

Graduate Student Handbook

College of Life Sciences
Department of Exercise Sciences

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*These forms will be updated annually and are available on line (<https://exsc.byu.edu/graduate-forms-handbook>).

NOTE: If you discover any broken links in the handbook, please let the graduate secretary know so they can be updated. Thanks!

i Exercise Sciences Mission Statement

The Department of Exercise Sciences values the human being as being sacred and seeks to strengthen both body and spirit by attaining, advancing and disseminating knowledge in the disciplines of human exercise and performance, injury and rehabilitation, and wellness while inviting divine inspiration to guide our efforts.

ii Department Goals

1. Nurture faith in God and the practice of Christian principles.
2. Prepare leaders to serve in ways that foster dignity and respect for the body, mind and spirit
3. Provide experiences that stimulate the acquisition and enjoyment of activities that promote health and happiness.
4. Encourage lifelong learning and advance the body of knowledge unique to the disciplines of exercise science.

iii Graduate Program Objectives

To develop scholars, researchers, teachers, and professionals in exercise science who can make significant original contributions to the discipline's body of knowledge and integrate, apply, and disseminate the frontiers of exercise science knowledge.

iv Aims of a BYU Education

Spiritually Strengthening
Intellectually Enlarging
Character Building
Lifelong Learning and Service

1.0 Introduction

The Exercise Sciences Graduate Student Handbook (GSH) is divided into five main sections:

1. Introduction
2. Beginning Your Program
3. Progressing Through Your Program
4. Doctoral Comprehensive Examination
5. Completing Your Program
6. Appendix

Students who familiarize themselves with each section as they move through that phase of their education will avoid frustration. It may be helpful to collect notes and keep them in the appropriate section. It is hoped students will refer to the handbook regularly and often. Advisors will discuss some items with their students, but ultimately graduate students are responsible for complying with the information found in this handbook. Failing to do so may cause additional cost or graduation delays.

Incorporated in many of the sections are referenced checklists, forms and some links. Pay particular attention to the checklists because they often include requirements from the department, college, and university and are found nowhere else.

The Department of Exercise Sciences offers two graduate degrees with multiple specializations. For detailed course requirements, refer to *Essential Links, 1.4*

1.1 Exercise Sciences Doctor of Philosophy Degree

The Exercise Sciences Doctor of Philosophy degree (PhD) prepares students for leadership at the highest level of their profession. Graduates are trained in the scientific bases of exercise science, well acquainted with the scientific literature, and able to conduct independent research. Most become university or college faculty.

1.2 Exercise Sciences Master of Science Degree

The Exercise Sciences Master of Science degree (MS) is designed to expand a student's appreciation of the science of exercise through course work, individual and team research, becoming thoroughly familiar with current literature, and writing experience. Graduates will be prepared to assume professional and leadership roles in educational, clinical, research and corporate programs, or enter allied health and medical programs, or successfully pursue further education at the doctoral level.

1.3 Faculty Expertise

Exercise Sciences faculty are qualified to teach and advise in multiple aspects of exercise sciences and may teach classes for more than one specialization. <http://exsc.byu.edu/faculty-staff>

1.4 Essential Links

These links will help students decide which educational plan best fits their goals. The first link, BYU Graduate Studies, covers all aspects of applying in general. The other links offer details about Exercise Sciences faculty or the individual degree or specialization.

Graduate Studies <http://gradstudies.byu.edu/>

Graduate Studies forms <http://gradstudies.byu.edu/page/form-list>

Exercise Sciences <http://exsc.byu.edu/>

MAT Details <http://gradstudies.byu.edu/athletic-training-mat>

MS Details <https://gradstudies.byu.edu/exercise-sciences-ms>

PhD Details <https://gradstudies.byu.edu/exercise-sciences-phd>

EXSC Facebook <https://www.facebook.com/BYUExSc>

The Exercise Sciences website has information about scholarships and other useful helps.

2.0 Beginning Your Program

2.1 Sequencing

Doctoral Students:

First Semester (Fall)

1. Attend Graduate Student Orientation.
2. Must register for a minimum of 2.0 credits; Doc Residency requires 2 consecutive 6-credit semesters.
3. Begin course work including STAT 512 or other appropriate STAT course.
4. Attend at least one thesis or dissertation proposal meeting.
5. Determine Program of Study

Second Semester

1. Continue course work.
2. Select committee chair and members.

Middle Semesters

1. Continue course work.
2. With the help of the committee chair, submit Program of Study (GradProg Program of Study) no later than third week of second year.
3. Attend at least one thesis or dissertation defense meeting.
4. Begin development of dissertation topic with committee – theoretical basis, review of literature, formation of research question.

5. Recommended: At least one semester before course work is completed, begin studying for comprehensive exam. Checklist: Doctoral Comprehensive Examination, 4.0.
6. Take the Comprehensive Exam (after all course work completed and before Proposal).
7. Conduct preproposal meeting(s) with committee.

Final Semesters

1. May begin to register for dissertation credit once comprehensive exams are passed.
2. Write prospectus.
3. Propose dissertation. Checklist: Proposal of Thesis/Dissertation, 3.4.
4. Apply for Institutional Review Board approval.
5. Begin data collection.
6. Defend your dissertation.
7. Must complete the program in eight years maximum
8. Graduate. Checklist: Graduation & Thesis/ Dissertation Defense, 5.2.

MAP for PhD in Exercise Sciences may be found at:

<http://exsc.byu.edu/https://brightspotcdn.byu.edu/bd/57/d63ae0d843eaaaf1b83eb46521a9/phd-all.pdf>

Master's Students:

First Semester (Fall)

1. Attend Graduate Student Orientation.
2. Must register for a minimum of 2.0 credits.
3. Begin course work including STAT 511 or EXSC 630.
4. Select committee members and determine Program of Study (GradProg Program of Study).
5. Work with committee to begin developing a thesis topic.
6. Attend at least one thesis or dissertation proposal meeting.

Second Semester

1. Continue course work.
2. With the help of the committee chair, submit Program of Study no later than third week of second semester.
3. Continue to work with committee on developing and writing a thesis proposal.

4. Conduct preproposal meeting(s) with committee, *Proposal Checklist*, 3.3.
5. Attend at least one thesis or dissertation defense meeting.
6. It is highly recommended that thesis is proposed by end of semester or Spring or Summer term.

Third Semester

1. Apply for Institutional Review Board approval.
2. Data collection should be completed by end of semester.

Last Semester

1. Defend your thesis.
2. Must complete the program in 2–5 years.
3. Graduate, *Graduation Checklist*, 4.0.

MAP for MS in Exercise Sciences may be found at:

<http://exsc.byu.edu/https://brightspotcdn.byu.edu/e9/ca/c59bad324b898a5c9e68d68aaf89/ms-all.pdf>

2.2 Exercise Sciences Course Rotation

This rotation is subject to change without notice. The courses with an even or odd designation are only offered every other year in even or odd years. For latest information go to

<https://exsc.byu.edu/https://brightspotcdn.byu.edu/c6/c6/eb45d7a9438897b568d0903099db/grad-rotation.pdf>

Classes	3 Jun 2022	Semesters/Terms			
		Fall	Win	Spr	Sum
EXSC 501	Pathophysiology for the Athletic Trainer	◆	◆		
EXSC 514	Advanced Athletic Training Lab	◆			
EXSC 515	Therapeutic Interventions 1, Modalities	◆			
EXSC 516	Orthopedic Evaluation 1: Lower Extremities	◆			
EXSC 517	Orthopedic Evaluation 2: Upper Extremities & Trunk		◆		
EXSC 518	Therapeutic Interventions 2, Rehabilitation		◆		
EXSC 519	Medical Issues in Athletic Training		◆		
EXSC 563	Environmental Physiology		◆		
EXSC 601	Pharmacology in Athletic Training	◆			
EXSC 602	Graduate Athletic Training 1	◆			
EXSC 603	Graduate Athletic Training 2		◆		
EXSC 625R	Adv Topics in PM&R (010)				
EXSC 625R	Clinical & Ed Adm (011)		◆		
EXSC 625R	Cryotherapy				
EXSC 625R	Electrotherapy, US, Diathermy (013)	◆ even			
EXSC 625R	Func Testing & Exer (014)			◆ even	
EXSC 625R	Joint Mobiliz & Manual Therapy (015)	◆ odd			
EXSC 625R	Neural Basis of Rehab (016)	◆ odd			
EXSC 625R	Musculoskeletal and Vascular Imaging (024)			◆ odd	
EXSC 625R	Mechanical Spinal Impair & Mobil (023)			◆ even	
EXSC 630	Research Methods in EXSC	◆			
EXSC 635	Evidence-Based Practice	2 nd Block	◆		
EXSC 640	Physical Activity & Health	◆ odd			
EXSC 654	Athletic Training Clinical Education 1	◆			
EXSC 655	Athletic Training Clinical Education 2		◆		
EXSC 656	Athletic Training Clinical Education 3	◆			
EXSC 657	Athletic Training Clinical Education 4		◆		
EXSC 661	Advanced Worksite Wellness	◆ even			
EXSC 662	Motion Analysis Techniques			◆	
EXSC 663	Neuromechanical Signal Collection & Processing			◆	
EXSC 664	Biomechanical Modeling		◆		
EXSC 665	Computer Programming for Kinesiology	◆			
EXSC 666	Exercise Physiology	◆			
EXSC 667	Lab Methods & Procedures	◆			
EXSC 668	Orthopaedic Anatomy		◆		
EXSC 671	Adv Lifestyle & Chronic Disease Prevention		◆ odd		
EXSC 673	Adv Obesity & Weight Management		◆ even		
EXSC 688R	Health Promotion Practicum	◆	◆	◆	◆
EXSC 688R	Athletic Training Internship	◆	◆	◆	◆
EXSC 693R	Readings Seminar (21)		◆		
EXSC 697	Athletic Training Capstone		◆		
EXSC 699R	Master's Thesis	◆	◆	◆	◆
EXSC 751	Seminar: Prof Writing		◆ odd		
EXSC 753	Seminar: Research & Grants		◆ even		
EXSC 766	Adv Exercise Physiology: Cardiopulmonary		◆ even		
EXSC 769	Adv Exercise Physiology: Skeletal Muscle		◆ odd		
EXSC 797R	Individual Research & Study	◆	◆	◆	◆
EXSC 799R	Doctoral Dissertation	◆	◆	◆	◆

2.3 Committee Selection

A committee chair is assigned to each admitted student and is announced in the admission letter. Usually this faculty member becomes the committee chair for all student-related committees including graduate, thesis or dissertation, or comprehensive exam chair for doctoral students, but changes can occur if necessary. All chairs must be Exercise Sciences graduate faculty and should have expertise in the student's area of study. Due to the individualized nature of a graduate degree, it is critical for students to build a successful working relationship with their committee chairs and faculty who will best help them with their theses or dissertations.

