

# UTEP College of Science: Bachelor of Science Degree Plan

## CELLULAR AND MOLECULAR BIOCHEMISTRY UNIVERSITY CORE CURRICULUM for this MAJOR

A maximum of 66 hours may be transferred from two-year institutions to UTEP degree programs

|          | COURSE NAME                                                              | UTEP      | EPCC             |
|----------|--------------------------------------------------------------------------|-----------|------------------|
| <b>A</b> | <b>General Education</b>                                                 |           |                  |
|          | (Minimum "C" grades required)                                            |           |                  |
| <b>1</b> | <b>Communication (6 credits)</b>                                         |           |                  |
|          | Rhetoric & Composition I                                                 | RWS 1301  | ENGL 1301        |
|          | Rhetoric & Composition II                                                | RWS 1302  | ENGL 1302        |
|          | Rhetoric, Composition, & Communication                                   | RWS 1601  | no equivalent    |
|          | Expository English Composition for Speakers of ESL                       | ESOL 1311 | no equivalent    |
|          | Expository English Composition for Speakers of ESL                       | ESOL 1312 | no equivalent    |
|          | Written and Oral Communication                                           | COMM 1611 | no equivalent    |
| <b>2</b> | <b>Mathematics (PreCalculus plus 7 or 8 additional credits)</b>          |           |                  |
|          | PreCalculus                                                              | MATH 1508 | MATH 1314 & 2413 |
|          | Calculus I                                                               | MATH 1411 | MATH 2412        |
|          | <i>AND choose one of the following:</i>                                  |           |                  |
|          | Calculus II                                                              | MATH 1312 | 2314             |
|          | Statistical Methods                                                      | STAT 2480 | no equivalent    |
| <b>3</b> | <b>Life and Physical Sciences (8 credits) - choose 1 sequence</b>        |           |                  |
|          | <i>Physics for non-majors:</i>                                           |           |                  |
|          | General Physics                                                          | PHYS 1403 | PHYS 1301-1101   |
|          | General Physics II                                                       | PHYS 1404 | PHYS 1302-1102   |
|          | <i>Physics for majors:</i>                                               |           |                  |
|          | Physics I (Introd. Mechanics)                                            | PHYS 2420 | PHYS 2325-2125   |
|          | Physics II (Waves & Fields)                                              | PHYS 2421 | PHYS 2326-2126   |
| <b>4</b> | <b>Language, Philosophy, &amp; Culture (3 credits) - choose 1 course</b> |           |                  |
|          | English Literature (to 1700's)                                           | ENGL 2311 | ENGL 2322        |
|          | English Literature (1700's - Modern)                                     | ENGL 2312 | ENGL 2323        |
|          | Inro to American Fiction                                                 | ENGL 2313 | ENGL 2324        |
|          | Introduction to American Drama                                           | ENGL 2314 | ENGL 2343        |
|          | Introduction to American Poetry                                          | ENGL 2318 | no equivalent    |
|          | World History to 1500                                                    | HIST 2301 | HIST 2321        |
|          | World History since 1500                                                 | HIST 2302 | HIST 2322        |
|          | Introduction to Philosophy                                               | PHIL 1301 | PHIL 1301        |
|          | Introduction to Ethics                                                   | PHIL 2306 | PHIL 2306        |
|          | Making of the Other Americas                                             | FREN 2322 | no equivalent    |
|          | Introduction to Religious Studies                                        | RS 1301   | no equivalent    |
|          | Seeing & Naming: Conversations                                           | SPAN 2340 | no equivalent    |
|          | Introduction to Women's Studies                                          | WS 2300   | no equivalent    |
|          | Global Feminisms                                                         | WS 2350   | no equivalent    |
| <b>5</b> | <b>Creative Arts (3 credits) - choose 1 course</b>                       |           |                  |
|          | Art Appreciation                                                         | ART 1300  | ARTS 1301        |
|          | History of Art I (Pre-Renaissance Art History)                           | ARTH 1305 | ARTS 1303        |
|          | History of Art II (Renaissance & Modern Art History)                     | ARTH 1306 | ARTS 1304        |
|          | Dance Appreciation                                                       | DANC 1304 | DANC 2303        |
|          | Introduction to Art of Motion/Film                                       | FILM 1390 | DRAM 2366        |
|          | Introduction to Music History                                            | MUSL 1321 | MUSI 1307        |
|          | Music Appreciation                                                       | MUSL 1324 | MUSI 1306        |
|          | Jazz to Rock                                                             | MUSL 1327 | MUSI 1310        |
|          | Introduction to Theater                                                  | THEA 1313 | DRAM 1310        |

