Virtua Health College
of Medicine & Life Sciences
of Rowan University

SCHOOL OF TRANSLATIONAL BIOMEDICAL ENGINEERING & SCIENCES

PhD in Cell and Molecular Biology, PhD in Neuroscience, and MS in Molecular Cell Biology and Neuroscience Programs STUDENT HANDBOOK

2025-2026

FORWARD

Welcome to the Rowan-Virtua School of Translational Biomedical Engineering & Sciences (TBES). We are located on the Stratford campus of Rowan University. We have all the benefits of a large University but with a small campus feel. The TBES has assembled this Student Handbook to assist you in understanding the operations, procedures, and rules of our programs. The TBES General Information Student Handbook contains useful information on the facilities available on the Stratford campus of Rowan University; specific student services available to you; and a summary of University and TBES policies pertinent to graduate students.

The mission of the Rowan-Virtua School of Translational Biomedical Engineering & Sciences is to develop scientists who will contribute new knowledge in the biomedical disciplines through creative research and scholarship. This is accomplished through a curriculum of course work and research training that prepares our students to critically evaluate existing knowledge and to advance the frontiers of new knowledge in the biomedical sciences.

We seek to attract talented students to all our programs, particularly the PhD and DO/PhD programs. You will work in modern, well-equipped laboratories with highly committed, enthusiastic faculty exploring current research topics in the biomedical sciences. Our multidisciplinary, interdepartmental programs provide a foundational curriculum in Neuroscience and Cell and Molecular Biology offered through the combined efforts of the faculty in the two departments of the same names. Doctoral students can expect to receive a stipend, tuition remission, paid health insurance, and paid student health fees.

We sincerely hope that your time here will be filled with a comprehensive educational experience, great science, and an extended network of academic contacts that will lead to a successful career of discovery and innovation in the biomedical sciences. Our program graduates have gone on to research careers in academia, the pharmaceutical industry, government agencies, scientific writing and administration. We wish you the best of luck in your journey.

Cell and Molecular Biology (PhD), Neuroscience (PhD), and Molecular Cell Biology and Neuroscience (MS) Programs: This document contains a summary description of the course work, thesis research components, guidelines for the written portions of the research thesis and information on the defense of the dissertation that must be completed for the PhD, DO/PhD and MS degrees.

University-wide emergency information:
sites.rowan.edu/publicsafety/emergencyservices/officeofemergency/ or call 856-256-4922

The TBES reserves the right to change or modify the procedures and policies contained within this document. Please check the TBES website on a regular basis for the most current information on programs, services, news and events.

"This handbook is informational only and does not constitute a contract between Rowan University and any student. It may be changed by Rowan University without prior notice to students. Any rules, regulations, policies, procedures or other representations made herein may be interpreted and applied by Rowan University to promote fairness and academic excellence, based on the circumstances of each individual situation.

This handbook represents a program of the current curricula, educational plans, offerings and requirements of the Rowan-Virtua TBES. The School reserves the right to change any provisions, offerings, tuition, fees, or requirements at any time within the student's period of study at Rowan University. In addition, Rowan University may at any time eliminate, modify or change the location of any School, Institute,Center, Program, Department, course or academic activity."

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PROGRAMS OF STUDY

PROGRAM DIRECTORS

PhD in Cell and Molecular Biology	Brian Weiser, PhD	weiser@rowan.edu
PhD in Neuroscience	Daniel Chandler, PhD	chandlerd@rowan.edu
MS in MCBN	Both Dr. Chandler and Dr. Weiser	

The TBES offers three degrees within these programs: 1) the Doctor of Philosophy (PhD) degree, 2) the DO/PhD dual degree in association with the School of Osteopathic Medicine, and 3) the Master of Science (MS). The MS program is designed for students considering a doctoral program, a career in academia or biomedical research, and/or can allow a student to seamlessly transition into a PhD program, if the student is interested and accepted. Alternatively, on occasion, a research-based MS degree may be granted to a PhD student who has fulfilled the requirements for the MS but is not qualified or cannot continue for the PhD. Non-research degrees are not offered within the Cell and Molecular Biology, Neuroscience, or Molecular Cell Biology and Neuroscience Programs. The course of study is continuous, includes summers and requires a substantial research contribution culminating in a dissertation.

In the Fall and Spring terms, full-time matriculated students in the programs are expected to carry a minimum course load of 9 credits per semester while part-time students must carry a minimum of 5 credits per semester. In the Summer term, full-time matriculated students are expected to carry a minimum course load of 6 credits per semester while part-time students must carry a minimum of 3 credits per semester. PhD students must be engaged full time in order to maintain their stipend. There is no financial support offered to MS students.

TBES students in all programs of study are required to maintain Good Academic Standing. *Please see your program-specific policy for details:* Academic Standing-CMB and Neuroscience Programs.

