FLORIDA ATLANTIC UNIVERSITY

NEW/CHANGE PROGRAM REQUEST
Graduate Programs

UGPC Approval _____
UFS Approval _____
Banner _____
Catalog _____

Department Center for Complex Systems and Brain Sciences

College Schmidt College of Science.

Program Name
Certificate in Neuroeconomics.

☑ **New Program***

☐ **Change Program***

Effective Date
(TERM & YEAR)
Fall, 2023

Please explain the requested change(s) and offer rationale below or on an attachment.

The Certificate in Neuroeconomics requires completing a total four courses: ISC5456 (Cognitive Neuroscience), either ISC6460 (Computational Neuroscience) OR ECO6930 (Introduction to Decision Theory), either ISC6908 (Biological Signal Processing) OR EXP6930 (Neuroimaging in Cognitive Neuroscience), and one new course, the Neuroscience of Decision Making. By completing these courses, students pursuing the certificate will learn about current theories of brain function in cognition, applying mathematical and computational approaches to describing and interpreting brain function, modern approaches to designing experiments, collecting, and analyzing neural data, and how our knowledge of the neural mechanisms underlying decisions can improve our understanding of behavior.

The courses included in this certificate are designed to be introductory in nature, specifically focusing on students who, on one hand, have some knowledge of statistics and programming, but do not necessarily use this knowledge on a day-to-day basis. On the other hand, for students with more advanced quantitative skills, the certificate serves as an introduction to how those skills can be applied to neuroscience research. We anticipate that the certificate program will attract considerable interest from current graduate students in Psychology and Neuroscience. In many cases, students already enroll in two or more of these courses during their graduate studies, making it relatively easy to complete the requirements for the certificate. The certificate is also expected to generate interest from outside these core programs.

*All new programs and changes to existing programs must be accompanied by a catalog entry showing the new or proposed changes.

Faculty Contact/Email/Phone
William Alexander walexander@fau.edu

Consult and list departments that may be affected by the change(s) and attach documentation
Psychology, Business, Economics, Physics.

Approved by	***Date***
Department Chair Gary W Perry	February 27, 2023
College Curriculum Chair Louis Merlin	03/15/2023
College Dean	03/15/2023
UGPC Chair	
UGC Chair	
Graduate College Dean	
UFS President	
Provost	

Email this form and attachments to UGPC@fau.edu 10 days before the UGPC meeting.

1. NEW PROGRAM REQUEST

Center for Complex Systems and Brain Sciences:

New Certificate Program – Neuroeconomics Certificate.

Rationale:

Neuroeconomics is the The Certificate in Neuroeconomics requires completing a total four courses: ISC5456 (Cognitive Neuroscience), either ISC6460 (Computational Neuroscience) OR ECO6930 (Introduction to Decision Theory), either ISC6908 (Biological Signal Processing) OR EXP6930 (Neuroimaging in Cognitive Neuroscience), and one new course, the Neuroscience of Decision Making. By completing these courses, students pursuing the certificate will learn about current theories of brain function in cognition, applying
mathematical and computational approaches to describing and interpreting brain function, modern approaches to designing experiments, collecting, and analyzing neural data, and how our knowledge of the neural mechanisms underlying decisions can improve our understanding of behavior.

The courses included in this certificate are designed to be introductory in nature, specifically focusing on students who, on one hand, have some knowledge of statistics and programming, but do not necessarily use this knowledge on a day-to-day basis. On the other hand, for students with more advanced quantitative skills, the certificate serves as an introduction to how those skills can be applied to neuroscience research. We anticipate that the certificate program will attract considerable interest from current graduate students in Psychology and Neuroscience. In many cases, students already enroll in two or more of these courses during their graduate studies, making it relatively easy to complete the requirements for the certificate. The certificate is also expected to generate interest from outside these core programs.

Departments that may be affected by the change(s) and attach documentation

Psychology, Business, Economics

Neuroeconomics Certificate:

Neuroeconomics is a field of study investigating the processes underlying choice behavior by applying formal mathematical and computational models of decision making to the analysis and interpretation of neuroimaging data. The Neuroeconomics certificate program is suitable either 1) for students who have some knowledge of statistics and programming but who do not necessarily use this knowledge on a day to day basis or 2) for students with advanced quantitative skills who aim to learn how those skills can be applied to neuroscience research. Available to master's and doctoral students, the program is administered through the College of Science's Dean's Office.

Admissions Requirements

1. Students must satisfy the prerequisites for enrolling in courses in the certificate program.

2. Approval of the certificate program coordinator prior to taking courses to fulfill the 12-credit certificate requirement.

Degree Requirements

The Neuroeconomics certificate consists of 12 credits. All four courses must be successfully completed (a minimum of B+ average). Students must satisfy the prerequisites for each course in the program.

Required Courses (12 credits)		
Both of the following:		
Cognitive Neuroscience	ISC5456	3
Neuroscience of Decision Making	ISC6930	3
One of the following:		
Computational Neuroscience	ISC6460	3
Introduction to Decision Making	ECO6930	3
One of the following:		
Biological Signal Processing	ISC6908	3
Neuroimaging in Cognitive Neuroscience	EXP6930	3

College of Business
Department of Economics
OD 93, 201
777 Glades Road
Boca Raton, FL 33431
Telephone: 561.297.3220

Monica Escaleras
Chair & Professor
Department of Economics
Office Depot - Room 201E
777 Glades Road, Boca Raton, FL 33431
Phone: 561-297-1312

February 2, 2022

Dear Graduate Committee:

The Department of Economics has reviewed the proposal for the Certificate of Neuroeconomics and we endorse the Certificate. Furthermore, we are pleased that our course **ECO 6930: Introduction to Decision Theory** is included in the Certificate. This course will introduce rational decision-making models under environments with complete certainty and uncertainty. Alternative theories will also be introduced in view of experimental evidence.

If I can be of any further assistance in your evaluation of the Certificate, please feel free to contact me.

Sincerely,

Monica Escaleras

Monica Escaleras

FAU

FLORIDA ATLANTIC UNIVERSITY

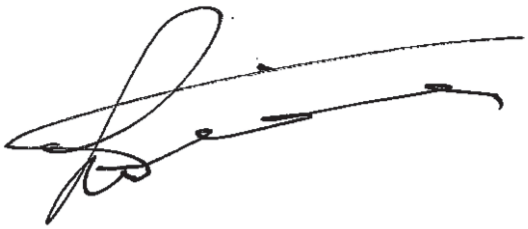
February 27, 2023

To whom it may concern:

The physics faculty have reviewed the proposed Certificate in Neuroeconomics. The department approves of this proposal and wholeheartedly supports it.

Should you have any further questions, please do not hesitate to contact me.

Sincerely yours,



Luc T. Wille, Ph.D.
Professor and Chair
Department of Physics
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Robin R. Vallacher
Interim Chair and Professor
Department of Psychology
Florida Atlantic University
777 Glades Road
Boca Raton, FL 33431

Dear Graduate Program Committee:

The Department of Psychology has reviewed the Certificate of Neuroeconomics proposed by the Center for Complex Systems & Brain Sciences. We endorse the proposal and recommend it be adopted.

Feel free to contact me if you wish further assistance in your evaluation of the proposed Certificate.

Cordially,

Robin R. Vallacher
Interim Chair and Professor