To: Dr. Mark Archambault, Assistant Dean of Academics, College of Engineering and Science

From: Dr. Jessica Smeltz, Assistant Professor of Chemistry; Director of CRC. Dr. Norito Takenaka, Associate Professor of Chemistry.

Date: December 17, 2018

Re: Honors CHM 1101, 1102, 2001 and 2002

The Biomedical and Chemical Engineering and Sciences Department seeks to offer honors sections of CHM 1101 and 2001 during the fall 2019 semester and honors sections of CHM 1102 and 2002 during the spring 2020 semester. The Chemistry Program is interested in offering these courses as part of the University’s desire to develop an Honors College. We would also like to offer an Honors Degree Program in Chemistry in the near future. Our goal is to keep enrollment of the General Chemistry honors sections below 25 and the Organic Chemistry honors sections below 15. This should enable us to offer the more in-depth instruction required of an honors course (i.e., discussion-based).

All four honors courses will meet the following required criteria:

1. Registration will be restricted to instructor/department head approval
2. All prerequisites, requisites and restrictions for the existing course will apply to the honors section
3. A non-honors section will be offered at the same time as the honors section

Brief descriptions for each course are provided below and syllabi are attached.

CHM 1101-HON course:

- Enrollment will require the students to have completed at least 1 year of high school chemistry and 1 year of high school physics. If a student wants to take the course without meeting the enrollment requirement, the Department will administer a placement exam to see if the student has sufficient knowledge of the subject to be successful in the honors section.

- With the background described above, the CHM 1101-HON will start at chapter 3 of the non-honors section syllabus. The two weeks of time gained from the first two weeks will allow for more in-depth discussions about the foundational concepts of the remaining chapters covered in CHM 1101. We will also discuss applications of the foundational topics that is not time permissible in the current CHM 1101 course. Any additional topics covered will also be outside of the realm of CHM 1102 so students taking 1102 can easily transition into either CHM 1102 or CHM 1102-HON from CHM 1101 or CHM 1101-HON.

- In CHM 1101 the delivery method is a traditional lecture format which is largely the result of lectures of 70 students. In CHM 1101-HON the class will be conducted in a discussion style format that will ensure student involvement in the learning process. Because of this, the desired enrollment in the CHM 1101-HON section will not exceed 25 students.
In CHM 1101, four midterm multiple choice exams are administered in a multiple-choice common exam format. In CHM 1101-HON three midterm assessments of long answer format will be administered outside of the common exam process.

CHM 1101 is currently a 4 credit lecture/lab course. The lab portion of the course will not be different in the CHM 1101-Hon section. Students will be able to switch in to or out of CHM 1101-HON easily.

CHM 1102-HON course:

- Enrollment will require the students to have earned an A in CHM 1101 or at least a B in CHM 1101-HON. Transfer students, or students that enter with credit for 1101 will be handled on a case-by-case basis.
- The course layout, assessments and expectations will besimilar to those indicated in CHM 1101-HON above.
- CHM 1102 is currently a 4 credit lecture/lab course. The lab portion of the course will not be different in the CHM 1101-Hon section. Students will be able to switch in to or out of CHM 1102-HON easily.

CHM 2001-HON course:

- Enrollment will require the students to have earned an A in CHM 1102 or at least a B in CHM 1102-HON. Transfer students, or students that enter with credit for CHM 1102 will be handled on a case-by-case basis.
- The course materials (e.g., the number of chapters) covered in non-honors and honors sections will be same. In sharp contrast to the non-honors section, work-book problem sets will not be heavily employed to teach the materials. The gained time will be utilized for in-depth discussions including students’ chalk-talk (i.e., inviting them to the board), which is expected to foster students’ abilities to critically think and communicate on their own feet. Accordingly, the exams will mostly be essay questions and mechanistic analysis of organic chemical transformation, which is also expected to promote the development of students in line with the five objectives of Honors courses identified by the National Collegiate Honors Council.

CHM 2002-HON course:

- Enrollment will require the students to have earned an A in CHM 2001 or at least a B in CHM 2001-HON. Transfer students, or students that enter with credit for CHM 2001 will be handled on a case-by-case basis.
- The course layout, assessments and expectations will similar to those indicated in CHM 2001-HON above.

Respectfully,
[Signature]
Naruto Takeda

150 West University Boulevard, Melbourne, FL 32901-6975  •  (321) 674-8046 • Fax: (321) 674-8951
REQUEST TO ADD AN HONORS SECTION TO AN EXISTING COURSE

Honors information is added to the Class Schedule and is reported on the academic transcript. Honors section will be available for registration with instructor/department head approval beginning with the fall term in which they appear in the University Catalog.