THE DOCTORAL DEGREE IN CELL AND MOLECULAR BIOLOGY OR NEUROSCIENCE

The PhD degree is awarded on the basis of achievement in a wide range of course work; experience in classroom teaching and laboratory instruction; an advisory meeting to determine the preparedness of a student entering their second year of study; a comprehensive qualifying examination evaluating the breadth of background knowledge and the ability for independent thinking; intensive research experience during which the candidate demonstrates ability to initiate, perform, and analyze original experimental work; a written dissertation; and a public defense of the dissertation through a final oral examination.

REQUIREMENTS FOR THE PhD DEGREE

Students will be introduced to basic biomedical science through graduate level course work shown in the Curriculum table below, and must complete at least 4 semesters of Thesis Research after completing their qualifying exam. The requirements for the PhD Degree must be completed within seven years regardless of full-time or part-time status. The student must be in full-time status for at least one academic year during the dissertation research.

Minimum requirements for the PhD include, but are not limited to, the following:

1. Complete the required Curriculum in the Table below with an overall coursework GPA of 3.0 or higher.

2. Complete three laboratory rotations within different labs. A fourth rotation in a different lab may be completed if necessary.

3. Come to a mutual agreement with a faculty mentor for Theis Research by June 1 of year 1.

4. Assemble a Thesis Advisory Committee by July 1 of year 1.

5. Holding the Thesis Advisory Proposal Meeting by September 15 of year 2.

6. Minimum 3.00 cumulative overall GPA after completion of all year 1 and year 2 curriculum (including rotations).

7. Sit for and pass the Qualifying Examination/Thesis Proposal by July 1 of year 2 as specified by the Program. If the student does not pass the Qualifying Examination on their first attempt by July

1, the Thesis Advisory Committee may grant permission for re-examination by August 15 of year 2.

8. Minimum of four semesters of Thesis Research.

9. A dissertation based upon independent research, prepared by the candidate and acceptable to the candidate's Thesis Advisory Committee.

10. A successful public defense of the dissertation before the candidate's Thesis Advisory Committee and the scientific community.

CURRICULUM FOR THE PhD DEGREE

Foundation Courses (Year 1; 4 credits)	**Skill Courses (Year 1; 2 credits)**	**Focus Courses (Year 2; 2-3 credits)**
Fall: MCBN Foundations I	Fall: Quantitative Methods	Fall (Select 2): Biomolecular Interactions, Critical Readings in CMB, Neuroanatomy, Neurophysiology, Advanced Emerging Topics in Biomedical Sciences
Spring: MCBN Foundations II	Spring: Scientific Writing	Spring (Select 2): Graduate Genetics, Immunology, Principles of Pharmacology, Antimicrobial Drugs: Mechanism of action & resistance, Neuropharmacology & Behavior, Research Topics in Neurobiology Advanced Emerging Topics in Biomedical Sciences

All first-year students will also take Responsible Conduct in Research and 2 Laboratory Rotation courses in the fall semester and 2 Laboratory Rotation courses in the spring semester. If a student has identified a mentor by the end of their third rotation, their second rotation for the Spring term will be completed in that laboratory.

All second-year students will take 2 Focus courses and Advanced Graduate Research in both the fall and spring semesters.

Foundation Courses (4 credits each). Students must pass each of these courses:

MCBN Foundations I
MCBN Foundations II

Skill Courses (2 credits each). Students must pass each of these courses:

Quantitative Methods
Scientific Writing

Focus Courses (2-3 credits). Students must pass 4 of the following:

Biomolecular Interactions
Critical Readings in CMB
Graduate Genetics
Immunology
Principles of Pharmacology
Antimicrobial Drugs: Mechanism of action & resistance
Neuropharmacology & Behavior
Neurophysiology
Research Topics in Neurobiology
Advanced Emerging Topics in Biomed Sciences
Neuroanatomy

Other Required Courses. Students must pass:

- Responsible Conduct of Research training course (0 credits that must be passed every 4 years)
- Laboratory Rotation A, B, C, D (2 credits each) – Students are required to rotate in 3 different labs. Each lab rotation is 7-weeks long. A 4th lab rotation can be in a different lab or the thesis mentor's lab. For DO/PhD students, the Lab Rotation A course is for your Summer Medical Research Fellowship.
- Summer Research in Molecular Cell Biology and Neuroscience (6 credits; 2 semesters)
- Advanced Graduate Research (5 credits; 2 semesters)
- Thesis Research/PhD (9 credits; minimum of 4 semesters)
- Summer Thesis Research (6 credits; 1 semester minimum)

Students electing the PhD in Cell and Molecular Biology or the PhD in Neuroscience Program will be required to satisfactorily complete a research thesis acceptable to the Thesis Advisory Committee of the student.

The Chart of the PhD Curriculum, the current Course Guides and Course Descriptions are located at the bottom of this webpage.

