

Department of Forest Biomaterials Qualifying Exam (QE) Structure for Graduate Students

The overall objective of the Qualifying Exam is to help graduate students achieve a successful educational, research, and professional experience. Specific objectives are aimed at allowing graduate students to display lateral thinking, creativity, potential, and ability to think independently as a scientist.

Background Required:

The only requirement is that the student be admitted to the Forest Biomaterials Graduate Program. It is recognized that this department attracts students of diverse backgrounds and that this qualifying examination will be performed with this in mind.

QE I – For all M. S. and PhD students:

This will be satisfied by passing **WPS 501 Masters Research Methods** or **WPS 701PhD Research Methods** course with a B- or better.

QE II – For PhD students only:

- The Exam consist of two parts:
 - 1/ Report** on an original **literature search** and **experimental plan proposal** initiated within the Research Methods course and
 - 2/ Examination** that will be conducted by a faculty Qualifying Exam Committee and the Research Methods course instructor and will be organized by the Director of Graduate Program (DGP) at the end of the semester.
- The topic will be one suggested by the student's adviser. If the student has no adviser, the Research Methods course instructor will consult with the student and choose the topic.
- The student will prepare the **Report** to be distributed to the Committee at least **one week prior to the exam date**. The **Reports** may be submitted as a digital file to Dr. Heitmann, the Research Methods course instructor and to the DGP.
- The **Report** should contain the following sections:
 - Title – Page 1
 - Authors (usually list student and adviser) – Page 1
 - Abstract summarizing the main work and findings of the report – Page 1
 - Introduction explaining the importance of the problem – 1-2 pages
 - Literature search -- ~3 pages
 - Objectives (statement of research question, hypothesis, or goals) – 1 paragraph
 - Experimental (Materials and Methods) -- 1-3 pages
 - Proposed Work (experimental plan or program) – 3 or more pages
 - Expected results or type of results and how you will analyze – 1 page
 - References (at least 2/3 must be refereed journal articles)
- For the **Examination**, the student will prepare an **oral presentation**. Presentation notes printed with two slides per page should be distributed to the Committee members at the time of the examination.
- The Committee and the Research Methods course instructor will evaluate the examination as either: **PASS, CONDITIONAL PASS, or FAIL**

NOTE: It is the intent that the student will have a realistic experience of making a **professional scientific presentation**. This is an extremely important skill in both business and research and in most other professional fields as well. This should represent the student's best effort; otherwise it will not be a successful learning experience. Use or create good visuals. Have a citation for each visual which requires it, a complete list at the end and restate the research question in your presentation.

Evaluation Process:

- A grade of **PASS** for QE II indicates that the student:
 - Understood and analyzed the scope of the question;
 - Conducted an acceptable review of the scientific literature;
 - Analyzed the literature and selected the most significant information;
 - Evaluated where our knowledge is limited;
 - Identified and proposed possible research paths forward;
 - Prepared an acceptable report.
 - Gave a quality scientific presentation that answered the question;
 - Demonstrated in the discussion, knowledge of the topic and the material presented;

- A grade of **CONDITIONAL PASS** for QE II indicates that the Committee is border line in their evaluation, and feels that the student will benefit from further efforts and a retake of the Exam. The student will work with their advisor on appropriate areas. It is the expectation and hoped that a retake will result in a passing grade.

- A grade of **FAIL** indicates the Qualifying Exam Committee does not believe the student is qualified to continue in the PhD program. The student's research adviser & committee will be notified and consulted prior to a final decision being made.

**QE II REPORT & PRESENTATION
STUDENT GUIDELINES AND FACULTY EVALUATION CRITERIA**

CANDIDATE _____ REVIEWER _____

SCORE: **PASS** **CONDITIONAL PASS** **FAIL**

1 2 3 4 5

- Understanding and Analyzing the Scope of the Question: _____
 - (1) Be certain to recognize all parts to the question.
 - (2) Cover all parts, or clearly state why not.

- Literature Search: _____
 - (3) A minimum of 2/3 of all your references should be from peer reviewed scientific journal articles.
 - (4) Other sources , such as conference presentations, patents, non-peer reviewed articles, and textbooks, can comprise the remaining 1/3 of the references.
 - (5) While search engines such as google may be used to find references, they should not be cited as references.
 - (6) Be careful to avoid a narrow a time period of cited references, i.e., references from 1990's only. Demonstrate that you found the best references, regardless of publication date.
 - (7) Evaluate and analyze the literature for significance, differences, etc., and where our knowledge of issues is limited or fuzzy.
 - (8) Give citations for all information and figures, to properly credit those who generated the knowledge, and to avoid the impression of plagiarism.

- Answering the Question in the Presentation and Report : _____
 - (1) Present the results of the literature search, and your analysis
 - (2) Do not just present information, but discuss the information with some critical thinking.
 - (3) Be prepared to answer faculty questions about each slide, such as defining all terms, and interpreting the information.
 - (4) Answer the question using scientific depth. Convince the faculty you know what you are talking about.
 - (6) Use the attached guidelines for the presentation and report.

- Overall Grade: _____

QE Part 2 Presentation Evaluation Form

NAME _____

DATE _____

Title: _____

Oral Presentation	A+ 1	A 1	A- 1	B+ 2	B 2	B- 3	C+ 3	C 4	C- 4	F 5
The Question and its Scope were clearly stated										
Literature was analyzed, & relevance was explained										
Areas of uncertainty and/or disagreement was discussed										
Identified / proposed possible research paths forward										
Visuals were referenced, and of good quality										
Material was well organized										
Faculty questions were answered correctly										
Subject was presented in an understandable manner										
Report										
1. Question & Scope Completely Stated										
2. Literature Complete, & Properly Cited										
3. Literature Analyzed & Conclusions Stated										
4. Research Proposed										
5. Report Format										
6. Report Clear & Readable										
7. Other?										
Overall Performance										

Comments: _____
