

Program in Rehabilitation Science Student Handbook

PhD and MS Degrees

2012-2013

(revised 12/29/11)

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IMPORTANT NOTE: *In addition to the contents of the Rehabilitation Science Program Handbook, all Rehabilitation Science students are responsible for the material contained in the University’s Student Code of Conduct and the Graduate School Catalog. These documents can be found online at:*

University’s Student Conduct Code:

<http://www.r.umn.edu/student-life/student-conduct/>
http://www1.umn.edu/regents/policies/academic/Student_Conduct_Code.pdf

Graduate School Catalog:

<http://www.catalogs.umn.edu/grad/>

Any questions or concerns regarding the content of the Rehabilitation Science Program Handbook should be addressed to the DGS – Assistant listed on page 4 of this handbook.

**University of Minnesota
Program in Rehabilitation Science
Mission and Vision Statement**

The faculty of the Program in Rehabilitation Science at the University of Minnesota is driven to discover and disseminate rehabilitation breakthroughs to improve the quality of life and physical well being of persons in the state of Minnesota, the nation, and throughout the world. Our mission further encompasses the cultivation of premier scientists and future academicians to lead the transformation of the science and the practice of rehabilitation.

Program Contact Information -

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Important University Contact Information -

(Both the MyU and Onestop websites are central sites for all student needs)

MyU -	www.myu.umn.edu
Onestop -	www.onestop.umn.edu
University of Minnesota Homepage -	www.umn.edu
University of Minnesota Graduate School -	www.grad.umn.edu
Graduate Assistant Employment -	www.umn.edu/ohr/gae
International Scholar and Student Services Office -	www.issu.umn.edu
Boynnton Health Services -	www.bhs.umn.edu
Student Computing Services -	www.oit.umn.edu/students/index.htm
Rehabilitation Science Program -	www.rehabscience.umn.edu
Occupational Therapy Program -	http://cahp.umn.edu/ot
Physical Therapy Program -	www.physther.umn.edu

University of Minnesota
Program in Rehabilitation Science
PhD and MS Degrees

--- General Information ---

Active Status – All graduate students must stay active in the University’s registration system Fall and Spring semesters. Failure to stay active will remove the student from the graduate school roster and the student will need to re-apply for admission. A student’s active status is dependent on enrollment. As long as a student registers for a minimum of 1 graduate credit each Fall and Spring semester, the student will be considered an active graduate student. The number of credits a student is required to register for may vary dependent on the student’s VISA status, employment status, and/or financial aid needs. Please see the DGS – Assistant to determine registration requirements (contact information on page 4). In the event a student will not take any courses during a given Fall or Spring semester, the student must still stay active by registering for GRAD 999 or by consulting with his/her advisor in advance of the start of the semester to determine a registration plan. Please see GRAD 999 (page 6) for Rehabilitation Science’s policy on registering for GRAD 999.

Annual Student Review - All Rehabilitation Science students will be reviewed annually, typically in the spring of each year. The review will cover academic performance and research progress. The form of the review will be both written and verbal. All Rehabilitation Science students will have an opportunity to formally respond to their annual review.

Computer Access - Computers are available for student use in student labs and offices in Children’s Rehab Center. There are also computer labs in Coffman Memorial Union and University libraries. For locations, please see the DGS-Assistant.

Copier Use – The copier in the mailroom on 2nd floor of Children’s Rehab Center is designated for faculty and staff use only. Students may use the copier for work related to the student’s research assistantship and/or teaching assistantship. Students may not use the 2nd floor copier for the student’s general school work or for non-University related work.

E-mail - All registered students will have an official University e-mail address. It will be the student’s responsibility to activate his/her e-mail address. Instructions for activating your account can be found at: <https://www.umn.edu/initiate>. Students may contact the DGS-Assistant if further information is needed. All Rehabilitation Science students will receive University-related correspondence via the student’s University of Minnesota email account. Non-University of Minnesota email accounts will not be used to transmit University-related information.

Emergency Situations – If you face an emergency situation of any kind, please, do not hesitate to contact your local fire department, police department, or medical facility. The best way to do so is to find the nearest phone and dial 911. 911 is the dedicated emergency phone number throughout the United States.

Financial Aid - Full-time students may apply for a limited number of fellowships. Research and teaching assistantships are arranged through faculty advisor. Students should contact the DGS-Assistant for further information. For additional financial aid information, students should visit the following website: http://onestop.umn.edu/finances/financial_aid/index.html .

GRAD 999 – GRAD 999 is a non-credit, non-cost course that students register for to stay active within the graduate school. A student needs advisor approval—in writing—in order to register for GRAD 999. Permission should come from the advisor via email and both the DGS and DGS-Assistant should be copied on the email. Written permission should be granted in advance of the first day of the semester. If a student registers for GRAD 999 without advisor permission, a hold will be placed on the student’s record for the following semester. The student will then need to consult with his/her advisor on a plan of study in order to release the hold. The consultation to release the hold needs to occur before the first day of the semester.

HIPAA Compliance – The AHC requires all students and faculty to be compliant with the federal Health Insurance Portability and Accountability Act (HIPAA). Information regarding this act and compliance is available at:

www.fpd.finop.umn.edu/groups/ppd/documents/policy/hippainfopol.cfm

As AHC policy states, all AHC students will complete HIPAA training. Instructions for completing HIPAA training will be during your orientation session with the DGS-Assistant.

