FLORIDA ATLANTIC UNIVERSITY

NEW COURSE PROPOSAL
Graduate Programs

Department Biological Sciences

College

*(To obtain a course number, contact **erudolph@fau.edu**)*

UGPC Approval _____
UFS Approval _____
SCNS Submittal _____
Confirmed _____
Banner _____
Catalog _____

Prefix BSC **Number** 6895	*(L = Lab Course; C = Combined Lecture/Lab; add if appropriate)* **Lab Code**	**Type of Course** Lecture	**Course Title** Artificial Intelligence in Biology

Credits *(See Definition of a Credit Hour)*: 3

Effective Date *(TERM & YEAR)*: Fall 2025

Grading *(Select One Option)*: Regular (●) Sat/UnSat (○)

Course Description *(Syllabus must be attached; see Template and Guidelines)*

This course explores the use of Artificial Intelligence (AI) and Machine Learning (ML) to solve biological challenges, including genomic analysis and neuroscience modeling. Students will gain hands-on experience with AI tools and programming to analyze biological data. The course emphasizes critical thinking about the potential and limitations of AI in biology, culminating in a final project applying these techniques to real-world problems.

Prerequisites

PCB 3063 or BCH 3033 or permission of instructor

Prerequisites, Corequisites and Registration Controls are enforced for all sections of course.

Academic Service Learning (ASL) course ☐

Academic Service Learning statement must be indicated in syllabus and approval attached to this form.

Corequisites

None

Registration Controls *(For example, Major, College, Level)*

None

Minimum qualifications needed to teach course:

Member of the FAU graduate faculty and has a terminal degree in the subject area (or a closely related field).

List textbook information in syllabus or here

A Biologist's Guide to Artificial Intelligence ISBN:9780443240003 Authors: Ambreen Hamadani, Nazir A Ganai, Hamadani Henna, J Bashir Publisher: Elsevier

Faculty Contact/Email/Phone

Rodrigo Pena/penar@fau.edu/6-8073

List/Attach comments from departments affected by new course

Approved by	***Date***
Department Chair: Sarah L. Phillips	9-17-24
College Curriculum Chair:	11/18/2024 2/10/2025
College Dean:	11/18/2024 2/10/2025
UGPC Chair: Arthur Sementelli (Feb 19, 2025 17:35 EST)	02/19/2025
UGC Chair: Arthur Sementelli (Feb 19, 2025 17:35 EST)	02/19/2025
Graduate College Dean: Robert W Stackman	02/19/2025
UFS President:	
Provost:	

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

FLORIDA ATLANTIC UNIVERSITY

BSC 6895

Artificial Intelligence in Biology

Date: Tuesday, Thursday 8:00 AM - 9:20 AM

3 Credit(s)

Spring 2025 - 1 Full Term

Instructor Information

Rodrigo De Oliveira Pena
Email: penar@fau.edu
This course explores the use of artificial intelligence (AI) and machine learning (ML) to solve biological challenges, including marine biology, genomic analysis, disease detection, and other biological relevant problems. Students will gain hands-on experience with AI tools and programming to analyze biological data. The course emphasizes critical thinking about the potential and limitations of AI in biology, culminating in a final project applying these techniques to real-world problems.

Office: Zoom Meetings, computer labs in the Boca campus and in the Jupiter campus TBD.
Office Hours: Monday and Wednesday from 9 AM - 11 AM. Please note you can email me at any time with your questions, comments, and concerns, or use CANVAS. Additional times/days are available to meet through Zoom.
Phone: 561-799-8514

Course Description

This course explores the use of Artificial Intelligence (AI) and Machine Learning (ML) to solve biological challenges, including genomic analysis and neuroscience modeling. Students will gain hands-on experience with AI tools and programming to analyze biological data. The course emphasizes critical thinking about the potential and limitations of AI in biology, culminating in a final project applying these techniques to real-world problems.

