
   - Students who live abroad should complete this form by the third day of class.
   - The address you provide must be a physical address and not a PO Box. Lab kits are sent via FedEx, which is unable to deliver to a PO Box.

2. Via a link on your Course Homepage near the top right where you can fill in your address. This link will be available until the drop date for the semester.

You only need to submit your address one time. After the drop date for this course the process for sending your kit to you will begin.

- Please allow 1-2 business days for processing and 7-10 business days for delivery.
• If you do not receive your lab kit by _______, contact me and I will work with you to adjust your lab due date that requires the kit.
• If you do not receive your lab kit due to not submitting your address or submitting an old or inaccurate mailing address, there will be no deadline extensions for lab assignments. CCCOnline is not responsible for delays or lost lab kits due to customs or APO processing.

When the lab kit arrives, check the contents against the lab kit inventory.

• If you are missing any items or have any broken items, contact Carolina Biological at 1-800-334-5551 ext: 4371. Any missing or broken items will be replaced for free.
  o The phone number and the name of the person who assembles the kit will be included in a postcard inside the lab kit. See the Lab Kit FAQs in the Lab Information Module for more information.
  o It is essential that you check your kit at the beginning of the semester.

See the Lab Kit FAQs in the Lab Information Module for more information.

**Lab Materials Supplied by the Student**

Please find the list of lab materials provided by the student in this course. Please make sure to review the list and have the materials available at least a week before the due date of the lab.

Additional lab information can be found in the Lab Information section in the Syllabus module.

**Photo and Camera Requirements**

This course requires access to a digital camera (cell phones cameras are acceptable). Students will be required to submit photos as part of specified assignments within this course. Photos submitted for assignments will be required to be .jpg, .tif or .bmp format. Assignments without required photos and proper formatting will result in a grade penalty.

**Office 365**

You have access to and can download a free version of the Microsoft Office suite through Office 365. It will be vital that you submit the correct type of files to the Assignment folders in this course. Please reference these instructions.

**Plug-Ins and Extras**

• Adobe Flash
• Adobe Reader
• QuickTime
**Course Competencies and Outcomes**

**Student Competencies**

The competencies you will demonstrate in this course are as follows:

A. Use hybridization to determine what kind of geometry exists in the structure of a compound.
B. Recognize what functional group(s) is/are present and decipher what possible chemical activity a compound can undergo.
C. Show how polarity can influence a chemical reaction and intermolecular interaction.
D. Use the functional group chemistry of organic compounds to determine the chemical activity of biochemical compounds.
E. Determine outcomes for a biosynthetic pathway given conditions such as pH, concentration, temperature, enzyme activity, etc.
F. Write or give orally the correct linear process of protein synthesis, including the vocabulary associated with that process.
G. Write or orally explain the metabolic pathways, including the vocabulary associated with that process.
H. Determine the correct name of the compound given an organic or biochemical structure.
I. Draw the correct structure on paper given a name of an organic or biochemical compound or structure.
J. Read, analyze, and apply to new situations, written material related to the study of chemistry.
K. Demonstrate the ability to select and apply contemporary forms of technology to solve problems or compile information in the study of chemistry.

The module outcomes that will permit you to demonstrate course competencies are:

**Module 1**

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Identify characteristics of organic compounds versus inorganic compounds.</td>
<td>D</td>
</tr>
<tr>
<td>2 Write International Union of Pure and Applied Chemistry (IUPAC) names for hydrocarbon compounds.</td>
<td>B, H</td>
</tr>
<tr>
<td>3 Draw organic compounds with the appropriate geometry and in the correct line-angle structure.</td>
<td>A, B, C, H, I</td>
</tr>
<tr>
<td>4 Write balanced chemical reactions for organic compounds and predict the products.</td>
<td>A, I</td>
</tr>
<tr>
<td>5 Draw, name, and describe the bonding of aromatic compounds.</td>
<td>A, C, H, I</td>
</tr>
<tr>
<td>6 Write the name for and draw the structure of oxygen containing and sulfur containing hydrocarbons.</td>
<td>B, D</td>
</tr>
<tr>
<td>7 Describe the physical properties and predict the chemical reactivity of oxygen and sulfur containing compounds.</td>
<td>J</td>
</tr>
<tr>
<td>8 Research and evaluate methods of chemical lab safety.</td>
<td>J, K</td>
</tr>
</tbody>
</table>
**Module 2**

