

## Biomedical Informatics Master's Capstone/Internship Plan – Clinical Informatics Track

### The Capstone/Internship Option

Six credit hours of BMI 581 or BMI 590 - Capstone Project are required of MBI students in the Clinical Informatics track. Students may begin the capstone once they have completed 30 credit hours of coursework. They may choose one of two formats:

- BMI 581: "Traditional" Capstone Project—research and submission of a formal paper (minimum 30 pages),  
**OR**
- BMI 590: Capstone/Internship Project with written paper (10-15 pages) and final report presentation

This document outlines the **BMI 590 Capstone/Internship** format for students interested in pursuing that option. This format consists of:

1. Two terms of an approved internship (3 credits per term which translates to 9-12 hours per week of work),
2. A written paper 10-15 pages long at the end of the second internship term, and,
3. A 20-minute presentation either at the DMICE Informatics Conference (on-campus students) or remotely (online students).

### Structure & Process

In partnership with the OHSU Department of Medical Informatics, external Sponsoring Organizations will provide structured Capstone/Internship experiences for medical informatics students to work on current projects. This program will provide benefits to the Sponsoring Organization, the students, and their state's workforce in a variety of ways. The Capstone/Internship will bring together theory, application, and current practice.

### Securing a Capstone/Internship

**Interest Form:** Interested students will complete a Student OHSU Master's Capstone/Internship Interest Form (below) and include a CV/resume to participate in the Capstone/Internship. This form must be turned into the OHSU Internship Coordinator, Diane Doctor ([doctord@ohsu.edu](mailto:doctord@ohsu.edu)) by the end of the 2<sup>nd</sup> week of the quarter before the student wants to begin the Capstone/Internship. For example, if a student wanted to begin the Capstone/Internship spring quarter, he/she would fill out the Interest Form at the beginning of winter quarter. It is important to begin this process early as obtaining all of the necessary documentation can take several weeks.

**Finding a Project:** Master's students are responsible for finding their own Capstone/Internship opportunities. The OHSU Internship Coordinator will maintain a database with descriptions of current project opportunities that are available at some of the Sponsoring Organizations. The student will either come up with his/her own project idea and Sponsoring Organization or use the project database to match his/her interests with an appropriate project. The OHSU Internship Coordinator and the Sponsoring Organization will facilitate possible matches and development opportunities. After coming up with his/her own idea or browsing the project descriptions available in the OHSU internship database, the student should discuss potential projects and opportunities with the OHSU Internship Coordinator. The project idea must be approved by the student's OHSU Faculty Advisor by the end of the 3<sup>rd</sup> week of the quarter before the student begins the Capstone/Internship.

**Project Development:** The quarter before the Capstone/Internship begins the student will work with the Sponsoring Organization to develop a detailed Project Plan that includes the:

1. Project Scope
2. Milestones
3. Deliverables
4. Timeline
5. Name and contact information of the mentor at the Sponsoring Organization
6. OHSU Faculty Advisor

The Project Plan will also include the frequency of meetings with the Sponsoring Organization and any additional requirements the Sponsoring Organization or OHSU Faculty Advisor has for the student (see Course Contract below for a more detailed listing of all required components).

The proposed Project Plan must be completed by the OHSU student and turned in to the Internship Coordinator no later than midway through the quarter prior to when the work will begin. For example, the Project Plan for a spring Capstone/Internship must be turned in no later than the fifth week of winter term.

**Logistics:** The Sponsoring Organization will work with the student to ensure all necessary Sponsor-required paperwork and/or screenings are completed prior to the start of the Capstone/Internship. The OHSU Internship Coordinator will work with OHSU and the Sponsoring Organization to establish the necessary Education Contract. If the internship will include patient care, the Internship Coordinator will work with the student and OHSU to develop an Off Campus Authorization (OCA).

**Final Approval:** The Project Plan and all necessary paperwork must be approved and the Course Contract signed by the Faculty Advisor, Sponsor site, and the OHSU Internship Coordinator at least four weeks prior to the beginning of the quarter during which the Capstone/Internship is to take place.

