Neuroscience, PHD

Program Director: SuJean Choi, Ph.D.

Neuroscience Graduate Program website (http://www.marquette.edu/grad/programs-neuroscience.php)

Degree Offered

Doctor of Philosophy

Educational Goals and Student Learning Outcomes

Upon completion of the neuroscience doctorate program, a student is able to:

- 1. Demonstrate an in-depth mastery of advanced interdisciplinary concepts in the neurosciences.
- 2. Demonstrate independent scientific reasoning.
- 3. Design and execute original research in an area of neuroscience specialization.
- 4. Demonstrate effective oral communication of interdisciplinary neuroscience concepts.

Program Description

Neuroscience is the study of the structure and function of the brain and nervous system and is currently one of the fastest growing areas in science education and research. The graduate program in neuroscience involves, at a minimum, faculty from the Departments of Biological Sciences; Biomedical Engineering; Biomedical Sciences; Mathematics, Statistics and Computer Science; Philosophy; Physical Therapy-Exercise Science; and Psychology. It is designed to provide students with research training and didactic course work that includes a broad foundation of neuroscience that can then be complemented with specialized courses within subfields.

CAREER SKILLS REQUIREMENT FOR PHD STUDENTS

Marquette University is committed to preparing our students to become exemplary leaders in their chosen academic and professional fields by preparing them for careers in which they find purpose and value by engaging in Ignatian pedagogical reflection and practice. The purpose of the career skills requirement is to ensure all doctoral students have the opportunity to reflect on their desired career and to acquire essential career-related skills needed for them to pursue their chosen path.

Students enrolled in Ph.D. programs in Fall 2024 and beyond at Marquette must complete three career skills requirements. Requirements are satisfied by one or more of approved courses, workshops, or practical experiences in each category, as approved by the Graduate School. Completion of each skill will be noted on the student's transcript.

CAREER DISCERNMENT

Students will be able to identify and prepare for career pathways that are consistent with their values.

Objectives:

- 1. Understand realities of academic job market for your discipline, creating space for career imagination and understand potential career paths.
- 2. Exploration of, and defining student's own identity/experiences/values/strengths/gifts and how the career pathway fits with those values.
- 3. Students will learn to identify and attain the skills and experiences necessary to obtain the career pathway they desire.

Code	Title	Hours
Choose 1:		
BISC 8003	Individual Development Plan	1
or NRSC 8003	Individual Development Plan	
GRAD 8097	Career Discernment/Career Diversity Skills (Career Development Bootcamp)	0
GRAD 8097	Career Discernment/Career Diversity Skills (Seminar Series) ¹	0
GRAD 8097	Career Discernment/Career Diversity Skills (Ph.D. Pathways)	0

¹ The Career Discernment/Career Diversity Skills Seminar Series is a series of six, 90-minute seminars that satisfies both the Career Discernment and Communication skills requirements, via GRAD 8097 and GRAD 8098, respectively. Students first enroll in GRAD 8097, offered each fall term, and then enroll in GRAD 8098, offered each spring term. Courses are taken sequentially and in combination to satisfy two of the three Ph.D. career skills requirements.

COMMUNICATION

Students will be able to communicate their ideas and scholarship effectively to audiences beyond those in their discipline.

Objectives:

- 1. Demonstrate the ability to communicate (e.g., research, expertise, experiences) effectively and ethically with disciplinary, cross-disciplinary, and nonacademic audiences.
- 2. Demonstrate the ability to communicate effectively and ethically within various contexts, formats, and media.
- 3. Demonstrate the ability to effectively deliver a presentation and facilitate discussion.

Code	Title	Hours
Choose 1:		
GRAD 8098	Communication Skills (Seminar Series) ¹	0
GRAD 8098	Communication Skills (Three Minute Thesis)	0
GRAD 8961	Science Storytelling	1

¹ The Career Discernment/Career Diversity Skills Seminar Series is a series of six, 90-minute seminars that satisfies both the Career Discernment and Communication skills requirements, via GRAD 8097 and GRAD 8098, respectively. Students first enroll in GRAD 8097, offered each fall term, and then enroll in GRAD 8098, offered each spring term. Courses are taken sequentially and in combination to satisfy two of the three Ph.D. career skills requirements.