**Outcomes**

1. Draw the structure of monosaccharides as Fischer projections and Haworth structures.
2. Describe structural features of monosaccharides, disaccharides and polysaccharides.
3. Describe and/or perform a separation of organic compounds using thin layer chromatography.
4. Calculate retention factors for different organic compounds using different chromatography techniques.
5. Perform a fermentation of sugars and determine how different sugars are affected by fermentation.
6. Describe the physical and chemical properties of aldehydes and ketones.
7. Identify compounds with chirality and describe how they differ.
8. Describe the process of drug approval.

**Competencies**

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>H, I</td>
</tr>
<tr>
<td>2</td>
<td>B, C</td>
</tr>
<tr>
<td>3</td>
<td>B, C, J, K</td>
</tr>
<tr>
<td>4</td>
<td>B, C, J, K</td>
</tr>
<tr>
<td>5</td>
<td>B, C, K</td>
</tr>
<tr>
<td>6</td>
<td>A, B, C, D</td>
</tr>
<tr>
<td>7</td>
<td>A, B, I</td>
</tr>
<tr>
<td>8</td>
<td>J</td>
</tr>
</tbody>
</table>

**Module 3**

**Outcomes**

1. Draw, identify, and name carboxylic acids and esters and describe their physical properties.
2. Write the chemical equation for the formation of and saponification of esters.
3. Write the chemical equation for reactions of carboxylic acids.
4. Describe the composition and function of the lipid bilayer in cell membranes.
5. Draw and describe the physical and chemical properties of the different classes of lipids, fatty acids, glycerols, and steroids.
6. Draw, identify, and name amines and amides and describe physical properties.
7. Write the chemical equation for reactions of amides.
8. Describe how neurotransmitters function in relation to their amines.
9. Perform the reaction of two carboxylic acids to synthesize a new compound.

**Competencies**

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A, B, C, H, I</td>
</tr>
<tr>
<td>2</td>
<td>B, D</td>
</tr>
<tr>
<td>3</td>
<td>B, D</td>
</tr>
<tr>
<td>4</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>C, D, H</td>
</tr>
<tr>
<td>6</td>
<td>A, B, C, H, I</td>
</tr>
<tr>
<td>7</td>
<td>B, D</td>
</tr>
<tr>
<td>8</td>
<td>D</td>
</tr>
<tr>
<td>9</td>
<td>K</td>
</tr>
<tr>
<td>10</td>
<td>K</td>
</tr>
</tbody>
</table>
MODULE 4

Outcomes
1. Classify and describe the structures of amino acids and proteins.
2. Describe how a peptide is formed and be able to use the three letter and one letter abbreviation to describe a peptide chain.
3. Describe the hydrolysis and denaturation of proteins.
4. Classify enzymes and be able to name them.
5. Describe how enzyme activity is impacted by changes of temperature, pH, and concentration.
6. Describe how enzymes can be inhibited and how enzyme activity is regulated.
7. Describe the components of DNA and RNA and identify the different components of the structures in illustrations.
8. Describe the process of DNA replication, transcription, and protein synthesis.
9. Describe the types of genetic mutations that can occur and how a virus infects a cell.

Competencies
A, B, C, D, H
E, F, H, I
D
E
D, H
E
A, B, C, D, H
F
E, F

MODULE 5

Outcomes
1. Compare and contrast catabolic and anabolic reactions and describe the role of ATP.
2. Write and explain the series of reactions involved in digestion of carbohydrates.
3. Describe role of the coenzymes of metabolic pathways.
4. Describe the process and compounds involved in glycolysis, gluconeogenesis, glycogen synthesis and degradation.
5. Name each component of and describe the citric acid cycle.
6. Describe ATP synthesis and the oxidation of glucose.
7. Describe the metabolic pathways for lipids and enzymes.
8. Describe the synthesis of non-essential amino acids.
9. Perform a transesterification to produce a biodiesel.

