**Bioinformatics Professional Science Master’s (PSM) Degree Plan (41 Credits)**

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| **Student Name:**  | **Email and Cell Phone:**  |
| **UTEP ID:**  | **Office Location and Phone:**  |
| **Undergraduate Major:**  | **Student Type:** Full-time / Part-time |
| **Previous Graduate Study Area:**  | **Start Date:**  |
| **Research Advisor:**  | **Expected Graduation Date:**  |
| **Graduate Advisor:** Dr. Ming-Ying Leungmleung@utep.edu; 915.747.6836 | **GRE Scores:**  |
| **For Course Registration:** Bioinformatics Officebioinformatics@utep.edu; 915.747.8484 | **TOEFL/IELTS Scores (if applicable):**  |

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| **Core Courses (16 credits)**  | **Semester** | **Grade** |
| BINF 5110 | Biology Seminar for Bioinformatics |  |  |
| BINF 5111 | Chemistry Seminar for Bioinformatics |  |  |
| BINF 5112 | Computer Science Seminar for Bioinformatics |  |  |
| BINF 5113 | Mathematics Seminar for Bioinformatics |  |  |
| BINF 5341 | Analysis and Modeling of Biological Structures |  |  |
| BINF 5351 | Introduction to Bioinformatics I: Basic Sequence Comparisons |  |  |
| BINF 5352 | Introduction to Bioinformatics II: Gene Finding and Genomic Comparisons |  |  |
| BINF 5354 | Post-Genomic Analysis |  |  |
| **Internship in Bioinformatics (3 credits; mandatory)** | **Semester** | **Grade** |
| BINF 5353 | Working at a company, government agency, or academic institution |  |  |
| **Required Courses (13 credits)** | **Semester** | **Grade** |
| BIOL 5340 | Structure and Function of Macromolecules |  |  |
| CS 5342 | Data Base Management |  |  |
| STAT 5329 | Statistical Programming |  |  |
| STAT 5428 | Intro to Statistical Analysis |  |  |
| **Free Electives (9 credits; choose 3 from the following suggested courses)** | **Semester** | **Grade** |
| * BINF 5396 and 5397; BINF 5398 and 5399 (for thesis option only)
* BIOL 5302, 5316, 5326, 5329, 5342, 5343, and 5344
* CHEM 5329, 5339, and 5396
* CPS 5310, 5320, 5396, 5397, and 5401
* CS 5334, 5341, 5350, 5351, 5353, 5383, 5391, 5396, and 5397
* MATH 5329, 5330, 5335, and 5396
* STAT 5336, 5386, 5388, 5390, 5391, 5392, and 5396
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| **Prerequisites (Complete in Year 1)** | **Semester** | **Grade** |
| BIOL 3414 | Molecular Cell Biology (Replaced by BIOL 3314 + 3115) |  |  |
| CHEM 2324 | Organic Chemistry + CHEM 2124 (Lab) |  |  |
| CS 2401 | Elementary Data Structures/Algorithms (CS 1301+1101 prereqs, Grades: ) |  |  |
| MATH 2300 | Discrete Mathematics |  |  |
| STAT 2480 | Elementary Statistical Methods |  |  |

**NOTES:**