

PARKER UNIVERSITY

ACADEMIC CATALOG ADDENDUM

2018 - 2019



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Parker University
Academic Catalog Addendum
2018-2019

This addendum contains approved changes to the 2018-2019 Parker University Academic Catalog. The purpose of this addendum is to provide additional information about new programs and courses that occurred after publication of the 2018-2019 Parker University Academic Catalog. The amendments listed in this document take precedence over information contained in the 2018-2019 Parker University Academic Catalog and are effective as of the date of this publication.

ADDENDUM to Parker University 2018-2019 Catalog

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Master of Science Degree with a Major in Neuroscience or Clinical Neuroscience

General Program Information

The Master of Science in Neuroscience and Clinical Neuroscience are designed for learners who already possess a bachelor's degree or higher. The curriculum will include courses in human neurobiology, the management of specific neurological disorders, harm prevention, professional communications, and emerging themes in the clinical neurosciences. All courses will be taught by experts with a Ph.D. or equivalent terminal degree in the relevant domain, or a professional degree plus an advanced qualification in a relevant domain (e.g. a fellowship or graduate degree). This program will prepare graduates to manage complex cases not typically seen in community-based primary care practices, such as traumatic brain and spinal cord injuries, paraplegia and the sequelae to limb amputations. It will also prepare graduates for positions in health care and health care education where they would function as expert clinicians, clinical consultants, and educators.

Program Learning Outcomes

Graduates will demonstrate expert knowledge of and clinical skills of relevance

to:

- Clinically relevant neuroanatomy of the peripheral, central and autonomic divisions of the nervous system
- The biological basis of neurological disorders that have been shown to respond to manual and adjunctive therapies.
- Diagnosis of selected neurological disorders.
- Management of those neurological disorders that respond to manual and adjunctive therapies.
- The critical analysis of clinically oriented neuroscience research.
- Oral and written communication skills appropriate for presentation at scientific meetings and for peer-reviewed publication.

Length of Program

The program consists of one track with a clinical residency (Clinical Neuroscience) and one without a clinical residency (Neuroscience). Courses are 7.5 weeks in length, and students may take one or two courses at a time. Students may complete the program in 12 to 24 months.

Mode of Instruction

The Master of Science degree with a major in Neuroscience or Clinical Neuroscience programs will be offered in a web-based format.

Admissions Requirements

Applicants may be admitted into these programs with a four-year baccalaureate degree in science allied health (or equivalent) from an accredited institution. *

Prerequisite Courses: Anatomy (or equivalent) (6 credits). Prerequisite courses must be completed with a “B” or above.

Applicants who choose either program must have a minimum GMAT score of 450, GRE composite score of 1350, or MAT score at the 40th percentile. **The GMAT, GRE, or MAT may be waived if the applicant meets one criterion of the following requirements:*

- Graduate degree from an accredited institution;
- Undergraduate degree from an accredited college or university with a grade-point average of 3.0 or above;
- Undergraduate degree from an accredited college or university with a grade-point average of 2.7 or above with a minimum of two years of administrative, managerial, or professional work experience documented on applicant’s resume;
- Provisional Admission: At the discretion of the Dean or Provost’s Office, a candidate demonstrating academic potential may be admitted. The student must maintain a “B” or above for the first six hours to gain full admission into the MS program.

Degree Requirements

The Master of Science with a Major in Neuroscience requires a minimum of 33 semester credit hours of coursework which are as follows:

- 30 Credit hours in Neuroscience courses
- 3 Credit hours in Capstone course

The Master of Science with a Major in Neuroscience requires a minimum of 33 semester credit hours of coursework which are as follows:

- 30 Credit hours in Neuroscience courses
- 3 Credit hours in capstone courses
- 3 Credit hours in Clinical Residency

Graduation Requirements

To earn a Master of Science with a Major in Neuroscience or Clinical Neuroscience from Parker University, students must accomplish the following:

- Complete the designated program of study.
- Complete degree requirements with a cumulative grade point average of 3.0 or higher on a 4.0 scale.
- File an application for the degree with the Office of the Registrar on or before the published date during the last term of resident study. The degree will not be awarded unless the application is completed.
- Resolve all financial obligations to Parker University.
- Complete all required exit paperwork.