Establishing Healthy Professional Communities

Students will understand the importance of community building and engagement in the creation and maintenance of professional environments and how these issues are related to their relevant career pathways.

Objectives:

- 1. Students will be aware of and able to identify various forms of bias in professional environments and will understand possible strategies to address any issues.
- 2. Students will be able to articulate the value of universal design principles and their ethical application to their own area of studies and future professional endeavors.
- 3. Students will be able to work productively and interact effectively with persons from varied backgrounds, experiences, values, ideas, and opinions, leading to stronger professional communities and environments.

Code	Title	Hours
GRAD 8099	Establishing Healthy Professional Communities	0

Neuroscience, PHD

Specializations: Behavioral and Cognitive Neuroscience; Cellular and Molecular Neuroscience; Computational, Neurorehabilitation and Neuroimaging Neuroscience

Neuroscience is the interdisciplinary study of the function of the nervous system, encompassing a broad spectrum of approaches from cellular and molecular function to anatomical circuitry to behavior, disorders and treatments. The neuroscience doctoral program is designed with interdisciplinary research training and curriculum, research writing and analysis skills toward preparing students for doctoral-level interdisciplinary career opportunities in the growing arena of neuroscience research and industry. The program involves faculty from the Departments of Biological Sciences; Biomedical Engineering; Biomedical Sciences; Physical Therapy-Exercise Science; Mathematics, Statistics and Computer Science; Philosophy; and Psychology. The program is designed to provide students with research training and didactic course work that includes a broad foundation in neuroscience that can then be complemented with specialized courses within subfields.

Code	Title	Hours
Required courses:		
BISC 5020	Molecular Neuroscience	3
BISC 5140	Functional Neuroanatomy	3
BISC 5850	Systems Neuroscience	3
NRSC/BISC 8003	Individual Development Plan	1
NRSC/BISC 8004	Science Writing and Ethics 1 (or equivalent) ¹	1
NRSC/BISC 8005	Science Writing and Ethics 2 (or equivalent) ¹	1
NRSC/BISC 8096	First Year Lab Rotations (taken three times at 1 cr. each)	3

BISC 6035	Advanced Statistics and Research Methods	3
or PSYC 8101	Advanced Statistics and Design 1	
A minimum of 14 credit hours from within the declared specialization. ²		14
NRSC 8999 Doctoral Dissertation		12
Total Credit Hours:		44

- ¹ Taking an equivalent course, such as PSYC 8125 Advanced Research Methods or MSSC 6090 Research Methods/Professional Development (repeated twice) may increase the overall credit total.
- One course (2-3 credits) may be chosen from the courses and seminars offered in any of the specializations or other doctoral-level courses offered by participating departments (e.g., Biological Sciences; Biomedical Engineering; Biomedical Sciences; Physical Therapy-Exercise Science; Mathematics, Statistics and Computer Science; Philosophy; and Psychology), as appropriate to individual training plans.

Specializations

BEHAVIORAL AND COGNITIVE NEUROSCIENCE

Students in this specialization acquire a foundational background in behavioral and cognitive processes and their neuroanatomical and neurophysiological foundations. Areas of focus include: perception, attention, learning, memory, executive functioning, social and affective functioning, reward, stress, mental health and disorders, development, aging and dementia.

Behavioral and cognitive neuroscience students must complete a minimum of 14 credit hours from the following list:

Code	Title	Hours
Required course:		
PSYC 8740	Foundations and Processes of Human Cognition	3
or PSYC 8780	Biological Bases of Behavior	
Choose a minimum of 1	1 credits of the following (may not repeat). At least two courses must be from the PHIL or PSYC courses below:	11-12
PSYC 8102	Advanced Statistics and Design 2 (or other approved advanced/applied statistics course)	
PSYC 8740	Foundations and Processes of Human Cognition	
PSYC 8780	Biological Bases of Behavior	
PHIL 6440	Philosophy of Science	
PHIL 6450	Philosophy of Mind	
PHIL 6470	Problems in Metaphysics	
PHIL 6959	Seminar in Philosophy (when topic approved by director)	

Alternative course/seminar with director approval.