Immunization Records – The Rehabilitation Science Program is a part of the Academic Health Center (AHC) at the University of Minnesota. All AHC students are required to have a health clearance as a condition of enrollment. This information must be completed to register for classes in the AHC. When you are notified of acceptance to the Program, the Graduate School will also inform you of the University’s immunization policy and direct you to Boynton Health Service’s web site for immunization procedures. For more information regarding this process and compliance, please visit the following:

<http://www.bhs.umn.edu/immunization-requirements.htm> .

Lab and Office Space – Laboratory and office space will be arranged and assigned based on availability and need. Please contact the DGS-Assistant for more information regarding lab and office space.

Orientation – Once you are admitted, the DGS-Assistant will contact you to arrange a program orientation. During this orientation you will be provided information necessary for getting started as a graduate student. In addition to this internal, program orientation, it is highly recommended that students new to the University complete Graduate School orientation. Graduate School orientation information can be found at:

<http://www.ofyp.umn.edu/graduate-students.html>

All international students will complete international student orientation. Please contact the International Scholar and Student Services (ISSS) to arrange for this orientation. Contact information for ISSS can be found online at: www.iss.umn.edu.

Phone Policy – Students may not bill long-distance phone calls, or local phone calls requiring a fee, to any University phone unless given permission by Rehabilitation Science faculty and/or staff. In the case of a family emergency, students may place a long-distance phone call from a University phone at the student’s discretion. From University phones, billable calls may be made using phone cards, credit cards etc., as long as no charges are billed to the University of Minnesota or the Rehabilitation Science Program.

Professional Services Policy – Rehabilitation Science students are expected to adhere to state laws when providing professional rehabilitation services, regardless of whether these services are for salary, fee, or free; and regardless of recipient’s status as student in affiliated programs. If a Rehabilitation Science student is appropriately credentialed and licensed in the state and chooses to offer professional rehabilitation services, these services must be within the practice act guidelines of the profession and may not be performed on University premises or with University equipment/supplies. All concerned parties (i.e., student service provider and service recipient) must be aware that such service is not covered by the University’s liability. This policy does not apply to assessments or interventions when performed as part of Rehabilitation Science students’ coursework or research projects.

Registration Requirements and Procedures – Students need to meet with their advisor to develop a plan of study and to plan the courses they will take each semester. Students are encouraged to attend full-time (6 credits or more of graduate level work Fall and Spring semester). Students may enroll in the program as a part-time student (<6 credits per semester) in consultation with the student’s advisor. All Graduate School students are required to retain Active Status with the Graduate School for the duration of the student’s studies. For more information regarding Active Status, please see page 5. Students should register early, if possible, so faculty can confirm that there are a sufficient number of students enrolled to offer the course, and to avoid late registration fees. Generally, except for independent study courses, six students must be registered for a course, otherwise, the course may be canceled. Students should visit the Onestop or MyU student websites for registration instructions and procedures (see page 4 for web addresses). If you are asked to provide a permission number for registration, or if assistance is needed for off-campus registration, or for any other special needs a student may need regarding registration procedures, please contact the DGS-Assistant.

Research Assistants – Research assistantships are arranged between the student and the student’s faculty advisor. Research assistantships are dependent on available funds. For general information related to research assistantships, please contact the DGS-Assistant and/or visit the following website: <http://www1.umn.edu/ohr/gae/>.

Responsible Conduct in Research (RCR) Training - The Graduate School requires that all Graduate Students receive RCR training. Courses that meet, in part, the Graduate School and Program requirement for ethics training can include, but are not limited to: part of an existing course or courses; a course dedicated to research/professional ethics; faculty mentoring; and/or a non-credit seminar, workshop, or colloquium (such as RCR Part I and Part II training offered by the Office of the Vice President for Research). The Rehabilitation Science Program highly encourages students to complete RCR Part I and Part II. To access the Graduate School’s RCR policy and short course, please visit the following website: www.research.umn.edu/first/. A schedule and registration process is available on this website. Student should work with advisor to identify a mechanism for meeting this requirement.

SETTA Test for International Teaching Assistants – University of Minnesota policy requires that all prospective teaching assistants who are non-native speakers of English are proficient in English before serving as a teaching assistant. The policy can be found at:

<http://policy.umn.edu/Policies/hr/Performance/LANGUAGE.html>
<http://www1.umn.edu/ohr/teachlearn/graduate/itap/schedule/>

Upon arrival, all non-native speakers of English will be required to take the SETTA test before beginning as a teaching assistant. The University offers the SETTA at no cost to students who have been admitted to the Graduate School. Results of the SETTA help determine the student's initial eligibility for a TA assignment. It is possible for students to be exempted from this requirement if they are from a country where English is a primary language. For details, contact the DGS-Assistant.

Supplies – Supplies contained in the mailroom on the 2nd floor of Children's Rehab Center should not be used by students for personal use or for use related to the student's role as student. Supplies can be used if the work is related to the student's role as research or teaching assistant.

Teaching Assistants – Teaching assistantships are determined by Rehabilitation Science faculty. Contact your faculty advisor for more information regarding teaching assistantships.

Teaching Assistants and Teaching Practicum – It is accepted that a student can serve as a paid teaching assistant and receive credit for their teaching experience in the form of Teaching Practicum (RSC 8188), as long as the following provisions are met:

- ❑ Teaching Practicum has separate, identifiable responsibilities then those responsibilities the student has a Teaching Assistant.
- ❑ Teaching Practicum must be a faculty mentored experience.
- ❑ Teaching Practicum is arranged in consultation with the student's advisor.