During your first semester as a master's student, you and your committee chair will select at least two additional committee members to join your thesis committee. Doctoral students, in collaboration with your committee chair, should select at least four additional committee members to be part of your dissertation committee during your second semester as a doctoral student. You may have additional members if you and your committee chair feel it is beneficial. All committee members must be graduate faculty, the majority Exercise Sciences faculty. At least one member of a dissertation committee should come from a non-Exercise Sciences supporting field. Your committee should be able to advance your study, through both their depth of knowledge and their ability and willingness to mentor you throughout the research process. Master's students' committee names must be submitted no later than the third week of the second semester as part of your Program of Study (GradProg). For doctoral students the deadline is no later than the third week of the beginning of the second year of study. It is strongly suggested that this be done the semester before the deadline. The last member of each committee should be the graduate coordinator; if that person is already a member of your committee, do not add them twice.

Tips for working well with a committee:

- Ask lots of questions.
- Become familiar with the journal formats of your chosen discipline.
- Never expect your committee to do your work.
- Plan well in advance – give faculty plenty of time to read each draft, at least 4–5 days. Remember, faculty may be away from campus on occasion and unavailable.
- Meet all deadlines – do not ask for exceptions.
- Be resilient, adaptable, persistent, and hardworking; accept constructive criticism and make changes in research project as directed. Preproposal meetings with all committee members are the best way to keep information current for everyone.
- Don't be defensive; remember your committee members are working in your best interests.
- If problems arise which cannot be resolved within the committee, voice them with the graduate coordinator.

2.4 Financial Assistance

Department financial assistance includes funding for graduate student Research and Teaching Assistantships, research, and travel as well as MS scholarships and doctoral student tuition. Because department funds are limited, financial assistance is given on a first-come, first-served basis until the funds are depleted.

Research and Teaching Assistantships

The department offers paid Research and/or Teaching Assistantships based on departmental needs. Assistantships are appointments rather than posted job openings, so students should be proactive in connecting with professors that have need. It is a good idea to explore opportunities early and then work to become qualified for the positions. Some positions require training or apprenticeships.

Four very important things to remember:

- 1. All employees must have a valid I-9 form on file with BYU Student Employment before they are hired by the business manager and begin work.**

2. All employees who work in a lab environment must complete all required trainings prior to beginning work. Trainings may include an online IRB Tutorial available on the [RAO website](#) (working with human subjects). Since all labs within the HPRC are BL1 labs, students entering these areas must complete the following trainings through the Safety and Compliance Coordinator in the College of Life Sciences: Bloodborne Pathogens, General Safety, HAZCOM and Lab Standard. Other specialized trainings may be required.
3. Maximum hours allowed per week year-round for graduate students is 28 for all church-sponsored jobs combined for U.S. citizens. International students are allowed to work a maximum of 20 hours per week during fall and winter semesters and 40 hours per week during spring and summer if they are on their “approved break.”
4. Master’s students are not normally eligible for assistance after their second year in their degree program and doctoral students are not normally eligible for assistance after the fourth year of their program in the Department of Exercise Sciences.

Graduate Student Research Funding

Graduate students should discuss options for funding with their committee chairs.

Graduate Student Travel Funding

Graduate students presenting a first-author abstract at an approved scientific conference can apply for travel funds to cover registration, transportation, and housing for the event. Applications for travel funds are available on the [EXSC website](#).

Doctoral Student Stipend

Exercise Sciences provides a limited number of full-time doctoral students with a stipend package. The stipend package remains in effect for a maximum of 4 years as long as the student maintains a satisfactory bi-annual evaluation. The package covers the actual cost of full year-round tuition as well as paying for 10 hours per week employment as a Teaching and/or Research Assistant with eligibility for additional TA/RA hours depending on department/faculty needs. For international doctoral students, the work time is limited to 20 hours per week total for Fall and Winter but goes up during Spring and Summer because of increased work. The distribution of time between TA and RA activities is decided by your advisor.

Department Scholarships

We have one PhD scholarship:

- 1) Robert K. Conlee ACSM Travel Award: Travel expenses (including per diem) to national ACSM meeting (\$1,500.00)

We have a limited number of MS Scholarships

- 2) A limited number of scholarships are available for MS students. Funding for these scholarships comes from a number of sources, including the Douglas Pierce Smith Memorial Scholarship, Ira Fulton Endowment, A. Garth & Geraldine R. Fisher Scholarship, as well as department funds. Please plan to write thank you letters if you are a recipient. Each scholarship is awarded in the amount of \$7,500 for one academic year. MS students may apply for these scholarships in their first two years. They are not available after two years.

Graduate Studies Scholarships and Awards

Students are encouraged to contact Graduate Studies directly regarding other scholarships and awards which may be applicable to travel or research funding. There are several options, some quite generous.

3.0 Progressing Through Your Program

3.1 AIM Progress Reports

Students are encouraged to check their progress reports in GradProg frequently, especially the first semester after being admitted and as graduation approaches.

GradProg compares the individual program of study with the courses taken and summarizes students' progress in a program: classes completed, current registration, classes still needed, and grade point average. In addition, the progress report alerts a student to possible problems with academic status, GPA, current registration, prerequisite degrees needed, minimum registration requirements, time limits, and courses. Students are responsible to work with the graduate secretary regarding any needed changes.

As a courtesy, Graduate Studies reminds all students to check their progress reports a few times a year, but there is no need to wait until the reminder arrives. Any problems with a progress report should be reported immediately to the graduate secretary for correction.

3.2 Progress Evaluations

The Department of Exercise Sciences formally monitors graduate students two times a year. Student progress evaluations are conducted by the committee chairs each year in January and May and approved by the graduate coordinator. The graduate secretary sends out a reminder a week or two before evaluations are due. To access the evaluation form, go to <https://lsgradtracker.byu.edu/> (Sign In at top right of page).

The rating will be **satisfactory** if a student is progressing as planned.

The rating will be **marginal** if **one** of the following occurs:

- Failure to submit a program of study and establish a graduate committee before the third week of the second semester (MS & PhD), before the third week of the second year (PhD).
- Have minimal contact and interaction with committee chair following reasonable efforts by the chair to establish a working relationship with the student.
- Show limited progress on Program of Study work and other requirements.
- Register for Dissertation or Thesis hours with inadequate work on the research project. (Doctoral students should not register for dissertation hours prior to completion of the comprehensive exam.)
- Failure to resubmit an approved dissertation or thesis prospectus after corrections have been recommended.
- Failure to obtain committee approval for a dissertation or thesis draft despite reasonable effort on the part of the committee chair.
- Perform poorly in clinical or applied experiences as judged by supervisors and/or the committee chair.
- Demonstrate poor research performance.
- **Program of Study** GPA falls below 3.0.
- Receive an unacceptable grade (less than a C-) in a Program of Study course.

The rating will be **unsatisfactory** if **one** of the following occurs:

- More than one of the items from the marginal list occurs.
- A previous marginal rating has been received.
- Failure to remediate previous weaknesses by repeating any of the above marginal criteria in a subsequent review cycle.
- Receive a failing grade (E) in a **Program of Study** course.
- Demonstrate behavior that lacks professionalism or is considered unethical.
- Doctoral students fail their retake of the comprehensive examination.

After the ratings are assessed by the committee chair and approved by the graduate coordinator, the following steps will be taken:

1. The graduate coordinator will inform each student and committee chair if the decisions are modified. The contracts for marginal or unsatisfactory are kept in the students' records in LSGradTracker.
 - a. **Satisfactory ratings** require no further steps.
 - b. **Marginal ratings** are emailed to the student and require a meeting between the student's advisory chair and the graduate coordinator to set up a "Course Correction Contract." The contract should include what the student needs to do to remedy the problem, when it needs to be accomplished, and whom to contact for help in order to demonstrate satisfactory progress.
 - c. **Unsatisfactory ratings** are sent to the student by certified letter with return receipt. If the student does not contest the rating, his or her graduate program will be terminated.

2. For contesting an unacceptable rating, a meeting between the student, committee chair, and graduate coordinator (or designee) is held to create a formal plan to remedy the problem. A written plan or "Course Correction Contract" unique to each student is required within one month of the evaluation and will include:
 - a. Specific and detailed items the student needs to complete to make satisfactory progress.
 - b. A timeline of when these tasks should be accomplished.
 - c. Whom the student should contact for more information or support.
 - d. What will happen if tasks are not accomplished (e.g., an unsatisfactory rating for the next semester, termination from the program, etc.).
 - e. Failure to meet any dates on the timeline will result in termination without possibility to petition.

If a student receives an unsatisfactory rating the department will either terminate the student's program at the conclusion of the semester or submit a Petition for Exception OGS Form 2 to Graduate Studies making a convincing case that the student be given another semester to demonstrate satisfactory progress. A copy of a contract listing student and faculty responsibilities with timeline should be attached and placed in the student's file.

Students who receive an unsatisfactory ranking or do not receive an evaluation will be ineligible to receive financial aid from either the university or from the federal government.

3.3 Research

The Department of Exercise Sciences requires a capstone experience by each student who receives a graduate degree in the form of a thesis or dissertation. Six credits of thesis require approximately 250 hours of work, and is one fifth of the required credit hours for a master's degree. Eighteen credits of dissertation requires approximately 750 hours of work. Both demand substantial intellectual investment by the student. Knowledge acquired during the research and writing process is perhaps the most significant acquisition in the pursuit of an advanced degree.

The finished paper should expand the body of knowledge in one or more areas of exercise science. To give proper background for the research, the topic must relate to the student's area of study. If the topic relates to a practical situation and does not permit wide enough generalization to qualify as an extension of theory, the researcher should review and analyze the theory that relates to the practical problem. Theoretical analysis should be presented in the introduction and discussion. The researcher should always understand and relate the relevant theory to the research. Although publication is not a requirement for the acceptance of a thesis or dissertation, it must be submitted for publication shortly after it is defended. Research that does not result in at least one publication in a professional journal is of questionable value to the student, the profession, and the university.

The Research Process

The research process requires the student, with the help of the committee, to

1. Become familiar with the theoretical bases of the research topic.
2. Conduct a necessary thorough review of the literature.
3. Establish a research question with its accompanying hypothesis(es).
4. Design a procedure that will adequately answer the research question(s).
5. Collect original data (must be collected by the student). Note: Preexisting data may be utilized if steps 1–4 and 6–9 and the time and intellectual investment required of the student are met. Students desiring to use preexisting data must submit a request for exception to the Department Graduate Advisory Committee. Also, a course in graduate biostatistics (Health Science Department) must be taken as part of the program of study. See *Appeal Process*, 5.0
6. Analyze and interpret the data.
7. Write the paper in the style of the journal to which it will be submitted.
8. Present and defend work at an oral defense.
9. Submit the article for publication.