Cellular and Molecular Neuroscience

Students in this specialization acquire a foundational background in core neuroscience concepts including a strong understanding of both neuronal and non-neuronal cells of the nervous system, electrical/chemical mechanisms of synaptic signaling, structure/function of the nervous system, and behavioral, physiological, and cognitive outputs of the healthy and dysfunctional nervous system. Areas of focus include: fundamental processes underlying drug and alcohol addiction, stress, depression, schizophrenia, learning and memory, obesity and eating disorders, neurodegeneration, circadian biology, ion channel function and spinal cord injury.

Cellular and molecular neuroscience students must complete a minimum of 14 credit hours from the following list:

Code	Title	Hours
BISC 5010	Neuroeconomics: The Neuroscience of Decision Making	3
BISC 5160	Human Molecular Pathology and Clinical Therapeutics	3
BISC 6030	Programming for Research	3
BISC 6035	Advanced Statistics and Research Methods	3
BISC 6040	Advanced Lab Techniques 1	3
BISC 6041	Advanced Lab Techniques 2	2
BIOL 8101	Protein Structure and Function	2
BIOL 8102	Biochemistry and Function of Nucleic Acids	2
BIOL 8202	Principles of Eukaryotic Genetics	2
BIOL 8302	Proteins in Eukaryotic Cells	3
BIOL 8603	Cell and Molecular Biology of Early Development	3

BIOL 8704	Cellular Homeostasis	2
BISC 5155	Diseases of the Brain	3
BISC 6050	Discovery to Translation and Beyond	3
BISC 6060	Biotech Entrepreneurship: The Business of Doing Science	3
BISC 6097	Laboratory Research in Neuroscience (Laboratory Research in Neuroscience)	1
BISC 8953	Seminar in Neuroscience	1
GRAD 8961	Science Storytelling	1
Alternative course/seminar with director approval.		2-3

Computational, Neurorehabilitation and Neuroimaging Neuroscience

Students in this specialization acquire a foundational background in computational modeling, neurorehabilitation and/or neuroimaging. Computational modeling explores processes from single neurons to neuronal networks including neural interconnections, neural signal processing, and synaptic plasticity. Neurorehabilitation explores the mechanisms and clinical and laboratory methods for studying neural disorders and the treatment strategies to address them. Neuroimaging neuroscience explores imaging physics, mathematics, and methods toward problems in basic and applied neuroscience. Areas of focus include: statistical models for magnetic resonance imaging, computational models of gene regulatory networks, predictive models of neurophysiological processes and clinical outcomes, human visuomotor processing, functional neuroimaging, brain structural and functional connectivity, spinal cord imaging and human motor control, neural and neurodevelopmental disorders, neurodegenerative diseases, and rehabilitative strategies.

Computational, neurorehabilitation and neuroimaging neuroscience students are required to complete a minimum of 14 credit hours from one of the focus areas. See course lists for each focus, below:

Computational

Code	Title	Hours
Choose at least 14 credit hours for th	e Computational focus area:	
Statistical Analysis/Data Science cou	rses	
MSSC 5760	Time Series Analysis	3
MSSC 5780	Regression Analysis	3
MSSC 6010	Computational Probability	3
MSSC 6020	Statistical Simulation	3
MSSC 6230	Multivariate Statistical Analysis	3
MSSC 6240	Design and Analysis of Scientific Experiments	3
Computer Science courses		
COSC 5600	Fundamentals of Artificial Intelligence	3
COSC 5610	Data Mining and Machine Learning	3
COSC 5800	Principles of Database Systems	3
COSC 6050	Elements of Software Development	3
COSC 6060	Distributed and Cloud Computing	3
Mathematical courses		
MSSC 6030	Applied Mathematical Analysis	3
MSSC 6040	Applied Linear Algebra	3
MSSC 6110	Applied Discrete Mathematics	3
MSSC 6120	Optimization	3
MSSC 6130	Dynamical Systems	3
Alternative course/seminar with director approval.		2-3

Neurorehabilitation

Code	Title	Hours
Complete the following 14 credit hour	s for the Neurorehabilitation focus area:	
EXRS 6001	Applied and Rehabilitative Systems Physiology	3
EXRS 6030	Advanced Principles and Instrumentation in Biomechanics	3
EXRS 6201	Neurophysiological Principles in Disease and Rehabilitation	3
Additional courses/seminars with director approval.		5-6