Transfer of Credits - Students may transfer graduate-level credits earned as a non-degree seeking student at the University of Minnesota with Rehabilitation Science faculty approval. A maximum of 12 credits of graduate-level work completed as a non-degree seeking student at the University of Minnesota may be transferred and applied to the student's Rehabilitation Science degree. Graduate credits earned at other recognized graduate institutions may be applied to the doctoral degree if the course work (1) was taken as an enrolled, graduate-degree-seeking student; (2) appears on official graduate school transcripts; and (3) is accepted by the Rehabilitation Science faculty. With approval of faculty, credits earned while pursuing a University of Minnesota master's degree (post-professional) may be used to meet doctoral degree course requirements. Credits earned through an entry-level master's degree program, or professional doctoral program, generally do not meet the requirements, but may be petitioned. Transfer of credits from other institutions is not allowed for courses completed through independent (correspondence) study, through extension, or taken before the awarding of a baccalaureate degree.

Tuition and Fees - Current tuition rates and related fees can be found by visiting the following website:

http://onestop.umn.edu/finances/costs_and_tuition/index.html

Students should contact the DGS–Assistant if they have questions regarding tuition and fees.

--- Time Limits, Grade Requirements, and Termination ---

Time Limits for Earning Degree – In addition to the Program requirements outlined in this handbook, students must follow Graduate School requirements for completing their degree. The PhD must be completed and the degree awarded within five calendar years after passing the preliminary oral examination. For specifics on the MS, see the websites below. It is very important that students are familiar with the information, and follow the procedures, on the following Graduate School websites:

--- for PhD students ---

http://www.grad.umn.edu/current_students/doctoral/phdeddchecklist.html

--- for MS students ---

http://www.grad.umn.edu/current_students/masters/index.html

Minimum Grade Requirements - Students must maintain a minimum cumulative GPA of 3.0 for all course work taken in the degree program. DGS will coordinate the review of student transcripts annually. Students with GPA below the minimum cumulative GPA of 3.0, and students with an incomplete (“I”) on their Degree Program Form, will be notified, in writing, by the DGS and/or DGS - Assistant. Advisors will get a copy of this notification. For students with a GPA below the minimum cumulative GPA of 3.0, see “Termination of Graduate Studies” (page 9). For students with “I” grades on the Degree Program Form, see “Incomplete Grades”(page 9). (revised 9/3/02)

Incomplete Grades - Students with “I” grade(s) on their Degree Program form will have 3 consecutive semesters, including Summer Session, to complete the coursework for letter grade. After 3 consecutive semesters, if the work has not been completed for letter grade, the grade will be assigned an “F” letter grade unless course instructor approves, in writing, a time extension for completion of the “I” grade. Please consult with your advisor and course instructor to complete “I” grade(s) for letter grade(s). (revised 9/3/02)

Termination of Graduate Status - Termination of Graduate Status can be based on, but is not limited to, academic course performance and exam performance. In both cases (academic course performance and exam performance), action to dismiss a student must be preceded by a review of the students overall performance by the Rehabilitation Science faculty. A simple majority vote by Rehabilitation Science faculty must be registered in order to terminate graduate status of a student. The Faculty may agree to outline a mechanism and time limit for student to satisfactorily correct specific deficiencies and retain Graduate Status. Students are eligible to appeal termination with the Graduate School. (revised 9/3/02)

Academic Course Performance: The Graduate School and Program in Rehabilitation Science require that 1 warning be issued to the student regarding unsatisfactory academic course performance before a student is terminated. The warning must include the specific deficiencies and must outline a mechanism and time limit for correcting them. Grounds for Termination of Graduate Status due to academic course deficiency include, but are not limited to:

- Cumulative GPA of less than 3.0 in degree program
- Failure to earn a grade of C- or higher on a retake course (revised 9/3/02)

Exam Performance: Grounds for Termination of Graduate Status due to exam deficiency include, but are not limited to:

- Failure of preliminary written examination (see “Preliminary Written Exam,” page 10).
- Failure of preliminary oral examination (see “Preliminary Oral Exam,” page 11).
- Failure of final oral examination (see “Final Oral Examination,” page 12). (revised 9/3/02)

--- PhD Requirements ---

Course Work - The PhD degree requires a minimum of 36 graduate credits, not including dissertation credits (thesis credits). The minimum of 36 graduate credits is broken down as follows: a minimum of 16 graduate credits of Rehabilitation Science (RSC) courses, which includes 6 credits of departmental seminars (RSC 8100); a minimum of 8 graduate credits of statistics course work; and a minimum of 12 additional graduate credits from RSC courses, non-RSC courses, or a combination of both. Students are welcome to declare a minor, which requires 12 credits of non-RSC coursework. Sample minors of past students include Gerontology, Clinical Movement Science, or Neuroscience, but other minors may be pursued. If a student chooses to declare a minor, the student must follow the minor requirements of the program offering the minor. Acceptable statistics courses include, but are not limited to, PUBH 6450 – Biostatistics I, PUBH 6451 – Biostatistics II, EPSY 8261 – Statistical Methods I, and EPSY 8262 – Statistical Methods II. To fulfill the requirement students need to take both courses in the respective series (Biostats I and Biostats II; Stat Methods I and Stat Methods II). You cannot fulfill the statistics requirement by taking only PUBH 6450 – Biostatistics I and EPSY 8261 – Statistical Methods I. In addition to these minimum requirements, the advisor may require additional courses. Students need to meet with their advisor prior to each semester to plan the student’s course of study.

Minimum Grade Requirements - see page 9.

Language Requirement - None.