Characteristics of Good Research

1. Validity
2. Responsibility
3. Generalizability
4. Objectivity
5. Rationality – sound reason and logic
6. Systematic rigor
7. Meaningful comparisons
8. Reducible into meaningful categories
9. Related to abstract theory and explains relationships

Training

All employees/students who work in a lab environment must complete all required trainings prior to beginning work. Information related to the Institutional Review Board process for the use of human subjects may be found at: <https://irb.byu.edu/is-irb-approval-required>. Students *must* take the IRB Tutorial and pass the exam to get a certificate of completion prior to working in any lab. Additional trainings administered by the Safety and Compliance Coordinator in the College of Life Sciences are: Bloodborne Pathogens, General Safety, HAZCOM, and Lab Standard (<https://lifesciences.byu.edu/safety/safety-training>). Other specialized trainings may be required.

Statistical Consultation

The Consulting Center located at 2152 WVB is available for statistical consultation with regard to graduate student research endeavors. For complete information concerning eligibility, services provided and costs, please visit <http://statistics.byu.edu/content/consulting-center>.

Tips for Success

Students should:

1. Backup thesis or dissertation drafts or files, including research data, in at least three locations with one off-site.
2. Meet with your committee regularly regarding research, data collection, course work, and writing.
3. Develop a research design and select an appropriate statistical analysis with your advisor.
4. If needed, visit the Consulting Center in the Statistics Department with your advisor.
5. Discuss possible specialized training needs with your advisor.
6. Confer with your advisor and any faculty who use the lab during the planning process regarding scheduling time and use of lab space and equipment. Lab directors require demonstrated competency in lab skills before researchers can work on their own. Additional training or pilot data collection may be required, even when your prior course work included use of the lab.
7. Begin writing the manuscript during data collection.
8. Design tables such that data can be added as it is acquired.
9. Check references and reference format.
10. See *Writing Guidelines 6.3* for more direction regarding writing and formatting your work.

3.4 The Prospectus

Preproposal Meetings

Preproposal meetings allow the student and faculty to participate in an intellectual exchange that ensures a high quality thesis. When adequate preproposal meetings are held, only minimal changes should be expected during the official proposal meeting. The following points should be discussed during the meetings:

1. Theoretical and practical justification of the research to ensure the work is worthy of a thesis.
2. The study's purpose, hypothesis(es), methodology, experimental design, and appropriate statistical analysis of the data.
3. Possible limitations and obstacles to the study.
4. Funding for the research (through committee chair).
5. How to help the student prepare for a successful proposal meeting.
6. Determine at what point the prospectus is ready to be officially proposed.

Writing the Proposal

Specific guidelines issued by the university are required for the first few pages of all theses and dissertations prior to the research itself. Templates for the first pages are found in Resources, Formatting in GradProg. The prospectus (or proposal before it is approved), including all appendices, should follow a writing format common to professional literature which is the style required by the journal to which the research will be submitted. The sooner proper formatting is used, the easier subsequent drafts will be. The prospectus should contain the following:

- Title pages (using the required university templates)
- Chapter 1 – Introduction or Statement of the problem
- Chapter 2 – Review of Literature
- Chapter 3 – Procedures or Methods
- References
- Appendices

For more specific information regarding writing and formatting the proposal, see *Writing Guidelines 6.3*.

The Proposal Meeting

After preproposal meeting(s) have been held and all committee members 1) are satisfied with the state of the written prospectus and its proposed purpose, hypothesis(es), experimental design, methodology, and statistical analysis; and 2) agree the student is prepared to present his or her proposal; the final steps leading up to the Proposal Meeting may be taken. Refer to the page – *Checklist: Proposal of Thesis/Dissertation*.

Ideally, the student and all committee members will be physically present in the same room at BYU for the proposal meeting. Because of technological advances in communication, the occasional use of these advances has been approved by Graduate Studies at BYU. When circumstances arise that make it impossible or extremely inconvenient for some committee members to be physically present, special arrangements may be made. Possible reasons for physical absence include: a) a committee member has left the University, b) a committee member is employed by another academic institution, or c) a committee member is on sabbatical and thus not in residence at BYU. The following restrictions apply: 1) The student and a majority of the committee members (which must include the committee chair) must be physically present. 2) All physical absences must be approved by the Graduate Coordinator or Department Chair. 3) The remote committee member(s) must be able to effectively interact with the graduate student and committee members. 4) High-quality video conferencing equipment must be used (a videoconferencing room is now available in the HBL). Additionally, the scheduling information provided to the graduate secretary generates an invitational email to all Exercise Sciences faculty and graduate students to attend the proposal meeting. Every graduate student is required to attend two proposal meetings (at least one prior to their own), one each year. Students may want to personally invite guests to the meeting including faculty members whose input may be of particular value. The proposal is held in a room available for department use.

During the proposal meeting the student will have the opportunity to present, discuss, and refine his/her research based on additional comments from the committee and other faculty in attendance at the meeting.

The meeting is conducted by the student's committee chair and includes:

- An opening prayer and an introduction of the student by the committee chair.
- Student proposal of the research (approximately 15 minutes).
- Questions concerning the proposal problem justification, statement of the problem, hypothesis(es) or research question(s) or the research methods are directed to the student and answered by the student. (The committee chair only offers input as requested by the student.)
- Students and nonfaculty visitors are excused.
- Committee members discuss the quality of the project and agree on how the student should proceed with the research project.
- Critical comments from the earlier discussion should be noted by the student and committee chair and necessary changes suggested by the faculty should be incorporated into the final prospectus.

Research Note: *Graduate Committee and IRB approval of every thesis and dissertation must be obtained, and an electronic copy of the prospectus must be provided to the graduate secretary before any original data for the study can be collected. Pilot data may be collected prior to the proposal to refine methodology.*

Proposal Forms

See next pages for a checklist and a proposal scheduling form. Approvals are done in GradProg.

Checklist: Proposal of Thesis/Dissertation

(Date)

1. _____ **STUDENT** conducts preproposal meeting(s) where the **committee** can give significant input into the proposed purpose, hypothesis(es), experimental design, methodology, and statistical analysis.
2. _____ **STUDENT** uses the GSH Appendix 6.3 Writing Guidelines for writing the proposal. Use the same title page formatting as outlined in the BYU Graduate Studies GradProg → Resources → Formatting → Templates/samples for title page and preliminary pages OR go to <https://gradstudies.byu.edu/academics/etd-instructions> → ETD Instructions → Thesis and Dissertation Formatting Policy (1st here link = title page; 2nd here link = preliminary pages).


When the final version of the proposal is complete

3. _____ **Committee** agrees to a date and time for the official Proposal meeting. Agreeing to a date and time indicates belief the prospectus is the final version and ready to be proposed and they agree to a time and location for the proposal to occur. *Note: All committee members must attend (refer to GSH 3.4 The Prospectus . . . The Proposal Meeting)*
4. _____ **STUDENT** submits a copy of the prospectus with the date and time for the Proposal meeting to the GRADUATE COORDINATOR **two weeks** prior to the proposal date. If approved, GRADUATE COORDINATOR e-mails **graduate secretary** that the Prospectus meeting can be scheduled.

When the proposal has been approved by the graduate coordinator

5. _____ **STUDENT** picks up the prospectus from the graduate coordinator. (If the proposal is not approved, the GRADUATE COORDINATOR will discuss concerns with the student.)
6. _____ **STUDENT** submits the prospectus and the date and time to the **graduate secretary** to officially schedule the meeting (at least three days in advance).
7. _____ **Graduate secretary** emails all graduate students and faculty to announce the proposal meeting.
8. _____ **STUDENT** discusses research needs with committee chair.

After a successful proposal

9. _____ **STUDENT** makes corrections as suggested by the **committee**.
10. _____ **STUDENT** uploads an electronic copy of the final prospectus in GradProg  **UPLOAD PROSPECTUS (OPTION 1)** and the **committee** approves the *Prospectus* in GradProg. AIM is automatically updated with completion date after all faculty have approved.
11. _____ When the final version is approved, this indicates readiness for IRB submission and data collection. Student works with committee chair regarding research funding.
12. _____ **STUDENT** prepares and submits the IRB form (<https://rao.byu.edu>). *Note: Official university policy does not allow an IRB submission until after a successful proposal.*
13. _____ **STUDENT** completes all required safety trainings as advised by the **Committee chair**.
14. _____ **STUDENT** files copies of training certificates with the **graduate secretary** and with the **Committee chair**. Researchers are required to have a copy of these certificates. If the hard copies are lost, they cannot be regenerated without redoing the training.

PROPOSAL SCHEDULING

BEFORE the Prospectus can receive final approval in GradProg, it needs to be scheduled and held. Please schedule your proposal with your committee and submit this signed form to the department graduate secretary **at least three days prior** to the desired proposal date.

title

as submitted by

printed student name	BYU ID number Net ID
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Proposal Meeting

date	time	location
------	------	----------

Signatures denote that the committee member

1. Has attended preproposal meeting(s) and carefully reviewed the introduction, problem statement, hypothesis, review of literature, research design, suggested analysis, methods, and the overall worthiness of the project, and feels the student is ready to present the prospectus.
2. Agrees with the date of the proposal and will be in attendance.

committee chair signature	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date

**Non-Exercise Sciences committee members please indicate an email address.*

Submit this signed form to the graduate coordinator **at least two weeks prior** to the desired proposal date.

Graduate Coordinator Approval

graduate coordinator signature	printed name	date
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4.0 Doctoral Comprehensive Examination

All doctoral students must take comprehensive examinations. The purposes of the written and oral exams are to determine if the student: 1) has adequate knowledge of the discipline to undertake dissertation research, and 2) understands and can integrate the collective knowledge of the discipline. The exams are taken only after the required course work and a thesis or similar experience is completed. A student is advanced to candidacy after successful completion of the comprehensive exam. Both written and oral portions of the exam cover the same areas of competence (i.e., area of study, supporting, and skill areas).

The **written exams** are typically scheduled on two days, must be completed within an 8-day period and generally take a total of 12 hours. The first day of the written exam usually covers the area of study, and the second day covers the supporting and skill areas, although the committee chair can decide the order of material to be scheduled. Students are required to fill out a *Scheduling PhD Comprehensive Examination* form and submit it to the department graduate secretary **three weeks** prior to the proposed date of the first written exam. The graduate secretary usually administers the exam, but the committee chair should be available to answer questions if needed. The student will use a department laptop to take the examination.

The committee chair uses the student's program of study to select the topics to be comprehensively examined. The committee chair solicits questions from the examination committee, giving each member a guideline as to how much time each member's question(s) should take the student to complete given the time constraints of the examination. The committee members each write questions for his/her individual area(s) of expertise which emphasize synthesis across course boundaries. Questions should be comprehensive in nature and should require creative thought, analysis, synthesis of information, and depth of understanding. The committee chair gathers and screens the questions from the committee and submits an electronic copy of the questions to the graduate coordinator **one week** before the examination date.