Competencies
G
G
D, E, I
G
E
E, G
D, E
B, K
**GRADING AND EVALUATION**

**METHODS**
Evaluation includes a combination of discussion participation, assignments, and other evaluations. Rubrics are provided for assignments and discussions.

**GRADING POLICIES**
Mark all Module due dates on your calendar for this class. You may submit assignments AHEAD of schedule.

_**No late work is accepted in this course (except in the case of documented extreme personal emergencies, e.g. a Doctor's note, hospital papers, etc.). Due dates will be enforced.**_

- Due dates are outlined in your Schedule.
- If you have a technical problem of any kind ...your server goes down, your computer melts, etc. or if your online course gets bogged down (this happens very infrequently and only for a few hours at a time), you are still responsible for the work.
- Get your work done on time and well before the deadline.
- Plan ahead. _**Discussion postings (both initial and response posts) are time-sensitive within each Module**_ and cannot be made up.
- Quizzes, Homework, and Labs will only be available during the assigned times as specified in the Schedule.
- Do not attempt to send labs through the D2L e-mail as attachments as they are larger than the E-mail capacity.

**PLAGIARISM**
Plagiarism is the act of using words and/or ideas from another person or source without acknowledgment or attribution of that person or source. Plagiarism, cheating, or helping someone else violate reasonable standards of academic behavior will not be tolerated.

- The instructor may, in any such instances, render a failing grade (zero) for any plagiarized assignment on the first offense and an F for the entire course on the second offense.
- ALL work submitted by a student should be in their own words. This includes Discussion Posts, Lab reports and Quiz answers.
- Any quotes or information used from an outside source must be clearly referenced. Self-plagiarism also falls under this category. Work from a previous semester may not be used. Your instructor has the expectation that all work completed will be unique to the current semester.
• You may confer with other students about the labs or other assignments in this course, but all work submitted must be your own and unique. If you do work with a classmate on an assignment please alert your instructor before turning in your work.
  o See Lab Success Without Plagiarism in the Lab Information Module for more information.

**Summary of Grading**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussions (10 @ 15 points each)</td>
<td>150</td>
<td>15%</td>
</tr>
<tr>
<td>Homework (13 @ 10 points each, 1 @ 11 points)</td>
<td>141</td>
<td>14%</td>
</tr>
<tr>
<td>Formal Lab Reports (4 @ 40 points each)</td>
<td>160</td>
<td>16%</td>
</tr>
<tr>
<td>Informal Lab Reports (9 @ 20 points each)</td>
<td>180</td>
<td>18%</td>
</tr>
<tr>
<td>Chapter Quizzes (13 @ 10 points each)</td>
<td>130</td>
<td>13%</td>
</tr>
<tr>
<td>Projects (4 @ 30 points each)</td>
<td>120</td>
<td>12%</td>
</tr>
<tr>
<td>Midterm Exam (1 @ 60 points each)</td>
<td>60</td>
<td>6%</td>
</tr>
<tr>
<td>Final Exam (1 @ 60 points each)</td>
<td>60</td>
<td>6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1001</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Grading Scale**

A = 90 to 100%    B = 80 to 89%    C = 70 to 79%    D = 60 to 69%    F = 59% and below

**Final Grades**

Final grades will be determined by the number of points you earn divided by the total number of points available x 100, as a percent.

**For example:**

If your total points are 873, your final grade will be determined from 873/1001 x 100 = 87.2%, which will result in a "B" in this course.

• In order to receive an A in this course, your score needs to be 900 or higher.
• The grades are final and non-negotiable. They are a measure of your own aptitude and effort. It is expected for you to accept your own performance as an integral part of yourself.