### **During the Capstone/Internship:**

- Each student will be closely linked with a Sponsoring Organization staff member who will serve as his/her mentor for the duration of the Capstone/Internship. The student may also be introduced to one or more content area experts or mentors for a given project or set of tasks. The student will meet regularly with Sponsoring Organization staff, including the mentor, at the frequency determined in the Project Plan, to review progress and assign work. The Sponsoring Organization mentor will complete a Summative Student Evaluation prior to the end of the Capstone/Internship.
- The student will complete a semi-monthly Student Capstone/Internship Progress Report Evaluation using E-Value's auto-generated, electronic evaluation reporting system.
- The Sponsor will complete a semi-monthly Student Capstone/Internship Progress Report Evaluation using E-Value's auto-generated, electronic evaluation reporting system.

- The Internship Coordinator will schedule student and OHSU advisor appointments as needed.
- The Internship Coordinator will review semi-monthly Capstone/Internship progress report evaluations from student and sponsor and forward evaluations to the student's Faculty Advisor.
- The Master's student will maintain and submit a log of hours worked and tasks completed. In addition, s/he will submit a 10-15 page double spaced summary of his/her Capstone/Internship experience to the Faculty Advisor and to the Internship Coordinator no later than one week prior to the end of the quarter.
- The Master's student will complete a 20-minute presentation of his/her internship experience at the Informatics Conference (on-campus students) or remotely (online students).

## Capstone/Internship Role Summary

Roles	Quarter Before Capstone/Internship Begins		During the Capstone/Internship	
	Timing	Task	Timing	Task
Student	Wk 2	Submit Capstone/Internship Interest Form with CV/resume	Per Project Plan	Meet with Sponsoring Organization
	Wk 3	Project idea approved		
	Mid-qtr	Submit proposed Project Plan	Semi-monthly	Complete student Capstone /Internship Progress Report Evaluation
	4 wks prior to qtr end	Submit signed Course Contact Submit final Project Plan Complete Sponsor related paperwork	1 wk prior to qtr end	Submit Capstone/Internship Final Summary Report paper
Sponsor	Mid-qtr	Identify mentor	Per Project Plan	Meet with student
	Mid-qtr	Proposed Project Plan developed with student	Semi-monthly	Complete Capstone/Internship Summary Report Evaluation
	2 wks prior to qtr end	Complete Sponsor related paperwork Sign Course Contract	Before qtr end	Complete student's Summative Evaluation
Faculty	Wk 3	Approve project idea	On-going	Monitor student's progress
	2 wks prior to qtr end	Approve Project Plan Sign Course Contract	As needed	Advise and communicate with student Address issues with student's progress
			Before qtr end	Grade Capstone/Internship Review Summative Evaluation and determine class grade
Internship Coordinator	On-going	Maintain database of project opportunities	Start of Term	Send Sponsor thank you email
	Wk 2	Receive Capstone/Internship Interest Form with CV/resume Send Education Contract to Sponsoring Site for review	Semi-monthly	Review Capstone/Internship Progress Report Evaluations from student and sponsor
	Mid-qtr	Receive proposed Project Plan Monitor progress of Education Contract signatures	Semi-monthly	Update Faculty Advisor of student's progress
	2 wks prior to qtr end	Receive and sign Course Contract – Receive final Project Plan Receive signed Education Contract Complete Sponsor related paperwork	As needed	Schedule student and advisor appointments

## Roles

### Master's Students

Students will fill out a Master's Capstone/Internship Interest Form and include a CV/resume to participate in the Capstone/Internship. This must be turned in to the OHSU Internship Coordinator by the end of the 2<sup>nd</sup> week of the quarter before the student wants to begin their Capstone/Internship. The student will investigate project options by reaching out to organizations with which he/she may be interested in working, or by contacting the Internship Coordinator for a list of current available projects. The student should discuss their potential project ideas and opportunities with the Internship Coordinator. The project idea must be approved by the Faculty Advisor by the end of the 3<sup>rd</sup> week of the quarter before the student begins the Capstone/Internship.

The quarter before the Capstone/Internship begins the student will work with the Sponsoring Organization to develop a detailed Project Plan. The student must submit a proposed Project Plan and turn it in to the Internship Coordinator no later than midway through the quarter prior to when the work will begin. The final Project Plan and all necessary paperwork (Interest Form, Course Contract, and Education Contract) must be approved at least two weeks prior to the beginning of the quarter in which the Capstone/Internship begins. **The student will work with the Sponsoring Organization to ensure all necessary paperwork and/or screenings required by the Sponsoring Organization are completed.** The student will also work with the OHSU Internship Coordinator to ensure that all paperwork, including an Education Contract and an OCA (if required), is completed.