Course Topical Outline

This preliminary course schedule is subject to changes announced in class or on Canvas.

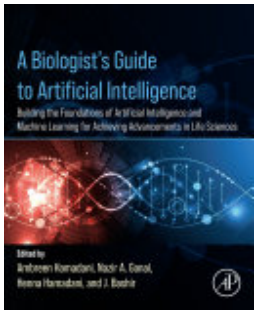
Week	Topic(s)	Assignment(s)
Week 1	Introduction to the course content and tools + What is AI (history, scope, definitions, concepts, applications, limitations, implications)	
Week 2	BootCamp with packages used in biology (use of libraries for data analysis)	Assignment 1 - Python programming
Week 3	Continuation programming BootCamp (RNA with Pydeseq, solving ODEs with Brian2, data with sbi, etc)	Assignment 2 - Python programming
Week 4	Biological Exploratory Data Analysis (EDA) + data visualization + unique characteristics and challenges in biological data	Assignment 3 - Data Exploration
Week 5	Guest lectures from local labs and companies that offer biology data for projects.	
Week 6	Fundamentals of Machine Learning and Model Thinking in Biology + The ML Workflow	Assignment 4 - ML fundamentals
Week 7	Supervised Learning + Linear Models for Regression and Classification + Nearest-Neighbor Methods - Practical applications	Assignment 5 - Regression and classification, applications to disease models
Week 8	Trees, Forest, and Ensembles	Assignment 6 - Random forests, Cancer characteristics, and dataset study
Week 9	Unsupervised Learning, Principal Component Analysis (PCA) + Clustering, genomic applications, RNA analysis	Assignment 7 - Cluster analysis and PCA

Week 10	Model Evaluation, Calibration, Imbalanced Data + Model Interpretation / Reviewing proposals for the final project	Midterm- Review of proposals
Week 11	Feature Selection and Feature Engineering	
Week 12	Experiment management + Automatic Machine Learning	
Week 13	Future of AI, discussion about topics that would be solved with Neural Networks and Deep Learning and applications	Assignment 9 - future tools
Week 14	Project discussions	
Week 15	Project presentation and final evaluation	Projects

Instructional Method

Online Live Lecture
100% of the course is delivered online, with synchronous meeting times. (The course will meet live on the specified meeting days and times.)

Required Texts/Materials



A Biologist's Guide to Artificial Intelligence
ISBN: 9780443240003
Authors: Ambreen Hamadani, Nazir A Ganai, Hamadani Henna, J Bashir
Publisher: Elsevier
Publication Date: 2024-03-15

Course Objectives/Student Learning Outcomes

By the end of the course, students will be able to:

- Select, reproduce, and code Python for a variety of applications.
- Understand the fundamental concepts of artificial intelligence and machine learning, including supervised and unsupervised learning.
- Identify and apply appropriate AI and ML models and computational tools to specific problems in biology.
- Analyze the performance of specific AI and machine learning models as applied to biological problems and justify their use and limitations.

Faculty Rights and Responsibilities

Florida Atlantic University respects the rights of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede their exercise. To ensure these rights, faculty members have the prerogative to:

• Establish and implement academic standards.

• Establish and enforce reasonable behavior standards in each class.

• Recommend disciplinary action for students whose behavior may be judged as disruptive under the Student Code of Conduct University Regulation 4.007.

Disability Policy

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/.

Course Evaluation Method

- Homework Assignments (40%): Regular homework assignments will be given throughout the course. The approximate number and frequency will be communicated in class.
- Proposal of Final Project (20%): Students are required to submit a proposal for their final project, which will count towards a midterm grade. The proposal format and specific requirements will be provided by the instructor.