DO/PhD DUAL DEGREE -- CELL AND MOLECULAR BIOLOGY OR NEUROSCIENCE PROGRAM

The dual degree program leading to the DO and PhD degrees represents a merging of the separate and distinct academic programs of the Rowan-Virtua School of Osteopathic Medicine (SOM) and the Rowan-Virtua School of Translational Biomedical Engineering and Sciences (TBES). It is recognized that the core coursework of both programs will need to be mastered to the satisfaction of each academic unit. A student interested in a dual degree must apply and be accepted to each of the schools independently. Students must be enrolled in the DO program at SOM at the time of application and they must obtain a "Pass" grade in medical school courses. Applicants also must have participated in the SOM Summer Medical Research Fellowship (SMRF) program with a TBES basic science faculty member or equivalent research experience during the summer of the first year of the DO program. A list of eligible TBES faculty members can be found on this weblink "Faculty Research Interests".

Final entry into the DO/PhD dual degree program is contingent upon the student passing COMLEX, Part I.

The first two years of the DO/PhD program consist primarily of pre-clinical medical school courses. One mandatory laboratory rotation must be performed in the summer following the first year as part of the SOM Summer Medical Research Fellowship (SMRF) program. Students would then apply to the DO/PhD dual degree program in the Fall of Year 2 in the DO program. A letter of recommendation from the basic science TBES faculty mentor is among the application requirements for the doctoral degree in CMB or Neuroscience Programs. Students will complete the first two years of the medical school curriculum and successfully pass COMLEX part I, BEFORE beginning the graduate program. Therefore, a student MUST take the COMLEX, Part I no later than the end of June so that the TBES is aware that they have passed prior to starting the PhD phase.

In the summer following the second year of medical school, students may perform their second lab rotation of 7 weeks so that when they start in the fall, they will only need to perform one more lab rotation. If the second lab rotation is not completed in the summer, then two rotations will need to be completed during the fall semester. Year 3 of the DO/PhD program begins full time course work and research towards the PhD degree.

During Year 3 (year 1 of the PhD portion of the Program), students will begin graduate course work according to the chart of curriculum for the PhD program above. Students are required to come to a mutual mentor/mentee agreement with a faculty advisory by January 1 and form a Thesis Advisory

Committee by July 1 of the same academic year. The Thesis Advisory Proposal Meeting (APM) must then be completed by September 15th of the following academic year (year 4 overall, year 2 of the PhD portion of the Program). The student must then sit for the Qualifying Exam/Thesis Proposal by July 1 of the same academic year. Course work for the PhD degree should be completed by the end of Year 4 overall (year 2 of the PhD portion of the Program). Subsequently, students begin full-time research to work towards the completion of their PhD degree. There is no set timeline for DO/PhD students to complete their PhD degree, but the students must write their dissertation and defend their thesis in public within 7 years after beginning their PhD coursework. Students will NOT be permitted to return to the DO program until they have publicly defended their doctoral thesis. The final two years of the program focus on clinical experience. Coordination between the clinical and research years is designed to facilitate a smooth transition between aspects of the Program.

DO/PhD scholarships may be available to accepted applicants to the Program. Scholarships include tuition waivers and a stipend during some years in the Program. They currently are:

- DO Years 1-2: No tuition waiver, stipend or health insurance from the SOM.
- PhD Years 3 to completion of degree: Tuition waiver, stipend, paid health insurance and some student fees from the TBES.
- DO years (2 remaining): Tuition waiver but no stipend or health insurance from the SOM.

CURRICULUM FOR THE DO/PhD DEGREE

The DO/PhD Curriculum has the same requirements as the PhD Curriculum (see previous section for degree requirements). The Chart of the DO/PhD Curriculum, the current Course Guides and Course Descriptions are located at the bottom of this webpage.

THE MASTER OF SCIENCE DEGREE -- MOLECULAR CELL BIOLOGY AND NEUROSCIENCE PROGRAM

The Master of Science (MS) program in Molecular Cell Biology and Neuroscience (thesis-based only) is both a program for students interested in a career in basic science research, especially if they are considering a doctoral degree, and a default program for doctoral students who elect not to pursue a PhD degree or who are dismissed from the PhD program. The academic program is designed to provide a rigorous base of knowledge in basic biomedical sciences with emphasis on fundamental principles of Molecular Cell Biology and Neuroscience and practical problem-solving skills. Students are required to engage in fundamental research in Molecular Cell Biology and Neuroscience and to prepare a research-based dissertation to complete the degree requirements. The course of study is continuous and includes summers. MS students in the MCBN program may apply to transfer to the PhD programs after they have successfully completed at least one semester. The transfers are not guaranteed and must be recommended by the program Admissions Committee, authorized by TBES Executive Council, and are subject to availability of funds.

REQUIREMENTS FOR THE MS DEGREE

The requirements are designed such that the Master of Science degree can be completed within two years but otherwise it must be completed within no more than five years.

The minimum requirements for the MS degree include, but are not limited to, the following:

1. Complete the coursework in the Curriculum table below with a minimum GPA of 3.00.

2. Complete three laboratory rotations within different labs. A fourth rotation in a different lab may be completed if necessary.