SUBJECT  C    H    M  COURSE NO.*  1  1  0  1  CREDIT HOURS  4  ACADEMIC YEAR TO BE ADDED TO THE FILE  Fall 2019
(e.g., CSE)  (e.g., 1301)  (e.g., Fall 2020)
COURSE TITLE  General Chemistry 1 - Honors
DEPARTMENT  BCES
(e.g., Biological Sciences)
SCHEDULE TYPE  Lecture/Lab
(e.g., Lecture, Lab or Special Topics/Project)
☐ COLLEGE OF AERONAUTICS—23
☐ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS—25
☐ COLLEGE OF ENGINEERING AND SCIENCE—30
☐ NATHAN M. BISK COLLEGE OF BUSINESS—24

IMPORTANT INFORMATION

☐ Honors sections are restricted to instructor/department head approval for registration
☐ Honors sections carry all prerequisites, corequisites and restrictions approved for the existing course (cannot be changed for registration without prior approval and publication in the University Catalog)
☐ At least one non-honors section must be offered at the same time as the honors section
☐ Courses with honors sections will have the designation HON added to the course description

ASSESSMENT & SYLLABI CONFIRMATION

☐ Yes  ☐ No  Existing assessments/outcomes will be applicable to the honors section.
☐ Yes  ☐ No  Separate syllabi will be used for honors and non-honors sections.
☐ Yes  ☐ No  Attach justification for the department's request
☐ Yes  ☐ No  Describe difference between the honors and non-honors sections

APPROVALS: On completion of description and course number verification, affix appropriate signatures as indicated, and submit to the Undergraduate Curriculum Committee Chair for placement on agenda.

[Signature]
Date  2/5/19

Department Head/Program Chair  Date

Dean or Associate Dean  Date

**Chair, Academic Programs Assessment Committee  Date

CATALOG & CURRICULUM MANAGER
These changes/additions have been made for the University Catalog and entered into the Class Schedule term named above.

Catalog & Curriculum Manager  Date

REGISTRAR'S USE ONLY
SSASECT  SSASYLB  SSATEXT  ACATALOG
Operator Init.  Date

DISTRIBUTION
Original – Registrar
Copy – Academic Unit
Instructor: Phone:  
Office: E-mail:  
Office Hours:  
General Chemistry Coordinator: Dr. Jessica Smeltz (OPS 127, jsmelztz@fit.edu, x8572)  

Required Texts/Learning Systems:  
- Modified MasteringChemistry access code  
- Lecture and laboratory information on course’s Canvas website  

Grading: The grade for the course is based on total number of points accumulated as follows:  
- Hour exams (3 x 100) 300 points  
- Cumulative final exam 200 points  
- Homework 100 points  
- Laboratory 200 points  
- 800 points  

Chemistry Help:  
1. **Supplemental Instruction (SI):** The BCES Department in collaboration with the Academic Support Center will offer Supplemental Instruction Sessions for CHM 1101. While this course is not explicitly offered for the CHM 1101-HON course, feel free to attend these sessions to review material.  
2. **Academic Support Center (ASC):** Located in the Evans Library Pavilion, the ASC provides peer tutoring for CHM 1101. Make an appointment at [http://hub.fit.edu/asc/](http://hub.fit.edu/asc/) or call 321-674-7110. You can prepare for a peer tutoring appointment by bringing textbooks, completed homework, notes, study guides, and graded quizzes or exams.  

Please remember that these opportunities are intended to supplement your learning and should not replace class attendance.  

**Attendance and Participation:** To be successful in this course you must attend class regularly. Attendance will be taken on a daily basis. If you acquire more than 4 unexcused absences over the course of the semester, your final grade will be lowered by a letter grade.  

We accept excuses for absences as follows:  
1. Medical excuse: Signed by a medical representative and presented to the Dean of Students (Rodney Bowers – 215 Denisus Student Center) within 24 hours upon return.  
2. Athletic, academic or ROTC excuse: Official documentation must be emailed to your instructor in advance of the absence.  

You are responsible for acquiring any lecture notes that you missed due to your absence.  

**Exams:** Students that miss the exam due to a documented, excused illness (above) must contact their instructor within 24 hours of their return to schedule a make-up exam. Planned absences must be communicated to the instructor prior to the exam.  

Each exam explicitly covers the material discussed in class since the previous exam. This should not be construed to mean that the earlier material will not be necessary to complete a test due to the cumulative nature of the material.  