- Final Project (40%): The final project is an individual effort for both undergrad and graduate students. Clear guidelines for the project will be provided, and it will be evaluated for the final grading.
- **Participation: Why is attendance mandatory?**
  Since this course focuses on practical skills and applications, attending and actively participating is essential. If your attendance falls below 70%, your final grade will be reduced by 20%; if it falls below 50%, the reduction will be 30%. Any absences must be reported with proper documentation (e.g., a doctor's note) during the semester, not at the end.
- Assignments and Lab Days: Assignments from the computational lab day can be submitted after class. Please follow the specified submission format, which will be communicated in class.
- Project Selection: Students are expected to select a project from a list provided by the instructor. Alternatively, they may propose their own ideas for approval.
- Group Work: Undergraduates are allowed to work on the final project in groups of two. Graduate students are expected to work individually.

Graduate level student (BSC 6936): Homework assignments will have more questions and a higher level. The proposal and final project have to be completed individually and not in groups. Projects must be presented individually as well.

Code of Academic Integrity

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001.

Attendance Policy Statement

Students are expected to attend all their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations, or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances, and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence,

ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

Religious Accommodation Policy Statement

In accordance with the rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs regarding admissions, registration, class attendance, and the scheduling of examinations and work assignments. University Regulation 2.007, Religious Observances, sets forth this policy for FAU and may be accessed on the FAU website at www.fau.edu/regulations.

Any student who feels aggrieved regarding religious accommodations may present a grievance to the executive director of The Office of Civil Rights and Title IX. Any such grievances will follow Florida Atlantic University's established grievance procedure regarding alleged discrimination.

Time Commitment Per Credit Hour

For traditionally delivered courses, not less than one (1) hour of classroom or direct faculty instruction each week for fifteen (15) weeks per Fall or Spring semester, and a minimum of two (2) hours of out-of-class student work for each credit hour. Equivalent time and effort are required for Summer Semesters, which usually have a shortened timeframe. Fully Online courses, hybrid, shortened, intensive format courses, and other non-traditional modes of delivery will demonstrate equivalent time and effort.

Course Grading Scale

Letter Grade	Letter Grade
A	94 - 100%
A-	90 - 93%
B+	87 - 89%
B	83 - 86%
B-	80 - 82%
C+	77 - 79%
C	73 - 76%
C-	70 - 72%
D+	67 - 69%
D	63 - 66%
D-	60 - 62%

Letter Grade	Letter Grade
F	Below 60

Grade Appeal Process

You may request a review of the final course grade when you believe that one of the following conditions apply:

• There was a computational or recording error in the grading.

• The grading process used non-academic criteria.

• There was a gross violation of the instructor's own grading system.

University Regulation 4.002 of the University Regulations contains information on the grade appeals process

Policy on Make-up Tests, Late work, and Incompletes

Students are expected to attend all scheduled classes and arrive on time. If you miss a class you are responsible for ALL the material covered during that class, including lecture material and rules and regulations about the course (such as penalties for late assignments, etc.). If you miss an entire or a part of a class, you are still expected to submit assignments for that week.

Assignments: The assignments are due on the dates assigned. These will be accepted up to 1 week late, but they will be penalized 10%/day. **None will be accepted over 1 week late.**

Project proposal: The project is due on the date assigned. It will be accepted up to 1 week late, but penalized 10%/day. **No submission will be accepted over 1 week late.**

Final project: The final project has to be presented on the assigned date. Appropriate documentation must be presented for justifiable absence from the final project delivery.

Artificial Intelligence Preamble

FAU recognizes the value of generative AI in facilitating learning. However, output generated by artificial intelligence (AI), such as written words, computations, code, artwork, images, music, etc., for example, is drawn from previously published materials and is not your own original work.

FAU students are not permitted to use AI for any course work unless explicitly allowed to do so by the instructor of the class for a specific assignment. **[Policy 12.16 Artificial Intelligence]**

Class policies related to AI use are decided by the individual faculty. Some faculty may permit the use of AI in some assignments but not others, and some faculty may prohibit the use of AI in their course entirely. In the case that an instructor permits the use of AI for some assignments, the assignment instructions will indicate when and how the use of AI is permitted in that specific assignment. It is the student's responsibility to comply with the instructor's expectations for each assignment in each course. When AI is authorized, the student is also responsible and accountable for the content of the work. AI may generate inaccurate, false, or exaggerated information. Users should approach any generated content with skepticism and review any information generated by AI before using generated content as-is.