**Discussions**

**Note:** Refer to the Course Schedule for Due Dates for Module Discussions.

The discussion area is our classroom and your means of participating in the classroom interaction. For every module, there will be at least one graded discussion topic that will be posted for you to research, ponder and write about. You will be graded on your participation in this Discussion. Unlike Quizzes, Labs, and MLP Assignments which you may wait until the deadline to submit, these discussions are not a self-paced activity. These discussions do not work if you are only posting a summary or initial response and not interacting with your classmates and myself. They also do not work if you are posting late in the discussion period (see below). Imagine going to a debate/discussion meeting after everyone has left and you are trying to deliver a speech to and get an interaction from an empty room.

Student evaluations of CCCOnline courses reflect the importance of the discussion area to successful online classes. Students tell us "I felt that the class discussions were interesting"; "kept all the
students engaged"; and "I really liked the interaction between the people in the discussions. I thought that each person's input really helped give a broad perspective of the subject and helped me learn." Current research in online education has arrived at a similar conclusion. From Quality in Distance Education: Focus on Online Learning by Katrina Meyer: "Quality learning is largely the result of ample interaction with the faculty, other students, and content" (page vii). (Quality in Distance Education - Focus On Online Learning- ASHE Higher Education Report Volume 29, Number 4 (02) by Meyer, Katrina A [Paperback (2002)])

Expect to post numerous times throughout the time period that a Discussion Topic is open. Check under the Discussion tab for open/close dates on each Discussion, these are different from the due dates for your posts described below.

When a Topic opens plan to write 150 words minimum in your initial required post (called your "First Post"). Make sure to create a unique subject heading for your First Post that will distinguish your post from your classmates. All posts must also be unique. If someone has already posted on your topic be sure to make yours unique by taking a different approach to the idea. Make sure to read and follow the instructions for each topic carefully. You may write about something from the reading material, a relevant experience, or other appropriate topics that add to the knowledge of the class. This First Post must also include a minimum of one reference cited, even if it is only your textbook. Also, if you use outside material to help you formulate any of your posts then you must cite that source.

Note: Any facts or quotations obtained from any other source should be referenced and cited properly according to APA guidelines. See this helpful resource [http://ccconline.libguides.com/APAtoolkit](http://ccconline.libguides.com/APAtoolkit).

Note: Wikipedia is NOT considered a primary or secondary source. If you find information in Wikipedia, locate the sources used by the author and pull information from them, if they are primary (original documents) or secondary (peer-reviewed publications) sources.

In addition, any facts or quotations obtained from any other source should be referenced and cited properly. If you get your material from a web page please provide this as a hyperlink so that the site may be directly accessed along with your citation.

You are also expected to post to at least 2 other students' First Posts (called your "Response Posts"). These posts should always be substantive and meaningful posts that contribute to the discussion and further it. "I agree" is not a meaningful response; explain WHY you agree or disagree, for example, and perhaps add some additional information (always making sure to cite any information taken from another source). Encouragement of others is a good thing, but don't make that your only input to the discussion. As stated above, if you use outside material to help you formulate your post it must be referenced, otherwise, a reference is not needed for response posts.

There will be deadlines for posting your initial "First Post," as well as your "Response Posts". Make sure to check your Course Schedule for these deadlines and the points that will be lost if you don't meet the stated deadlines.

You also want to answer all substantial posts posed to you under your First Post thread (points are awarded for this in the rubric under the Response post category) including those: under your First Post, or a post from your instructor to the entire class, or a response from your classmate. In general, those students who are active in discussions will do better in the rest of the course. Although there isn't a stated deadline, 48 hours is a good goal to respond to these.

Since this is an asynchronous activity, everyone will be "on" at different times, although we will be on the same timeline. For maximum benefit, post early to allow other students to read and respond. Check into the discussion area as often as possible to keep current with the discussions. You do not have to spend hours but spend quality time for both you and the other members of the group.

Do note that additional Discussion questions may be posted by the instructor from lectures, assigned readings, website readings, and other sources. It will greatly enhance your learning experience if you post answers to these discussion questions as well. References to relevant outside sources or real life
that relate to the discussion questions may be included in your discussions. There will be, at a minimum, one graded discussion topic per Module. Points earned will be based on the Discussion Rubric found below or under the Start Here Module.