3. Come to a mutual agreement with a faculty mentor for Thesis Research by June 1 of year 1.

4. Assemble a Thesis Advisory Committee by July 1 of year 1.

5. Minimum 3.00 cumulative overall GPA after completion of all year 1 and year 2 curriculum (including rotations).

6. A Master's Thesis Proposal, which is a thesis research plan, that is deemed acceptable by the candidate's Thesis Advisory Committee by December 30 of year 2.

7. A dissertation based upon independent research prepared by the candidate and acceptable to the Thesis Advisory Committee.

8. A successful public defense of the dissertation before the candidate's Thesis Advisory Committee and the scientific community.

CURRICULUM FOR THE MS DEGREE -- MOLECULAR CELL BIOLOGY AND NEUROSCIENCE PROGRAM

Foundation Courses (Year 1; 4 credits)	**Skill Courses (Year 1; 2 credits)**	**Focus Courses (Year 2; 2-3 credits)**
Fall: MCBN Foundations I	Fall: Quantitative Methods	Fall (Select 1): Biomolecular Interactions, Critical Readings in MCBN, Neuroanatomy, Neurophysiology, Advanced Emerging Topics in Biomedical Sciences
Spring: MCBN Foundations II	Spring: Scientific Writing	Spring (Select 1): Graduate Genetics, Immunology, Principles of Pharmacology, Antimicrobial Drugs: Mechanism of action & resistance, Neuropharmacology & Behavior, Research Topics in Neurobiology Advanced Emerging Topics in Biomedical Sciences

All first-year students will also take Responsible Conduct in Research and 2 Laboratory Rotation courses in the fall semester and 2 Laboratory Rotation courses in the spring semester.
All second-year students will take 1 Focus course and MS Thesis Continuation in both the fall and spring semesters.

Foundation Courses (4 credits each). Students must pass each of these courses:
MCBN Foundations I
MCBN Foundations II

Skill Courses (2 credits each). Students must pass each of these courses:
Quantitative Methods
Scientific Writing

Focus Courses (2-3 credits). Students must pass 2 of the following:

Biomolecular Interactions	Neuropharmacology & Behavior
Critical Readings in MCBN	Neurophysiology
Graduate Genetics	Research Topics in Neurobiology
Immunology	Advanced Emerging Topics in Biomed Sciences
Principles of Pharmacology	Neuroanatomy
Antimicrobial Drugs: Mechanism of action & resistance	

Other Required Courses. Students must pass:

- Responsible Conduct of Research training course (0 credits that must be passed every 4 years)
- Laboratory Rotation A, B, C, D (2 credits each) – Students are required to rotate in 3 different labs. Each lab rotation is 7-weeks long. A 4th lab rotation can be in a different lab or the thesis mentor's lab.
- Thesis Research/MS (7 credits) (typically summer of year 1)
- MS Thesis Continuation (Thesis Proposal; 7 credits in the fall no tuition; matriculation fee only)
- MS Thesis Continuation (Thesis Defense; 7 credits in the spring no tuition; matriculation fee only)
- MS Thesis Continuation (3 credits in the summer no tuition; matriculation fee only; if necessary)

Students electing the Master of Science in Molecular Cell Biology and Neuroscience Program (thesis only) will be required to satisfactorily complete a research thesis acceptable to the Thesis Advisory Committee of the student.

TBES students in all programs of study are required to maintain Good Academic Standing. *Please see your program-specific policy for details:* Academic Standing-MCBN Program.

The Chart of the MS Curriculum, the current Course Guides and Course Descriptions are located at the bottom of this webpage.

PROGRAM ACHIEVEMENT MILESTONES AND DEADLINES

All PhD, DO/PhD, and MS degree program achievement milestones and deadlines for the current academic year can be found in the Addendum at the end of this student handbook.

QUALIFYING REQUIREMENTS

THE QUALIFYING EXAMINATION AND ADMISSION TO PhD CANDIDACY

The Qualifying Examination is designed to assess the student's competency to conduct PhD-level research. In order to be eligible to take the Qualifying Examination, the student must have completed a minimum of 38 credits which includes classroom, lab rotation credits, and other research course credits. The student must have a grade point average (GPA) of 3.00 or better, cumulative in the classroom courses, and overall, and have satisfied any additional curriculum requirements as specified by the CMB and Neuroscience Programs. The student is admitted to candidacy for the PhD degree upon passing the Qualifying Examination. All eligible PhD and DO/PhD students must sit for their qualifying exam by July 1 during their second year. DO/PhD students are especially encouraged to complete their Qualifying Exam as early as possible during the second semester of Year 2 to facilitate timely completion of their thesis research. Students who do not sit for their qualifying exam by July 1 will be dismissed from the PhD program. If a student sits for the qualifying exam but does not pass, their Thesis Advisory Committee may grant then one opportunity for a reexamination by August 15. Failure to pass the second chance will result in dismissal from the program. Individual students may petition Executive Council to extend either deadline if extenuating circumstances impact their ability to complete their qualifying exam, but Executive Council is not obliged to grant the request if they do not deem the request necessary or valid.

