Thesis in Bioinformatics

The University of Toledo
BRIM Program in Bioinformatics & Proteomics/Genomics
BIPG6990 Thesis in Bioinformatics (CRN is instructor-specific)

Instructor:	Student Advisor	**Class Location**:	TBD
Email:	TBD		
Office Hours:	TBD	**Class Day/Time**:	TBD
Office Location:	TBD	**Lab Location**:	TBD
Instructor Phone:	TBD		
Offered:	Fall, Spring, Summer	**Lab Day/Time**:	TBD
Course Website:	Blackboard Learn (if applicable)	**Credit Hours**:	1-15

CATALOG/COURSE DESCRIPTION

Research in bioinformatics, or interdisciplinary investigation of biomedical problems with significant bioinformatic components. This research is at the master's level, leading to completion of a scientific project for presentation as a thesis. May be repeated for credit.

STUDENT LEARNING OUTCOMES

- Develop research hypotheses
- Develop research protocols and methodology
- Develop relevant data needed to test hypotheses
- Analyze data and discuss results in written reports/oral presentations
- Present research results in a format acceptable for publication
- Analyze research results in context of present knowledge/literature in research topic area
- Identify and use methods essential to current research in biomedical sciences
- Describe the theories and principles of bioinformatics
- Utilize critical thinking in the application of hypothesis testing to accurately probe mechanisms underlying biomedical research questions.
- Analyze major differences between normal controls and experimental samples.
- Evaluate selected literature for relevance to the research questions being investigated.

Overall, the student will demonstrate effective ability to develop a firm knowledge of the application of the scientific method of investigation, including formation of hypotheses; ability to refine, alter, expand or reject hypotheses by development and implementation of experimental methods, data gathering, and accurate interpretation of results in comparison to currently accepted scientific knowledge in the field.

TEACHING METHODOLOGY

To be determined by course instructor/student mentor.

PREREQUISITES AND COREQUISITES

Must be a graduate student in the Biomedical Sciences PhD Program, in the Bioinformatics Track, and must have approval of instructor/mentor to register for his/her section of the course. Students must take their Qualifying Exam before registering for the Thesis course.

TEXTS AND ANCILLARY MATERIALS

No textbooks required. Students will work with the materials provided by their mentor, a combination of one-on-one and laboratory group meetings, review of scientific literature, and independent work at the computer and/or laboratory bench.

TECHNOLOGY REQUIREMENTS

Ability to access key bioinformatics databases, as required by their specific project.

ACADEMIC POLICIES

Graduate Policies: http://www.utoledo.edu/policies/academic/graduate/

COURSE EXPECTATIONS

To be determined by course instructor/mentor and the student.

OVERVIEW OF COURSE GRADE ASSIGNMENT

Satisfactory/Unsatisfactory

UNIVERSITY POLICIES

Policy Statement on Non-Discrimination on the Basis of Disability (ADA)*

The University is an equal opportunity educational institution. Please read The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance.
Students can find this policy along with other university policies listed by audience on the University Policy webpage (http://www.utoledo.edu/policies/audience.html/#students).

https://www.utoledo.edu/title-ix/policies.html
https://www.utoledo.edu/policies/administration/diversity/pdfs/3364_50_01.pdf
https://www.utoledo.edu/policies/main_campus/student_life/pdfs/3364_30_04_Student_code_of_conduct.pdf

Academic Accommodations

The University of Toledo embraces the inclusion of students with disabilities. We are committed to ensuring equal opportunity and seamless access for full participation in all courses. For students who have an accommodations memo from Student Disability Services, I invite you to correspond with me as soon as possible so that we can communicate confidentially about implementing accommodations in this course. For students who have not established affiliation with Student Disability Services and are experiencing disability access barriers or are interested in a referral to healthcare resources for a potential disability or would like information regarding eligibility for academic accommodations, please contact the Student Disability Services Office (http://www.utoledo.edu/offices/student-disability-services/) by calling 419.530.4981 or sending an email to StudentDisability@utoledo.edu.

ACADEMIC AND SUPPORT SERVICES

Please follow this link to view a comprehensive list of Student Academic and Support Services (http://www.utoledo.edu/studentaffairs/departments.html) available to you as a student.

SAFETY AND HEALTH SERVICES FOR UT STUDENTS

Please use the following link to view a comprehensive list Campus Health and Safety Services available to you as a student.