**I. Selecting a Thesis Advisor**

While formulating ideas and searching for research topics, it is the student’s responsibility to approach a professor in the department who is qualified to direct their thesis (consult the list of IBD Graduate Faculty and their areas of specialty on the IBD program website). It is not necessary to write out a formal proposal for your professor to review before the first meeting, but you should have a good idea about the direction and focus of your thesis. Be professional. Organize yourself before asking for the meeting and be prepared to articulate your thoughts about your thesis idea. If the professor agrees to become your thesis advisor, he/she will help you refine your topic and offer advice on how to approach it. It is important to note that the initiative for finding a thesis advisor lies with you, the student, although you are encouraged to discuss possibilities with the IBD Graduate Program Coordinator (GPC) and/or with other professors in the department. For example, students are encouraged to interact with IBD faculty and to explore thesis options while taking BIO 505 Stewardship Seminar. Once you have identified a thesis advisor and collaboratively selected your committee, you must sign and submit the Thesis Advisory Committee Form to the IBD Graduate Program Committee prior to registering for Thesis credits (Bio 592).

**II. Selecting a Thesis Committee**

Your thesis project requires a thesis advisory/evaluation committee. The committee requires a minimum of two members but is typically composed of 3-4 members. At a minimum, you need two IBD Graduate Faculty on your committee. The Chair (almost always your thesis advisor) must be a member of the IBD Graduate Program. The second IBD committee member must also be a member of the IBD Graduate Faculty, bringing diverse viewpoints to the committee. At least one of the IBD faculty on the committee must be a full-time, faculty member in the Department of Biological & Environmental Sciences at WCSU. The IBD Graduate Program Committee ***strongly recommends*** (but does not require) that the thesis committee has at least one external member (i.e., a third individual from outside the IBD Graduate Program). Additional members can be from within or outside IBD (e.g. faculty from other WCSU departments, universities, agencies, and private industry). Thesis committee members that are not WCSU Faculty (e.g., faculty from other institutions or individuals from agencies or industry that hold a PhD) can be included as "Consulting members" (i.e., non-voting) or "Members" (i.e., voting), but cannot replace either of the two IBD Graduate Faculty members (i.e., they can serve as third or fourth members). Research Associates or other individuals (holding an MS degree at a minimum) are eligible to serve as thesis committee members with approval of the IBD Graduate Program Coordinator and the Graduate Program Committee. With your assistance, your thesis advisor must forward a **Thesis Advisory Committee Form** to the IBD Graduate Program Coordinator prior to registering for Thesis credits (Bio 592). Your thesis committee is not officially formed until this form has been sent to IBD Graduate Program Coordinator and has been approved by the IBD Graduate Program Committee. You must have an approved thesis committee before you can submit your thesis proposal, and in some cases you may want to identify a committee prior to writing your proposal.

**III. The Thesis Proposal**

You must submit a thesis proposal (also called a prospectus) describing the research to be conducted. This proposal must be approved and signed by all Thesis Committee members, the IBD Graduate Program Coordinator, and the Department Chair at least four months before the thesis defense. The format of the proposal is to be determined by you and your thesis committee; however, ideally, it should be written in an appropriate publication format but with the "Results" and "Discussion" sections replaced with "Anticipated Results" and “Broader Implications”. Include your experimental design, plans for data analysis, a timeline, and your publication plans.

A proposal is the foundation of your research. In it, you will identify a research topic, explain why it is interesting and important, review the relevant literature, list your specific hypotheses, outline your methods and give some potential outcomes of your research. Proposals have value in terms of focusing your subsequent research efforts, convincing your thesis committee that you have a suitable project, and often in terms of securing funding. Writing and submitting research proposals to funding agencies such as the National Science Foundation and the National Institutes of Health is the way science is funded. Writing your proposal is good practice for writing proposals to obtain funding and it sets the stage for how your research project will be implemented. The quality of the writing is also very important.

Your proposal should:

1. State your research topic. This step will be done with your thesis advisor. Some advisors will have specific topics they want you to work on. Other advisors will expect you to have ideas of your own for a research topic.

2. Explain why your research topic is significant, interesting, and important. This step involves getting the reader of your proposal excited about your research. Most individual research projects are parts of a larger research agenda that is exciting. It is important to tie your specific project to this larger agenda, such as finding a cure for diabetes or conserving native trout. There is serious competition for research dollars so it is the most exciting proposals that get the funding these days.

