

Thesis Defense Forms

There are four forms needed for the thesis defense. Multiple copies are required of one of the forms. The forms are all included in this pdf file. Here is a list of the forms as well as instructions.

1. REPORT OF THESIS DEFENSE and ACCEPTANCE OF THESIS

Notice the top half of this form has instructions for you, your major professor, and the Graduate Coordinator. All you need to do is enter your name and Bronco Number in the “Report of Thesis Defense” section, and give the form to your major professor. This form is the department’s record of your defense and completion of thesis.

2. REPORT OF CULMINATING EXPERIENCE

This is the most important form for the student to graduate!

The Thesis Advisor must fill out the **Online Report of Culminating Experience form**.

Please see Page 3 for detailed instructions.

The next two forms are needed for the required Program Assessment of the graduate program:

3. Graduate Assessment - Biological Sciences Department STUDENT form

This is a two-page form that YOU complete AFTER your thesis defense. Give this form directly to the Graduate Coordinator. Do not give it to your major professor or thesis committee.

4. Graduate Assessment - Biological Sciences Department FACULTY form

This is two-page form that EACH MEMBER of your thesis committee (including your major professor) completes after your thesis defense. Since the usual thesis committee has three members, three copies of this form are provided. If you have more than three people on your committee, you must make additional copies as needed. Your committee will give these forms directly to the Graduate Coordinator; they will not be returned to you.

If you have questions, or there is confusion about these forms, please contact the Graduate Coordinator.

Also included, for your information, is a one-page statement of suggestions and guidelines for the type of things that may be discussed at your defense.

Cal Poly Pomona
 Biological Sciences Department
 Report of Thesis Defense AND Acceptance of Thesis

INSTRUCTIONS

STUDENT

- On this page, enter your name and Bronco Number (in the Report of Thesis Defense section below).
- On the Report of Culminating Experience form, enter all information at the top (above the department name). This includes the Date, your Bronco Number, Name, Home Phone Number, Cal Poly Pomona Email, Secondary Email, and Address.
- When you have entered all the information, give both forms to your adviser (major professor).

MAJOR PROFESSOR = CHAIR of the THESIS COMMITTEE = ADVISER

- Indicate below the results (pass/fail) of the thesis defense. Members of the thesis committee sign where indicated.
- When the thesis has been accepted (that is, all members of the thesis committee have signed the cover page), so indicate by signing and dating in the appropriate location below.
- When all signatures are present, give both pages to the Graduate Coordinator.

GRADUATE COORDINATOR

- Place this page in the student's departmental file.
- Sign the second page, and forward for the Department Chair's signature.

Report of Thesis Defense

Name _____ Bronco Number _____

Date of Defense _____

PASS FAIL

Signatures of the Thesis Committee:

Major Professor (Chair, Thesis Committee) _____
 Committee Member _____
 Committee Member _____
 Committee Member _____
 Committee Member _____
 Committee Member _____

IMPORTANT → Report of Acceptance of Thesis ← IMPORTANT

To be signed by the Major Professor (Chair of the Thesis Committee) when all members of the thesis committee have accepted the thesis and have signed the cover page of the thesis.

Major Professor (Chair, Thesis Committee) _____ Date _____

Cal Poly Pomona
Graduate Studies Office
Online Report of Culminating
Experience

Thesis Advisor, Please follow these instructions:

- 1) Go to this web site (copy and paste into your browser):
<https://www.cpp.edu/~gradstudies/forms-and-procedures/graduate-forms.shtml>
- 2) Click on Report of Culminating Experience
- 3) Click on Report of Culminating Experience (online form)
- 4) Log in using your BroncoDirect password
- 5) Select Report of Culminating Experience from the list
- 6) Enter the following:
 - a) Students Bronco number
 - b) First and Last name
 - c) Current term
 - d) Appropriate masters program from the drop down list (Biological Sciences)
 - e) Under option there will be no choices, because we have only 1 grad program.
 - f) Thesis title
 - g) Check Oral Defense AND Thesis
 - h) Check the approval and Submit

If you are having difficulties with the submission, let me (Robert Talmadge, Graduate Coordinator) know ASAP.

