

University of Pittsburgh Department of Biological Sciences Graduate Programs in EE and MCDB

Comprehensive Examination Report

Faculty form: This form is to be completed by the faculty Chair of the Examination Committee in consultation with the other members of the committee and will provide an evaluation of the written proposal and oral exam.

| Student's Name | | | | |
|---------------------------------|----|---------------|-----------|-----------|
| Graduate Program | EE | MCDB | Other: | |
| Dissertation Advisor | | | | ☐ Present |
| Dissertation Coadvisor (if any) | | | | ☐ Present |
| Committee Chair | | | | ☐ Present |
| Committee Member | | | | ☐ Present |
| Committee Member | | | | ☐ Present |
| Committee Member (if any) | | | | ☐ Present |
| Date of Examination | | | | · |
| Is this a Reexamination? | No | Yes, for exam | taken on: | |

Detailed evaluation form

| Category | | Outstanding | Above expectations | Meets expectations | Below expectations | Unsatisfactory |
|---|---|--|---|---|---|--|
| Overall assessment | Outstanding Above expectations Meets expectations Below expectations Unsatisfactory | Clearly excels and stands out in every com- ponent of as- sessment. | Excels in some components of assessment and stands out in a number. | Upward trajectory. All components are on par with the program expectations. | Clearly identified deficits in some components. Will need to take significant steps to improve and meet program expectations. | Major deficiencies in all or most components of the assessment. |
| General knowledge of lit- erature in the broad field | Outstanding Above expectations Meets expectations Below expectations Unsatisfactory | Clear command of the "big picture". Understands the major burning questions in the field. | Good command of the "big picture" and major questions in the field. | Usually can explain key concepts and answer relevant questions on general topics. | Knows some key concepts and paradigms but has trouble placing them in the big picture. | Major difficulties with understanding the broad field and answering basic questions. |
| Knowledge of project and its context in current research | Outstanding Above expectations Meets expectations Below expectations Unsatisfactory | Understands the place of project in the broad field and discusses the impact and the next steps. | Good command of the relevance of the project in the broad field. Usually dis- cusses specifics per- taining to future direc- tions. | Can discuss relevance of project in the broad field. Is making progress toward discussing specific future directions. | Trouble with discussing implications and potential future directions. | Major difficul- ties describing the impact of the project. |
| Knowledge of the literature in the specific field. | Outstanding Above expectations Meets expectations Below expectations Unsatisfactory | Comprehensive knowledge of research litera- ture in the field. | Detailed and up to date knowledge of re- search literature in the field. | Generally up to date knowledge of research literature in the field. | Some deficits in the knowledge of the current literature. | Major deficien- cies in the knowledge of current litera- ture. |
| Proficiency in designing experiments | Outstanding Above expectations Meets expectations | Complete and comprehensive experimental design that incorporates all | Designed well- thought experiments, including appropriate controls and statis- tics. Well-developed | Designed experiments with minor deficits. Good discussion of alternative ap- | Several pitfalls and missing controls. Some problems with the discussion of alternative outcomes | Pitfalls and missing con- trols. Signifi- cant problems |

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| | Below expectations Unsatisfactory | aspects of statistics, controls, pitfalls and alternative outcomes and approaches. | pitfalls, alternative approaches and outcomes. | proaches and out- comes. Recognizes the role of controls and understands ex- perimental rigor. | and approaches. Some aspects of controls and statistics are missing. | with the discussion of alternative outcomes and approaches. Controls and statistics are missing. |
|------------------------------------|---|---|---|---|---|---|
| Proficiency in data interpretation | Outstanding Above expectations Meets expectations Below expectations Unsatisfactory | Clearly and in- dependently extrapolates the impact, in- terprets experi- ments with solid under- standing of novelty, limita- tions and future directions. | Independently interprets most experiments with understanding of the pitfalls, limitations, and future directions. Confidently extrapolates the impact of the proposed studies and their conclusions. | Interprets some experiments independently but needs help with other aspects of interpretation. Understands and identifies most components of the impact from the proposed studies and their conclusions, with some deficits. | Finds interpreting experiments difficult and requires help. Major deficits understanding the impact from the proposed studies and their conclusions. | Major deficits in every aspect of interpreting experimental results and understanding their impact. |
| Quantitative skills | Outstanding Above expectations Meets expectations Below expectations Unsatisfactory | In command of all aspects of statistics and quantitatively rigorous de- sign. | Necessary aspects of statistics and quanti- tatively rigorous de- sign have been ac- counted for. | Generally well-developed statistical approaches with some deficits. | Understands some statistical approaches but significant deficits are apparent. | Poor under- standing of sta- tistical ap- proaches in re- search. |
| Quality of written report | Outstanding Above expectations Meets expectations Below expectations Unsatisfactory | Expert-level report incorporating all elements of the proposed research, approaches and impact. | Comprehensive, well written and structured report incorporating nearly all elements of the proposed research, approaches, and impact. | Generally well written report incorporating most elements of the proposed research, approaches and impact. A few deficits identified. | The report incorporates some elements of the proposed research, approaches, and impact. Several deficits identified. | The report is poorly written and misses many elements of the proposed research, approaches, and impact. |

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| Quality of oral presentation and defense | Outstanding Above expectations Meets expectations Below expectations Unsatisfactory | Confident and professional-level talk. Expertly answered questions and laid out major perspective. | Confident and professional-level talk. Answered nearly all questions and laid out perspective. | Mostly a clear, logical, and concise presentation, with some flaws. Answered the majority of questions well. | Several problems with presentation; presentation lacked clarity. Problems answering questions. | Did not develop, organize, and present the talk and did not answer questions. |
|--|---|--|--|--|--|---|
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Committee Decision

Pass

Conditional Pass (if not a reexamination)

Fail

| Detailed evaluation Include specific examples of key components of this assess | sment. |
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| Comments on the proficiency to design and interpret experi | <u>ments</u> |
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| Comments on the written report | |
| Comments on the oral defense | |
| What can be improved moving forward: | |
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| | |

Additional comments to student

Guidelines

Within one week of the oral examination the Chair of the committee will complete a detailed Departmental report. This must be completed in consultation with the other members of the committee and will provide an evaluation of the written proposal and oral exam. If the student was not awarded an unconditional pass, the report will outline the areas that the student must improve or correct in order to pass the comprehensive exam. If the decision was a conditional pass, the specific requirements that need to be reexamined must be clearly documented in the report. If the decision was fail, then the specific reasons for this must be provided. The report must be e-mailed to the student, the other members of the committee, the DGS, the GPA and the Dissertation Advisor. The student is expected to discuss the report with members of the committee; this is essential if the student did not receive an unconditional pass.