Students cannot be on academic probation or subject to disciplinary sanctions at the time of graduation.

Curriculum

MASTER OF SCIENCE DEGREE Neuroscience

NEUROSCIENCE COURSES	30 Semester Credit Hours
CAPSTONE COURSE – 45 Contact Hours	3 Semester Credit Hours
TOTAL	33 Semester Credit Hours

Course ID	CR HR	Course Name	Delivery
NEUR 5300	3	Review of human neurobiology (45 hours)	Online
NEUR 5401	3	Advanced functional neuroanatomy (45 hours)	Online
NEUR 5302	3	Pain physiology and management (45 hours)	Online
NEUR 5303	3	Sensorimotor integration and reflex physiology (45 hours)	Online
NEUR 5304	3	Management of CNS disorders (45 hours)	Online
NEUR 5305	3	Management of PNS disorders (45 hours)	Online
NEUR 5306	3	Management of ANS disorders (45 hours)	Online
NEUR 6106	3	Research Design and Scholarly Activity (45 hours)	Online
NEUR 6310	3	Professional communications (45 hours)	Online
NEUR 6312	3	Emerging themes in human neurosciences (45 hours)	Online
NEUR 6320	3	Capstone project/thesis (45 hours)	Online
Total Credit Hours	33		

MASTER OF SCIENCE DEGREE Neuroscience

Course ID	CR HR	Course Name	Delivery
NEUR 6325	3	Clinical Residency (90 lab hours)	On-campus
Total Credit Hours	36		

Certificate in Massage Therapy – Dual Language Track

Mode of Instruction

Parker University's Certificate in Massage Therapy (CMT) program is also offered in a Dual Language format. In-class lectures, handouts, and assessments are presented in Spanish. Textbooks are in English as well as students need conversational English skills to interact with clients in the Intern clinic. All curriculum content is the same for all methods of delivery.

El programa de Certificación en Terapia de Masaje (CMT) de la Universidad de Parker también se ofrece en un formato de lenguaje dual. Las clases en clase, folletos y evaluaciones son presentadas en español. Los libros de texto están en inglés y los estudiantes necesitan tener la habilidad de conversar en inglés para interactuar con los clientes en la clínica interna. Todo el contenido de el plan de estudios es el mismo para todos los métodos de entrega.

Course Descriptions

NEUR – Neuroscience

NEUR 5300 – Review of Human Neurobiology – 3 credits

The course consists of online interactive presentations which review advanced undergraduate human neurobiology. Central and peripheral nervous system anatomy will be reviewed with emphasis on the distributions of the cranial and spinal nerves, including the autonomic nerves. Neuronal cell biology will be covered in depth, with detailed consideration of developmental biology and of the regulation of membrane potential, axonal transport, cell-cell signaling, neuronal repair and apoptosis.

NEUR 5401 – Advanced Functional Neuroanatomy – 3 credits

This course consists of an in-depth study of the anatomy of the central and peripheral nervous systems. Focus will be placed on the brain stem, cranial nerves, peripheral nerves as well as the cerebral cortex. An anatomically focused identification of common sites of pathology will be undertaken, with particular emphasis on CNS pathology such as demyelination, vascular and traumatic lesions. Advanced imaging (MRI) correlation will also be utilized throughout the course, and video/online human brain dissection aids will be utilized. This course will serve a major foundation for the anatomical basis for functional neurorehabilitation studies in future courses.