3. A literature review is important to place your work in context with a broader field of study. It will also demonstrate that your proposed work is novel and will advance the field forward. Your literature search should be comprehensive and include all relevant references. Key papers should be reviewed and discussed in detail. The number and format of references should be consistent with the number and format of references found in a journal from your field.

4. List your specific hypotheses. These should be clear and falsifiable.

5. Present your experimental designs, which will include your experimental treatments and your control treatments or your survey designs. In addition, outline your research methods and analyses in enough detail that your committee can understand what you will do. This step is important because the more your committee understands about what you are doing, the more helpful they can be.

6. Present your anticipated results and their broader implications. Projects that will be interesting no matter what results are found are compelling, so explain what the importance of each result would mean.

7. Your cited references/bibliography.

**IV. Submitting the Thesis Proposal for Approval**

Once you have written a draft of your thesis proposal, you will submit it to your thesis committee. Quite often they will make suggestions for improving the document and return it to you during a committee meeting. This process may be repeated a number of times. It is strongly suggested that you hold a formal proposal defense meeting for your committee in which you present your proposal. When the committee feels the document is finished, you, along with your thesis advisor, will submit your prospectus to the IBD Graduate Program Coordinator using the **Thesis Proposal Approval Form**. All members of your thesis advisory committee need to approve the final proposal and to sign this form before submission to the IBD Graduate Program Coordinator. The deadline for submitting a thesis proposal for approval by the IBD Graduate Committee and for signature from the Graduate Program Coordinator is the end of your second semester (end of November or April). An approved thesis proposal is required to register for continuing BIO 592 (thesis credits).

Your submission must include:

1. **The Thesis Proposal Approval Form** signed by: 1) all thesis committee members and 2) the IBD Graduate Program Coordinator
2. A copy of the approved thesis proposal
3. The Faculty Workload Credit Form signed by: 1) the thesis advisor and 2) the department chairperson

The IBD Graduate Program Coordinator will submit these documents to the MSAS Dean’s office.

**V. Preparing the Draft of the Thesis**

Your Thesis should include the following:

* Thesis Cover Page (see specific format)
* Title page (see specific format)
* Abstract
* Acknowledgements
* Table of Contents
* List of Tables
* List of Figures
* List of Abbreviations (optional)
* Body of Thesis (see specific format) with Introduction, Methods, Results, Discussion
* Literature Cited
* Appendix (optional)
* Curriculum Vitae

**VI. The Thesis Defense**

You must obtain tentative approval of the thesis as to subject matter and syntax by all members of your thesis committee before the defense can be scheduled. Specifically, at least one week before the thesis defense is scheduled, all thesis committee members must sign the **Thesis Defense Form** confirming that they have read the thesis and approve your readiness to proceed to defense and this form must be sent to the IBD Graduate Program Chair. After hearing from all committee members, it is up to the IBD Graduate Program Chair to determine that you are ready to defend and coordinate the defense date's scheduling. Note, the thesis need not be in its final version for tentative approval; the thesis committee may require amendments following the defense. Once the defense is scheduled, you must make a copy of the thesis available to members of the Department of Biological & Environmental Sciences at least five working days before the defense. Your thesis advisor must distribute an announcement of the defense to all faculty and graduate students in the program at least one week before the defense. The announcement will include your name, thesis title, the place and time of the defense, and the names of the examining committee members.

