PART I: Setup.

Student’s email:  
[BIMD Handbook  
Biology Master’s Program Handbook  
Graduate Catalog]

Remember to reserve a room for the exam.  
To reserve a library group study room, contact Library Public Services, 160 Perry Library, Circulation, Robert Stone < rstone@odu.edu >. The library needs the name of the student who will be using the room as part of the reservation process. On the day of the exam, the student brings their ID to the circulation desk in exchange for a room key.

Instructions for the Advisory Committee in advance of the exam: Questions from the advisory committee should be submitted to Ratzlaff < rratzlaf@odu.edu > by DATE. Please ensure that your questions comply with the instructions below. If possible, I would prefer that you enter your questions starting in PART III of this document---it will help me assemble the final version of the test. Thanks.

Identify a person who will hold the student’s personal items and receive the completed examination.

PART II: Instructions guiding the examination process.

1. A comprehensive exam has been scheduled for DATE, TIME in BUILDING. On the day of the exam,  
   a. The student picks up a copy of the exam from Dr. Ratzlaff in MGB 202G at TIME.  
   b. No personal “digital items” are allowed in the exam room.  
   c. The student must bring their ODU ID to the library circulation desk in exchange for a key to the exam room.  
   d. The drop-off location for the exam is Dr. Ratzlaff’s mailbox in the Biology Office, MGB 110. The Biology Office closes at 5PM.  
   e. A person will be identified to hold the student’s personal items and receive the completed examination.  
   f. A preliminary copy of these instructions (Part II) was emailed to the student on DATE.

2. The student needs to be registered for at least one credit in the semester the exam is taken.

3. With regard to evaluating the exam, the question(s) from an individual committee member will be considered equivalent to the questions of the other members. This does not imply that there will be an equal number of questions from each member.

4. The student must complete the entire exam within nine hours which includes the time taken for breaks. Each committee member will submit an assignment that they believe can be completed within 2½ hours.

5. The student will enter their answers (long-hand) into examination booklets. Booklets will be provided. Label each book with your name, the faculty examiner’s name and the question number(s). Use a separate book for each examiner and clearly label the question(s) you are answering. Legible handwriting is expected (pen or pencil). Points can be lost if your answers are difficult to read. Students may bring a “clean” note pad to the exam for prepping their answers.

6. The student may not keep a copy of the exam questions in any format or share information about the exam. All exam materials, examination booklets, including those that have not been used are to be dropped-off at the Biology Office, MGB 110 before 5PM. The Biology Office closes at 5PM. A person will be identified to receive the examination.

7. Advisory committee members may provide the student with supplemental materials in advance of the exam. However, students may not bring these materials to the exam unless specifically approved by the advisory committee.

8. If supplemental material can be used by the student during the exam, then the advisory committee member must include a hardcopy with their questions.
9. With the exception of supplemental materials provided, students may not seek help from any source---human, paper, electronic, etc., during the exam.

10. Academic fraud includes any situation where someone other than the student assigned this project prepares—or facilitates the preparation of—any part of this assignment. Please contact Dr. Ratzlaff if you have questions about what might constitute fraud.

11. The student cannot bring any type of digital device to the testing room---computer, cell phone, etc.

12. The student may not use any digital device that is part of the testing room facility. Any digital device that is part of the testing room facility must be OFF or made unavailable to the student.

13. The student may bring food/drink to the test if it is permissible according to University policy for the room.

14. The student may leave the room for lunch/snack/bathroom breaks. All exam materials must remain in the testing room during breaks.

15. An individual committee member may add an oral component that covers their part of the exam only. Alternatively, the advisory committee may add an oral component to the entire exam. In either case, the student will be given at least a week’s advance notice.

16. The final evaluation of the Master’s comprehensive exam will be either a Pass or a Fail as determined by majority vote of the committee members. The major advisor will inform the student of the results within two weeks of completing the comprehensive exam. A student who fails the Master’s comprehensive may repeat it once after an elapsed period of at least four months following the initial examination.

17. The PhD student must pass the written before the oral test can be taken. Both components of the candidacy examination must be passed without conditions. More than one negative vote from the examination committee will result in failure (see the Graduate Catalog for retaking the exam). The major advisor will inform the student of the results within two weeks of completing the candidacy exam.

18. The advisory committee reports the outcome of the exam on Result of Master’s Examination or Requirement (Form M2) or Result of Doctoral Examination or Requirement (Form D3).