Between the written and oral phases, students are **not** allowed access to their written responses nor to any information concerning the evaluation of their performance on the written examination. They are also **not** given a copy of the questions they were asked on either day of the written exam.

The **oral examination** focuses on, but is not necessarily limited to, topics asked in the written examination. The purposes of the oral exam are to evaluate the student's ability to respond orally to questions, to give the student opportunity to show competence in areas of weakness evident from the written exam, and to evaluate the student's reactions and responses when pushed to the limits of his or her knowledge and understanding. The oral exam is to be taken within **two weeks** of the last portion of the written examination. The committee chair is responsible for conducting the oral exam. The attendance policy and use of technology for the PhD oral comprehensive examination is the same as that stipulated for the Proposal Meeting (see section 3.4).

Note: No Comprehensive Examination is held for the MS degree in Exercise Sciences.

4.1 Comprehensive Examination Committee

The dissertation committee chair serves as chair of the examination committee and is responsible for finalizing the committee which consists of members of the student's dissertation committee plus any additional graduate faculty whose expertise is needed to provide thorough testing of the student's area of study and supporting and skill areas. These additional faculty have usually taught the student. If a member of the student's dissertation committee does not write a question for the student's comprehensive exam, that person is not considered a member of the examination committee and does not evaluate the student as far as the exam is concerned.

CONSULT the *Checklist: Doctoral Comprehensive Examination* for process and student, committee chair, committee member, graduate secretary and graduate coordinator responsibilities.

4.2 Grading the Comprehensive Examination

The department graduate secretary e-mails responses from each examiner's question(s) to each respective examiner and all responses to the committee chair **and** graduate coordinator. Each committee member evaluates the **written responses** to the question(s) he/she submitted to the chair according to the following criteria: Pass, Deficient or Fail on the *Individual Examiner's Comprehensive Examination Evaluation* (Form 5a). The examiners return the completed forms to the committee chair **no later than four days before the scheduled oral exam**. The committee chair forwards copies of the evaluations to the graduate coordinator **at least two days before the oral examination**.

Following the **oral exam** the chair has the examining committee fill out the oral portion of the *Individual Examiner's Comprehensive Examination Evaluation* (Form 5a) using the same criteria they did for the written portion of the exam.

At the conclusion of the **entire comprehensive examination**, after a thorough discussion, the Comprehensive Examination Committee evaluates the doctoral **student's overall performance** on both written and oral portions of the comprehensive examination according to the criteria listed below (Pass, Deficient or Fail) and fills out the *Committee's Comprehensive Examination Evaluation* (Form 5b). A **majority vote** determines the final assessment.

A student should be ranked "**Pass**" if 1) they demonstrate adequate knowledge of the discipline to undertake dissertation research, and 2) they understand and can integrate the collective knowledge of the discipline as evidenced in their written and oral responses.

If the student is ranked "**Pass**" he/she is advanced to candidacy.

A student should be ranked "**Deficient**" if the *majority* of the Comprehensive Examination Committee views the student's overall performance in **both** the written and oral portions of the examination to be less than adequate.

If the student is ranked as "**Deficient**" the following procedures occur:

1. The examination committee determines which content portion(s) must be retaken.
2. The student may be encouraged or required to take additional classes or retake classes to remediate the deficiencies.
3. All requirements of the student are enumerated on the *Committee's Comprehensive Examination Evaluation* (Form 5b).
4. General areas of concern which will be covered during the re-examination may be given to the student for study, but specific questions will **not** be given in advance.
5. Retake of the deficient portion(s) of the comprehensive exam may be scheduled no sooner than the subsequent semester. The original scheduling procedures will be followed: both the written and oral portions of the re-examination are conducted.
6. **All** members of the Comprehensive Examination Committee will be given access to the student's written portions of the retaken exam and attend the oral examination. A **majority vote** will determine the final assessment taking into account the portions of the first examination that had been "Passed" by the candidate and the candidate's area of specialization.
7. Grading of retaken examinations will be evaluated on a **Pass** or **Fail** basis.
8. Results of the re-examination (taking into account the portions of the first examination that were passed and the re-examination material), must be reported on the *Committee's Comprehensive Examination Evaluation* (Form 5b) and sent to Graduate Studies.
9. Retake examination results and copies of the student's responses are to be kept in the student's file.

A student should be ranked "**Fail**" if the **majority** of the Comprehensive Examination Committee views the student's overall performance in both the written and oral portions of the examination to be markedly inadequate during the first examination or a subsequent re-examination. If the student receives the rank of "**Fail**" he/she will be dismissed from the graduate program in the department.

Checklist: Doctoral Comprehensive Exam

Note: Exam must be taken before data collection.

1. _____ **STUDENT** begins studying for the comprehensive examination with **committee chair** one semester before course work is completed.
2. _____ **STUDENT** submits a signed *Scheduling Comprehensive Exam* form to the **graduate secretary** **three weeks prior** to the proposed date of the first written exam.
3. _____ **Committee chair** submits collected questions from the **committee** to the GRADUATE COORDINATOR at least **one week prior** to the exam date.
4. _____ GRADUATE COORDINATOR approves the questions and then gives them to the **graduate secretary** who clarifies the following information if needed:
 - How many hours should each question take to answer?
 - Which exam day for which questions? (Question hours should not total more than the hours allotted for the given day.)
 - Special considerations? For instance, usually notes are not allowed, but there may be an exception.
5. _____ **STUDENT** takes the written exams on 2 days within a mutually agreeable 8-day period.
6. _____ **Graduate secretary** administers the exam by:
 - Assembling questions for each day onto a blank jump drive for the student. Student may see only the questions for the given day.
 - Preparing a department laptop and clearing all information (documents, browser histories, etc.).
 - Escorting the student to the exam room, posting 'Do Not Disturb' signs, and dropping in occasionally to check on needs.
 - Collecting the jump drive with responses at the conclusion of the test.
7. _____ **Graduate secretary** sends emails with each examiner's question(s) to each respective examiner with *Individual Examiner's Comprehensive Evaluation* (Form 5a) and all responses to the **committee chair** with *Committee's Comprehensive Examination Evaluation* (Form 5b) and to the GRADUATE COORDINATOR.
8. _____ **Graduate secretary** saves back-up responses in an electronic file.
9. _____ **Committee** returns *Individual Examiner's Comprehensive Evaluation* (Form 5a) to **committee chair** no later than **4 business days** before the scheduled oral exam.
10. _____ **Committee chair** forwards copies of all the individual examiner's evaluations to the GRADUATE COORDINATOR at least **2 business days** before the oral exam.
11. _____ **Committee** and **STUDENT** conduct the oral exam **within 2 weeks** of the last written exam.
12. _____ **Committee** assesses performance and completes *Committee's Comprehensive Examination Evaluation* (Form 5b).
13. _____ **Committee chair** submits all *Examiner's Comprehensive Examination Evaluation* (Form 5a) forms and *Committee's Comprehensive Examination Evaluation* (Form 5b) form to the GRADUATE COORDINATOR within 24 hours.
14. _____ After review, the GRADUATE COORDINATOR gives all forms to the **Graduate secretary** for the student file.
15. _____ **Graduate secretary** enters results on AIM.
16. _____ **STUDENT**, upon successful completion of the comprehensive written and oral exams, is advanced to candidacy.

Scheduling Comprehensive Exam

To schedule the comprehensive examination, submit this signed form to the graduate secretary *at least three weeks prior* to the desired date for the first written exam. The written exams must be completed within an 8-day period, usually 12 hours total. The oral exam must take place within **two weeks** of the second written examination. The committee chair must be in attendance and all other members of the comprehensive examination committee must be in attendance or be able to effectively interact with the graduate student and committee members. If this cannot happen, then the oral exam must be rescheduled.

I certify that my coursework is complete and my thesis requirement has been fulfilled.

BYU ID# Net ID	student signature	printed name	date
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Written Exam Dates

date of first written exam	begin time	end time	location
date of second written exam	begin time	end time	location

Oral Exam Date

date of oral exam	begin time	end time	location
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Signature of each committee member denotes that the committee member is familiar with the comprehensive exam policies and procedures and is responsible to see they are carried out. All question contributors are part of the examination committee.

committee chair signature	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
graduate coordinator signature	printed name	date
graduate coordinator signature	printed name	date

**Non-Exercise Sciences committee members please indicate an email address.*

_____ submission date

*Individual Examiner's Comprehensive Examination Evaluation
Form 5a*

Student Name _____ Area of Specialization _____

Student ID# _____ Examiner Name (print) _____

Date of **Written Exam** _____ Circle evaluation: **Pass** **Deficient*** **Fail**

Comments on Written Exam (include specific remedial work needed*)

Date of **Oral Exam** _____ Circle grade: **Pass** **Deficient*** **Fail**

Comments on Oral Exam (include specific remedial work needed*)

examiner signature

date

graduate coordinator signature

date

* Requiring remedial work and/or retake of weak portions of the examination

Note to examiners: After the written exam, fill in the top comments and submit this form to the committee chair at least four days prior to the oral exam. The committee chair will return the form to you at the oral exam for additional assessment.

Committee Comprehensive Examination Evaluation *Form 5b*

Student Name _____ Area of Specialization _____

Date of Written Exam _____ Date of Oral Exam _____

After evaluating a vote by the committee, circle the **FINAL** grade: **Pass** **Deficient*** **Fail**

*In the case of a Deficient grade, list specific remedial work that needs to be accomplished and weak content portions of the exam which need to be retaken:

committee chair signature	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	Date
committee member signature*	printed name	date
committee member signature*	printed name	date
committee member signature*	printed name	Date
graduate coordinator signature	printed name	date

5.0 Completing Your Program

There are two critical forms on the next two pages. Other information regarding final steps to graduation follow in more detail.

The first form is based on *Graduation Deadlines* generated by Graduate Studies which can be found in GradProg → Resources → Deadlines. Deadlines in the Department of Exercise Sciences vary slightly from the university page. It is essential for graduate students to be very familiar with deadlines as they approach graduation as THERE ARE NO EXCEPTIONS for missed deadlines. Students should make every effort to significantly beat deadlines in case faculty members or key people are unavailable for signatures or other steps in the process. No matter who is unavailable, it is still the student whose graduation is delayed and who will likely incur significant additional cost and inconvenience.

The second form is the *Checklist: Graduate & Thesis/Dissertation Defense*. This form incorporates requirements from the department, college and university for the student, committee members, graduate coordinator and the graduate secretary, all on one page for quick reference.

To the student: Meeting deadlines is *your* responsibility. Do not compromise quality in order to meet a deadline. Be proactive and ask your committee members how much time is needed (generally one week) to read drafts and to return input to you well before deadlines. Feel free to remind your committees of approaching deadlines. Request permission, in advance, to contact professors at home if needed. Be aware of committee or staff vacation schedules and plan accordingly, especially during Spring or Summer terms.