Your final exam will be the standardized American Chemical Society General Chemistry First Term Exam. This exam is comprehensive of the General Chemistry 1 course material. The testing booklets are ordered from the American Chemical Society and cost the Department money. If you choose to or accidentally write in the exam booklet, a $5 replacement fee will be charged to your student account.  

**Homework:** Working chemistry problems is essential to understanding the subject. We use an online homework system called Modified Mastering Chemistry (MC). You will access MC through the course Canvas site. Registration instructions can be found in the Homework Module on Canvas. Computer/internet problems are not valid excuses for missing homework deadlines. Plan ahead so that you can complete the assignments on time. Due dates will be changed only in rare circumstances, such as a campus-wide power/internet outage.
CHM 1101-HON  General Chemistry 1  Fall 2019

Laboratory: You learn chemistry by actually doing chemistry. Therefore, laboratory attendance is mandatory. You will receive more information about the general chemistry laboratory when you attend your first lab session. You should direct all questions about the laboratory portion of the course to the Lab Coordinator, Dr. Jessica Smeltz. *A failing grade in the laboratory will result in failing the course.*

What is Title IX?: Title IX of the Educational Amendments Act of 1972 is the federal law prohibiting discrimination based on sex under any education program and/or activity operated by an institution receiving and/or benefiting from federal financial assistance. Behaviors that can be considered “sexual discrimination” include sexual assault, sexual harassment, stalking, relationship abuse (dating violence and domestic violence), sexual misconduct, and gender discrimination. You are encouraged to report these behaviors. Reporting: Florida Tech can better support students in trouble if we know about what is happening. Reporting also helps us to identify patterns that might arise – for example, if more than one complainant reports having been assaulted or harassed by the same individual. Florida Tech is committed to providing a safe and positive learning experience. To report a violation of sexual misconduct or gender discrimination, please contact Linda Jancheson, Title IX Coordinator at 321-674-7277 or ljancheson@fit.edu. *Please note that as your professor, I am required to report any incidents to the Title IX Coordinator. Confidential support for students is available by contacting the Student Counseling Center at 321-674-8050.*

Academic Dishonesty: The General Chemistry faculty and the BCES Department will adhere to the policies and enforce the penalties described in the Academic Dishonesty, Cheating, and Plagiarism handbook for any cheating, plagiarism, and/or fabrication of lab data and results (see http://web2.fit.edu/current/documents/plagiarism.pdf). As defined in the handbook, cheating includes “giving or receiving information during an exam ("exam" includes tests and quizzes)”. *To avoid the appearance of impropriety, you may use a calculator but you may not use any other device (such as a cell phone) during an exam and you may not leave the classroom during an exam for any reason.*
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Chapter</th>
<th>Topic</th>
<th>Assignment Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/20</td>
<td>1/2</td>
<td>Matter, Measurement, and Problem Solving; Atoms and Elements</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8/22</td>
<td>3</td>
<td>Molecules, Compounds, and Chemical Equations</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8/24</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8/27</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8/29</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>8/31</td>
<td>4</td>
<td>Chemical Quantities and Aqueous Reactions</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>9/3</td>
<td>4</td>
<td><strong>Holiday – Labor Day</strong></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>9/5</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>9/7</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>9/10</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>9/12</td>
<td>5</td>
<td>Gases</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>9/14</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>9/17</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>9/19</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>9/21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>9/24</td>
<td>6</td>
<td>Thermochemistry</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>9/26</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>9/28</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>10/1</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>10/3</td>
<td>7</td>
<td>The Quantum-Mechanical Model of the Atom</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>10/5</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>10/8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>10/10</td>
<td>7</td>
<td><strong>Holiday – Columbus Day</strong></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>10/12</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>10/15</td>
<td>8</td>
<td>Periodic Properties of the Elements</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>10/17</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>10/19</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10/22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10/24</td>
<td>9</td>
<td>Chemical Bonding I: The Lewis Model</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10/26</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>10/29</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>10/31</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11/2</td>
<td>10</td>
<td>Chemical Bonding II: Molecular Shapes, Valence Bond</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Theory, and Molecular Orbital Theory</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>11/5</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>11/7</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>11/9</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>11/12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>11/14</td>
<td>10</td>
<td><strong>Holiday – Veterans Day Observed</strong></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>11/16</td>
<td>15</td>
<td>Chemical Equilibrium</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>11/19</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>11/21</td>
<td></td>
<td><strong>Holiday – Thanksgiving</strong></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>11/23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>11/26</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>11/28</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>11/30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>12/3</td>
<td>23</td>
<td>Chemistry of the Nonmetals</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>12/5</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>12/7</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>12/10</td>
<td></td>
<td><strong>FINAL</strong></td>
<td>10:30am – 12:30 pm</td>
</tr>
</tbody>
</table>

MC = MasteringChemistry assignment due date
REQUEST TO ADD AN HONORS SECTION TO AN EXISTING COURSE

Honors information is added to the Class Schedule and is reported on the academic transcript. Honors section will be available for registration with instructor/department head approval beginning with the fall term in which they appear in the University Catalog.