NEUR 5302 – Pain Physiology and Management – 3 credits

The course consists of online interactive presentations, supplemented by the reading and analysis of core research papers dealing with the physiology and management of pain. Mechanisms of pharmacological and physical analgesia will be dealt with in depth, including pain relief from acupuncture and manual therapies. Special topics will include referred pain, phantom limb pain and complex regional pain syndromes.

NEUR 5303 – Sensorimotor Integration and Reflex Physiology – 3 credits

The course consists of online interactive presentations, supplemented by the reading and analysis of core research papers dealing with reflex physiology and sensorimotor integration. Learners will identify sites of sensorimotor integration in the brain and spinal cord and will learn in detail the connections between sensory and motor neurons. This will provide understanding of how sensory input can both aggravate and relieve motor signs and symptoms. This provides context for the later study of such phenomena as the dystonias and somatovisceral disorders.

NEUR 5304 – Management of CNS disorders – 3 credits

The course consists of online interactive presentations, supplemented by the viewing of video recordings of patients, and the reading and analysis of core research papers dealing with CNS disorders. The focus will be on the diagnosis and treatment of CNS disorders that respond to manual and evidence-based neurorehabilitation therapies. Specific topics will include management of the post-stroke/post-traumatic brain injury patient, concussion, movement and disorders of motor control.

NEUR 5305 – Management of PNS disorders – 3 credits

The course consists of online interactive presentations, supplemented by the reading and analysis of core research papers dealing with PNS disorders. The focus will be on the diagnosis and treatment of PNS disorders that respond to manual and evidence-based neurorehabilitation therapies. Specific topics will include mono and polyneuropathy, radiculopathy, and myopathy.

NEUR 5306 – Management of ANS disorders – 3 credits

The course consists of online interactive presentations, supplemented by the reading and analysis of core research papers dealing with ANS disorders. The focus is on the diagnosis and treatment of ANS disorders that respond to manual and adjunctive therapies. Specific topics include orthostatic hypertension, whiplash associated disorders and post-concussion syndromes.

NEUR 6106 – Research Design and Scholarly Activity – 3 credits

This course is an interactive study of research methodology and critical appraisal of the literature. Data collection and management techniques will be explored with an overview of essential statistical methods. Emphasis will be placed on the development of a research hypothesis, experimental design, data management and manuscript preparation. The course is intended to prepare the learner to be capable of the design, development and completion of an original research project and thesis presentation. This course serves as a foundation for thesis preparation and future scholarly activities.

NEUR 6310 – Professional Communications – 3 credits

The course consists of online interactive presentations that characterize discourse in biomedical research communications. Learners will critique content and style guidelines, and journals' instructions to authors. An overview and discussion of the peer review process and trends toward open access publications will be performed. Learners will work toward competence by critiquing the writings of others and themselves. Learners will write one complete case report by course completion and will produce a first draft of an in-depth review of salient literature that will form the basis of their capstone project/thesis.

NEUR 6312 – Emerging Themes in Human Neuroscience – 3 credits

The course consists of online interactive presentations, supplemented by the online discussion of papers dealing with new and emerging themes in human neurosciences. Learners will practice the skills of analyzing new discoveries, theories and technologies so that they can make evidence-based decisions and advise others on potential future incorporation of novel therapeutic interventions. Course content will react to current events and controversies but will include such topics as the effects of manual and brain-based therapies and their utilization in patient management.

NEUR 6320 - Capstone Project/dissertation - 3 credits

Learners will write a manuscript of publishable quality, such as a systematic or scoping review, addressing a topic that they have chosen in discussions with a faculty member/advisor. The learner and faculty advisor will correspond directly during the evolution of the paper, which shall be graded as either pass or fail. All capstone projects will be prepared and submitted to the appropriate journal for publication.

NEUR 6325 - Clinical Residency – 3 credits

Learners will participate in at least 90 hours of supervised clinical practice in a facility approved by the university. They will demonstrate their proficiency at diagnosis and treatment of patients with complex neurological disorders and designing and implementing effective management plans. This component of the program will be graded as either pass or fail.