By utilizing these two forms, the administrative steps toward graduation should be greatly facilitated.

5.1 Appeal for Exceptions to the Thesis/Dissertation Process

If major procedures of the thesis/dissertation process cannot be fully met, the student may petition for a departmental exception. The student must submit written justification for the exception to the graduate coordinator. The graduate advisory committee hears appeals for all procedural exceptions. Members of the committee meet as a body and decisions are made by a majority vote. Exceptions include items such as using preexisting data, collecting data prior to completion of the doctoral comprehensive exams, or requesting changes of time limits.

Appeal for Departmental Exceptions to Thesis/Dissertation Process

If major procedures of the thesis/dissertation process cannot be fully met, the student may petition for a departmental exception. The student must submit written justification for the exception to the graduate coordinator. The Graduate Council hears appeals for all procedural exceptions. Members of the committee meet as a body and decisions are made by a majority vote. Exceptions include items such as using preexisting data, collecting data prior to completion of the doctoral comprehensive exams, or requesting changes of time limits.

Applicant Information			
Name		Date	
Current Mailing Address		BYU ID Number	
City	ST/PROV	Postal Code	Country
			Graduate Department
Phone	E-mail		Degree Sought
Exception Information			
State the exception you are requesting from the Department. If additional space is needed, attach a letter and any supporting documents. Petitions dealing with time-limit issues must include an in-depth timeline and contract to completion detailing the remaining graduate requirements. Petitions will be reviewed by the Exercise Sciences Graduate Council; after the committee meets, you will be notified of the committee's decision.			
Graduate Council Decision			
		<input type="checkbox"/> In Favor <input type="checkbox"/> Opposed	
Graduate Coordinator			Vote
		<input type="checkbox"/> In Favor <input type="checkbox"/> Opposed	
Committee Member	Vote	Committee Member	Vote
		<input type="checkbox"/> In Favor <input type="checkbox"/> Opposed	
Committee Member	Vote	Committee Member	Vote
		<input type="checkbox"/> In Favor <input type="checkbox"/> Opposed	
Committee Member	Vote	Committee Member	Vote
		<input type="checkbox"/> In Favor <input type="checkbox"/> Opposed	
Comments			

5.2 Forms – Deadlines for Graduate Students and Checklist: Graduation Thesis/Dissertation Defense

Exercise Sciences Deadlines for Graduate Students 2022–2023

Students who miss the graduation deadlines for any given semester must register for at least 1 credit hour (June graduates) and 2 credit hours (April, August, December graduates); Graduate Studies prefers the student register for project, thesis, dissertation, or internship credit or pay the equivalent minimum registration fee and will graduate the following semester.

All graduation applications are submitted online.

Note: Department and college deadlines may be earlier than those required by Grad Studies. This contains all Grad Studies and Department deadlines.

Dec 2022	Apr 2023	Jun 2023	Aug 2023	
Sep 16	Jan 27	Mar 10*	Mar 10*	Last day for graduate students to apply for graduation online in AIM. Go to byu.edu → myBYU → School → Apply for Graduation. *This date applies to those students who want to walk in the April graduation ceremonies.
		May 5**	Jun 23**	**Last day for students to receive a diploma, but NOT walk in the April graduation ceremonies.
Sep 30	Feb 10	Mar 17*	Mar 17*	Last day for departments to accept a student's graduation application in AIM (GRADQ, GRADAPP, and ADV01).
		May 19***	Jul 7***	***Last day for departments to accept a student's graduation application in AIM for a diploma.
Department Deadlines (dates are last possible days; change according to the day you choose for defense):				
Nov 2	Mar 14	May 9	Jul 5	▪ Review copy of T/D to Grad Coord minimum 2 weeks before defense;
Nov 16	Mar 28	May 23	Jul 19	▪ Schedule defense minimum of 2 days before defense date by e-mailing graduate secretary with day, date, and time for defense. †
Nov 18	Mar 30	May 25	Jul 21	▪ Hold a final oral exam (last possible day); committee approvals submitted online in GradProg (Ts automatically changed to Ps). ▪ Complete all qualifications; make all requested changes
Dec 2	Apr 13	Jun 8	Aug 4	▪ Send Word copy to Grad Secty to edit (last day possible). NOTE: INCLUDE REQUIRED/PREFERRED STYLE GUIDE USED (e.g., AMA, APA; REQUIRED) and ANY AUTHOR GUIDELINES FOR CITATIONS, TABLES, AND REFERENCES (OPTIONAL).
Dec 9	Apr 20	Jun 15	Aug 11	▪ Submit ETD (electronic dissertation/thesis) PDF and receive all approvals on ETD section of GradProg
Dec 16	Apr 27	Jun 22	Aug 18	▪ FINAL DEADLINE – All Department Deadlines must be completed by this date. This is the last day the student's ETD may be approved by all parties (Grad Studies, Department, College, then Grad Studies again). Also the last day to complete any remaining requirements for a degree including payment of fees, submitting grade changes (for I's, etc.), prerequisite independent study courses, and for departments to enter examination results (oral or written), or to clear a student for graduation (GradProg).
None§	Apr 27	None§	None§	Graduation — University Commencement (10:00 am)
None§	Apr 27–28	None§	None§	Graduation — College Convocations (8:00 am, 9:00 am, 11:00 pm, 2:00 pm, 3:00 pm, 5:00 pm)

† All students in dissertation or thesis programs must use GradProg to schedule the final oral examination at least two days before the exam. Final examinations may not be held during the "interim period" between semesters or terms.

§ December (previous year), April, June and August graduates (current year) are invited to participate in April graduation exercises.

Checklist: Graduation & Thesis/Dissertation Defense

Note: Allow time for possible absences of those who must approve or sign.

(Date)

1. _____ **STUDENT** applies online for Graduation by [deadline](#) (or see deadlines list above).
2. _____ **Graduate secretary** reviews student's progress report and ask student's committee chair to confirm student can meet the deadlines.
3. _____ If approved, **graduate secretary** enters the decision on AIM.
4. _____ **Committee** approves thesis/dissertation for delivery to the GRADUATE COORDINATOR by approving in GradProg under Ready for Defense.
5. _____ **STUDENT** brings copy of the manuscript to the GRADUATE COORDINATOR **at least 2 weeks prior to the defense**. If approved, GRADUATE COORDINATOR e-mails **graduate secretary** that the Defense can be scheduled.
6. _____ **STUDENT** schedules T/D defense by e-mailing **graduate secretary at least 2 days before defense date/time** (24 hours is permissible; more advanced notice is preferred).
7. _____ **Graduate secretary** schedules the room, invites faculty and students, and the **business manager** adds the defense to the department chair's calendar.
8. _____ **Committee** and **STUDENT** conduct the defense. **Committee chair** enters outcome of meeting in GradProg (Pass, Qualifications, Recess, Fail); all **committee** members approve outcome. If outcome is anything except Pass, **Committee chair** enters instructions for what needs to be done (**Committee** may approve right after defense; **Committee chair** should wait until qualifications/instructions have been met). Once these qualifications/instructions have been met, **Committee chair** enters the new outcome. *Note: When committee approves Defense on Pass in GradProg, all 699R/799R T grades are automatically changed to P.*
9. _____ **STUDENT** modifies T/D according to **committee** direction.
10. _____ **STUDENT** e-mails an e-copy of the T/D, including what style guide they want to use (e.g., APA, AMA; required) and a copy of the author guidelines for the journal of choice for publication (optional) to the **graduate secretary**. The T/D should be formatted accordingly. **Graduate secretary** proofs the document, works with student on any needed modifications and formatting, and readies the document for submitting as an ETD.
11. _____ **STUDENT** uploads final version of T/D to GradProg under ETD before the deadline for approval by Grad Studies, the **graduate secretary**, and the College, with final approval by Grad Studies.

5.3 Data Collection

No original data may be collected before the prospectus has been filed with the graduate secretary. Advisory Committee and IRB approval of every thesis must be obtained before any original data for the study can be collected. Pilot data may be collected prior to the proposal to refine methodology.

5.4 Writing the Thesis/Dissertation

The completed thesis/dissertation is a manuscript prepared for submission to a journal. The student should expect to work closely with the chair and committee writing several drafts before satisfactory completion of this capstone work. To save time on subsequent drafts, incorporate all style recommendations as soon as possible, including those from the university and in the style guide from the journal of choice for later publication (exceptions: line numbering, running heads, etc.).

When the committee chair approves a final draft, the student should

- Provide copies of the draft to the entire committee, either electronic or paper, depending on the preference of the member. This step happens before #4 on the *Checklist: Graduation & Thesis/Dissertation Defense* found at the beginning of this section.
- Ask members to give editorial comments for each draft and hope to receive detailed feedback.
- Allow at least one week for committee members to review each draft.
- When delivering revised drafts (including the final draft), return the previous draft with that member's edits and comments.

The thesis generally includes the following pages or sections:

- Title Page (requires university formatting)
- Abstract – a one-page summary of the research with emphasis on the findings and conclusions (requires university formatting)
- Acknowledgments (optional) (requires university formatting)
- Table of Contents (see university sample)
- List of Tables (if included; see university sample)
- List of Figures (if included; see university sample)
- Manuscript and/or published article (uses the style guidelines of the journal to which it is submitted)
- Appendix A – Raw Data (summarize if excessive in length)
- Appendix B – Statistical Tables

Never assume, suggest, or imply that members of the committee should give approval signatures based on the fact that the committee chair has already given approval. Each member should be given ample time to read all copies, including the final draft.

For more specific information on writing, see *Writing Guidelines*, 6.3.

5.5 Final Oral Defense

Preparation

The final oral defense committee is composed of the student's graduate Program of Study committee. Master's committees must have at least 3 voting members, doctoral committees must have at least 5 voting members. Ideally, the student and all committee members will be physically present in the same room at BYU for the oral defense. Because of technological advances in communication, the occasional use of these advances has been approved by Graduate Studies at BYU, but a petition must be submitted for approval before the defense. The same rules and regulations regarding attendance and the use of technology previously outlined (3.4, Proposal Meeting) regarding the proposal meeting apply during the final oral

defense. One member of the committee must represent the student's minor department if the student has declared a minor.

Prior to scheduling, there should be ample time for the committee and the student to read and revise as often as necessary to ensure all is ready for a defense. The student should respect committee members' time and start the process early enough to meet university deadlines. The purpose of the final oral defense is to test the student's knowledge and understanding of the completed research project.

The date, time and place of the final oral defense are published by the university. All final oral defenses are open to all faculty and students for the presentation and general discussion portion of the defense.

Scheduling

Scheduling the final oral defense implies that the committee is satisfied with revisions the student has made. The required minimum **24 hours**, from scheduling to the defense, is a time to prepare for the defense and is not the time to make major revisions in the thesis or dissertation. The copies of the thesis distributed to the committee and the graduate coordinator should be the final draft. Final oral thesis/dissertation defenses may not be held during the interim periods between semesters or terms.