SUBJECT C H M COURSE NO.* 1 1 0 2 CREDIT HOURS 4 ACADEMIC YEAR TO BE ADDED TO THE FILE Spring 2020
(e.g., CSE) (e.g., 1301) (e.g., Fall 2020)

COURSE TITLE General Chemistry 2 - Honors

DEPARTMENT BCES
(e.g., Biological Sciences)

SCHEDULE TYPE Lecture/Lab
(e.g., Lecture, Lab or Special Topics/Project)

☐ COLLEGE OF AERONAUTICS—23
☐ COLLEGE OF ENGINEERING AND SCIENCE—30
☐ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS—25
☐ NATHAN M. BISK COLLEGE OF BUSINESS—24

IMPORTANT INFORMATION

☒ Honors sections are restricted to instructor/department head approval for registration

☒ Honors sections carry all prerequisites, corequisites and restrictions approved for the existing course (cannot be changed for registration without prior approval and publication in the University Catalog)

☒ At least one non-honors section must be offered at the same time as the honors section

☒ Courses with honors sections will have the designation HON added to the course description

ASSESSMENT & SYLLABI CONFIRMATION

☒ Yes ☐ No Existing assessments/outcomes will be applicable to the honors section.

☒ Yes ☐ No Separate syllabi will be used for honors and non-honors sections.

☒ Yes ☐ No Attach justification for the department's request

☒ Yes ☐ No Describe difference between the honors and non-honors sections

APPROVALS: On completion of description and course number verification, affix appropriate signatures as indicated, and submit to the Undergraduate Curriculum Committee Chair for placement on agenda.

Organizer: __________________________ Date: 2/5/19
Department Head/Program Chair: __________________________ Date: 2/5/19

Dean or Associate Dean: __________________________ Date: __________________________
Chair, Undergraduate Curriculum Committee: __________________________ Date: __________________________

*Chair, Academic Programs Assessment Committee

CATALOG & CURRICULUM MANAGER: __________________________ Date: __________________________

REGISTRAR'S USE ONLY

SSAECT __________ SSASYLB __________ SSATEXT __________ ACATALOG __________
Operator Init: __________________________ Date: __________________________

DISTRIBUTION
Original—Registrar
Copy—Academic Unit

Florida Institute of Technology • Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975 • 321-674-8114 • Fax 321-674-7827

RGR-379-1018
Instructor: E-mail: jsmeltz@fit.edu
Office: Office Hours: Course Coordinator: Dr. Jessica Smeltz (jsmeltz@fit.edu, 321-674-8572, OPS 127)
Required Texts/Learning Systems:
Tro, Chemistry, A Molecular Approach, 4th ed.
Modified MasteringChemistry access code
Access to Learning Catalytics
Lecture and laboratory information on course’s Canvas website
Grading: The grade for the course will be based on the number of points accumulated:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hour exams (3 x 100)</td>
<td>300</td>
</tr>
<tr>
<td>Cumulative Final</td>
<td>200</td>
</tr>
<tr>
<td>Homework</td>
<td>100</td>
</tr>
<tr>
<td>Laboratory</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td>800</td>
</tr>
</tbody>
</table>

Chemistry Help:
1. Supplemental Instruction: The BCES Department in collaboration with the Academic Support Center will offer Supplemental Instruction Sessions for CHM 1102. While this course is not explicitly offered for the CHM 1102-HON course, feel free to attend these sessions to review material.
2. Academic Support Center: Located in the Evans Library Pavilion, the ASC provides peer tutoring for CHM 1102. Make an appointment at http://hub.fit.edu/asc/ or call 321-674-7110. You can prepare for a peer tutoring appointment by bringing textbooks, completed homework, notes, study guides, and graded quizzes or exams.

Please remember that these opportunities are intended to supplement your learning and should not replace class attendance.

Attendance and Participation: To be successful in this course you must attend class regularly. Attendance will be taken on a daily basis. If you acquire more than 4 unexcused absences over the course of the semester, your final grade will be lowered by a letter grade.