Thesis – Rehabilitation Science students pursuing the PhD are required to complete 24 thesis credits (RSc 8888). Students are allowed to register for up to 12 thesis credits after successful completion of the preliminary written exam. The remaining 12 thesis credits are completed after successful completion of the preliminary oral exam.

Official Degree Program Form - By the time a student has completed 16 credits, and ordinarily not later than the third quarter of registration, the student must file with the Graduate School an official Degree Program form. This form lists all courses the student has completed or will complete for the degree in Rehabilitation Science (as approved by the advisor and the DGS). This form can be found at the following:

http://www.grad.umn.edu/current_students/forms/gs89a.pdf

Preliminary Written Exam - All doctoral students are required to pass a written examination in their major field. This examination covers all work completed in the major field and must include work completed in the minor or supporting field, plus questions probing the student’s ability to collect and interpret information from the scientific literature. It will also determine whether the students have retained and integrated knowledge from their course work, have the

ability to articulate their knowledge in written form, and have the ability to reason and apply knowledge toward new questions.

A student cannot sit for Preliminary Written Exam if they have an “I” grade in their program of study (listed on the Degree Program form, see above). If a student does have an “I” on their Degree Program form, see “Incomplete Grades” (page 9). (Revised 9/3/02)

The student must get written approval from his/her primary research advisor to sit for the Preliminary Written Exam. The student must inform the DGS-Assistant of the exam date once the exam date is set.

The advisor, in consultation with the student, will recommend a Preliminary Written Examination committee to the DGS, as well as a chair. The advisor cannot serve as chair. The committee will include five members: three from the major (Rehabilitation Science faculty) and two from outside the major (non-Rehabilitation Science faculty). The DGS approves the committee and chair. The major responsibility of the committee chair is to organize the reexamination process, if necessary. Students are encouraged to meet with each committee member to discuss the scope of their questions and to identify critical readings at least 4-6 weeks before the exam. After the committee and committee chair are identified, the advisor will ask each committee member to submit examination questions which can be completed in 6 hours or less. The examination will be conducted over three consecutive days and thus, will be divided by the advisor into three short exams (i.e., two committee members’ questions on day #1 & #2; faculty advisor’s question(s) on day #3). On the first two days, students will receive their examinations at 8:00 AM and will return their responses by 8:00 PM of that day. On the third day, students will receive their examination at 8 AM and will return their responses by 2 PM. Each day the exam will be emailed to the student, who needs to confirm receipt of the exam by email or phone. The student will return the exam by email and receipt of the exam from the student will be confirmed by the advisor or DGS-Assistant. Students may work at the library or at home. Because the examination is not proctored, the student will be required to sign the following statement: "I completed this exam alone, without assistance from any other person. I pledge that I will keep this examination confidential, and not disclose (verbally, electronically, or in writing) specific examination content (questions or answers) to others or reproduce any portion of the examination in any manner." Each member of the committee will grade his/her specific questions on a pass/fail basis. (Revised 6/1/2011)

The following criteria will be used to evaluate the initial Preliminary Written Exam:

4 or 5 votes of pass = pass

3 votes of pass = fail with opportunity for reexamination

2 or less votes of pass = fail with student subject to “Termination of Graduate Status” (page 9)

All students will be notified by the advisor, in writing, regarding the vote that they received on the initial Preliminary Written Exam. A copy of this notification will be put on file with the DGS assistant. (Revised 9/3/02)

If a student receives a vote of 3 or less, the student will be notified by the advisor, in writing, that he/she has failed the Preliminary Written Exam. This notice of failure will be put on file with the DGS assistant. (Revised 9/3/02). If a student receives 3 votes of pass, the student must request to the committee chair, in writing, his/her desire for a re-examination. The student must make this written request within two weeks of having received results of the original preliminary

written exam. The committee chair will organize the re-examination with the committee members, providing the re-examination is conducted by the original written examination committee. Methods and procedures for re-examination are at the discretion of the committee and DGS and may include oral and written components. The committee chair will outline the methods, procedures, and terms of re-examination in a written letter to the student. A copy of this letter will go on file with the DGS. (Revised 9/3/02)

If a student receives 2 or less votes of pass, please see “Termination of Graduate Status” (page 9). (Revised 9/3/02)

Preliminary Oral Exam - All doctoral students are required to pass a preliminary oral examination in their major field. The preliminary oral examination must include a dissertation proposal and may include work in the major field, the minor field, and any work fundamental to these areas. Additionally, the oral examination can include questions elaborating on earlier responses from the preliminary written examination. A written proposal describing the intended dissertation project should be submitted to all committee members at least two weeks in advance of the examination date. The proposal must include an introduction, comprehensive review of the literature, specific aims, hypotheses, and detailed methods (i.e., a condensed research proposal will not provide the detail that will be expected). The advisor, in consultation with the student, will recommend a preliminary oral examination committee to the DGS, who in turn recommends the committee to the Dean of the Graduate School for final approval. The student must formally schedule the preliminary oral examination with the Graduate School at least one week in advance of the examination. The student should contact the DGS-Assistant for instruction on scheduling the preliminary oral examination with the Graduate School. The examining committee includes five members (minimum of four with advisor approval), but may include additional members at the discretion of the advisor. Three of the committee members must be from the major field (Rehabilitation Science) and two (or one) from outside the major (non-Rehabilitation Science faculty). All assigned members must be present in person or electronically (e.g., ITV or Skype) at the preliminary oral examination; the absence of any member results in an invalid examination. The preliminary oral examination committee may or may not include the same members as the preliminary written examination committee. Student should reserve a room through the DGS assistant for a minimum of two hours. The outcome of the examination is recorded in one of three ways: pass, pass with reservations, or fail. The voting proportions necessary for these decisions are as follows: If the committee consists of five members, a favorable verdict for passing consists of either a unanimous vote or a vote of 4-1; (If the committee consists of four members, a favorable verdict for passing consists of either a unanimous vote or a vote of 3-1). The proposal, once approved, represents an agreement between the doctoral candidate and the student regarding the expectations of the dissertation project that the student will eventually defend at the final oral examination. The format of the final dissertation document also requires the agreement of the committee. The format for the Preliminary Oral Defense will be: Student’s presentation of their dissertation proposal (30-40 minutes) followed by questions about the dissertation proposal or about student’s previous coursework. (Revised 6/2011)