If you are unclear about whether or not the use of AI is permitted, ask your instructor before starting the assignment.

Failure to comply with the requirements related to the use of AI may constitute a violation of the **Florida Atlantic Code of Academic Integrity, Regulation 4.001.**

Proper Citation: If the use of AI is permitted for a specific assignment, then use of the AI tool must be properly documented and cited. For more information on how to properly cite the use of AI tools, visit **https://fau.edu/ai/citation**

Special Course Requirements

Access to Google Colab: https://colab.research.google.com. Alternatively, students can develop projects on the FAU computers or their own personal computers.

Policy on the Recording of Lectures

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

AI Language Specific To This Course

AI Encouraged: The use of AI to assist in work assigned in this specific course is encouraged for various purposes. The instructor hereby permits the use of AI to assist in work assigned for this course, unless the instructor expressly indicates AI is not permitted on a particular assignment. Use must be properly documented and cited per instructor guidelines (https://fau.edu/ai/citation).

Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual therapy, group therapy, and crisis services, to name a few - offered to help improve and maintain emotional well-being. For more information, go to http://www.fau.edu/counseling/

Student Support Services and Online Resources

- Center for Learning and Student Success (CLASS)
- Counseling and Psychological Services (CAPS)
- FAU Libraries
- Math Learning Center
- Office of Information Technology Helpdesk
- Center for Global Engagement
- Office of Undergraduate Research and Inquiry (OURI)
- Science Learning Center
- Speaking Center
- Student Accessibility Services
- Student Athlete Success Center (SASC)
- Testing and Certification
- Test Preparation
- University Academic Advising Services
- University Center for Excellence in Writing (UCEW)
- Writing Across the Curriculum (WAC)

Special Topics
Variable title

Title IX Statement

In any case involving allegations of sexual misconduct, you are encouraged to report the matter to the University Title IX Coordinator in the Office of Civil Rights and Title IX (OCR9). If University faculty become aware of an allegation of sexual misconduct, they are expected to report it to OCR9. If a report is made, someone from OCR9 and/or Campus Victim Services will contact you to make you aware of available resources including support services, supportive measures, and the University's grievance procedures. More information, including contact information for OCR9, is available at **https://www.fau.edu/ocr9/title-ix/**. You may also contact Victim Services at **victimservices@fau.edu** or 561-297-0500 (ask to speak to an Advocate) or schedule an appointment with a counselor at Counseling and Psychological Services (CAPS) by calling 561-297-CAPS.

Outlook

New Course Proposal

From William Brooks <wbrooks@fau.edu>
Date Mon 9/23/2024 2:37 PM
To Rodrigo De Oliveira Pena <penar@fau.edu>
Cc Marianne Porter <mporte26@fau.edu>; Rebecca Dixon <rdixon@fau.edu>; Sarah Milton <smilton@fau.edu>

1 attachments (2 MB)
BSC 6895 Artificial Intelligence in Biology-Pena.pdf;

Hello Rodrigo,

The College Graduate Programs Committee met and reviewed your new course proposal: BSC 6895 Artificial Intelligence In Biology

They requested that you articulate more about how this AI class specializes in biological systems. An overview of the syllabus shows some biological aspects, but the committee still questions the content. Discussing the course with Gary Perry (Complex Systems) and Yuan Wang (Math) about support for the new course could minimize concerns about potential course materials overlap. Hopefully, both could write letters presented to Sarah stating they endorse the course.