We accept excuses for absences as follows:
1. Medical excuse: Signed by a medical representative and presented to the Dean of Students (Rodney Bowers – 215 Denius Student Center) within 24 hours upon return.
2. Athletic, academic or ROTC excuse: Official documentation must be emailed to your instructor in advance of the absence.

You are responsible for acquiring any lecture notes that you missed due to your absence.

Exams: Students that miss the exam due to a documented, excused illness (above) must contact their instructor within 24 hours of their return to schedule a make-up exam. Planned absences must be communicated to the instructor prior to the exam.

Each exam explicitly covers the material discussed in class since the previous exam. This should not be construed to mean that the earlier material will not be necessary to complete a test due to the cumulative nature of the material.

Your final exam will be the standardized American Chemical Society General Chemistry Exam. This exam is comprehensive of General Chemistry 1 and 2 course material. These testing booklets are ordered from the American Chemical Society and cost the Department money. If you choose to or accidentally write in the exam booklet, a $5 replacement fee will be charged to your student account.
**Homework:** Working chemistry problems is essential to understanding the subject. We use an online homework system called Mastering Chemistry. You will access MC through the course Canvas site. Registration instructions can be found in the Homework Module on Canvas. Computer/internet problems are not valid excuses for missing homework deadlines. Plan ahead so that you can complete the assignments on time. Due dates will be changed only in rare circumstances, such as a campus-wide power/internet outage.

**Laboratory:** You learn chemistry by actually doing chemistry. Therefore, laboratory attendance is mandatory. You will receive more information about the general chemistry laboratory when you attend your first lab session. You should direct all questions about the laboratory portion of the course to the Lab Coordinator, Dr. Jessica Smeltz. A failing grade in the laboratory will result in failing the course.

**What is Title IX?:** Title IX of the Educational Amendments Act of 1972 is the federal law prohibiting discrimination based on sex under any education program and/or activity operated by an institution receiving and/or benefiting from federal financial assistance. Behaviors that can be considered “sexual discrimination” include sexual assault, sexual harassment, stalking, relationship abuse (dating violence and domestic violence), sexual misconduct, and gender discrimination. You are encouraged to report these behaviors. **Reporting:** Florida Tech can better support students in trouble if we know about what is happening. Reporting also helps us to identify patterns that might arise – for example, if more than one complainant reports having been assaulted or harassed by the same individual. Florida Tech is committed to providing a safe and positive learning experience. To report a violation of sexual misconduct or gender discrimination, please contact Linda Jancheson, Title IX Coordinator at 321-674-7277 or ljancheson@fit.edu.

*Please note that as your professor, I am required to report any incidents to the Title IX Coordinator. Confidential support for students is available by contacting the Student Counseling Center at 321-674-8050.*