The Student Introductory discussion will not be graded. See the Course Rubrics in the Syllabus section for more information.

ASSIGNMENTS

The MyLabsPlus assignments (Chapter Homework and Reading Quizzes) and the eText, are found by clicking the MyLabsPlus link on the Course Home page under External Links.

- The MyLabsPlus assignments should be done by the due date stated in the Schedule.
- Even if you have a paper textbook, it is highly recommended that you also go through the e-Text that covers the same chapter. There are links to interactive demonstrations that will help you to understand the material you are reading.
- Items that are assigned in MyLabsPlus count toward your course grade.
- All graded course assessments, activities, and MyLabPlus assignments are posted in D2L Grades.

PROJECTS

You will be submitting projects for Modules 2-5. Each Project has its own set of questions that you will need to answer. There may also be drawings you will need to submit of chemical structures. If you must submit drawings, then take a clear picture of your image or scan your work and submit that. All other parts of the project must be typed. The projects are submitted in the appropriate folder. Check the Course Schedule for due dates.

LAB REPORTS

You will be performing labs using a lab kit starting with Lab 4. Make sure to check for the materials you need to provide under the Syllabus/Course Materials page. In order to write your informal and formal lab reports, see the Laboratory Instructions page in the Lab Information module for detailed information on photo requirements and report guidelines. Information on the due date for each report is provided in the Course Schedule.

- Instructions for conducting and completing your labs are provided in the lab section of each Module.
- All Laboratory work will be submitted in the assignment folder and will be checked by originality software.
  - Your typed assignment will not be graded unless an Originality report has been generated. (This excludes photos submitted as per assignment instructions.)

Begin working on your laboratories early. Some may be lengthy and require extended effort.
QUIZZES AND EXAMS

CHAPTER QUIZZES

Chapter quizzes will be taken using the MyLabsPlus link on the Course Home page. Chapter quizzes are timed and you are given 30 minutes to complete them. For the MLP quizzes, it is essential that you allow yourself at least 1 hour before 11:59pm MT on the due date to complete every quiz.

Exam settings: You will receive your quiz score after completion and then be able to review all questions after the due date of the quiz. You will also be able to access the quiz and rework problems after the due date, however, you will not be able to print out the quiz.

- All quizzes are timed and once you start you need to complete it in one sitting.
- To be prepared, read the required chapters.
- Grades are posted in D2L.

Midterm and Final Exams

The midterm and comprehensive final are on D2L and they have separate instructions found under Module content on how to complete and submit. See the Course Schedule for due dates.

EXTRA CREDIT

There is no extra credit available in this course.

ADDITIONAL TIPS ON HOW TO STUDY FOR THIS COURSE

1. Please make use of the instructor written Explorations that can be found in our D2L course under Content and within each Module folder.

2. Be sure to make use of the resources found on our eText site. There is helpful overview information at the back of each Chapter. Your instructor might also set up practice tutorials or similar. Please look for any announcements regarding additional resources added to the course.

3. Please also make use of the D2L Discussion Topics: “Help, I don’t understand the Content” and the “Virtual Café”, where you can ask questions about Lab content and Homework problems.
### COURSE SCHEDULE

The Schedule is subject to change as needed.

This page summarizes all of the graded assignments, exams, and reading assignments for the course. It is highly suggested that you print it out and post it somewhere handy.

All assignments are described in detail on the Module assignment pages. If you have questions check there and/or send me an e-mail.

In general (but can vary, especially the first week and for Lab dates) the following types of assignments are due on the following days. But it is the responsibility of the student to follow the dates stated in your Schedule!!