19. At the start of the exam, the student will be instructed as to the best means to reach Dr. Ratzlaff during the course of the exam.

20. The instructions in their final form will be reviewed with the student before the exam.

21. Student misconduct charges will be considered if the student fails to abide by the rules outlined in this document. The advisory committee will handle the situation according to the STUDENT DISCIPLINARY POLICIES & PROCEDURES.

22. A student who violates the Code of Student Conduct is subject to sanctions as described in the University graduate catalog. Sanctions range from dismissal, suspension, grade adjustments, and/or an academic dishonesty notation on the student’s official University record. All sanctions will be recorded in the student’s discipline file, which will be maintained by the Office of Student Conduct & Academic Integrity. You are encouraged to immediately seek further clarification from your advisor on how you should handle any questionable situation that may arise during this exam.
PART III: List of Questions for the Master’s Comprehensive Examination or the PhD Candidacy Examination.

Instructions for the student. Label each book with your name, the faculty examiner’s name and the question number(s). Use a separate book for each examiner and clearly label the question(s) you are answering. Legible handwriting is expected (pen or pencil). Points can be lost if your answers are difficult to read. Students may bring a “clean” note pad to the exam for prepping their answers.

The student may not keep a copy of the exam questions in any format or share information about the exam. All exam materials, examination booklets, including those that have not been used are to be dropped-off at the Biology Office, MGB 110 before 5PM. The Biology Office closes at 5PM. A person will be identified to receive the examination.

(Questions from Ratzlaff, Chair)

1. Please return a question or as many questions as you feel can be answered in 2½ hours. Student must answer long-hand---no computer.

2. 

(Questions from NAME Cmte member #1)

3. Please return a question or as many questions as you feel can be answered in 2½ hours. Student must answer long-hand---no computer.

4. 

(Questions from NAME Cmte member #2)

5. Please return a question or as many questions as you feel can be answered in 2½ hours. Student must answer long-hand---no computer.

6. 

(Questions from NAME Cmte member #3)

7. Please return a question or as many questions as you feel can be answered in 2½ hours. Student must answer long-hand---no computer.

8. 
Part IV: Guidelines for BIMD students taking the PROPOSAL-STYLE exam.

This is not the only type of comprehensive exam format available. Not all students are required to take their comprehensive exams in this format. If the committee feels as though some other format is appropriate, then the committee can make that decision, hopefully in consultation with the student. Either format of comprehensive exam meets the university requirement as outlined in the “Candidacy Examination” section of the Graduate Catalog.

1) Topic is not to be directly related to your dissertation research proposal. It can be in the field of your research area but should not be directly related to work either you or your advisor is currently doing. It is hoped that your topic will be a challenge (but interesting) to you, and will allow you to show that you have the ability to think about a problem.

2) Your committee will give you your topic, or if you have some topic you would like to explore you can suggest it to your advisor/committee for consideration. If you chose your own topic, your guidance committee must approve it.

3) Your topic and/or your approach to solving the problem should show that you have the ability to obtain information, assimilate it, and logically think about a problem. This is not a test of whether you can do independent research but to gain insight into whether you can apply what you have learned during your graduate studies. We are however testing your ability to think about a problem.

4) When preparing your proposal you should consider the make up of your committee, and if possible address areas that are appropriate and of interest to your committee. However it should also be reflective of the types of courses you have taken during your graduate studies.

5) Your proposal should reflect your ability to assimilate information from primary literature sources and devise a set of experiments that can fill in missing gaps.

6) This is your comprehensive exam: it is to be your work and only your work. You are not to get outside assistance for scientific content or grammar (by this stage in your studies you should be able to put things into a logical and understandable format). You will not be directly graded on grammar, however if poor grammar leads to a poor understanding of the proposal that will be reflected in your grade.

   If you are unsure about whether you are on the right track or not, this information can be obtained from your advisor/committee – however do not ask anyone to read and critique something you have written. You can talk about techniques etc to others but not directly ask them if they would be appropriate for the study you are proposing.

7) If it is found that you obtain outside assistance, you will be given a FAIL grade for the exam. You will then be given the second chance to pass the written portion of the comprehensive exam using the question type format.

8) Proposal format
   a) Max 12 pages (figures and tables included). Bibliography not included within page limit.
   b) Format according to NIH R15 grant guidelines

9) You will be given up to 6-8 weeks from the time your committee provides you with your topic to turn in your proposal. Extensions beyond that will require permission of your committee. More than one or two extension periods, without a very good reason, may require that you change your topic and start again.