STEPS TO OFFICIAL PhD CANDIDACY

1. Perform at least three Lab Rotations within different labs.
2. Select a Thesis Mentor of Mutual Agreement.
3. Earn minimum 3.00 cumulative GPA in the classroom courses assessed at the end of each academic year.
4. Nominate a Thesis Advisory Committee.
5. Prepare the Thesis Advisory Proposal.
6. Participate in the Thesis Advisory Proposal Meeting.
7. Earn minimum 3.00 cumulative overall GPA after completion of all year 1 and year 2 curriculum.
8. Prepare the written Thesis Proposal and submit to the Thesis Advisory Committee for evaluation.
9. Pass the Qualifying Exam by successfully defending the Thesis Proposal to the Thesis Advisory Committee.

PERFORM AT LEAST THREE LAB ROTATIONS IN DIFFERENT LABORATORIES

It is the student’s responsibility to find a faculty mentor. Students are strongly encouraged to become aware of the research programs of individual faculty members during their first year in the graduate school. This can be done by going to the TBES website, attending seminars, perusing the individual faculty members’ web sites, and discussions with the faculty. In addition, at the beginning of the fall semester the programs host orientation seminars or lab tours to explore the Cell & Molecular Biology Department and Neuroscience Department labs, as well as labs of other faculty affiliated with our programs (e.g, Cooper Medical School of Rowan University faculty). Each student is required to participate in three lab rotations within different labs in their first year. The student should spend the first two weeks of the semester seeking out and talking to prospective mentors. Before the end of week two, the faculty member who selects a student will complete the “Lab Rotation Agreement” form. Each lab rotation is 7 weeks in length. With this type of scheduling, a student will accomplish 2 rotations in each semester of their first year. The 7 weeks length of time for each lab rotation affords a student a fourth lab rotation in a different lab or the lab of their mutually agreed upon future mentor.

SELECT A THESIS MENTOR OF MUTUAL AGREEMENT

In the normal course of events, students in the PhD programs will most likely select their thesis advisor from among those faculty members who served as a mentor during the laboratory rotations. The student

should recognize that it can take 4-6 years to complete a PhD program and 2-3 years to complete a MS program. The resources, activity of the laboratory, and the likelihood of continued stipend support (for PhD students) are additional factors to consider when selecting a mentor. Students should also be aware that the TBES Bylaws permit only fully titled members of the TBES Graduate Faculty to serve as thesis advisors.

The student must come to a mutual agreement with a faculty mentor to complete their thesis work in their laboratory by June 1st of their first year. Failure to do so will result in loss of Good Academic Standing. If the student has still not come to a mutual agreement with a faculty mentor by June 15th of the first year they will be dismissed from the program. DO/PhD students must select mentors by January 1st of the 1st Year. The PhD student, mentor, department chair and Dean of the TBES must complete the "Policy for Graduate Student Support: Rowan-Virtua Translational Biomedical Engineering and Sciences (TBES)" and submit it to the TBES Office according to the dates above. For MS students, an email confirmation of mutual agreement between the student and the mentor is required.

GUIDELINES FOR STUDENTS PERFORMING RESEARCH FOR THE PhD AND MS DEGREE AT AN OFF-CAMPUS LOCATION

Most research for the PhD and MS degree is performed on the SOM campus with one of the faculty of the TBES. In cases where students choose to perform research in a laboratory that is not on our campus the following guidelines must be followed:

- The off-campus advisor must have an appointment as a TBES Graduate Faculty Member.
- Selection of a mentor who is not a full member of the TBES Graduate Faculty may affect the doctoral stipend availability beyond Year 1. Please consult the TBES office for more information.
- The student must have a Mentor-of-Record who is a full member of the TBES Graduate Faculty.
- At least two members of the Thesis Advisory Committee must be from the full-time graduate faculty. The arrangement must be approved by the department of the Mentor-of-Record (Chair and Program Director) and the Executive Council.
- At least two advisory group meetings per year must be scheduled to monitor progress of thesis research.
- The work to be performed must conform to the same standards as those applied to other students in TBES (high standards of excellence, scholarly in nature, non-proprietary and hypothesis driven).

EARN AN OVERALL GRADE POINT AVERAGE OF 3.00 OR HIGHER

All PhD students must complete at least 20 course credits of relevant graduate level course work per year beyond the baccalaureate with an overall academic average of 3.00 or higher. If the student does not earn a 3.00 or higher overall GPA, the student is not in good academic standing.

NOMINATE AND HAVE APPROVED THESIS ADVISORY COMMITTEE (TAC)

The Thesis Advisory Committee will have oversight responsibility for the development of the student and their thesis project. This committee will continually monitor the research competency and progress. The committee should work for the mutual benefit of the student and their faculty mentor. While the committee should uphold suitably high standards for the student and assist the mentor in achieving their research goals, they should also ensure fairness and act in the best interest of the student's education and career.