Defenses should be scheduled only when the University is open and not on holidays or religious holy days. The entirety of the defense, including the seminar presentation, Q&A involving non-committee members, and the Thesis Committee's examination, is by default open to any interested persons, including other students, faculty, and the general public. However, you and your thesis advisor may petition the IBD Graduate Program Coordinator to have the committee examination portion of the defense closed to students and the public; however, faculty cannot be excluded from any portion of the defense. This petition must be received by the IBD Graduate Program Coordinator, as appropriate, at least one week before the defense. If approved, the Thesis Committee Chair (or Moderator) will announce the closed exam during their review of the defense's ground rules at the time of the defense (below). The defense's emphasis will be on your thesis and closely related subjects that require you to demonstrate an understanding of how your work fits into the broader context of integrated biological diversity. The Thesis Committee Chair (or Moderator) will chair the defense. The recommended length is one to two hours but with a maximum of three hours. You or any member of the Committee may request the option of having a moderator, which may then be appointed either by the IBD Graduate Program Director (or the Department Chair if the GPD is a committee member). The Thesis Committee Chair (or Moderator) will review the defense's ground rules and introduce you and the committee members. You will summarize your research in a seminar presentation. You will be expected to do this in 30-45 minutes. The Chair will invite questions from the audience; the presentation and Q&A session are not expected to exceed 60 minutes in total. After questions, there will be a break, and the candidate and committee members will reconvene to begin the formal examination. All other interested persons (faculty, students, public) are free to attend the examination but may not participate (i.e., they may not ask questions). You will be asked questions by each committee member (including Consultants), with each questioner given 20-40 minutes depending on the number of committee members and the time available. An examiner may yield the floor, with permission of the Chair, if another examiner wants to pursue a line of questioning toward a logical conclusion or resolve any ambiguities. Note, non-committee members may be present during the examination, but they are not allowed to ask you questions. They may participate in the ensuing discussion if and only if the Chair (or Moderator) deems it appropriate and solicits their participation. After the examiners are through, you and all other students and non-invited guests will be asked to leave. Non-voting faculty and guests may address comments to the Committee. Non-voting faculty and guests, except the moderator and Consultants, will then be asked to leave before the voting. Voting: All voting will be by secret, written ballot for PASS or FAIL. Only officially appointed examiners vote. The Moderator and Consultants do not vote. After a brief discussion, a first-ballot will be taken. If the votes are unanimously PASS, no further discussion is necessary, and you will have passed the defense. If there are FAIL votes, there will be further discussion regarding the extent and seriousness of your weakness. There will then be a final vote. The vote must be unanimously PASS for you to pass the defense. You will be informed verbally of the result as soon as it is reached. Note, you may pass the defense but still be required to make changes in the thesis before it is signed in its final form.

**VII. Submitting the Completed Thesis**

Follow the instructions below to submit your Thesis to MS in Integrative Biological Diversity Theses. Please read this entire document before proceeding. If you have any concerns not addressed on this page, see the Author FAQ page.

Note that, if you do not want your work to be made publicly available, you will be given the opportunity to place an embargo on it for a specific, limited time period. Keep in mind that there will still be a record of your submission that includes the title, author, abstract and keywords, and this information will be available to the public. If you select an embargo, the actual thesis and any associated documents you submitted will not be available to the public for the time period you stipulate.

The submission process consists of two parts: (a) completing the Submission Agreement, and (b) providing information about your work, which includes uploading your file(s). Before you begin the process, you should have the following information ready:

1.The Thesis title (required)

2.Author (required)

3.An abstract (up to 250 words) (required)

4.A list of keywords (10 maximum) (recommended)

5.An electronic copy ( PDF) of your work (required). If you upload a Word or RTF document it will be converted to a PDF.

Title, author, abstract, and keywords are used by search engines to help others find your work.

Supplemental information/files to support your work can be uploaded along with the main document.

Please be ready to submit these along with the main file, as they cannot be added at a later time.

When you have all of the information and files needed, read and accept the Submission Agreement below by selecting the checkbox.

After accepting the Submission Agreement, a submission form will be presented for you to complete.

* Fill in the submission form. Required fields are in red print.
* Upload your electronic copy/file.
* Check the Additional Files box in order to upload supplemental files, if desired.
* Click the Submit button.

Note: If you checked the Additional Files box a new page will be provided, in order to upload additional/supplemental files, after you click on the Submit button.

After you submit, you will receive an email shortly confirming your submission and another when your submission is added to West Collections

**Submission Agreement for MS in Integrative Biological Diversity Thesis**

By signing below, I grant MS in Integrative Biological Diversity Theses, on behalf of Western Connecticut State University, the non-exclusive right to distribute my submission ("the Work") over the Internet and make it part of the WestCollections: digitalcommons@wcsu.

I warrant as follows:

1. I hold the copyright to the document(s) I am about to submit, or I have been authorized by the copyright holder to do so, allowing me to legally upload the document(s) into WestCollections for display, distribution, and preservation by WestCollections.

2.The Work does not infringe any copyright, nor violate any proprietary rights, nor contain any libelous matter, nor invade the privacy of any person or third party.

Student Name (Print) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title of the Thesis \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**VIII. Printing and Binding**

Once you have obtained all the necessary signatures, you are ready to print the thesis and have it bound:

\_\_ Print one (1) copy of the thesis for each committee member for your defense. A final electronic PDF version will be used for archival purposes and for submission to digital commons. The thesis should be 12 or 14 point type; double-space the body of the thesis).