**Academic Dishonesty:** The General Chemistry faculty and the Chemistry Department will adhere to the policies and enforce the penalties described in the Academic Dishonesty, Cheating, and Plagiarism handbook for any cheating, plagiarism, and/or fabrication of lab data and results (see http://web2.fit.edu/current/documents/plagiarism.pdf). As defined in the handbook, cheating includes “giving or receiving information during an exam ("exam" includes tests and quizzes)”. To avoid the appearance of impropriety, you may use a calculator but you may not use any other device (such as a cell phone) during an exam and you may not leave the classroom during an exam for any reason.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Chapter</th>
<th>Topic</th>
<th>Assignment Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/7</td>
<td>10.6 – 10.7</td>
<td>Chemical Bonding II: Hybridization</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1/9</td>
<td>10.6 – 10.7</td>
<td>Liquid, Solids &amp; Intermolecular Forces</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1/14</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1/16</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1/18</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1/21</td>
<td></td>
<td>Martin Luther King Day – No Class</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1/23</td>
<td>12</td>
<td>Solids and Modern Materials</td>
<td>MC 1 11:59pm</td>
</tr>
<tr>
<td>3</td>
<td>1/25</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1/28</td>
<td>13</td>
<td>Solutions</td>
<td>MC 2 11:59pm</td>
</tr>
<tr>
<td>4</td>
<td>1/30</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2/1</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2/4</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2/6</td>
<td>16</td>
<td></td>
<td>MC 3 11:59pm</td>
</tr>
<tr>
<td>6</td>
<td>2/8</td>
<td>16</td>
<td>Acids and Bases</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2/11</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2/13</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2/15</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2/18</td>
<td>17</td>
<td>Aqueous Ionic Equilibrium</td>
<td>MC 4 11:59pm</td>
</tr>
<tr>
<td>7</td>
<td>2/20</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2/22</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2/25</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2/27</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>3/1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>3/4–8</td>
<td></td>
<td>Spring Break</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>3/11</td>
<td>14</td>
<td>Chemical Kinetics</td>
<td>MC 5 11:59pm</td>
</tr>
<tr>
<td>10</td>
<td>3/13</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>3/15</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>3/18</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>3/20</td>
<td>18</td>
<td>Free Energy &amp; Thermodynamics</td>
<td>MC 6 11:59pm</td>
</tr>
<tr>
<td>11</td>
<td>3/22</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>3/25</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>3/27</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3/29</td>
<td>19</td>
<td>Electrochemistry</td>
<td>MC 7 11:59pm</td>
</tr>
<tr>
<td>13</td>
<td>4/1</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>4/3</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>4/5</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>4/8</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>4/10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>4/12</td>
<td>25</td>
<td>Transition Metals &amp; Coordination Compounds</td>
<td>MC 8 11:59pm</td>
</tr>
<tr>
<td>15</td>
<td>4/15</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>4/17</td>
<td>20</td>
<td>Radioactivity and Nuclear Chemistry</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>4/19</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>4/22</td>
<td>21</td>
<td>Organic Chemistry</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>4/24</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>4/26</td>
<td></td>
<td>Study Days – No Class</td>
<td>MC 9 11:59pm</td>
</tr>
<tr>
<td>16</td>
<td>4/29</td>
<td></td>
<td>Study Days – No Class</td>
<td>FINAL – 10:30am – 12:30pm, location TBA</td>
</tr>
</tbody>
</table>

*MC = Mastering Chemistry assignment due date
REQUEST TO ADD AN HONORS SECTION TO AN EXISTING COURSE

Honors information is added to the Class Schedule and is reported on the academic transcript. Honors section will be available for registration with instructor/department head approval beginning with the fall term in which they appear in the University Catalog.

SUBJECT  C  H  M  COURSE NO.*  2  0  0  1  CREDIT HOURS  3  ACADEMIC YEAR TO BE ADDED TO THE FILE  Fall 2019  
(e.g., CSE)  (e.g., 1301)  (e.g., Fall 2020)  

COURSE TITLE  Organic Chemistry 1 - Honors  

DEPARTMENT  BCES  SCHEDULE TYPE  Lecture  
(e.g., Biological Sciences)  (e.g., Lecture, Lab or Special Topics/Project)  

☐ COLLEGE OF AERONAUTICS—23  ☐ COLLEGE OF ENGINEERING AND SCIENCE—30  
☐ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS—25  ☐ NATHAN M. BISK COLLEGE OF BUSINESS—24  

IMPORTANT INFORMATION

- Honors sections are restricted to instructor/department head approval for registration.
- Honors sections carry all prerequisites, corequisites and restrictions approved for the existing course (cannot be changed for registration without prior approval and publication in the University Catalog).
- At least one non-honors section must be offered at the same time as the honors section.
- Courses with honors sections will have the designation HON added to the course description.

ASSESSMENT & SYLLABI CONFIRMATION

☐ Yes  ☐ No  Existing assessments/outcomes will be applicable to the honors section.  
☐ Yes  ☐ No  Separate syllabi will be used for honors and non-honors sections.  
☐ Yes  ☐ No  Attach justification for the department's request  
☐ Yes  ☐ No  Describe difference between the honors and non-honors sections

APPROVALS: On completion of description and course number verification, affix appropriate signatures as indicated, and submit to the Undergraduate Curriculum Committee Chair for placement on agenda.

Originator  02/05/2019  
Department Head/Program Chair  2/5/19  
Dean or Associate Dean  
Chair, Undergraduate Curriculum Committee  

**Chair, Academic Programs Assessment Committee  

CATALOG & CURRICULUM MANAGER

These changes/additions have been made for the University Catalog and entered into the Class Schedule term named above.

Catalog & Curriculum Manager  

REGISTRAR’S USE ONLY

SSASECT  SSASYLB  SSATEST  ACALOG  
Operator Init.  Date

DISTRIBUTION

Original – Registrar  Copy – Academic Unit

Florida Institute of Technology  •  Office of the Registrar  
150 West University Boulevard, Melbourne, FL 32901-6975  •  321-674-8114  •  Fax 321-674-7827  

RGR-370-1018
What is Title IX?