During the Capstone/Internship, the student will communicate with the Internship Coordinator and their Faculty Advisor on an as needed basis. The student will complete a Student Capstone/Internship Progress Report Evaluation to the Internship Coordinator semi-monthly each month. The student will meet regularly with Sponsoring Organization staff at the frequency determined in the Project Plan.

The Master's student will maintain a list of hours worked and tasks completed, and they will submit a 10-15 page double-spaced type summary of the Capstone/Internship experience to the Faculty Advisor and the Internship Coordinator no later than one week prior to the end of the quarter. The Master's student will present a final report of their internship experience.

The student will demonstrate professionalism through punctuality, enthusiasm, and appropriate dress, as well as by maintaining confidentiality.

### Sponsoring Organization

The Sponsoring Organization will identify mentor(s) for the student(s). Each student must be assigned a mentor at the Sponsoring Organization by mid-term of the quarter prior to when the Capstone/Internship will begin. The mentor will work with the student to develop the proposed Project Plan by mid-term of the quarter prior to the Capstone/Internship and sign Course Contract two weeks prior to the end of the previous quarter. The mentor will help guide the student's efforts, submit semi-monthly Sponsor Student Capstone/Internship Progress Report Evaluations about the student's progress to the Internship Coordinator throughout the Capstone/Internship, meet with the student as outlined in the Project Plan, and work to ensure the experience is valuable for both the student and the Sponsoring Organization's mission. The Sponsoring Organization will complete a Summative Student Evaluation prior to the student leaving at the end of the Capstone/Internship.

A staff member from the Sponsoring Organization will serve as the program's primary Sponsoring Official, ensuring that the Capstone/Internship program remains a priority and that appropriate resources are dedicated

to support the student and Sponsoring Organization staff involved with the program. This staff member may be the student's primary mentor, or someone else designated by the Sponsoring Organization.

The Sponsoring Organization will work with the Internship Coordinator and the student to ensure OHSU's Education Contract and all necessary Sponsor required paperwork/screenings are completed at least two weeks prior to the end of quarter preceding the Capstone/Internship.

The Sponsoring Organization will submit descriptions of possible projects to the Internship Coordinator to facilitate student matches based on interest, experience, and education requirements.

### **OHSU Faculty Advisor**

The Faculty Advisor will oversee the program to ensure the educational relevance and quality of the Capstone/Internship content, approve project idea by the 3<sup>rd</sup> week, approve each student's Project Plan at least two weeks prior to the start of the Capstone/Internship, monitor the student's progress, and communicate with each student on an as needed basis. The Faculty Advisor will consult with the Sponsoring Organization and the Internship Coordinator on suitable projects for students, facilitate the development of new opportunities, grade the student Capstone/Internship Final Summary Report, determine class grade, and ensure overall adherence with program requirements. He/she will serve as the academic advisor for students in the Sponsoring Organization's Capstone/Internship to receive course credit and address any issues that may arise with student progress during the Capstone/Internship.

### **OHSU Internship Coordinator**

The Internship Coordinator will work with the Sponsoring Organization to facilitate student applications and placement, review semi-monthly Capstone/Internship progress report evaluations from student and sponsor, and keep the Faculty Advisor updated semi-monthly on the students' progress. The Internship Coordinator will maintain a database with descriptions of current project opportunities at the Sponsoring Organizations. This person will communicate with the Sponsoring Organization and the Faculty Advisor about student needs, progress, and project opportunities for additional students. The Internship Coordinator will schedule advisor appointments with the student as needed and work with OHSU and the Sponsoring Organization to establish the necessary Education Contract. If there will be patient care as part of the Capstone/Internship, the Internship Coordinator will work with the student and OHSU to develop an Off Campus Authorization (OCA).

## **Additional required resources that may be necessary from Sponsoring Organizations:**

### **Physical Workspace**

Depending on the project, the Sponsoring Organization may provide the student with a computer workstation, office supplies, or appropriate administrative support to facilitate the student's work.