10) Your proposal should provide your committee with sufficient background information to ensure that you understand how to gather information and assimilate it in some usable form. You should also be able to provide a series of experiments that would allow you to test the hypothesis or answer the question posed in your topic
   a) You should do a thorough literature review, although it will be realized that a complete review may not be possible due to the time constraints. You should, where possible, use primary literature sources, and limit the use of textbooks.
   b) To examine your hypothesis/answer the proposed questions you should devise a series of experiments. These experiments should reflect your understanding of the field.
      i) It is realized that you have not been exposed to all possible techniques, along with their potential pitfalls etc. You should be able to justify why you think the technique you chose will provide you with appropriate results. If a committee member believes that such a test may not provide you with sufficient data, that issue can (and should) be addressed in the oral portion of the exam. Your experimental design should reflect the information you have been provided with over your graduate studies, and information you should be able to ascertain from current literature.
11) Suggested outline for the proposal. This is only a guide, you do not necessarily have to need to follow this guide exactly. How much you put in each section will be determined by your topic, and the amount of available literature.

   a) Abstract (500 words)
   b) Review of the literature (~ 2-3 pages)
   c) Statement of the problem/hypothesis
   d) Experimental approaches
   e) Analysis and significance of results (1 pages)

12) You are to turn in your proposal to all committee members. At that time you should ascertain a time when they will be available for the oral portion of the exam. This should be within 3-4 weeks of turning in the proposal.

13) Your proposal will be graded by your committee within two weeks of them receiving it. As stated above it should be reflective of your committee members' area of expertise and/or interests as well as showing that you have a fundamental understanding of the courses you have taken during your studies. Your committee will assign a pass/fail grade.

   **Committee members:** the proposal is to be assigned a P/F grade. If two or more committee members fail the proposal it will be considered a fail. The committee will meet to discuss the proposal outcome if the resulting grade (P/F) is not unanimous. As a committee you have already agreed upon the topic for the student. From the information the student has now provided you need to consider the following in assigning a grade. (1) You are to ascertain whether the student has sufficient understanding of the fundamental areas of the course work they have taken, how to use the literature, and how to extract information from the literature. (2) The experimental design should reflect an understanding of appropriate methods to which the students would have had exposure that would be suitable for the proposed studies. We do not necessarily expect a complete understanding of all the possible techniques. If it is felt, by a committee member, that such-and-such a method may be more appropriate, rather than the methods outlined in the proposal then this can be addressed in the oral. However, if a proposed method is not understood (e.g. use of PCR to amplify protein), or would not give the data the student suggests (e.g. use of scanning electron microscopy to determine the location of a nuclear protein) it would then this will be reflected in a lower grade as it shows a lack of understanding of the methods.

14) Oral exams

   a) It would be expected that the oral portion of your exam will take about 2 hours, although depending on your committee it could be longer.
   b) The oral portion of your exam is an intricate part of your comprehensive exam. It does not matter if your proposal would get top billing and funded in full from NIH; you will still be required to do the oral portion of the exam.
   c) The oral will test your overall knowledge, as well as your ability to think on your feet.
   d) The oral portion of your exam may potentially be the more difficult of the two components of the comprehensive exam. Within reason, anything and everything is available for discussion. Remember that this is a comprehensive exam, and topics are not limited solely to what you wrote in your proposal. Your committee is charged with ensuring that you have a sufficient level of fundamental information in the areas of your course work.
   e) You should prepare an overview of the proposal that you submitted to your committee. This should be an overview, and not an in depth re-examination of the information provided in your proposal. It should be no more than 30 minutes in length. This gives you sufficient time to show your committee that you are familiar with what you have proposed. It also gives you the opportunity to justify why you have chosen particular methods or approaches.
   f) Your comprehensive oral can, and should, cover any aspects that the committee feels were not adequately addressed/explained in the proposal. You should also be prepared to justify your approaches, including being able to adequately describe methods and expected outcomes.
   g) You should expect in depth questioning from all your committee members. Remember that your course work encompassed a multitude of different classes, all of which in some way can probably be related to your proposal. [No course is probably more than 3 steps removed from what you put in your proposal and is therefore ‘fair game’ – no topic is probably more than 5 steps removed].