Neuroimaging

Code	Title	Hours
Choose at least 14 credit hours for th	e Neuroimaging/Neuroengineering focus area:	
Neural Systems courses		
BIEN 5600	Neural Engineering	3
BIEN 6600	Neuromotor Control	3
Signal Processing courses		
BIEN 6200	Biomedical Signal Processing	3
BIEN 6210	Advanced Biomedical Signal Processing	3
Modeling course		
BIEN 5710	Analysis of Physiological Models	3
Imaging courses		
BIEN 5500	Medical Imaging Physics	3
BIEN 5510	Image Processing for the Biomedical Sciences	3
BIEN 6500	Mathematics of Medical Imaging	3
Alternative course/seminar with direct	tor approval.	2-3

ACCELERATED BACHELOR'S-Doctoral DEGREE PROGRAM

The Graduate School offers a combined bachelor's-doctoral program available to outstanding Marquette University biomedical sciences undergraduate students. This program enables students to complete their undergraduate degree within the first year of the neuroscience graduate program, allowing them to complete their doctorate in less time than traditional graduate students. Biomedical sciences undergraduate students can apply for early admission to the neuroscience doctoral program in the first term of their junior year. The cellular and molecular neuroscience specialization must be chosen. Students may request permission to move to another specialization, though requests are not guaranteed.

Students accepted into this program are eligible to enroll in up to 17 credits of graduate neuroscience courses in their senior year that can be used to fulfill both undergraduate and graduate degree requirements. Interested students should contact their adviser early in their undergraduate career to plan the curriculum for the biomedical sciences major accordingly. Students must submit an application to the Graduate School, indicate their interest in the <u>accelerated degree program</u> and meet all other admission criteria as stated in the Application Requirements section on the Graduate School's ADP webpage. If accepted to the ADP, students must notify the Graduate School upon successful completion of bachelor's degree, and their admission as a full-time graduate student is then activated.

University Policies

- Academic Censure Graduate School (https://bulletin.marquette.edu/policies/academic-censure/graduate/)
- Academic Integrity (https://bulletin.marquette.edu/policies/academic-integrity/)
- Academic Misconduct (https://bulletin.marquette.edu/policies/academic-misconduct-policy/)
- Academic Program Definitions (https://bulletin.marquette.edu/policies/academic-programs-defined/)
- Accelerated Degree Programs (https://bulletin.marquette.edu/policies/accelerated-degree-programs/)
- Attendance Graduate School (https://bulletin.marquette.edu/policies/attendance/graduate/)
- Awarding Diplomas and Certificates (https://bulletin.marquette.edu/policies/awarding-diplomas-certificates/)
- Background Checks, Drug Testing (https://bulletin.marquette.edu/policies/background-checks-drug-testing/)
- Class Rank (https://bulletin.marquette.edu/policies/class-rank/)
- · Commencement (https://bulletin.marquette.edu/policies/commencement/)
- · Course Levels (https://bulletin.marquette.edu/policies/course-levels/)
- Credit Hour (https://bulletin.marquette.edu/policies/credit/)
- Credit Load Graduate School (https://bulletin.marquette.edu/policies/credit-load/graduate/)
- Faculty Grading (https://bulletin.marquette.edu/policies/faculty-grading/)
- Family Education Rights and Privacy Act-FERPA (https://bulletin.marquette.edu/policies/ferpa/)
- · Grade Appeals (https://bulletin.marquette.edu/policies/grade-appeals/)
- Grading System Graduate School and Graduate School of Management (https://bulletin.marquette.edu/policies/grading-system/graduatemanagement/)
- Graduation Graduate School (https://bulletin.marquette.edu/policies/graduation/graduate/)
- Immunization and Tuberculosis Screening Requirements (https://bulletin.marquette.edu/policies/immunization-and-tuberculosis-screening/)
- Last Date of Attendance/Activity (https://bulletin.marquette.edu/policies/last-dateof-attendance-activity/)
- Military Call to Active Duty or Training (https://bulletin.marquette.edu/policies/militarycall-active-duty-training/)
- · Registration Graduate School (https://bulletin.marquette.edu/policies/registration/graduate/)