- Read Chapter: Sundays
- Module Discussions: Initial post (Tue.), Response Posts (Thur.), Reaction posts (per the Discussion rubric)
- Lab Reports: Thursday
- Chapter Homework: Friday
- Module Projects: Friday
- Chapter Quizzes: Saturday
- Midterm/Final: Saturday

**This course is not self-paced and is not open-exit.** All assignments, papers, quizzes, discussions, etc., are to be completed by no later than 11:59 pm MST/MDT of the due date. **PLEASE NOTE:** On most all of the assignments you can work ahead BEFORE the due date stated below. This allows you to cater to your own personal Schedule. Please take advantage of this. Also be aware that this course will continue through any break you may have in your face2face courses and it is possible that a due date may fall on a holiday.

**NOTE:** Important CCCOnline semester dates (e.g., drop/withdraw/term end) appear on the [CCCOnline calendar](#).

### MODULE 1

**Reading/Assignments/Exams**

<table>
<thead>
<tr>
<th>Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read/View: Entire Syllabus and Lab Information</td>
</tr>
<tr>
<td>Discuss: Student Introductions</td>
</tr>
<tr>
<td>Do: Introduction to Mastering Chemistry in MLP</td>
</tr>
<tr>
<td>(Note: there is a Chemistry Primer in MLP that is optional but highly recommended)</td>
</tr>
<tr>
<td>Read/View: Chapter 12 of the eText</td>
</tr>
<tr>
<td>Discussion #1: Lab Safety (Initial Post)</td>
</tr>
<tr>
<td>Discussion #1: Lab Safety (Response Post)</td>
</tr>
<tr>
<td>Do: Chapter 12 Homework (Pearson platform)</td>
</tr>
<tr>
<td>Do: Chapter 12 Quiz (Pearson platform)</td>
</tr>
<tr>
<td>Read/View: Chapter 13 of the eText</td>
</tr>
<tr>
<td>Discussion #2: Trust in Science (Initial Post)</td>
</tr>
<tr>
<td>Do: Lab 1: Safety (Informal, no lab kit needed)</td>
</tr>
<tr>
<td>Discussion #2: Trust in Science (Response Post)</td>
</tr>
<tr>
<td>Census/Drop Date alert: If you have not completed at least one of these assignments (MLP Intro, MLP Chap 1 Reading quiz, MLP Chap 1 Hmwk) for credit or have contacted me by email</td>
</tr>
</tbody>
</table>

Week 1 Ends Saturday.

Week 2 Ends Saturday.
offering your extenuating circumstances, you will be dropped from this course.

Do: Chapter 13 Homework (Pearson platform)  
Do: Chapter 13 Quiz (Pearson platform)  

Week 3 Ends Saturday.

Do: Lab 2: Intro to Graphing (Informal)  
Lab 3: Balancing Chemical Equations (Informal)  
Lab 4: Intro to Molecules (Informal)  

Content found in Module 1 but due at later date below.

MODULE 2

Reading/Assignments/Exams

Read/View: Chapter 14 of the eText
Discussion #1: Food and Drug Safety (Initial Post)
Do: Lab 2: Introduction to Graphing (Informal, no lab kit needed, content found in Module 1)
Discussion #1: Food and Drug Safety (Response Post)
Do: Chapter 14 Homework (Pearson platform)
Do: Chapter 14 Quiz (Pearson platform)

Week 4 Ends Saturday.

Read/View: Chapter 15 of the eText
Discussion #2: Vitamins and Supplements (Initial Post)
Do: Lab 3: Balancing Chemical Equations (Informal, content found in Module 1, starting with this lab photos will be required, see Syllabus Lab Information folder)
Discussion #2: Vitamins and Supplements (Response Post)
Do: Chapter 15 Homework (Pearson platform)
Do: Project Module 2: Column Chromatography
Do: Chapter 15 Quiz (Pearson platform)

Week 5 ends Saturday.

Do:
• Lab 5: Fundamentals of Chromatography
• Lab 6: Thin Layer of Chromatography
• Lab 7: Fermentation of Sugar

Content found in Module 2 but due at later date below.