Title IX of the Educational Amendments Act of 1972 is the federal law prohibiting discrimination based on sex under any education program and/or activity operated by an institution receiving and/or benefiting from federal financial assistance. Behaviors that can be considered “sexual discrimination” include sexual assault, sexual harassment, stalking, relationship abuse (dating violence and domestic violence), sexual misconduct, and gender discrimination. You are encouraged to report these behaviors.

Reporting: Florida Tech can better support students in trouble if we know about what is happening. Reporting also helps us to identify patterns that might arise – for example, if more than one complainant reports having been assaulted or harassed by the same individual.

Florida Tech is committed to providing a safe and positive learning experience. To report a violation of sexual misconduct or gender discrimination, please contact Linda Jancheson, Title IX Coordinator at 321-674-7277 or ljancheson@fit.edu. *Please note that as your professor, I am required to report any incidents to the Title IX Coordinator. Confidential support for students is available by contacting the Student Counseling Center at 321-674-8050.*

Instructor: Narito Takenaka
E-mail: ntakenaka@fit.edu
Phone: 674-7310
Office: OPS 220
Office Hours: Wed. 10:00 AM – 1:00 PM, or by appointment.

Class Policy: The use of laptops, cell phones, and i-anything is strictly prohibited.

Exam Policy: Restroom breaks are not allowed during exams. Please use them before class. *Students can only make up missed exams if they have a valid written medical, athletic, or academic excuse.* The excuse must be signed by a doctor or nurse practitioner (medical), a coach (athletic), or a professor (academic). A valid medical excuse does not include scheduling a doctor’s appointment during your exam period. The validity of any medical excuse will be thoroughly investigated.

Recommended Problems: Recommended problems will be announced for each chapter during the semester. Let me stress that it is to your great advantage to work on those problems although they will not be collected and graded.

Grading: In science, as in languages, new knowledge uses and builds on previous knowledge; therefore, all examinations will be both comprehensive and cumulative. Your final grade will be based on; 1) **discussion-based classroom participation** (10%), 2) **three in-class exams** (3 x 20% = 60%), and 3) **a final exam** (30%).

**Tentative Exam Schedule:**
Exam 1 Friday, September 21st
Exam 2  Friday, October 19th
Exam 3  Friday, November 30th
Final Exam  Monday, December 10th 8:00-10:00AM


Molecular Models (extremely useful): Available in the bookstore. However, I recommend either HGS Biochemistry Molecular Model, 5010 Elementary Bio-Organic Set or The flexible molecular model kit (Darling Models™), both of which are available from amazon.com.

Course Outline:
1. Fundamentals; structure, bonding, acids, and bases  Ch. 1, 2
2. Alkanes  Ch. 3
3. Reactions; mechanisms, thermodynamics, kinetics  Ch. 4
4. Stereochemistry  Ch. 5
5. Infrared Spectroscopy, Mass Spectrometry  Ch. 12
6. Nuclear Magnetic Resonance Spectroscopy  Ch. 13
7. Alkyl Halides  Ch. 6
8. Alkenes; structure, synthesis and reactions  Ch. 7, 8
REQUEST TO ADD AN HONORS SECTION TO AN EXISTING COURSE

Honors information is added to the Class Schedule and is reported on the academic transcript. Honors section will be available for registration with instructor/department head approval beginning with the fall term in which they appear in the University Catalog.

SUBJECT  C H M  
(e.g., CHE)

COURSE NO.  2 0 0 2  
(e.g., 1301)

CREDIT HOURS  3  

ACADEMIC YEAR TO BE ADDED TO THE FILE  Spring 2020  
(e.g., Fall 2020)

COURSE TITLE  Organic Chemistry 2 - Honors

DEPARTMENT  BCES  
(e.g., Biological Sciences)

SCHEDULE TYPE  Lecture  
(e.g., Lecture, Lab or Special Topics/Project)

☐ COLLEGE OF AERONAUTICS—23  
☐ COLLEGE OF ENGINEERING AND SCIENCE—30  
☐ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS—25  
☐ NATHAN M. BISK COLLEGE OF BUSINESS—24

IMPORTANT INFORMATION

- Honors sections are restricted to instructor/department head approval for registration
- Honors sections carry all prerequisites, corequisites and restrictions approved for the existing course (cannot be changed for registration without prior approval and publication in the University Catalog)
- At least one non-honors section must be offered at the same time as the honors section
- Courses with honors sections will have the designation HON added to the course description

ASSESSMENT & SYLLABI CONFIRMATION

☐ Yes  ☐ No  Existing assessments/outcomes will be applicable to the honors section.