**RETURN DIRECTLY TO GRADUATE COORDINATOR
DO NOT GIVE TO MAJOR PROFESSOR OR COMMITTEE MEMBERS**

Your Name: _____ Date: _____

Major Professor: _____

Members of Thesis Committee: _____

Primary Trait Analysis – Please evaluate how well you feel you met each learning outcome using the following rubric:

- 0 = Outcome not met
- 1 = Minimal competency in outcome demonstrated
- 2 = Competency demonstrated
- 3 = Above average competency demonstrated
- 4 = Outstanding competency demonstrated
- N/A = Not applicable; not assessed

Please circle the appropriate value

Student Learning Outcome	Evaluation					
Demonstrate knowledge in areas of biology relevant to selected research interests.	0	1	2	3	4	N/A
Identify research questions on a contemporary issue in biology, and critically analyze the relevant literature.	0	1	2	3	4	N/A
Develop specific hypotheses pertaining to a research problem.	0	1	2	3	4	N/A
Devise and conduct experiments to test hypotheses.	0	1	2	3	4	N/A
Demonstrate mastery of the methodology and techniques specific to the field of study.	0	1	2	3	4	N/A
Statistically analyze and interpret research data.	0	1	2	3	4	N/A
Discuss, both orally and in writing, the relevance of their research data to the original hypotheses and to the general field of interest.	0	1	2	3	4	N/A

What are your plans after graduation?

____ Employment. Where? _____

____ Ph.D. Where? _____

____ Teaching. Where? _____

____ Professional School. What degree? _____ Where? _____

____ Other Explain _____

Please complete the second page of this form (Process Effectiveness)

Process Effectiveness – please respond to the following questions to provide an evaluation of the graduate education process, including development and defense of the thesis.

Please indicate (by circling the appropriate number) your extent of agreement to each of the following from **1 = completely agree to 5 = completely disagree**. N/A = Not applicable.

The proceedings were handled in a fair, professional, and impartial manner.	Agree 1	2	↔ 3	4	Disagree 5	N/A
Each of the committee members was given a reasonable chance to ask questions, including follow-up questions.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The questions by the committee were appropriate.	Agree 1	2	↔ 3	4	Disagree 5	N/A
You were allowed/required to answer questions without undue interference/help from the Major Professor or other committee members.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The exam was rigorous.	Agree 1	2	↔ 3	4	Disagree 5	N/A
You showed solid knowledge of the area of specialization.	Agree 1	2	↔ 3	4	Disagree 5	N/A
You demonstrated a thorough working knowledge of your specific field of biology.	Agree 1	2	↔ 3	4	Disagree 5	N/A
You showed a solid understanding of the scientific method.	Agree 1	2	↔ 3	4	Disagree 5	N/A
You demonstrated good communication skills; you were able to communicate as a scientist and potential colleague.	Agree 1	2	↔ 3	4	Disagree 5	N/A
You are making adequate progress towards attaining the working knowledge required to contribute to your chosen field upon graduation.	Agree 1	2	↔ 3	4	Disagree 5	N/A

Please provide any comments or suggestions that you feel would contribute toward improving the graduate education process:

<p>Return form directly to Graduate Coordinator Do not give to the major professor or thesis committee</p>
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RETURN DIRECTLY TO GRADUATE COORDINATOR

DO NOT GIVE TO STUDENT

Form to be completed by each Faculty member of the Thesis Committee

This form to be used for Program Assessment only; not to be used to determine pass or fail of the exam

Student Name: _____ Date: _____

Evaluator Name: _____

Your role: ___Major Professor ___Committee Member

Primary Trait Analysis – to be completed by each Thesis Committee Member following the oral defense of thesis.

Please evaluate how well the student met each learning outcome using the following rubric:

- 0 = Outcome not met; unsatisfactory performance.
- 1 = Minimal competency in outcome demonstrated; performance low.
- 2 = Competency demonstrated; performance at expected level.
- 3 = Above average competency demonstrated; performance above expectations.
- 4 = Outstanding competency demonstrated; performance greatly exceeds expectations.
- N/A = Not applicable; not assessed

Please circle the appropriate value

Student Learning Outcome	Evaluation					
Demonstrate knowledge in areas of biology relevant to selected research interests.	0	1	2	3	4	N/A
Identify research questions on a contemporary issue in biology, and critically analyze the relevant literature.	0	1	2	3	4	N/A
Develop specific hypotheses pertaining to a research problem.	0	1	2	3	4	N/A
Devise and conduct experiments to test hypotheses.	0	1	2	3	4	N/A
Demonstrate mastery of the methodology and techniques specific to the field of study.	0	1	2	3	4	N/A
Statistically analyze and interpret research data.	0	1	2	3	4	N/A
Discuss, both orally and in writing, the relevance of their research data to the original hypotheses and to the general field of interest.	0	1	2	3	4	N/A

Did the student pass or fail the exam, as determined by the committee? ___pass ___fail

Do you agree or disagree with the committee’s decision? ___agree ___disagree

Please complete the second page of this form (Process Effectiveness)

Process Effectiveness – please respond to the following questions to provide an evaluation of the graduate education process, including development and defense of the thesis.

