The course is largely consisting of biosynthesis of molecular precursors and biomolecules. The knowledge of the material covered in CHEM-3303 will be assumed. The course is a continuation of CHEM 3303 and is a prerequisite for this course. This course reviews the mechanisms of biosynthesis of macromolecules, particularly amino acids, proteins, fatty acids, lipids, carbohydrates, purines, and pyrimidines. Emphasis will be given to the processes that are regulated and integrated with the metabolism of the cell and the molecular basis of various disorders related to intermediary metabolism.

Graduates will have both broad knowledge and skills of critical thinking in the chemical sciences. Graduates are prepared to conduct or participate in advanced research. Graduates will demonstrate the ability to communicate chemical knowledge. Graduates are prepared to search for employment and matriculation into graduate or professional schools.

Demonstrate an understanding of basic mechanism of biosynthesis of major macromolecules in the cell such as amino acids, fatty acids, carbohydrates and nucleotides. Demonstrate an understanding of the regulation and integration of metabolic processes in the cell. Demonstrate an understanding of signal transduction in biological systems. Describe major intermediates and enzymes involved in the central pathways for signal transduction.

For each quiz and exam, you are required to bring your laptop that is equipped with lockdown browsers. All quizzes and exams must be taken at the scheduled hour except when legitimate medical or personal reasons make it impossible to do so. Under these special cases, a make-up exam (limited to one exam) may be given if the instructor is available.

The comprehensive final exam will include about 15-20 questions from Chapters 27&9 and 30-35 questions from Chapters 12, 14/15, 18, 21-23.
informed ahead of time. The instructor has full discretion for the make-up exam decision.

**Grading Policy:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (%)</th>
<th>Final Letter Grade Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>20%</td>
<td>The final letter grade will be determined by matching the final average with the following scale:</td>
</tr>
<tr>
<td>Chapter Exams</td>
<td>60%</td>
<td>90 or better = A; 80-89 = B; 70-79 = C; 60-69 = D; below 60 = F.</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

**Attendance:**

Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences (more than three). UTRGV’s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

**Course Drops:**

According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

**Students with Disabilities:**

If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor and contact Student Accessibility Services to schedule an appointment to initiate services. It is recommended that you schedule an appointment with Student Accessibility Services before classes start. However, accommodations can be provided at any time. **Brownsville Campus:** Student Accessibility Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at accessibility@utrgv.edu. **Edinburg Campus:** Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at accessibility@utrgv.edu.

**Mandatory Course Evaluation Period:**

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Online evaluations will be available August 10-17, 2018. Students who complete their evaluations will have priority access to their grades.

**Scholastic Integrity:**

As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that that who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism, and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

**Sexual Harassment, Discrimination and Violence:**

In accordance with UT System regulations, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and so must report any instance, occurring during a student’s time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide learning, working, and living environment that promote personal integrity, civility, and mutual respect in an environment free from sexual misconduct and discrimination.