☐ Yes  ☐ No  Separate syllabi will be used for honors and non-honors sections.

☐ Yes  ☐ No  Attach justification for the department's request

☐ Yes  ☐ No  Describe difference between the honors and non-honors sections

APPROVALS: On completion of description and course number verification, affix appropriate signatures as indicated, and submit to the Undergraduate Curriculum Committee Chair for placement on agenda.

[Signatures and dates]

Dean or Associate Dean

Date

Chair, Undergraduate Curriculum Committee

Date

*Chair, Academic Programs Assessment Committee

Date

CATALOG & CURRICULUM MANAGER

These changes/additions have been made for the University Catalog and entered into the Class Schedule term named above.

Catalog & Curriculum Manager

Date

REGISTRAR'S USE ONLY

SSASECT  SSASYLB  SSATEXT  ACALOG

Operator Init.  Date

DISTRIBUTION

Original – Registrar
Copy – Academic Unit

Florida Institute of Technology  •  Office of the Registrar

150 West University Boulevard, Melbourne, FL 32901-6975  •  321-674-8114  •  Fax 321-674-7827

RGR-379-1018
What is Title IX?

Title IX of the Educational Amendments Act of 1972 is the federal law prohibiting discrimination based on sex under any education program and/or activity operated by an institution receiving and/or benefiting from federal financial assistance. Behaviors that can be considered "sexual discrimination" include sexual assault, sexual harassment, stalking, relationship abuse (dating violence and domestic violence), sexual misconduct, and gender discrimination. You are encouraged to report these behaviors.

**Reporting:** Florida Tech can better support students in trouble if we know about what is happening. Reporting also helps us to identify patterns that might arise – for example, if more than one complainant reports having been assaulted or harassed by the same individual.

Florida Tech is committed to providing a safe and positive learning experience. To report a violation of sexual misconduct or gender discrimination, please contact Linda Jancheson, Title IX Coordinator at 321-674-7277 or ljancheson@fit.edu.

*Please note that as your professor, I am required to report any incidents to the Title IX Coordinator. Confidential support for students is available by contacting the Student Counseling Center at 321-674-8050.*

**Instructor:** Norito Takenaka  
**E-mail:** ntakenaka@fit.edu  
**Phone:** 674-7310  
**Office:** OPS 220  
**Office Hours:** Wed. 10:00 AM – 1:00 PM, or by appointment,

**Class Policy:** The use of laptops, cell phones, and *i-anything* is strictly prohibited at all times.

**Exam Policy:** Restroom breaks are not allowed during exams. Please use them before class. *Students can only make up missed exams if they have a valid written medical, athletic, or academic excuse.* The excuse must be signed by a doctor or nurse practitioner (medical), a coach (athletic), or a professor (academic). A valid medical excuse does not include scheduling a doctor’s appointment during your exam period. The validity of any medical excuse will be thoroughly investigated.

**Recommended Problems:** Recommended problems will be announced for each chapter during the semester. Let me stress that it is to your great advantage to work on those problems although they will not be collected and graded.

**Grading:** In science, as in languages, new knowledge uses and builds on previous knowledge; therefore, *all examinations will be both comprehensive and cumulative.* Your final grade will be based on: 1) **discussion-based classroom participation** (10%), 2) **three in-class exams** (3 x 20% = 60%), and 3) **a final exam** (30%).

**Tentative Exam Schedule:**
<table>
<thead>
<tr>
<th>Exam 1</th>
<th>February 15th, 9:00 – 9:50 AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 2</td>
<td>March 15th, 9:00 – 9:50 AM</td>
</tr>
<tr>
<td>Exam 3</td>
<td>April 19th, 9:00 – 9:50 AM</td>
</tr>
<tr>
<td>Final Exam</td>
<td>May 2nd (Thursday) 8:00 – 10:00 AM</td>
</tr>
</tbody>
</table>


**Molecular Models (extremely useful):** Available in the bookstore. However, I recommend either HGS Biochemistry Molecular Model, 5010 Elementary Bio-Organic Set or The flexible molecular model kit (Darling Models™), both of which are available from amazon.com.

**Course Outline:**

1. Alkenes
   - Ch. 8
2. Alkynes
   - Ch. 9
3. Alcohols
   - Ch. 10, 11
4. Ethers and Epoxides
   - Ch. 14
5. Conjugation and Aromaticity
   - Ch. 15-17
6. Ketones and Aldehydes
   - Ch. 18
7. Carboxylic Acids Etc.
   - Ch. 20