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The questions by the committee were appropriate.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The student was allowed/required to answer questions without undue interference/help from the Major Professor or other committee members.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The exam was rigorous.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The student showed solid knowledge of the area of specialization.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The student demonstrated a thorough working knowledge of his/her specific field of biology.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The student showed a solid understanding of the scientific method.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The student demonstrated good communication skills; he/she was able to communicate as a scientist and potential colleague.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The Major Professor was NOT overbearing in the discussion of the student's exam, after the student left the room.	Agree 1	2	↔ 3	4	Disagree 5	N/A
The student is making adequate progress towards attaining the working knowledge required to contribute to his/her chosen field upon graduation.	Agree 1	2	↔ 3	4	Disagree 5	N/A

Please provide any comments or suggestions that you feel would contribute toward improving the graduate education process:

Return form directly to Graduate Coordinator Do not give to student
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Evaluator Name: _____

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Discuss, both orally and in writing, the relevance of their research data to the original hypotheses and to the general field of interest.	0	1	2	3	4	N/A

Did the student pass or fail the exam, as determined by the committee? ___pass ___fail

Do you agree or disagree with the committee’s decision? ___agree ___disagree

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The student is making adequate progress towards attaining the working knowledge required to contribute to his/her chosen field upon graduation.	Agree 1	2	⇔ 3	4	Disagree 5	N/A

Please provide any comments or suggestions that you feel would contribute toward improving the graduate education process:

Return form directly to Graduate Coordinator Do not give to student
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Suggestions/Guidelines for Thesis Defense

The thesis defense is more than just the presentation of the research project. Defense means the student should be able to explain and justify what was done, be able to place the work in the larger context of basic and applied science, and suggest future directions for work related to the research results.

Questions and topics of discussion at the defense are determined by the thesis committee. The following are suggestions and guidelines, not policy or mandatory elements of the defense. Questions and topics are not limited to the following. The defense may include topics not mentioned here.

Does the student understand what was done? Can the student explain the project in the technical sense (as was done in the thesis), but also in the common sense? Nobel laureate in Physiology or Medicine (1999) Dr. Günter Blobel is quoted as saying:

“I don’t think there is any concept that you can’t make understandable to the educated lay public. I always tell my students and postdocs if you can’t explain to your grandmother what you are doing, probably you don’t understand it yourself properly.”

Can the student explain their thesis (concepts, methods, results) so that it is “understandable to the educated lay public”?

Is the student knowledgeable about the species of organism(s) used in the study? This would include basic biology, evolution, natural history, ecology, and classification, including major characteristics of the taxa to which that organism is assigned.

Does the student understand the project objective and why certain experiments were carried out? Can the student justify the experimental design? The student should demonstrate an understanding of any potential logical or technical weaknesses in the experimental approaches, and be able to provide alternative approaches that might address those weaknesses. Can the student explain the workings of the procedures and instruments used? Can the student explain the workings of any quantitative/statistical procedures used, and why these analyses were conducted?

Does the student understand the significance of the project in the context of both basic science (literature) and applied science? Is the student able to see how the results will fit into the bigger scheme of nature, i.e. how the results help us understand how the world works at the molecular/cellular, organismal, and system levels?

Is the student able to develop putative experiments and rationales not presented in the thesis to address questions posed by committee members? Is the student able to think as a scientist “on their feet”? Can they apply the concepts of their research project and knowledge of biology to suggest additional work, and possible outcomes of that work?

Finally, an individual receiving the Master of Science in Biological Sciences is expected to have knowledge of biology commensurate with the degree being awarded by the faculty. Students should expect and be able to discuss the basics of cell biology, energy, genetics, evolution, ecology, biological diversity, plant biology and animal biology. “Basics” here refers to a general overview of the critical definitions and processes in these topics as presented in an introductory, basic biology course.