MODULE 3

Reading/Assignments/Exams

Read/View: Chapter 16 of the eText
Do: Complete Lab Kit Authentic Assessment (as soon as you receive your kit)
Discussion #1: Antibiotics (Initial Post)
Do: Lab 4: Intro to Molecules (Informal, content found in Module 1)
Discussion #1: Antibiotics (Response Post)
Do: Chapter 16 Homework (Pearson platform)
Do: Chapter 16 Quiz (Pearson platform)

Week 6 ends Saturday.

Read/View: Chapter 17 of the eText (There is no discussion topic this week.)
Do: Lab 5: Fundamentals of Chromatography (Informal, content found in Module 2)
Do: Lab 6: Thin Layer Chromatography (Informal, content found in Module 2)
Do: Chapter 17 Homework (Pearson platform)
Do: Chapter 17 Quiz (Pearson platform)

Week 7 Ends Saturday.

Read/View: Chapter 18 of the eText
Discussion #2: Pain Relieving Drugs (Initial Post)
Discussion #2: Pain Relieving Drugs (Response Post)
Do: Lab 7: Fermentation of Sugar (Formal, content found in Module 2)
Do: Chapter 18 Homework (Pearson platform)
Do: Chapter 18 Quiz (Pearson platform)  
Do: Start to study for Midterm, no Chapter to read this week  
Do: Lab 8: Synthesis of Aspirin (Informal)  
Do: Lab 9: Saponification of Fatty Acids (Formal)  
Do: Project Module 3: Infrared  
Do: Midterm Exam  
Do: Lab 10: Determination of Vitamin C Concentrate due at later date below

Week 8 ends Saturday.

Do: Lab 8: Synthesis of Aspirin (Informal)  
Do: Lab 9: Saponification of Fatty Acids (Formal)  
Do: Project Module 3: Infrared  
Do: Midterm Exam

Week 9 ends Saturday.

Do: Lab 10: Determination of Vitamin C Concentrate Content found in Module 3 but due at later date below

MODULE 4

Reading/Assignments/Exams
Read/View: Chapter 19 of the eText
Discussion #1: Therapeutic Proteins (Initial Post)
Do: Lab 10: Determination of Vitamin C Concentrate (Informal)
Discussion #1: Therapeutic Proteins (Response Post)
Do: Chapter 19 Homework (Pearson platform)
Do: Chapter 19 Quiz (Pearson platform)
Read/View: Chapter 20 of the eText (no discussion this week)
Do: Lab 11: Bio Macromolecules and Enzymes (Formal)
Do: Chapter 20 Homework (Pearson platform)
Do: Chapter 20 Quiz (Pearson platform)
Read/View: Chapter 21 of the eText (no lab this week, just Project)
Discussion #2: CRISPR (Initial Post)
Discussion #2: CRISPR (Response Post)
Do: Chapter 21 Homework (Pearson platform)
Do: Project Module 4: Green Fluorescent Protein
Do: Chapter 21 Quiz (Pearson platform)
Do: Lab 12: DNA, RNA, and Proteins
Content found in Module 4 but due at later date below

Week 10 Ends Saturday.

Week 11 ends Saturday.

Week 12 ends Saturday.

MODULE 5

Reading/Assignments/Exams
Read/View: Chapter 22 of the eText
Discussion #1: Diabetes (Initial Post)
Do: Lab 12: DNA, RNA, and Proteins (Informal)
Do: Chapter 22 Homework (Pearson platform)
Do: Chapter 22 Quiz (Pearson platform)
Read/View: Chapter 23 of the eText
Discussion #2: Chemistry and Energy (Initial Post)
Discussion #2: Chemistry and Energy (Initial Post)
Do: Lab 13: Synthesis of Biodiesel (Formal)
Do: Chapter 23 Homework (Pearson platform)
Do: Chapter 23 Quiz (Pearson platform)
Read/View: Chapter 24 of the eText (no discussion or Lab this week)
Do: Chapter 24 Homework (Pearson platform)
Do: Chapter 24 Quiz (Pearson platform)
Do: Project: Cancer and Metabolism
Do: Final Exam

Week 13 Ends Saturday.

Week 14 ends Saturday.

Week 15 ends Saturday.

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