The Meeting

The oral defense is scheduled for two hours and is conducted by the committee chair (who must be physically present). It should include an opening prayer, a presentation of the research by the student, an open discussion, followed by questioning by the committee of the student concerning the research. The chair should see that the defense is conducted in a rigorous, scholarly, but fair manner. Questions are directed to the student and should be answered by the student. While any member of the BYU academic community may attend a final oral defense, only the designated committee may question the student and vote on performance.

Decisions regarding the outcome of the defense are entered in GradProg.

Evaluation

Following the questioning, the student is asked to leave the room so the committee may discuss the quality of the defense and vote. Each voting member indicates their approval in GradProg.

The graduate committee may vote to pass, pass with qualification, recess, or fail the student. If the decision is to **pass**, no further work is required. If the decision is to **pass with qualification**, the committee may require minor revisions of the dissertation or thesis or may request that the student strengthen his or her preparation in subject matter areas, or both. When these qualifications are cleared and the committee chair has properly recorded the clearance in GradProg, the student is judged to have passed the examination. If two or more examiners vote to **recess**, the examination is recessed. The committee will provide a detailed summary to the student, to the department and to Graduate Studies of the expectations for improvement in the subject matter, and/or changes required in the dissertation or thesis before the examination will be reconvened. The details are entered in GradProg. With the approval of the Graduate Committee, the student may schedule a second and final examination. The new exam cannot be held sooner than a month after the recessed examination. If two or more examiners vote to **fail** (original defense), the examination is failed and the graduate degree program of the student is terminated. Because examination results of recess or fail may lead to termination of graduate status, the department is required to submit the results in GradProg (this goes to Graduate Studies) including the reasons for the decision.

All committee members must indicate their approval of the thesis outcome. At the conclusion of the defense, the committee chair should advise the student of the results to make clear what must be done to complete the degree. The committee chair should also have a discussion with the student regarding his/her general performance during the defense, pointing out strengths and weaknesses.

Article Submission

It is expected that an article containing the findings of the research shall be submitted to a refereed journal. Students should be aware that they may not copyright the thesis or dissertation if the article is to be submitted for publication. Copyright privileges vest immediately upon creating the work without requirement of notice or registration. If the material is published prior to submission to BYU a disclaimer should be included because the publishing company will hold the copyright. If the article is published after submission, the copyright is transferred to the publisher, although an author may negotiate retention of the copyright.

Following the final oral defense and the final signature by the graduate coordinator or department chair, the manuscript should be submitted to a peer reviewed periodical for publication. Journals should be chosen by impact factor, preferably a journal in the top twenty of the discipline.

If the committee members contribute substantially to the thesis or dissertation project, then their names may appear as co-authors in the subsequent publications. The decision of authorship should be established prior to manuscript preparation. Ultimately, the decision of authorship is determined by the student and committee chair based upon the contribution of each committee member.

5.6 Electronic Thesis Dissertation (ETD)

Graduation is near, stress is high, and ETD submission, while not difficult, is meticulous and can be frustrating. To minimize frustration, students should carefully follow all Graduate Studies and department templates and allow time to submit an ETD multiple times, just in case. The thesis or dissertation has already been approved for content by the committee, but once it is submitted in GradProg, it must also be approved by Graduate Studies, the department graduate secretary, the dean's office, and Graduate Studies (final approval) for formatting and other university requirements. If any of these offices disapproves the ETD, it will be returned to the student (with needed changes outlined) to submit again until it is accepted at all three levels.

Each office checks the following **partial** list for compliance.

- **Metadata** states the correct degree, type of document, that the student name matches the title page, and that the college and department are correct (both are plural). The thesis or dissertation title matches the title page and abstract, and key words are specific terms, lowercase, and separated by commas. The abstract is single-spaced with no indents and hard returns between paragraphs (this formatting differs from Abstract in ETD).
- The **ETD** itself has one-inch margins on all sides, black Times Roman font 12 pt for text (when needed 11 pt or 10 pt font is acceptable for tables and figures). All fonts are embedded. Pagination and headers are correct. No blank pages, correct rotation for readability, and no external links.
- **Bookmarks** are required; all bookmarks may be visible or accessed by the icon on the left of the PDF; all tables and figures should be bookmarked and the bookmark should target the figure as well as the figure title.
- **Tables** should never have more than 3 horizontal black lines and no vertical lines. Tables should be created as tables (not tabbed).
- **Title page** title uses inverted pyramid style if longer than six inches, mixed case in the double spaced title, no period after the title, any preposition five letters or more is capitalized, and both words in a hyphenated word are capitalized. The "in" in "in partial ful..." is not capitalized. "Chair" follows the name of the chair, and no other titles (PhD, Dr, etc.) are used on committee names. "Department of Exercise Sciences" is plural. The student name is identical as author. The sections of the title page are spaced evenly top to bottom.
- **Abstract** has mixed case in the single-spaced title. "Department of Exercise Sciences" is plural and followed by a comma and BYU. Paragraphs are single-spaced and indented with a blank line between paragraphs. The title matches the ETD title exactly. **Key word** list matches metadata.

- **Table of Contents** doesn't use the thesis or dissertation title, just the words Title Page, includes all major sections of the thesis or dissertation, matches the actual page numbers and includes all heading levels.

Note: Using a MAC sometimes causes trouble with the bookmarks (2013).

See 6.4, *Forms, Links, and Lists* for a list of university and departmental forms dealing with the thesis and dissertation process. The Multimedia Lab in 4840 HBLL can assist with formatting and programming ETD PDFs.

5.7 Graduate Student Exit Survey and Evaluation

Students, bring this completed form to your exit interview with the Graduate Coordinator.

Graduate Student Exit Survey and Evaluation

Graduate Student Exit Survey and Evaluation		Bring to Graduate Coordinator at the time of your Exit Interview	
General Information	<i>STUDENT NAME</i>	<i>PERMANENT E-MAIL</i>	<i>TODAY'S DATE</i>
	<i>PERMANENT ADDRESS</i>		<i>PERMANENT PHONE</i>
	<i>UNDERGRADUATE INSTITUTION ATTENDED</i>		
	<i>MAJOR</i>	<i>MINOR</i>	<i>YEAR & MONTH OF GRADUATION</i>
	<i>OTHER GRADUATE INSTITUTION ATTENDED</i>		
	<i>MAJOR</i>	<i>MINOR</i>	<i>YEAR & MONTH OF GRADUATION</i>
BYU Graduate Record	<i>DEGREE EARNED</i>	<i>SPECIALIZATION</i>	<i>GRADUATION DATE</i>
	<i>YEARS OF ATTENDANCE (FROM-TO)</i>		
	<i>COMMITTEE CHAIR</i>	<i>COMMITTEE MEMBERS</i>	
	<i>TITLE OF YOUR THESIS/DISSERTATION</i>		
	<i>SUBMITTED ARTICLE TO WHICH PUBLICATION?</i>		
Teaching/Research Record	<i>WHAT CLASSES DID YOU TEACH WHILE YOU WERE A GRADUATE STUDENT?</i>		
	<i>IN WHAT RESEARCH PROJECTS (NOT COUNTING YOUR THESIS OR DISSERTATION) DID YOU PARTICIPATE AS A RESEARCHER?</i>		
	<i>PROJECT TITLE</i>	<i>COLLABORATED WITH</i>	
	<i>PROJECT TITLE</i>	<i>COLLABORATED WITH</i>	
Evaluation of Graduate Program	<input type="checkbox"/> Yes / <input type="checkbox"/> No – <i>MAY WE SHARE YOUR PROGRAM EVALUATION RESPONSES WITH POTENTIAL APPLICANTS?</i>		
	<input type="checkbox"/> Yes / <input type="checkbox"/> No – <i>MAY WE SHARE YOUR E-MAIL SO POTENTIAL APPLICANTS COULD CONTACT YOU FOR CANDID PEER FEEDBACK ABOUT THE PROGRAM?</i>		
	<i>WHAT WERE YOUR GOALS? HOW WELL DID YOUR GRADUATE PROGRAM PREPARE YOU TO SUCCESSFULLY MEET YOUR GOALS?</i>		
	<i>WHAT DO YOU CONSIDER THE MOST VALUABLE PART OF YOUR GRADUATE EXPERIENCE? BE SPECIFIC.</i>		
	<i>IF YOU WERE GIVEN THE OPPORTUNITY, WHAT WOULD YOU CHANGE ABOUT YOUR GRADUATE PROGRAM? BE SPECIFIC.</i>		

Evaluation of Graduate Program continued	ARE THERE ANY CLASSES CURRENTLY REQUIRED YOU WOULD DELETE OR THAT YOU THINK SHOULD BE ELECTIVES INSTEAD?
	IN YOUR OPINION, ARE THERE CLASSES CURRENTLY NOT REQUIRED WHICH SHOULD BE REQUIRED?
	DID YOU ENCOUNTER ANY SCHEDULING PROBLEMS? IF SO, PLEASE DESCRIBE THEM.
	HOW PREPARED DO YOU FEEL FOR FINDING A JOB IN YOUR FIELD? DESCRIBE ANY CONCERNS.
	DO YOU HAVE SUGGESTIONS FOR HOW THE RELATIONSHIP BETWEEN STUDENT AND CHAIR COULD BE IMPROVED? COMMENT ON YOUR EXPERIENCE WITH YOUR CHAIR.
	COMMENT ON THE QUALITY OF TEACHING IN THE DEPARTMENT.
	WHAT ADDITIONAL INSIGHTS OR SUGGESTIONS DO YOU HAVE THAT WOULD IMPROVE THE QUALITY OF THE PROGRAM?
	DO YOU FEEL YOU WERE SPIRITUALLY STRENGTHENED BY YOUR EXPERIENCE AT BYU? HOW?
	WERE YOU INTELLECTUALLY ENLARGED? HOW?
	DO YOU FEEL YOUR CHARACTER HAS BEEN DEVELOPED? HOW?
DID YOUR BYU EDUCATION PREPARE YOU FOR LIFELONG LEARNING AND SERVICE? HOW?	

Future Plans	EMPLOYMENT		EMPLOYER NAME
	IS YOUR EMPLOYMENT RELATED TO YOUR DEGREE? IF YES, DESCRIBE THE POSITION.		ADDRESS
			PHONE
			TITLE/POSITION
	NUMBER OF OTHER OFFERS	SALARY RANGE	SALARY
	ACCEPTED DOCTORAL OR POSTDOCTORAL PROGRAM		INSTITUTION
	ADDRESS		PHONE
			PROGRAM
	TO WHICH OTHER INSTITUTIONS DID YOU APPLY?		
	WHAT ARE YOUR LONG-TERM PLANS OR GOALS?		
DID YOU RECEIVE CAREER ADVISEMENT?			
THANK YOU FOR YOUR CONTRIBUTION TO THE DEPARTMENT OF EXERCISE SCIENCES. PLEASE STAY IN TOUCH.			

