

# Bachelor of Science in Chemistry

## 2014 - 2015 Catalog

### The University of Texas-Pan American

This document provides a list of the UTPA courses required for the major and their equivalent UTRGV courses.

A significant number of courses have changed their course prefix, number, and title.

For any additional information, please visit the Academic Advising Center.

#### **UTPA Courses**

#### **Course Equivalents at UTRGV**

##### **A – GENERAL EDUCATION CORE – 43 HOURS**

##### **Natural Sciences – 8 hours**

CHEM 1301/1101 General Chemistry I and Lab

CHEM 1302/1102 General Chemistry II and Lab

##### **Mathematics – 3 hours**

MATH 1460 Calculus I (or MATH 1487 Honors) three-hour lecture

##### **B – MAJOR REQUIREMENTS – 45 HOURS (25 advanced)**

##### **1 – Chemistry Core – 37 hours (25 advanced)**

CHEM 2301/2101 Analytical Chemistry and Lab

CHEM 2302/2102 Organic Chemistry I and Lab

CHEM 2303/2103 Organic Chemistry II and Lab

CHEM 3301/3202 Inorganic Chemistry and Lab

CHEM 3303/3103 Biochemistry and Lab

CHEM 3304/3104 Physical Chemistry I and Lab

CHEM 3305/3105 Physical Chemistry II and Lab

CHEM 4304/4104 Instrumental Analysis and Lab

CHEM 4101 Chemistry Seminar

CHEM 4201 Chemistry Problems I

CHEM 4105 Chemistry Capstone

##### **2 – Concentrations – 33 hours minimum (26 advanced minimum)**

##### **a – Pre-Medical/Pre-Dental – 34 hours (26 advanced)**

##### **i – Biology – 20 hours (12 advanced)**

BIOL 1401 General Biology I (or BIOL 1487 Honors)

BIOL 1402 General Biology II (or BIOL 1488 Honors)

*Choose 12 hours of advanced Biology.*

##### **ii – Advanced Natural Science Electives – 12 hours (12 advanced)**

*Choose 12 hours of advanced ASTR, BIOL, CHEM, GEOL, PHYS, and/or PSCL.*

##### **iii – Free Electives – 1 hours (2 advanced)**

##### **2 – Broadfield – 33 hours (18 advanced)**

##### **i – Support Courses – 25 hours (18 advanced)**

PHYS 1402 General Physics II

MATH 1470 Calculus II (or MATH 1488 Honors)

CHEM 3306 Polymer Science & Engr

CHEM 4202 Chemistry Problems II

CHEM 4301 Advanced Inorganic Chem

CHEM 4302 Advanced Biochemistry

CHEM 4303 Adv Organic Chemistry

CHEM 4378 Special Topics Chemistry

##### **ii – Free Electives – 8 hours (15 advanced)**

##### **C – SUPPORT COURSES – 8 hours**

MATH 1460 Calculus I (or MATH 1487 Honors) one-hour lecture

PHYS 1401 General Physics I

CHEM 1311/1111 General Chemistry I and Lab

CHEM 1312/1112 General Chemistry II and Lab

MATH 2413 Calculus I (or MATH 2487 Honors) three-hour lecture

CHEM 2301/2101 Analytical Chemistry and Lab

CHEM 2323/2123 Organic Chemistry I and Lab

CHEM 2325/2125 Organic Chemistry II and Lab

CHEM 3301/3202 Inorganic Chemistry and Lab

CHEM 3303/3103 Biochemistry I and Lab

CHEM 3304/3104 Physical Chemistry I and Lab

CHEM 3305/3105 Physical Chemistry II and Lab

CHEM 4304/4104 Instrumental Analysis and Lab

CHEM 4101 Chemistry Seminar

CHEM 4201 Chemistry Problems I

CHEM 4105 Chemistry Capstone

BIOL 1406 General Biology I (or BIOL 1487 Honors)

BIOL 1407 General Biology II (or BIOL 1488 Honors)

PHYS 1402 General Physics II

MATH 2414 Calculus II (or MATH 2488 Honors)

CHEM 3306 Polymer Science and Engineering

CHEM 4202 Chemistry Problems II

CHEM 4301 Advanced Inorganic Chemistry

CHEM 4302 Advanced Biochemistry

CHEM 4303 Advanced Organic Chemistry

CHEM 4278 Special Topics in Chemistry or

CHEM 4378 Special Topics in Chemistry

MATH 2413 Calculus I (or MATH 2487 Honors) one-hour lecture

PHYS 1401 General Physics I

**TOTAL CREDIT HOURS FOR GRADUATION – 120 HOURS**

**TOTAL ADVANCED HOURS – 51 HOURS**