Thesis/Project Proposal Form – Students must file a Thesis/Project Proposal form with the Graduate School no later than the first semester after passing the preliminary oral examination. Graduate School approval of the Thesis/Project Proposal form is required prior to obtaining the student’s graduation packet. The student’s graduation packet includes the official form for scheduling the final oral exam. The Thesis/Project Proposal form must include the proposed

thesis title and a thesis proposal, about 250 words in length, describing the research to be undertaken and the methods to be employed in carrying it out. The student should contact the DGS–Assistant for information on submitting the Thesis/Project Proposal form. (Revised 6/2011)

Graduation Packet - After the Thesis/Project Proposal form is submitted and approved, the student should request a graduation packet from the Graduate School. The graduation packet includes the form the student needs for scheduling the final oral exam. The student should contact the DGS – Assistant for information related to the graduation packet, and information on scheduling the final oral exam.

Final Oral Exam - The final oral exam consists of a seminar in which the candidate defends his/her dissertation project to the examining committee and other members of the scholarly community. After the public portion is concluded, the student will meet privately to respond to additional questions from the examining committee. The examining committee is the same as the committee assembled for the Preliminary Oral Exam. Committee substitutions on the examining committee may be necessitated by such circumstances as a faculty member’s temporary absence on leave from the University. The advisor or DGS must request the Graduate School’s approval of such substitutions well in advance of the examination. Substitutions necessitated by emergency situations must also be approved in advance. In such cases, the committee chair should consult with the Graduate School staff by telephone before the start of examination.

The dissertation is not only a representation of a student’s academic work, but also a reflection on the faculty advisor, the dissertation committee, the Rehabilitation Sciences Graduate Program, and the University of Minnesota. Because stylistic conventions vary greatly from one scientific field to another, the body of the dissertation may differ. The body of the dissertation may follow the traditional individual chapter format (introduction, review of literature, methods, results, discussion chapters) or represent a series of chapters (manuscript style). Regardless of the style, the dissertation must include a comprehensive review of the literature, integration of the findings, and bibliography. Students should consult with their faculty advisor and committee regarding what is an acceptable format. A written copy of the dissertation project should be submitted to all committee members at least three weeks in advance of the examination date. Three readers (2 internal & 1 external) must sign off that the dissertation is ready for defense one week prior to the defense. Students should reserve a room through the DGS assistant for a minimum of two hours. Students are not expected to provide food or beverages at their dissertation defense. Voting criteria will be the same as for the Oral Preliminary Examination. After any necessary final revisions, students are expected to provide a bound copy of their dissertation for their advisor, and the Rehabilitation Science program. (Revised 6/2011)

--- Master’s (MS) Requirements ---

---Plan A: Master’s Degree with Thesis---

Graduate School Requirements, including Degree Program Form – MS students are responsible for following Graduate School requirements for degree completion, including proper submission of graduate forms and for meeting deadlines. Degree completion procedures can be found at the following two websites:

http://www.grad.umn.edu/current_students/masters/index.html

Course Work - In addition to Graduate School Requirements, MS students must complete a minimum of 23 graduate credits, not including thesis credits. The minimum of 23 graduate credits is broken down as follows: 14 credits of RSC course work, including 4 credits of seminars in rehabilitation science (RSC 8100) and a research design course (PT 6293 or RSC 8192); 3 credits of statistics course work; and a minimum of an additional 6 graduate credits from RSC courses, non-RSC courses, or a combination of both. Students are welcome to declare a minor. Sample minors of past students include Gerontology, Clinical Movement Science, or Neuroscience, but other minors may be pursued. If a student chooses to declare a minor, the student must follow the minor requirements of the program offering the minor. Acceptable statistics courses include, but are not limited to PUBH 6450 – Biostatistics I, PUBH 6451 – Biostatistics II, EPSY 8261 – Statistical Methods I, EPSY 8262 – Statistical Methods II. Student advisor may require additional courses.

Minimum Grade Requirements - see page 9.

Language Requirement – none.

Thesis - Minimum of 10 thesis credits (RSc 8777).

