

Health, Engineering Science and Entrepreneurship (HESE) Thesis Course: I will be enrolling in (Please select ONE):

| IBEHS 4E09A/B | IBEHS 5E15A/B | |
|--|-----------------|--|
| STUDENT NAME: | STUDENT NUMBER: | |
| EMAIL ADDRESS: | ACADEMIC YEAR: | |
| This is a full academic year project course. | | |
| SUPERVISOR INFORMATION | | |
| Name: | Department: | |
| Email: | Institution: | |
| Phone: | Position: | |
| Address: | | |
| CO-SUPERVISOR INFORMATION (If Applic | able) ^ | |
| Name: | Department: | |
| Email: | Institution: | |
| Phone: | Position: | |
| Address: | | |
| PROJECT INFORMATION | | |
| Project Title: | | |
| Project Topic Area: | | |
| Start Date: | End Date | |

[^] Students may require a co-supervisor with an appointment at McMaster University, if their supervisor is not appointed by McMaster. The need for a co-supervisor will be determined on a case-by-case basis.



| Evaluation*: | | |
|----------------------|---------------|---------|
| Evaluation Criteria: | Evaluated By: | Weight: |
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| | | |
| | | |
| | | |
| | | |
| Total: | | 100% |

Outline & Learning Objectives



| Logistics and Health & Safety | | |
|--|-----|----|
| | Yes | No |
| Do you authorize the publishing of your name, contact information and project title to <u>the iBioMed Project</u> Database webpage? | | |
| Have you ensured the student has the necessary Health and Safety (EOHSS) requirements? | | |
| Does the project require Research Ethics approval(s)? | | |
| Are the students working in a clinical environment where they interact with patients? If yes, complete the questions below: | | |
| Are you authorized to allow students to interact with patients? | | |
| Has the student completed the required Health Screening procedures as indicated by the Health Screening Office? | | |
| Have you completed the required risk management assessment forms? | | |

Supervisor Signature

(Name)

(Signature)

(Date)

Date:

FOR OFFICE USE ONLY:

Authorizing Signature:



IBEHS Thesis Evaluation Samples

The student should discuss the evaluation criteria with their supervisor to ensure that there is clarity. You are strongly encouraged to include a midpoint progress evaluation in December worth 10-20% of the final grade so that you will know whether you are progressing well and meeting expectations. Below are some evaluation structures used in the past.

| Research proposal - 5% Literature review - 15%Draft of thesis- 10% Thesis - 40% Work for data collection - 20%Final presentation - 10% | Background evaluation and data planning - 30% Database completion - 20% Analysis - 20% Presentation - 15% Original hypothesis/planning - 15% | PICO development - 25% Systematic research completion - 10% Filtering articles - 10% Systematic review table - 25%Abstract and results - 15%Manuscript - 15% |
|---|---|--|
| Early assessment feedback - 10%Literature review - 20% Progress presentation - 20%Final thesis - 50% | Critical literature review - 20% Experimental design - 5% Experimental procedure -10% Data gathering - 10% Data analysis - 5% Weekly communications - 10%Final report - 40% | Final paper- 50%Final presentation - 25%Lab performance - 25% |
| Lab meeting attendance - 10%Foundations on gait analysis - 15% Research methods - 15%Data analysis - 10% Final presentation - 20% Written thesis proposal - 30% | Project plan - 25% Depth, comprehension and problem-solving - 35%Report and background - 25% Literature references and documentation - 15% | Market assessment of bioink manufacturing - 10% Market assessment of bioprinters -10% Market assessment of companies selling tissue - 10% Patient landscape analysis - 10% Wet lab execution - 10% Weekly update meetings - 10% Final presentation and report - 40% |
| Final report - 30% Hands-on lab work - 30% Participation during group meetings - 20% Communication skills - 10% Time management - 10% | Lab meeting attendance - 10% Assessment on foundation - 15%Coding and analysis - 25% Research documentation for reproducibility - 25% Final presentation - 15% | Refining the scope of the project (business models, etc.) - 30% Back end database to assist in clinical data collection - 30% Assist research team with clinical study - 40% |
| Thesis report - 70% Journal paper based on experimental work - 30% | Research proposal/ literature review - 15% Mid-year report - 25% Written thesis - 25% Work performed to collect & analyze data - 35% | Literature review - 30% Participation - 20% Written thesis - 40% Oral presentation - 10% |



| Literature review - 20%Data management plan - 10% Research progress update (December) - 15% Research progress update (March) - 15% Final report - 30% Lab book/data records - 10% | Lab performance - 50% Midterm presentation - 10%Final presentation - 20%Final report - 20% | Meeting participation - 15% Timeline and progression - 15% Reading list completion - 20% Drafting proposal - 20% Final paper - 30% |
|--|--|---|
| Literature review - 15% Design - 20% Experimentation - 40% Validation and analysis - 25% | Literature review - 15% Project proposal - 15% Project management - 10% Lab work - 20% Final report - 35% Health and safety training - 5% | Proposal - 10% HIREB approval forms - 10%Data collection - 30% Data analysis - 20% Abstract prep - 10% Manuscript -10% |
| 3-minute thesis - 5% Research summary -20% Thesis early assessment - 20% Final thesis - 45% Conference presentation 10% | Experimental performance - 50% Lab performance - 10% Presentations - 20% Data analysis and reports - 20% | Literature review - 20% Weekly reports - 10% Group meeting presentations - 5% Lab performance - 20% Midterm report - 5% Final report - 20% Final presentation - 20% |
| Project management - 30% Experimental design - 10% Data analysis - 10% Effective communication - 10% Written reports - 40% | Proposal - 10% Proposal presentation - 10% Literature review - 20% Final presentation - 20% Final paper - 20% Lab participation - 20% | Meeting prep - 20% Question preparation - 20% Abstract preparation and final report - 20% Meeting organization - 20% Poster day presentation - 20% |
| Contribution to scientific knowledge - 65% Teamwork - 20% Integrity towards patients and patient materials - 15% | Literature review - 30% Lab performance - 40% Final report - 30% | 3-minute thesis - 10% Abstract - 10% Poster - 30% Thesis paper - 50% |
| Timeline - 15% Research ethics submission - 15% Data collection and analysis - 15% Update and self-evaluation - 10% Abstract and conclusions - 15% 3MT - 5% Final report and self-assessment -25% | Defining phenomenon studied - 10% Justifying topic choice - 10% Presenting research question - 10% Describe data collection method - 10% Choosing and reporting data - 10% Quality of final report - 25% Student work/involvement - 25% | Oral presentation - 10% Research proposal document - 30% Oral presentation of thesis - 20% Overall performance appraisal - 10% Final written thesis - 30% |



| Final written thesis - 45% Lab work - 35% Technical Presentation (April) - 15% 3-minute thesis - 5% | Experimental performance - 50% Lab performance - 10% Presentations - 20% Data analysis & reporting - 20% | Final report - 100% |
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