|          | COURSE NAME                                                         | UTEP      | EPCC          |
|----------|---------------------------------------------------------------------|-----------|---------------|
| <b>6</b> | <b>American History (6 credits) - must take both</b>                |           |               |
|          | History of the U.S. to 1865                                         | HIST 1301 | HIST 1301     |
|          | History of the U.S. since 1865                                      | HIST 1302 | HIST 1302     |
| <b>7</b> | <b>Government/Political Science (6 credits)**</b>                   |           |               |
|          | Introduction to Politics                                            | POLS 2310 | GOVT 2305     |
|          | American Government & Politics                                      | POLS 2311 | GOVT 2306     |
| <b>8</b> | <b>Social and Behavioral Sciences (3 credits) - choose 1 course</b> |           |               |
|          | Intro to Physical Anthropology & Archaeology                        | ANTH 1301 | ANTH 2346     |
|          | Intro to Social & Cultural Anthropology                             | ANTH 1302 | ANTH 2351     |
|          | Cultural Geography                                                  | ANTH 1310 | no equivalent |
|          | Introduction to Linguistics                                         | ANTH 2320 | no equivalent |
|          | Economics for Engineers and Scientists                              | CE 2326   | no equivalent |
|          | Interpersonal Communication                                         | COMM 2350 | no equivalent |
|          | Mass Media and Society                                              | COMM 2372 | COMM 1307     |
|          | Principles of Macroeconomics                                        | ECON 2303 | ECON 2301     |
|          | Principles of Microeconomics                                        | ECON 2304 | ECON 2301     |
|          | Introduction to Educational Psychology                              | EDPC 1301 | no equivalent |
|          | Action Research in Classrooms                                       | EDU 1342  | no equivalent |
|          | Introduction to Linguistics                                         | ENGL 2320 | no equivalent |
|          | Cultural Geography                                                  | GEOG 1310 | no equivalent |
|          | An Introduction to Linguistics                                      | LING 2320 | no equivalent |
|          | Language Inside and Out: Select Topics                              | LING 2340 | no equivalent |
|          | Introduction to Psychology                                          | PSYC 1301 | PSYC 2301     |
|          | Introduction to Sociology                                           | SOCI 1301 | SOCI 1301     |
|          | Cultural Geography                                                  | SOCI 1310 | no equivalent |
| <b>9</b> | <b>Component Area Option (6 credits) - choose 2 courses</b>         |           |               |
|          | Introduction to Global Business                                     | BUSN 1301 | no equivalent |
|          | Public Speaking                                                     | COMM 1301 | SPCH 1315     |
|          | Business/Professional Communication                                 | COMM 1302 | SPCH 1321     |
|          | Intro-Computational Thinking                                        | CS 1310   | no equivalent |
|          | Computer Programming Sci/Eng                                        | CS 1320   | no equivalent |
|          | Scientific Inquiry                                                  | SCI 1301  | no equivalent |
|          | Seminar/Critical Inquiry                                            | UNIV 1301 | EDUC 1300     |

### IMPORTANT

- 1 It is recommended that both Political Science courses be completed at EPCC then transferred to UTEP or both be completed at UTEP.
- 2 All courses used to satisfy the core curriculum must be completed with a grade of "C" or better. This also applies to courses transferred from
- 3 No substitutions will be allowed in the Core Curriculum.

**UTEP College of Science: Bachelor of Science Degree Plan  
Cellular and Molecular Biochemistry**

**LOWER DIVISION COURSES for the MAJOR**

|          | <b>COURSE NAME</b>                                              | <b>UTEP</b>           | <b>EPCC</b>           |
|----------|-----------------------------------------------------------------|-----------------------|-----------------------|
| <b>B</b> | <b>MAJOR: BIOCHEMISTRY</b>                                      |                       |                       |
|          | <b>Cellular and Molecular Biochemistry Courses (44 credits)</b> |                       |                       |
|          | General Biology                                                 | <b>BIOL 1305-1107</b> | <b>BIOL 1306-1106</b> |
|          | Organismal Biology                                              | <b>BIOL 13061108</b>  | <b>BIOL 1307-1107</b> |
|          | General Microbiology                                            | <b>MICR 2340-2141</b> | <b>BIOL 2421</b>      |
|          | Genetics                                                        | <b>BIOL 3320</b>      | no equivalent         |
|          | Molecular and Cellular Biology                                  | <b>BIOL 3314-3115</b> | no equivalent         |
|          | Membrane Biology                                                | <b>CBCH 3316</b>      | no equivalent         |
|          | Prokaryotic Molecular Genetics                                  | <b>MICR 3449</b>      | no equivalent         |
|          | Immunology                                                      | <b>MICR 4353-4154</b> | no equivalent         |
|          | Microbial Physiology                                            | <b>MICR 3345-3146</b> | no equivalent         |
|          | Cellular Biochemistry                                           | <b>CBCH 4414</b>      | no equivalent         |
|          | Techniques in Molecular Biochemistry                            | <b>CBCH 4310</b>      | no equivalent         |
|          | Advanced Topics in Molecular Biochemistry                       | <b>CBCH 4320</b>      | no equivalent         |
|          |                                                                 |                       |                       |
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|          | <b>COURSE NAME</b>                                 | <b>UTEP</b>           | <b>EPCC</b>           |
|----------|----------------------------------------------------|-----------------------|-----------------------|
|          |                                                    |                       |                       |
| <b>C</b> | <b>Required Chemistry Courses (23 credits)</b>     |                       |                       |
|          | General Chemistry I                                | <b>CHEM 1305-1105</b> | <b>CHEM 1311-1111</b> |
|          | General Chemistry II                               | <b>CHEM 1306-1106</b> | <b>CHEM 1312-1112</b> |
|          | Organic Chemistry I                                | <b>CHEM 2324-2124</b> | <b>CHEM 2423</b>      |
|          | Organic Chemistry II                               | <b>CHEM 2325-2125</b> | <b>CHEM 2425</b>      |
|          | Biochemistry I                                     | <b>CHEM 3330</b>      | no equivalent         |
|          | Biochemistry II                                    | <b>CHEM 3332</b>      | no equivalent         |
|          |                                                    |                       |                       |
|          |                                                    |                       |                       |
| <b>D</b> | <b>Electives (5 credits)</b>                       |                       |                       |
|          | Upper Division Hours (inside or outside the major) |                       |                       |
|          |                                                    |                       |                       |
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**IMPORTANT**

- 1 Upper division coursework = 3000 or 4000 level courses
- 2 Upper division coursework in the major or upper division electives are only available at UTEP (these are not offered at EPCC).