- Repeated Courses Graduate School (https://bulletin.marquette.edu/policies/repeated-courses/graduate/)
- Student Consumer Complaints (https://bulletin.marquette.edu/policies/student-complaints/)
- Student Data Use and Privacy (https://bulletin.marquette.edu/policies/student-data-use-privacy/)
- Transcripts-Official (https://bulletin.marquette.edu/policies/transcripts-official/)
- Transfer Course Credit Graduate School (https://bulletin.marquette.edu/policies/transfer-course-credit-policy/graduate/)
- Withdrawal Graduate School (https://bulletin.marquette.edu/policies/withdrawals/graduate/)

Graduate School Policies

- Academic Performance (https://bulletin.marquette.edu/graduate/policies/academic-performance/)
- Advising (https://bulletin.marquette.edu/graduate/policies/advising/)
- · Certificate Concurrent Enrollment (https://bulletin.marquette.edu/graduate/policies/certificate-concurrent-enrollment/)
- Conduct (https://bulletin.marquette.edu/graduate/policies/conduct/)
- Confidentiality of Proprietary Information (https://bulletin.marquette.edu/graduate/policies/confidentiality-proprietary-information/)
- · Continuous Enrollment (https://bulletin.marquette.edu/graduate/policies/continuous-enrollment/)
- Courses and Prerequisites (https://bulletin.marquette.edu/graduate/policies/courses-prerequisites/)
- · Cross-listed Courses (https://bulletin.marquette.edu/graduate/policies/cross-listed-courses/)
- Deadlines (https://bulletin.marquette.edu/graduate/policies/deadlines/)
- Doctoral Degree Academic Program Overview (https://bulletin.marquette.edu/graduate/policies/doctoral-program-overview/)
- Dual/Joint Programs of Study (https://bulletin.marquette.edu/graduate/policies/dual-joint-programs/)
- Graduate Credit (https://bulletin.marquette.edu/graduate/policies/graduate-credit/)
- Graduate School Policies (https://bulletin.marquette.edu/graduate/policies/)
- Independent Study (https://bulletin.marquette.edu/graduate/policies/independent-study/)
- Intellectual Property (https://bulletin.marquette.edu/graduate/policies/intellectual-property/)
- Master's Degree Academic Program Overview (https://bulletin.marquette.edu/graduate/policies/masters-program-overview/)
- Merit-Based Aid Registration Requirements (https://bulletin.marquette.edu/graduate/policies/merit-based-aid-registration-requirements/)
- Research Involving Humans, Animals, Radioisotopes or Recombinant DNA/Transgenic Organisms (https://bulletin.marquette.edu/graduate/policies/ research-involving-humans-animals-radioisotopes-recombinant-dnatransgenic-organisms/)
- Temporary Withdrawal from Graduate Program (https://bulletin.marquette.edu/graduate/policies/temporary-withdrawal-graduate-program/)
- Time Limitations (https://bulletin.marquette.edu/graduate/policies/time-limitations/)
- Working with Minors (https://bulletin.marquette.edu/graduate/policies/working-minors/)

NRSC 8003 Individual Development Plan (1 credits)

Guidance of students toward identifying their current interests to facilitate future career paths as well as develop a graduate career plan based on necessary skills and expertise. Same as BISC 8003; credit is not awarded for both.

Prerequisite: Admitted to NRSC program or cons. of instr.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%208003)

NRSC 8004 Science Writing and Ethics 1 (1 credits)

An introduction of scientific writing skills necessary for a successful career in science. Same as BISC 8004; credit is not awarded for both. *Prerequisite:* BISC 8003 or NRSC 8003.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%208004)

NRSC 8005 Science Writing and Ethics 2 (1 credits)

Advanced writing skills necessary for grant writing. Same as BISC 8005; credit is not awarded for both.

Prerequisite: BISC 8004 or NRSC 8004.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%208005)

NRSC 8096 First Year Lab Rotations (1 credits)

Introductory lab rotations for first year graduate students based on mutual preferences of the student and faculty member. May include lab group meetings, literature search, bench work, presentation of findings and/or research plans to lab members. Same as BISC 8096; credit is not awarded for both.