The Thesis Advisory Committee (TAC) must be established and approved by the Program Director(s) by July 1 of the first year. The PhD and the DO/PhD TAC must be composed of the mentor and at least four other qualified members while the MS TAC must be composed of the mentor and at least two other qualified members. One of the TAC members may be from outside of the TBES Faculty, if their expertise is appropriate. The student and mentor nominate the committee members using the *Thesis/Dissertation*

Committee Appointment Form. Each nomination should be supported by a brief explanation for the individual's selection to the Committee. The signed form is given to the Department Chair and TBES Dean for approval. The Department Chair or Dean may recommend committee members other than those nominated. The signed nomination form is given to the Director for submission to the Executive Council. The final membership of the committee is approved by the Executive Council.

After the TAC members are approved, a Committee Chair must be designated. The committee members decide who serves as Chair with input from the student and mentor. The Chair must be a member of the TBES Faculty within the program and may not be the student's mentor. There is no formal procedure to select the Chair, but it is expected that the Chair is agreed upon by the TAC members. At the latest, the TAC Chair must be selected before the start of the Advisory Proposal Meeting.

ADVISORY PROPOSAL MEETING

An Advisory Proposal Meeting between the student and their approved TAC is required. The students must:

1. Schedule the Advisory Proposal Meeting with the approved TAC members any time after approval of the TAC but no later than September 15th at the start of the 2nd Year. A minimum of four (4) TAC members must be present.

2. Prepare the Thesis Advisory Proposal Document according to the guidelines below and submit it to all TAC members no later than one week prior to the scheduled Advisory Proposal Meeting date.

3. Submit the Advisory Proposal Meeting date to the full TAC and TBES Office by email (TBES@rowan.edu).

The Advisory Proposal should include research plans for the next academic year and the initial steps of a likely thesis project. It should be brief and focused on short-term goals. It must include a title page, abstract, brief background, major question(s) to be addressed, specific experiments or analyses to be performed, interpretations, and contingency plans. The Advisory Proposal can follow the thesis proposal format (see below), but may be shorter or more limited in scope, and the writing should be of high quality. This will serve as a basis for discussion at the meeting. With the help of their mentor, the student should use the committee's guidance and the intervening year to craft a well-defined and rigorous Thesis Proposal, to acquire the relevant knowledge, and to obtain preliminary data.

The Advisory Proposal Meeting is not pass/fail. However, the committee may make specific requests, such as a re-written Advisory Proposal, that must be fulfilled within a time period specified by the committee. The Advisory Proposal Meeting is required and will help the student be better prepared for their Thesis Proposal/Qualifying Exam.

At the start, the committee should meet briefly with the mentor while the student is out of the room. Likewise, the committee should also meet briefly with the student while the mentor is out of the room. This provides both the student and the mentor the opportunity to discuss the student's progress and their working relationship in a private forum with the committee. The chair moderates the Advisory Proposal Meeting. They are expected to serve as chair through the student's thesis defense, although a new chair may be selected by the committee at a future meeting, if necessary. The student's laboratory performance, their exceptional abilities or deficiencies, or issues pertaining to the science may be raised. The chair and the committee members should agree on how the Advisory Meeting will be conducted, including the degree of involvement by the mentor in answering questions. The student may be asked about relevant technical and scientific issues, as well as basic knowledge. The chair may call on the student's mentor to resolve an issue, if necessary. An important goal of the Advisory Proposal Meeting is to provide the student with useful feedback for the Qualifying Examination. The Advisory Proposal Evaluation Form should indicate the strengths and weaknesses of the student, his or her project, constructive criticisms, as well as a firm idea of what is expected at the Qualifying Examination. Feedback is provided to the student using their individual Student Progress Google form.

PREPARE THE QUALIFYING EXAM/THESIS PROPOSAL

The thesis proposal is written in the format of a grant application, such as:

Title page should contain:
- Title in capital letters
- Name of the student
- Name of the mentor
- Date of Qualifying Exam

Abstract (500 words for PhD and 250 words for MS)
A summary of the entire proposal.

Specific Aims (1 page)
Concise descriptions of the hypothesis to be tested and each experimental aim. Two to three aims is usually appropriate.

Background and Significance (2-3 pages for PhD and 1-2 pages for MS)
A brief overview of the issues that lead to the present proposal containing sufficient information to understand the experimental aims and relate them to overall scientific objectives. Not a review of all the related science. Section headings suggested.

Preliminary Results (2-4 pages, including figures for PhD and 1-2 pages, including figures for MS)
Brief description of findings by the student and/or the laboratory that are directly relevant to the experimental aims of the proposal. Should indicate who is responsible for the data if not the student. Figures should be concisely captioned. Details of methods are not necessary.

Experimental Design and Methods (4-8 pages for PhD and 2-4 pages for MS)
The rationale, approach, procedures, expected outcomes and their interpretations, possible difficulties, and alternative approaches for each aim. Should include a tentative sequence or timeline.