Preliminary Oral Examination - Defense of thesis proposal to an examining committee. Please consult with your advisor for more information regarding the Preliminary Oral Exam. Also, please visit the following websites for Graduate School requirements:

www.grad.umn.edu/current_students/examiningcommitteesnew.html#MASTERS
www.catalogs.umn.edu/gen/gen/masters.html

Final Oral Examination - Defense of thesis research to an examining committee. Please consult with your advisor for more information regarding the Final Oral Exam. Also, please visit the following websites for Graduate School requirements:

www.grad.umn.edu/current_students/examiningcommitteesnew.html#MASTERS
www.catalogs.umn.edu/gen/gen/masters.html

---Plan B: Master's Degree without Thesis---

Graduate School Requirements, including Degree Program Form – MS students are responsible for following Graduate School requirements for degree completion, including proper submission of graduate forms and for meeting deadlines. Degree completion procedures can be found at the following two websites:

http://www.grad.umn.edu/current_students/masters/index.html

Course Work - In addition to Graduate School Requirements, MS students must complete a minimum of 30 graduate credits. The minimum of 30 graduate credits is broken down as follows: 14 credits of RSC course work, including 4 credits of seminars in rehabilitation science (RSC 8100) and a research design course (PT 6293 or RSC 8192); 3 credits of statistics course work; and a minimum of an additional 6 graduate credits from RSC courses, non-RSC courses, or a combination of both. Students are welcome to declare a minor. Sample minors of past

students include Gerontology, Clinical Movement Science, or Neuroscience, but other minors may be pursued. If a student chooses to declare a minor, the student must follow the minor requirements of the program offering the minor. Acceptable statistics courses include, but are not limited to PUBH 6450 – Biostatistics I, PUBH 6451 – Biostatistics II, EPSY 8261 – Statistical Methods I, EPSY 8262 – Statistical Methods II. The balance of courses to comprise the overall 30 credit minimum is chosen by agreement between the student and advisor. Student advisor may require additional courses.

Minimum Grade Requirements - see page 9.

Language Requirement - none.

Plan B Project(s) - Demonstration of familiarity with the tools of research or scholarship in the major field, ability to work independently, and ability to present the results of investigation effectively. Please visit the following for Graduate School policies and procedures:

www.catalogs.umn.edu/grad/gen/masters.html

Final Examination - Written or oral (or both) responses to questions from an examining committee. Please visit the following for Graduate School policies and procedures:

www.catalogs.umn.edu/grad/gen/masters.html

--- Faculty ---

James Carey PhD, PT - carey007@umn.edu

Professor, Program in Physical Therapy

Motor Recovery from Stroke, Neuroplasticity/functional Magnetic Resonance Imaging (fMRI), Academic Administration.

Teresa Jacobson Kimberley PhD, PT – tjk@umn.edu

Assistant Professor, Program in Physical Therapy

Neurobiological Basis of Recovery of Functional Ability after Brain Injury, functional Magnetic Resonance Imaging (fMRI), Neuromotor Control, Neuroanatomy.

Carl G. Kukulka PhD, PT – kukul001@umn.edu

Professor, Program in Physical Therapy

Basic Mechanisms Underlying the Organization of the Spinal Cord in Health and Disease, Evaluation of Spinal Pathways in Spinal Cord Injury, Role of Cutaneous Afferent Reflexes in Step Initiation.

Dawn Lowe PhD – lowex017@umn.edu

Associate Professor, Program in Physical Therapy

Muscle Physiology, Aging, Muscular Dystrophy, Exercise Science. Cellular and Molecular Mechanisms Underlying Muscle Deterioration that Occur with Age, Injury, and Disease.

Paula Ludewig PhD, PT - ludew001@umn.edu

Director of Graduate Studies (DGS), Associate Professor, Program in Physical Therapy

Shoulder Biomechanics & Rehabilitation, 3D Human Motion, Kinesiology, Electromyography, Ergonomics.

Peggy Martin MS, OTR/L – marti370@umn.edu

Program Director, Program in Occupational Therapy

Adult Education, Development of Expertise, Clinical Reasoning, Movement Analysis, Development Disabilities, Sensory Integration.

Virgil Mathiowetz PhD, OTR - mathi003@umn.edu

Associate Professor, Program in Occupational Therapy

Rehabilitation Outcomes for Stroke and Multiple Sclerosis, Task-Oriented Approach to CNS Dysfunction, Energy Conservation Strategies for Persons with Multiple Sclerosis, Measurement of Hand Strength, Dexterity, and Hand Function.

David Nuckley PhD – dnuckley@umn.edu

Assistant Professor, Program in Physical Therapy

Biomechanics; Orthopaedic Biomechanics; Research Problems; Injury Prevention, Diagnosis, and Management; Spinal Mechanics in Pediatrics; Therapeutic Strategies for Low Back Pain.

LeAnn Snow MD, PhD – snow0018@umn.edu

Assistant Professor, Program in Physical Therapy

Age, Exercise, and Rehabilitation; Biology of Aging; Effects of Exercise on Nerve and Muscle Function in Neuromuscular Disorders.

LaDora Thompson PhD, BS PT - thomp067@umn.edu

Interim Director, Professor, Program in Physical Therapy

Theory of Therapeutic Exercise, Biology of Aging, Exercise Physiology of the Elderly, Geriatric Rehabilitation, Aging Skeletal Muscle, Exercise and Inactivity, Skeletal Muscle Physiology, Functional Assessment, Congestive Heart Failure.

--- Course Descriptions ---

Students should check with DGS – Assistant (page 4) for class meeting times and for possible changes in the scheduling of courses.

RSC 5100 – Hot Topics – Biology of Aging (1 credit)

Biological research of aging. Student/faculty led discussions on select research topics that are highly relevant to the field of biogerontology research, along with seminars on scientific integrity. Students lead discussions focused on their area of research expertise, using review/research articles and case studies of scientific misconduct. Tour of laboratory/discussion of literature published by lab dealing with aging and/or proteomics. Offered every Spring semester of odd-numbered years.

RSC 5135 - Advanced Biomechanics I: Kinematics (3 credits)

Addresses two fundamental questions in human biomechanics: 1) how to describe movement, and 2) how to measure movement, with an emphasis on three-dimensional techniques. Includes lecture, laboratory exposure, and seminar discussion of basic and applied biomechanics, pathokinesiology, and rehabilitation literature. Classes are held together for both PMED 5135 and PMED 8135 registrants. Course assignments vary for those registered at different levels. Offered Fall semesters of odd-numbered years.