Prerequisite: Admitted to NRSC program or cons. of instr.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%208096)

NRSC 8931 Topics in Neuroscience (1-3 credits)

Subject matter varies as determined by needs of neuroscience graduate students. May be repeated, as subject matter changes. Same as BISC 8931; credit is not awarded for both.

Prerequisite: Admitted to NRSC program or cons. of instr.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%208931)

NRSC 8999 Doctoral Dissertation (1-12 credits)

S/U grade assessment. Prerequisite: Cons. of dept. ch. Consent required. Level of Study: Graduate Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%208999)

NRSC 9970 Graduate Standing Continuation: Less than Half-Time (0 credits)

Fee. S/U grade assessment. Designated as less than half-time status only, cannot be used in conjunction with other courses, and does not qualify students for financial aid or loan deferment.

Prerequisite: Cons. of prog. dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209970)

NRSC 9974 Graduate Fellowship: Full-Time (0 credits)

Fee. S/U grade assessment. Designated as full-time status. If a student is already registered in other courses full time, this continuation course is not needed.

Prerequisite: Cons. of program dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209974)

NRSC 9975 Graduate Assistant Teaching: Full-Time (0 credits)

Fee. S/U grade assessment. Designated as full-time status. If a student is already registered in other courses full time, this continuation course is not needed.

Prerequisite: Cons. of program dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209975)

NRSC 9976 Graduate Assistant Research: Full-Time (0 credits)

Fee. S/U grade assessment. Designated as full-time status. If a student is already registered in other courses full time, this continuation course is not needed.

Prerequisite: Cons. of program dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209976)

NRSC 9987 Doctoral Qualifying Examination Preparation: Less than Half-Time (0 credits)

Fee. S/U grade assessment. Allows a student to be considered the equivalent of less than half-time status. Requires that the student is working less than 12 hours per week toward their doctoral qualifying exam.

Prerequisite: Cons. of program dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209987)

NRSC 9988 Doctoral Qualifying Examination Preparation: Half-Time (0 credits)

Fee. S/U grade assessment. Allows a student to be considered the equivalent of half-time status. Requires that the student is working more than 12 to less than 20 hours per week toward their doctoral qualifying exam. May be taken in conjunction with credit-bearing or other non-credit courses to result in the status indicated, as deemed appropriate by the department.

Prerequisite: Cons. of program dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209988)

NRSC 9989 Doctoral Qualifying Examination Preparation: Full-Time (0 credits)

Fee. S/U grade assessment. Allows a student to be considered the equivalent of full-time status. Requires that the student is working 20 hours or more per week toward their doctoral qualifying exam. May be taken in conjunction with credit-bearing or other non-credit courses to result in the status indicated, as deemed appropriate by the department.

Prerequisite: Cons. of program dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209989)

NRSC 9997 Doctoral Dissertation Continuation: Less than Half-Time (0 credits)

Fee. S/U grade assessment. Allows a student to be considered the equivalent of less than half-time status. Requires that the student is working less than 12 hours per week on their doctoral dissertation. All 12 dissertation credits required for the degree should be completed before registering for non-credit Doctoral Dissertation Continuation.

Prerequisite: Cons. of program dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209997)

NRSC 9998 Doctoral Dissertation Continuation: Half-Time (0 credits)

Fee. S/U grade assessment. Allows a student to be considered the equivalent of half-time status. Requires that the student is working more than 12 to less than 20 hours per week on their doctoral dissertation. All 12 dissertation credits required for the degree should be completed before registering for non-credit Doctoral Dissertation Continuation.

Prerequisite: Cons. of program dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209998)

NRSC 9999 Doctoral Dissertation Continuation: Full-Time (0 credits)

Fee. S/U grade assessment. Allows a student to be considered the equivalent of full-time status. Requires that the student is working 20 hours or more per week on their doctoral dissertation. All 12 dissertation credits required for the degree should be completed before registering for non-credit Doctoral Dissertation.

Prerequisite: Cons. of program dir. Consent required.

Level of Study: Graduate

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=NRSC%209999)