Human Subjects and/or Non-Human Vertebrates
Rationale for use of protected subjects and the procedures relevant to protecting their welfare.

References
The references may be numbered or alphabetized and must include authors, title, journal, volume, page numbers and year.

All pages should have margins of no more than 1 inch, lines of no more than 1.5 spacing, and a font no smaller than 12 pt Times New Roman.

The student should prepare a draft of the proposal and submit it to his/her mentor. The mentor should not write or re-write the proposal. The mentor is expected to guide the selection of the issues to be addressed and experimental approaches. Ideas and preliminary data may come from others. However, it is expected that the student is the sole author of the proposal.

The written thesis proposal must be submitted to each member of the committee two weeks prior to the date of the Qualifying Exam. Because writing and revising the final draft of the proposal may take many days to weeks, it is strongly recommended that the student prepare a complete draft of the proposal at least one month in advance of the expected exam date. If the committee is not given sufficient time to review the written proposal or if the proposal is obviously substandard, the committee may elect to postpone the scheduled examination.

The student should prepare a PowerPoint presentation outlining the proposal to give at the Qualifying Examination/Thesis Proposal.

PASS THE QUALIFYING EXAMINATION/THESIS PROPOSAL

The Qualifying Examination/Thesis Proposal is conducted by the approved Thesis Advisory Committee (TAC). PhD students must be in Good Academic Standing to take their Qualifying Examination/Thesis Proposal at the end of the 2nd Year. The online Qualifying Exam Evaluation form records the TAC members' individual votes and evaluations of the student's Qualifying Exam/Thesis Proposal. All members of the TAC must complete this form and vote "Pass" for the student to pass. This form may be completed no more than twice for each student. The student may also complete this form as a self-assessment.

For PhD and DO/PhD students, prior to the Qualifying Examination, the approved Thesis Advisory Committee should review the Advisory Proposal Meeting report from last year and use this as a starting point for the Qualifying Examination. During the Qualifying Examination (or Thesis Proposal for MS students), the TAC assesses the specific proposal by the student and the ability of the student to carry out the proposal toward earning a PhD or MS degree, respectively. Coursework, rotations, general knowledge, as well as understanding of the proposed project, may be considered in making the evaluation. A summary of the student's academic performance, including grades, will be prepared by the TBES office and distributed to the committee prior to the exam date, if requested.

Each committee conducts a fair and thorough examination of the student as they see fit, but in a collegial manner with the best interest of the student in mind. At least two hours should be allotted for the examination. At the start, the committee should meet briefly with the student while the mentor is out of the room. Additionally, the committee should meet briefly with the mentor while the student is out of the room. At this time, the committee may ask for information to help them conduct an informed and constructive examination of the student. The student's laboratory performance, his/her exceptional abilities or deficiencies, or issues pertaining to the science may be raised. In addition, the committee should agree on how the exam is to be conducted, including whether the committee may stop the student to ask questions during their presentation or hold them for the end, and the degree of involvement by the mentor. The chair moderates the meeting to ensure that each committee member has adequate opportunity to ask questions and that the student is given time and consideration in answering. The chair may call on the student's mentor to resolve an issue, if necessary. When the examination of the student is completed, the chair asks the student to leave the room while the committee confers. The chair may also ask the mentor to leave the room at this time during deliberations.

The committee's decision takes two forms: a vote on pass/fail, and a written evaluation report. This report will state the committee's view of the strengths and weaknesses of the student and recommendations regarding the proposal. It will reflect the expressed opinions of all committee members. Both are completed using the student's individual Student Progress Google form.

Pass
All TAC members unanimously agree that the student has met the requirements to continue in the PhD or MS program.

Fail
One or more TAC member indicate that the student has not met the requirements to continue in the PhD or MS program. The committee has the right to recommend that a failing student be given the option to re-take the Qualifying Examination. A student may not re-take the exam without a recommendation from the committee to do so.

If the vote is "fail", the report will state if a second meeting or re-examination is recommended.

The Qualifying Examination Evaluation form and the final version of the Thesis Proposal must be submitted to the TBES Office to become part of the student's file and serve as documentation of the Qualifying Examination. When the PhD student passes the Qualifying Exam, he/she is considered an official PhD Candidate.

GUIDELINES FOR PROGRESS REPORTS (PhD and DO/PhD students only)

PhD students enrolled in the Thesis Research course (which is the default course for PhD candidates that have passed their Qualifying Exam) must show progress in reports every fall and spring semester. Each semester, students must hold either a private meeting with their Thesis Advisory Committee, or a public work-in-progress seminar as described below. The semester in which each exercise that students complete is determined between years 2 and 3 by the Program Director in consultation with the student and their mentor, and will remain consistent year to year. A successful thesis defense will fill the requirement for either exercise because it consists of both a public presentation and a private meeting with the thesis advisory committee.