RSC 5231 – Clinical Biomechanics (2-5 credits)

Course material covers basic principles of biomechanics and forces and structures internal and external to the body responsible for normal and abnormal human movement. Joint and tissue mechanics, muscle function, task analysis, and gait mechanics are taught through lecture and laboratory practice. Offered every Fall semester.

RSC 5235 – Advanced Biomechanics II: Kinetics (3 credits)

This course examines the forces which create human motion and which are produced within the body as a result of human motion. Using lectures, laboratory experiments, and group discussion we will develop the skills for measuring the kinetics of human motion. Clinical movement assessment as well as exercise, sport, and activities of daily living will be measured and analyzed to describe the transfer of forces within the body. We will develop two dimensional rigid body dynamics models to describe human kinetics, discuss forward and inverse dynamics solutions, and develop hypotheses to describe whole body and joint kinetics. Offered Spring semesters of even-numbered years.

RSC 5294 - Independent Study in Rehabilitation Science (credits arranged)

Independent exploration into significant topics related to Rehabilitation Science. Offered by individual arrangement with faculty.

RSC 5814 - Age, Exercise, and Rehabilitation (2 credits)

Overview of normal physiological responses to exercise in the elderly. Comparison of exercise-induced responses of the various physiological systems throughout the aging process. Focus on the importance of exercise from a rehabilitation perspective. Offered Fall semesters of even-numbered years.

RSC 5841 - Rehabilitation Science Instrumentation and Methodology (4 credits)

Theory and application of kinesiological EMG and other common instruments used to measure human motion. Offered Fall semester of even-numbered years.

RSC 8100 - Rehabilitation Science Seminar (1 credit)

Seminar course that prepares students to 1) think critically in reading and discussing rehabilitation science literature, 2) identify important researchable questions, 3) propose reasonable methods to answer such questions and 4) speak and write persuasively on scientific topics. Offered every semester.

RSC 8130 - Current Literature (credits arranged)

Review of current literature in the area of rehabilitation science. Offered Summer session by individual arrangement with faculty.

RSC 8135 - Advanced Kinesiology (3 credits)

This course is designed to address two fundamental questions in human biomechanics: 1) how to describe movement, and 2) how to measure movement, with an emphasis on three-dimensional techniques. The course will include lecture, laboratory exposure, and seminar discussion of basic and applied biomechanics, pathokinesiology, and rehabilitation literature. Classes are held together for both RSc 5135 and RSc 8135 registrants. Course assignments vary for those registered at different levels. Offered Fall semesters of odd-numbered years.

RSC 8170 - Special Topics in Rehabilitation Science (credits arranged)

Advanced topics in Rehabilitation Science with papers required. Offered by individual arrangement with faculty.

RSC 8185 - Problems in Rehabilitation Science (credits arranged)

Supervised research experience in a selected problem in rehabilitation science. Offered by individual arrangement with faculty.

RSC 8188 - Teaching Practicum (credits arranged)

Supervised experience in teaching and evaluation with development of skills in effective use of instructional materials in lecture and lab courses. Students can expect to: create learning objectives for teaching unit(s); conduct a thorough review of current literature on topic; prepare classroom presentations; deliver classroom presentations; consult with faculty for feedback prior to presentation; compose test questions; proctor examinations. Offered by individual arrangement with faculty. 1-3 credits.

RSC 8192 - Research Design in Rehabilitation Science (3 credits)

Critical appraisal of current medical literature; fundamentals of research design and techniques of medical writing. Offered every Fall semester.

RSC 8235 – Human Kinetics (3 credits)

This course examines the forces which create human motion and which are produced within the body as a result of human motion. Human Kinetics draws upon basic biomechanics principles to uncover solutions for kinetics problems as well as the sensitivity of those solutions to measurement errors, assumptions, and limitations of the solution formulations. Using lectures, laboratory experiments, and group discussion we will develop the skills for measuring and analyzing the kinetics of human motion. Clinical movement assessment as well as exercise, sport, and activities of daily living will be measured and analyzed to describe the transfer of forces within the body. We will develop two dimensional rigid body dynamics models to describe human kinetics, discuss forward and inverse dynamics solutions, and develop hypotheses to describe whole body and joint kinetics. Offered Spring semesters of even-numbered years.

RSC 8282 - Problems in Human Movement (4 credits)

Fundamental principles of neurophysiology, neurology, motor control, and motor learning as a basis for therapeutic intervention in motor dysfunction. Offered every Spring semester.

RSC 8666 - Doctoral Pre-Thesis Credits (1-18 credits)**RSC 8777 - Thesis Credits: Master's (10 credits)****RSC 8888 - Thesis Credits: Doctoral (24 credits)**

GRAD 999 - Graduate School Active Service (0 credits)

Course to meet Graduate School's registration policy requiring all Graduate School students to register every Fall and Spring. GRAD 999 is a non-credit, non-cost course that students take to stay active within the Graduate School. A student needs advisor approval—in writing—in order to register for GRAD 999. Permission should come from the advisor via email and both the DGS and DGS-Assistant should be copied on the email. Written permission should be granted in advance of the first day of class. If a student registers for GRAD 999 without advisor permission, a hold will be placed on the student's record for the following semester. The student will then need to consult with his/her advisor on a plan of study in order to release the hold. The consultation needs to occur before the first day of class.