6.0 Appendix

The appendix is a collection of information for additional reference. Some of the areas are referenced earlier in the handbook.

It is strongly recommended that students refer to the Graduate Student Handbook often.

6.1 BYU Academic Honesty Policy

The first injunction of the BYU Honor Code is the call to “be honest.” Students come to the university not only to improve their minds, gain knowledge, and develop skills that will assist them in their life’s work, but also to build character. “President David O. McKay taught that character is the highest aim of education: above knowledge is wisdom, and above wisdom is character.” (Aims of a BYU Education)

The following is known as BYU’s Academic Honesty Policy and is found in the current Undergraduate Catalog. In brief, it says be honest.

“BYU students should seek to be totally honest in their dealings with others. They should complete their own work and be evaluated based upon that work. They should avoid academic dishonesty and misconduct in all its forms, including but not limited to plagiarism, fabrication or falsification, cheating, and other academic misconduct.

Plagiarism

“Intentional plagiarism is a form of intellectual theft that violates widely recognized principles of academic integrity as well as the Honor Code. Such plagiarism may subject the student to appropriate disciplinary action administered through the university Honor Code Office, in addition to academic sanctions that may be applied by an instructor. Inadvertent plagiarism, whereas not in violation of the Honor Code, is nevertheless a form of intellectual carelessness that is unacceptable in the academic community. Plagiarism of any kind is completely contrary to the established practices of higher education, where all members of the university are expected to acknowledge the original intellectual work of others that is included in one’s own work. In some cases, plagiarism may also involve violations of copyright law.

“Intentional Plagiarism. Intentional plagiarism is the deliberate act of representing the words, ideas, or data of another as one’s own without providing proper attribution to the author through quotation, reference, or footnote.

“Inadvertent Plagiarism. Inadvertent plagiarism involves the inappropriate, but nondeliberate, use of another’s words, ideas, or data without proper attribution. Inadvertent plagiarism usually results from an ignorant failure to follow established rules for documenting sources or from simply being insufficiently careful in research and writing. Although not a violation of the Honor Code, inadvertent plagiarism is a form of academic misconduct for which an instructor can impose appropriate academic sanctions. Students who are in doubt as to whether they are providing proper attribution have the responsibility to consult with their instructor and obtain guidance.

“Examples of plagiarism include:

- *Direct Plagiarism.* The verbatim copying of an original source without acknowledging the source.
- *Paraphrased Plagiarism.* The paraphrasing, without acknowledgment, of ideas from another that the reader might mistake for your own.
- *Plagiarism Mosaic.* The borrowing of words, ideas, or data from an original source and blending this original material with one’s own without acknowledging the source.
- *Insufficient Acknowledgment.* The partial or incomplete attribution of words, ideas, or data from an original source.

“Plagiarism may occur with respect to unpublished as well as published material. Acts of copying another student’s work and submitting it as one’s own individual work without proper attribution is a serious form of plagiarism.

Fabrication and Falsification

“Fabrication or falsification is a form of dishonesty where a student invents or distorts the origin or content of information used as authority. Examples include:

- Citing a source that does not exist.
- Attributing to a source ideas and information that are not included in the source.
- Citing a source for a proposition that it does not support.
- Citing a source in a bibliography when the source was neither consulted nor cited in the body of the paper.
- Intentionally distorting the meaning or applicability of data.
- Inventing data or statistical results to support conclusions.

Cheating

“Cheating is a form of dishonesty where a student attempts to give the appearance of a level of knowledge or skill that the student has not obtained. Examples include:

- Copying from another person’s work during an examination or while completing an assignment.
- Allowing someone to copy from you during an examination or while completing an assignment.
- Using unauthorized materials during an exam or while completing an assignment.
- Collaborating on an examination or assignment without authorization.
- Taking an examination or completing an assignment for another, or permitting another to take an examination or to complete an assignment in place of the student.

Other Academic Misconduct

“Academic misconduct includes other academically dishonest, deceitful, or inappropriate acts that are intentionally committed. Examples of such acts include but are not limited to:

- Inappropriately providing or receiving information or academic work so as to gain unfair advantage over others.
- Planning with another to commit any act of academic dishonesty.
- Attempting to gain an unfair academic advantage for oneself or another by bribery or by any act of offering, giving, receiving, or soliciting anything of value to another for such purpose.
- Changing or altering grades or other official educational records.
- Obtaining or providing to another an unadministered test or answers to an unadministered test.
- Breaking and entering into a building or office for the purpose of obtaining an unauthorized test.
- Continuing work on an exam or assignment after the allocated time has elapsed.
- Submitting the same work for more than one class without disclosure and approval.

Procedures for Handling Incidence of Academic Misconduct

“Faculty are responsible to establish and communicate to students their expectations of behavior with respect to academic honesty and the student’s conduct in the course. Responsible instructors will investigate alleged academic dishonesty, determine the facts, and take appropriate action. In a case where academic dishonesty is determined to have occurred, the instructor must notify the Honor Code Office of the incident as a means of encouraging behavior change and discouraging repeat violations. In addition, the instructor shall consult with the department chair concerning disciplinary actions to be taken. If the incident of academic dishonesty involves the violation of a public law, such as breaking and entering into an office or stealing an examination, the act should also be reported to appropriate law enforcement officials. If an affected student disagrees with the determination or action and is unable to resolve the matter to the mutual satisfaction of

the student and the instructor, the student may have the matter reviewed through the university's Student Academic Grievance Procedure.

Applicable Actions

"A wide range of possible actions exists for cases of academic dishonesty. Instructors should take actions that are fair and equitable under the circumstances and should attempt to reach an understanding with the affected student on the imposition of an appropriate action. In some cases, the department, the college, or the university may also take actions independent of the instructor. Examples of possible actions include but are not limited to the following:

For instructors (in consultation with the department chair):

- Reprimanding the student orally or in writing.
- Requiring work affected by the academic dishonesty to be redone.
- Administering a lower or failing grade on the affected assignment or test.
- Administering a lower or failing grade for the course (even if the student withdraws from the course).
- Removing the student from the course.

For departments and colleges:

- After consulting with the Honor Code Office, dismissing the student from the program, department, or college.
- Recommending probation, suspension, or dismissal from the university.

For the university:

- The University may elect to discipline a student for academic honesty in addition to, or independently from, discipline imposed by a faculty member, a department, or a college. University discipline may be administered through the Honor Code Office or through the Dean of Students' Office. The Honor Code Office will maintain a record of all violations of this Academic Honesty Policy reported to it by the faculty. The university may elect to place an affected student on probation or to suspend or dismiss the student, and to place a temporary or permanent notation on the student's permanent academic transcript indicating that he or she was suspended or dismissed due to academic misconduct.
- The university may report an incident of academic misconduct to appropriate law enforcement officials and may prosecute an affected student if the act in question involves the commission of a crime (e.g., breaking into an office or building, stealing an examination, etc.).

Shared Responsibility Policy Statement

"Students are responsible not only to adhere to the Honor Code requirement to be honest but also to assist other students in fulfilling their commitment to be honest.

Faculty Academic Integrity

"The substantive standards of academic honesty stated in this policy apply *a fortiori* to faculty. Indeed, all members of the BYU community are expected to act according to the highest principles of academic integrity." *BYU Undergraduate Catalog* <https://policy.byu.edu/view/index.php?p=10>

For a detailed listing of sources, go the undergraduate catalog.

6.2 Authorship

An author is the person or persons who takes public responsibility for the content of the work. Decisions on authorship must be made by the authors themselves.

Three criteria are used to judge claims to authorship:

1. An author should have generated at least part of the intellectual content of a paper, including one or both of the following:
 - a. Conceive or design the study, identify the question or questions to be answered and the design of the paper
 - b. Collect or interpret the data
2. An author should have taken part in writing the paper, reviewing it for possible revision, or revising its intellectual content (not just its technical content).
3. An author should be able to defend publicly in the scientific community all of the intellectual content of the paper.¹

Authorship credit should be based only on substantial contributions to all of the following:

1. Conception and design or analysis and interpretation of data.
2. Drafting the article or revising it critically for important intellectual content.
3. Final approval of the version to be published.²

Other contributions—technical, financial, etc.—can be expressed at an appropriate place in the article. Written permission should be used if a person's name is mentioned in the article since readers may infer their endorsement of the data and conclusions.³

The authors should be listed in order of importance. Good scientists do not allow dilution of their own work by adding other people's names for their minuscule contributions. Some journals and university review committees ask authors to write what each did and the percentage of the contribution, with the entire group approving the percentages. Technical contribution can be acknowledged in Notes.⁴

Plagiarism and Copyright

One who has had no connection with a research project but presents its methods, data, or conclusions as his own has committed plagiarism; if the writings of another are taken essentially verbatim, there may be copyright infringement as well.⁵

Read the source, then put it aside and write. Cite all sources. Assume that all text is copyrighted, with the exception of government documents. Use of graphs, photographs, diagrams, dictionary definitions, music, media, and computer programs require written permission from the publisher or copyright owner.

References

¹ Huth, Edward J. MD. *How to Write and Publish Papers in the Medical Sciences*. Second Edition. Baltimore: Williams & Wilkins.

² Source: International Committee of Medical Journal Editors. Cited in Editorial Policy Committee, Council of Biology Editors. (1990). *Ethics and Policy in Scientific Publication*. Bethesda, MD: Council of Biology Editors.

³ Editorial Policy Committee, Council of Biology Editors. (1990). *Ethics and Policy in Scientific Publication*. Bethesda, MD: Council of Biology Editors.

⁴ Day, Robert A. (1988). *How to Write & Publish a Scientific Paper*. Third edition. Phoenix: Oryx Press.

⁵ Kennedy, Donald. (1985). *On academic authorship*. Scholarly Communication Reprint 4. Washington, D.C.: Office of Scholarly Communication and Technology, American Council of Learned Societies.

6.3 Writing Guidelines

Content for Prospectus – Thesis – Dissertation

Chapter 1: Introduction – Statement of the Problem

The introduction includes:

Statement of Purpose

A clear, concise, complete sentence that describes what will be done to solve the problem. A statement that describes what will be compared, investigated, examined, how relationships will be determined, etc.

Examples:

- The purpose is to compare motor ability with self-image.
- The purpose is to investigate the effect of regular physical exercise on hyperlipoproteinemia.
- The purpose is to compare the effectiveness of weight training programs that involve 1, 2, 3, or 4 workouts per week.
- The purpose is to examine the relationship between percent body fat and physical exercise patterns of adult Americans.

Hypothesis

- Written in pairs
 - Null or statistical hypothesis – statement of no difference or no relationship; used to set up a statistical test of significance: There is no relationship between . . . _____ will have no effect on . . .
 - Alternative or research hypothesis – statement of difference of a relationship; what is believed to be true: There is a relationship between . . . _____ will lower, raise . . .
- If one hypothesis is accepted the other is automatically rejected (if statistics permit).