ANNUAL THESIS COMMITTEE MEETING (PhD and DO/PhD students only)

Students are required to privately meet with their Thesis Advisory Committee at least once per year in the semester that they do not complete the public work-in-progress seminar. However, a student or mentor can request a meeting at any time and should, especially if the student's thesis project changes. It is the student's responsibility to identify a date and time that at least four of five committee members can be present. Students are encouraged but not required to submit a written report to their committee prior to the meeting that previews what will be discussed. The private meeting typically includes a presentation and should provide the committee with a reminder of the specific aims, any recent progress that has been made, technical difficulties, troubleshooting, professional development, and plans for the following year. At the meeting, it is advised that the committee meet briefly with the mentor and the student separately. What is discussed at this time should be kept confidential. As with the Qualifying Examination, the committee decides how the meetings are conducted, the role of the chair in moderating the discussion, and the degree of involvement by the mentor. Based on the discussion, the committee may make specific requests of the student that have to be completed by a certain time or by the next progress report. Thesis Research Evaluation forms are completed by each of the Thesis Advisory Committee members online; the student may also complete this form as a self-assessment. The evaluations of at least 4 Thesis Advisory Committee members are required to create the Thesis Research Evaluation Summary and provide the student with a grade of "S" for Satisfactory or a "U" for Unsatisfactory in the Thesis Research course each fall and spring semester. An Unsatisfactory grade constitutes violation of the Academic Standing – Program Policy. It must be corrected at the end of the following semester or the student is dismissed. Evaluations are completed by the TAC using the individual Student Progress Report Google form.

PUBLIC WORK-IN-PROGRESS SEMINAR

During the alternating semester, students must complete a public work-in-progress seminar. Efforts will made by the Program Director to make sure that student seminars occur at the same day and time each week throughout the semester to simplify scheduling. Students will be asked to sign up for one of these times at the start of each semester on a first-come first-serve basis. Talks are expected to last between 30 and 60 minutes, including questions from the audience, and should include project background and significance, specific aims, hypotheses, approaches, results, interpretations, and future directions. While the full Thesis Advisory Committee is encouraged to attend, only the mentor is required to do so. In addition, following a work-in-progress seminar, only the mentor completes the individual Student Progress Google form determine a grade of Satisfactory or Unsatisfactory in Thesis Research for the student. An Unsatisfactory grade constitutes violation of the Academic Standing Policy. It must be corrected at the end of the following semester or the student is dismissed.

THESIS DEFENSE CHECKLIST

Go to the TBES Defense Checklist to download the guide to finish the PhD or MS program.

TBES stipend support may be provided for up to one month following the defense date, but not beyond your graduation date.

Final Written Dissertation*

Please refer to the Thesis and Dissertation Manual. If you have any questions, contact Jenn Tharp at tharp@rowan.edu.

GRADUATION, DIPLOMAS AND COMMENCEMENT

Doctoral students must successfully defend before Commencement to attend the Commencement Ceremony in May.

Graduation Information may be found on the bottom of the TBES Student Resources Registrar page. This includes:

1. Graduation Process and Important Deadlines
2. Graduation Application Instructions
3. Graduation vs Commencement
4. Commencement Information

All degree students must apply to graduate in Self-Service Banner. Rowan University confers degrees on the 30th day of December (Fall), January (Winter), May (Spring), and August (Summer).

The Commencement Ceremony is held in May. Please note that **NO** student will receive their diploma at Commencement. The student will receive their diploma approximately 8-12 weeks after the degree conferral term.

STAY CONNECTED

- ☐ Complete the Alumni Registration Form
- ☐ Enroll in LinkedIn, a professional networking site. It's free: https://www.linkedin.com

ADDENDUM

PROGRAM ACHIEVEMENT MILESTONES AND DEADLINES
ACADEMIC YEAR 2025-2026

Grad Year	Achievement milestones:	Good Academic Standing deadline:	Dismissal deadline:
1	Mutual Agreement with Mentor	DO/PhD: January 1 of 1st Year PhD & MS: June 1 of 1st Year	June 15 of 1st Year
1	Thesis Advisory Committee (TAC) nominated and approved	July 1 of 1st Year	December 1 of 2nd Year
1	Advisory Proposal Meeting (APM; DO/PhD & PhD)	September 15 of 2nd Year	December 1 of 2nd Year
2	Thesis Proposal/Qualifying Exam		MS: December 30 of 2nd Year DO/PhD & PhD: July 1 of 2nd Year
	Complete and pass Thesis Research course (DO/PhD & PhD)	End of each semester (see below)	End of following semester**
3+	Thesis Research – Fall progress: Written report or Oral seminar	November 30	
3+	Thesis Research – Spring progress: Written report or Oral seminar	April 15	
3+	Thesis Research – Summer: No report or seminar required		
	Successful Thesis Defense		7 years (PhD) or 5 (MS) years from first matriculation

** If a student does not pass Thesis Research, they must pass the following semester.