Mutual Responsibilities in Graduate Education at the University of Minnesota Approved by the Graduate School Executive Committee 5/28/97

Preamble

A major purpose of graduate education at the University of Minnesota is to instill in each student an understanding of and capacity for scholarship, independent judgment, academic rigor, and intellectual honesty. Graduate education is an opportunity for the student to develop into a professional scholar. Graduate research and teaching assistantships offer an “apprenticeship” experience in the academic profession as well as financial support. It is the joint responsibility of faculty and graduate students to work together to foster these ends through relationships that encourage freedom of inquiry, demonstrate personal and professional integrity, and foster mutual respect. This shared responsibility with faculty extends to all of the endeavors of graduate students, as students, employees, and members of the larger academic community.

High quality graduate education depends on the professional and ethical conduct of the participants. Faculty and graduate students have complementary responsibilities in the maintenance of academic standards and the creation of high quality graduate programs. Excellence in graduate education is achieved when both faculty and students are highly motivated, possess the academic and professional backgrounds necessary to perform at the highest level, and are sincere in their desire to see each other succeed.

The following principles illustrate what students should expect from their programs and what programs should expect from their students, to help achieve this excellence.

Principle 1: INFORMATION ABOUT POLICIES AND PROCEDURES

The Graduate School and graduate programs are responsible for providing students and prospective students with access to information about their graduate programs, areas of specialization, degree requirements, and average time to completion of degrees. Graduate programs are responsible for providing access to information about graduate student financial support in the program, such as the prospects for fellowships, assistantships or other financial support and the proportion of students receiving financial support. In addition, graduate programs should provide students and applicants with information about career experiences of graduates of the programs. All such information should be presented in a format that does not violate the privacy of individual students. Programs are encouraged to provide relevant information in their handbooks, websites or other readily accessible formats.

Students are responsible for keeping themselves informed about current policies of their program and the Graduate School that affect graduate students. Students and alumni also have a responsibility to respond to program inquiries about their career development.

Principle 2: COMMUNICATION ABOUT ACADEMIC STATUS

The Graduate School and graduate programs are responsible for providing students with information about their individual academic status: who in the Graduate School and in the graduate program is responsible for communicating to them about admission issues and progress through the degree program, how the communication will take place, and the possibility for appeal to a third party for assistance in resolving disputed issues.

Students are responsible for communicating with the Graduate School and their graduate program about changes in their circumstances that affect their status and progress toward the degree.

Principle 3: RESEARCH CONTRIBUTIONS

Individual faculty as research directors are responsible for providing students with appropriate recognition for their contributions at conferences, in professional publications, or in applications for patents. It is the faculty member's responsibility to clarify the principles for determining authorship and recognition at the beginning of any project.

Students are responsible for discussing their expectations regarding acknowledgment of research contributions or intellectual property rights with the appropriate person(s) in the research team, preferably early in the project.

Principle 4: UNIVERSITY GOVERNANCE

Departments and graduate programs are responsible for defining specific opportunities for student participation on committees as they deem appropriate. The University recognizes that graduate students make important contributions to governance and decision making at the program, department, college, Graduate School and University levels; specific roles for participation are defined at each level by the relevant governing bodies. For example, University Senate policy requires student membership on faculty search committees.

Students are responsible for participating in University governance and decision making that enrich the campus community.

Principle 5: RESPECTFUL EMPLOYMENT CONDITIONS

University faculty and staff are responsible for assuring that graduate students are able to conduct their work, as students or students/employees, in a manner consistent with professional conduct and integrity, free of intimidation or coercion. Students who are employees also have the protection of all University employment policies and laws. Graduate programs are responsible for providing clear communication to students about the possibility for appeal to a third party for assistance in resolving disputed issues.

Students are responsible for reporting unprofessional conduct to the appropriate body or person, as defined in the academic or employment grievance policy; they should be able to do so without fear of reprisal. Students are responsible for acting in a respectful and fair manner toward other students, faculty, or staff in the conduct of their academic work or work they may do in connection with an assistantship.

Principle 6: CONDITIONS OF EMPLOYMENT

The University (through its departments, research projects or other employing units) is responsible for providing to prospective graduate assistants a written offer financial support before a response to the offer is required. Such communication must indicate the salary and the terms and conditions of appointment, including the general nature of the work the student will be performing, duration of employment, and whether and how this employment is tied to the student's academic progress. The details of specific teaching or research assignments may need to await later written clarification.

Students are responsible for accepting the conditions of employment only if they believe they are qualified and able to complete the tasks assigned. Students have a responsibility for communicating in writing any changes in their circumstances that affect their ability to fulfill the terms and conditions of their employment.

Principle 7: SAFE WORKING ENVIRONMENT

Supervisors are responsible for providing a safe working environment for graduate students, and for developing and publicizing safety policies and training programs to achieve that goal.

Graduate students are responsible for helping to maintain a safe working environment, for adhering to safety policies, for participating in training programs, and for reporting safety violations to the proper authority.

OTHER UNIVERSITY DOCUMENTS may provide information and guidance relevant to the graduate education experience. Additional Board of Regents information and guidelines can be found by visiting: <http://www1.umn.edu/regents/polindex.html>.

Board of Regents, Code of Conduct, adopted July 12, 1996.
[<http://www1.umn.edu/regents/policies/academic/Conduct.pdf>]

Board of Regents, Academic Freedom and Responsibility, adopted October 8, 1995.
[<http://www1.umn.edu/regents/policies/academic/AcademicFreedom.pdf>]

Graduate Assistant Office, Handbook for Graduate Assistants.
[www.umn.edu/OHR/GAO/]