Definition of Terms

- Definition of invented terms.
- Operational definition of a term that has several possible meanings, telling how it is used in the study.
- Definition of a term not commonly used by researchers and readers in the discipline.

Delimitations

- Choices the researcher makes to effect a workable research problem (such as tests selected, subjects or institutions studied, length of time involved).
- Delimitations, in effect, build a fence around the study and only the “animals” inside the fence are studied. Examples:
 - The sample included 40 volunteers from Provo, Utah.
 - The sample did not include workers who retired before 2006.
 - Exercise sessions were not supervised.
- When the procedures section (Chapter 3) is short and precise, this section should be eliminated.

Assumptions

- Conditions that are accepted or taken for granted by the researchers upon which the validity of the study depends.
- Careful researchers attempt to eliminate assumptions before beginning the research. Some researchers assume that the survey participants will honestly report their behavior. If they do not, the study will not be valid. In a study on physical fitness and self-concept, the researchers assume that a physical fitness program will improve physical fitness. If it does not, the study will not be valid.
- If an assumption cannot be eliminated or when experts will not agree with the assumption, it should be listed.

Limitations

- Related to assumptions.
- Possible shortcomings or influences that cannot be eliminated or controlled.
- They may result from delimitations imposed by the researcher.
- In the judgment of the researchers, the limitations will not invalidate the study, but they will make the study less precise or limit the conclusions that can be made. Examples:
 - Only 80% of the subjects completed the survey.
 - Activities of the subjects outside of the training hours could not be controlled.
 - Subjects were aware of the treatment received, but there is no reason to believe it would be more motivating than the other treatment.
- Too many limitations can jeopardize the validity of the study.

Chapter 2: Review of Literature

The review of literature has two purposes:

What to Research

- To assist in selecting and delimiting a research problem.
- To give ideas of hypotheses to test to extend existing knowledge or theory.
- To avoid duplicating research that has already been done.
- To place research in proper historical perspective compared to completed research.

How to Research

- To prepare the student to effectively plan and conduct the research.
- To suggest design and data analysis procedures.
- To become familiar with the leading researchers and experts on the topic.
- To illustrate ways to write the proposal and article.

Chapter 3: Procedures or Methods*Population*

- The group conclusions will apply to.

Sample

- The part of the population to be studied.
- How participants will be selected, informed, assigned, and controlled in the study.

Independent Variables

- Variables manipulated by the researcher (i.e., the treatment).

Dependent Variables

- Variables influenced by the treatment (i.e., tests or measurements performed to assess the effect of the treatment variable).

Statistical Analysis

- Definition of the statistical procedures used to analyze the data.
- Basis for acceptance or rejection of the hypothesis.
- Probability of Type I or Type II error.

Format for Prospectus – Thesis – Dissertation – ETD

The journal article is written using the style guidelines of the journal to which it is submitted, generally including the following sections:

1. Introduction
2. Methods/procedures
3. Results
4. Discussion/conclusion(s)

If you, the student, begin writing the proposal with an eye toward journal publication, and you know which journal you'd like to publish in, use the style guide (e.g., AMA, APA) suggested by that journal and consult their author guidelines from the very beginning and save yourself significant time and effort in subsequent drafts. The author guidelines cover details for handling footnotes, references, etc., while the style guide governs the use of everything else (headings, numbers).

Since how the data is presented in the journal article is critically important, please strongly consider the following suggestions:

1. Organize the raw and summary data into tables.
 - a. A table must stand by itself: The reader should understand the table without referring to the text.
 - b. The table should have unity; deal with only one parameter if possible.
 - c. The table should be simple. A table is to communicate information, not test the reader's IQ.
 - d. The table should be short – one page maximum.
 - e. The title to the table should be concise and informative.
 - f. Footnotes may be used in the table.
 - g. Tables must be checked carefully for accuracy of data.
2. Decide if figures are to be used. Graphs can often illustrate important relationships. Use the same table guidelines above for figures.
3. After the tables and figures have been developed, the narrative is added.
 - a. Introduce the table or figure in the narrative.
 - b. Present the table or figure.
 - c. Discuss pertinent relationships or projections of the data.
 - d. Present statistical analysis of the data, the test of significance, and give the finding in terms of accepting the hypothesis, of declaring a difference or no difference, etc. Depending on the statistical analysis used, a table for the analysis data may be appropriate. When analysis of variance experimental design or multiple regression is employed as the statistical technique, a table should be used.
4. Don't be redundant – if there is a data table, do not reiterate the same numbers in the text or in a figure.

The format of the introductory pages (title page, abstract, acknowledgements) of the thesis or dissertation is dictated by the university. Sample first pages and detailed instructions for their formatting are available in GradProg. (See Resources, Formatting, ETD Basics.) Some of the pages are set up as templates and are very easy to insert information unique to the paper, but students should be aware title length may impact the spacing of the page, so should not rely solely on the template. It will be up to the student to ensure the completed product complies with the requirements especially regarding the spacing of the title page.

6.4 Forms, Links, and Lists

Graduate Studies forms

Most Graduate Studies forms dealing with the thesis and dissertation process may be obtained in GradProg (Resources, Formatting) or at Graduate Studies <https://gradstudies.byu.edu/academics/etd-instructions> (Thesis and Dissertation Formatting Policy – first link = title page, second link = preliminary pages).

The forms more commonly used during the final semesters of a student's progress are listed below.

Form ID	Abbreviated Form Name
ADV Form 2a	Graduate Full-time Status Request
ADV Form 5	Leave of Absence Request
GS Form 6	Application to Resume Graduate Study
ADV Form 8g	Letter of Completion Request
ADV Form 14	Survey of Earned Doctorates

Department Forms

Many department forms are found in this Graduate Student Handbook (GSH). The downloadable versions and a few other forms are found on the EXSC website (Graduate Forms & Handbook).

Grad Student Forms (<https://exsc.byu.edu/graduate-forms-handbook>)

Handbook & Info

- Graduate Student Handbook
- Graduate Course Rotation

Department Forms

- Student Travel Application
- Conlee ACSM Travel Award Application
- MS Scholarship Application
- Absent Notice
- Injury Report Form

Research Forms

- Research Subject Reimbursement Form
- EXSC 797R Contract – Graduate Individual Research
- EXSC 497R Contract – Undergraduate Individual Research
- Faculty Request for Lab Assistant
- Faculty Request for Teaching Assistant

Orientation Info

- Grad Studies Online Orientation
- Orientation Handouts
- GradProg Instructions
- Website Access Instructions
- How to Access Class Rolls
- How to Access Testing Center Results
- BYU Academic Calendar
- Sample Subject Reimbursement Form

Prospectus/Proposals

- Thesis/Dissertation Checklist
- Proposal Scheduling

Doctoral Comprehensive Examination

- Doctoral Comprehensive Examination Checklist
- Schedule Comprehensive Exam
- Individual Examiner's Comprehensive Examination Evaluation
- Committee Comprehensive Examination Evaluation

Appeal for DEPARTMENTAL Exceptions

- Appeal for Departmental Exceptions to Thesis

Graduation

- EXSC-Modified Deadlines for Graduate Students
- Graduation & Thesis/Dissertation Defense Checklist

Graduate Student Exit Survey

- Graduate Student Exit Survey and Evaluation

Graduate Studies Forms

- Grad Studies Forms

Additional Links

- Department of Exercise Sciences Home <http://exsc.byu.edu/>
- MAT Program Details <https://gradstudies.byu.edu/athletic-training-mat>
- Master's Program Details <https://gradstudies.byu.edu/exercise-sciences-ms>
- Doctorate Program Details <https://gradstudies.byu.edu/exercise-sciences-phd>
- EXSC Facebook <http://www.facebook.com/BYUExSc>
- For detailed information or a list of current faculty research publications, see: <http://exsc.byu.edu/Faculty-Staff> and click on the faculty photo.
- VERY useful link for students preparing to graduate: <http://gradstudies.byu.edu/page/graduation>. This page has other links which are helpful at all stages.
- Information on Electronic Thesis/Dissertation (ETD) can be found at: <https://gradprogress.sim.byu.edu/resources> or <https://gradstudies.byu.edu/academics/etd-instructions>

6.5 Glossary

ADV	Graduate Studies uses three short acronyms before their various forms. ADV is the most common. There are also GS and OGS forms
AIM	The AIM system is a large database of information and processes on campus. Progress Reports, grades, teacher and class schedules, scholarships, and many more items are all entered and organized on AIM
CANDIDATE	A doctoral student becomes a candidate once the comprehensive exam is passed.
ECCLESIASTICAL ENDORSEMENT	All students are required to obtain an Ecclesiastical Endorsement every year. The endorsement is made online by the student's ecclesiastical leader or for international students by the BYU Chaplain after an interview and is part of the application process. A renewal of the endorsement is required annually as a continuing student
ESL	English as a second language
ETD	Stands for Electronic Thesis Dissertation and is used to describe the thesis and dissertation submission process for the Harold B. Lee Library, and the electronic document itself
EXSC	Exercise Sciences
FAQ	Frequently Asked Questions
GHS	Global Harmonization System training added to the HAZCOM Standard training required for lab use
GPA	Grade Point Average
GradProg	Graduate Progress – streamlines most of Graduate Studies processes (Committee, Program of Study, Prospectus, Defense, ETD). Collects online signatures so paper forms are no longer needed

GRE	The Graduate Record Examination is a standardized test that is an admissions requirement for many US graduate schools (Wikipedia)
GS	Graduate Studies Department or Graduate Student
GSH	This Graduate Student Handbook
HPRC	Human Performance Research Center – all EXSC labs
IRB	Institutional Review Board
LSGradTracker	Department-generated system that tracks evaluations for each student (Graduate Studies requirement: two required per academic year – Fall XXX1 thru Summer XXX2).
MAP	Major Academic Plan – usually fits on one sheet and explains what courses and other requirements are necessary for graduation in a specific program or specialization.
PILOT DATA	Preliminary data which may be collected under very limited circumstances
Progress Report	A list of courses and other requirements and your status in the completion (or deficit) of those items (available under Tools in GradProg).
RAO	BYU's Research Administration Office (rao.byu.edu) – formerly ORCA
T Grade	If a course has a grade rule that allows T grades, and the course is not completed in one semester, it will receive a T grade. When the course is completed, which might be a year or more later in the case of thesis or dissertation credits, it will receive a final grade when all work is completed (and for all of the semesters/terms, in the case of theses/ dissertations). In some cases the student will register for new credits each semester, and in other cases, the student might register for some credits in one semester but not again. In either case, the grade will not be entered or finalized until the work is completed. Until the final grade is submitted, a 'T' will be on the record (T grades do not affect GPA)
TOEFL	Test of English as a Foreign Language which is required at BYU for ESL students in many cases