\_\_ Have the final printed copy of the thesis bound in an officially approved thesis spring binder (which can be purchased in the WestConn Bookstore).

The bound thesis should include the following:

\_\_ The signed sign-off coversheet

\_\_ The completed thesis (e.g., title page, abstract, body of thesis, works cited).

**IX. Suggested Time-table**

As the student, you bear the major responsibility for completing your degree promptly. You may find that your thesis advisor doesn’t keep track of how long you have been enrolled in your program. This doesn’t mean the following responsibilities are unimportant—it just means that you need to push your thesis advisor to help you meet these scheduling goals. The timetable below is meant to be a guide to help you stay on track. However, many situations may require modifications to this timetable. It is the responsibility of you and your thesis advisor to modify the timetable accordingly to see that all degree requirements are met in a timely fashion.

For a Full-Time Student:

*First semester*

* Enroll in the required course: BIO 505 Biodiversity Stewardship Seminar
* Identify a thesis advisor and work with your thesis advisor to develop and define your thesis project.
* With the guidance of your thesis advisor, pick a thesis evaluation committee. *Complete the* ***Thesis Advisory Committee Form*** *and submit this form to the IBD Graduate Program Coordinator.*

*Second semester*

* Enroll in BIO 592 Thesis Credits (3)
* With the help of your thesis advisor, draft your thesis proposal according to the suggested format
* Present your thesis proposal to your thesis advisory committee. The purpose of this presentation is to get approval from your committee to move forward with your research plan.
* After your committee approves the proposal, *submit the* ***Thesis Proposal Approval Form*** *(signed by all committee members) along with a copy of your thesis proposal to the IBD Graduate Program Coordinator.*

*Third Semester/Fourth Semester:*

* Enroll in BIO 592 Thesis Credits (3)
* Complete your thesis following the guidelines published by the Graduate School.
* Submit a draft of your thesis to your committee for tentative approval.
* To schedule a defense date, *submit a* ***Thesis Defense Form*** *(containing signatures of all committee members), at least one week before you plan to defend your thesis*.
* Have your thesis advisor notify all Biological & Environmental Sciences faculty and students of your thesis defense via an email announcement at least one week before your defense*.*
* Make a copy of your thesis available to members of the Department
* Defend your thesis to your committee and the Department. After your defense, have your thesis advisor complete the Thesis Defense Form to be forwarded to the IBD Graduate Program Coordinator and to the Graduate School
* In consultation with your thesis advisor, revise your thesis, and submit it to the Graduate School

UNDERGRADUATE/GRADUATE

STUDENT THESIS AND

FACULTY WORKLOAD CREDIT FORM

WESTERN CONNECTICUT STATE UNIVERSITY

TO BE COMPLETED BY STUDENT

Name: Last\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_First\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Student ID #\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student WCSU Email\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Telephone#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Semester Requested : Fall 20\_\_\_\_\_ Spring 20\_\_\_\_\_ Intersession 20\_\_\_\_\_ Summer 20\_\_\_\_\_

(January/March) (Circle: I, II, III or IV)

Course:\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Dept) (Course Number) (Thesis Topic)

Student Semester Hours:\_\_\_\_\_\_\_\_\_\_\_\_\_

TO BE COMPLETED BY FACULTY ADVISOR

Number of Faculty Contact Hours Per Week With Student:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Thesis Proposal/Completion Approval: Yes\_\_\_\_\_\_\_\_\_ No\_\_\_\_\_\_\_\_\_

Request is for (check one):

Faculty Workload Credit(s)\_\_\_\_\_\_\_\_ Faculty Summer/Intersession Compensation\_\_\_\_\_\_\_\_

Request is for (check one):

Completion of Thesis Proposal: □ Completion of Thesis: □

Approval

Faculty Advisor Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Department Chair Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

School Dean Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TO BE COMPLETED BY REGISTRAR’S OFFICE OR GRADUATE OFFICE:

Received and Processed/Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Submit a copy of the thesis proposal or completed thesis with this form. After the required signatures are

obtained on this form, file the form with either the Registrar’s Office (UG) on 1st floor of Old Main, Suite

#102, or the Division of Graduate Studies Office (G) on 2nd floor of Old Main, Suite #206.

01/29/07