Regards,

Randy

W. Randy Brooks, PhD
Professor of Biology
Chair, FAU Biology Undergraduate & MS Graduate Program Committees
Boca Raton, FL 33431, Phone: 561-297-3888, Email: wbrooks@fau.edu

http://biology.fau.edu/directory/brooks/index.php

http://biology.fau.edu/academics/graduate/ms-programs.php

FLORIDA ATLANTIC UNIVERSITY

Charles E. Schmidt College of Science
Department of Biological Sciences
5353 Parkside Dr.
Jupiter, FL 33458
tel: 561.799-8073
e-mail: penar@fau.edu

November 5, 2024

Dear Members of the College Graduate Programs Committee,

I am writing to present the course proposal for **BSC 6895: Artificial Intelligence in Biology**. This course is an extension of an already approved IDS course, now tailored specifically for graduate students (see attached documentation).

The course is structured to provide a balance between theoretical knowledge and practical applications. Each week, students are introduced to the theoretical foundations of an artificial intelligence technique on one day, followed by hands-on practice with the technique on the next. When offered previously as a Special Topics course, students engaged in various applications of AI across biological fields, including Neuroscience, Computational Neuroscience, Ecology, Marine Science, Biochemistry, and diverse image recognition tasks.

A key component of the course is the development of an applied project. Students present this project twice during the semester. Many students use this opportunity to advance research projects from their respective labs by applying the techniques learned in class.

For the upcoming Spring 2025 semester, I have discussed data-sharing with Prof. Kate Detwiler and Prof. Marianne Porter, who kindly agreed to contribute data for use in class projects. Additionally, the Max Planck Florida Institute has generously provided datasets on dendritic spine detection and gold particle object detection from their experiments, enhancing the practical resources available to students.

Examples of recent student projects include:

- "Cardiovascular Disease Prediction Using Machine Learning"
- "Using Python to Automatically Process Fluorescence In Situ Hybridization (FISH) Images"
- "Land Cover Classification"
- "Animal Characteristic Categorization"
- "The Doubs River Ecosystem: Implications for Fish Population Dynamics and Ecosystem Health"
- "Microbial Community Analysis with Machine Learning"
- "Dendritic Spine Detection"

These projects illustrate the unique environment this course offers, where students explore AI applications directly relevant to biological research. Should you wish to review these and other projects in detail, they are available upon request.

Additionally, please find attached a letter of support from Prof. Gary Perry (Center for Complex Systems and Brain Sciences), who has conducted a thorough review of the course content together with Prof. Will Alexander.

Please feel free to reach out if you have any questions or need further information.
Thank you for considering this proposal.

Sincerely,

Rodrigo F. O. Pena

Rodrigo Pena
Assistant Professor

Outlook

(-BSC 6895 Artificial Intelligence In Biology

From Gary Perry <perryg@fau.edu>
Date Mon 11/4/2024 11:14 AM
To Rodrigo De Oliveira Pena <penar@fau.edu>
Cc William Alexander <walexander@fau.edu>

Good morning Rodrigo,

Following our review of the syllabus and discussion with Will Alexander regarding your new course on Artificial Intelligence in Biology, we do not believe there is significant overlap with Computational Neuroscience ISC 6460 and so are happy to support this course moving forward.

Cheers,
Gary

Gary W. Perry, PhD
Professor of Neuroscience & Acting Director
Center for Complex Systems and Brain Sciences
& Department of Psychology
Charles E. Schmidt College of Science
Florida Atlantic University
777 Glades Road
Boca Raton, FL 33431
Email: perryg@fau.edu

Outlook

Re: course proposal support

From Alan Kersten <akersten@fau.edu>
Date Thu 11/21/2024 11:22 AM
To Rodrigo De Oliveira Pena <penar@fau.edu>

Hi Rodrigo,
The Psychology Department is happy to support you in offering this course.
Sincerely,
Alan

Alan Kersten
Professor and Chair
Department of Psychology
Florida Atlantic University
Boca Raton, FL 33431

From: Rodrigo De Oliveira Pena <penar@fau.edu>
Sent: Monday, November 18, 2024 2:39 PM
To: Alan Kersten <akersten@fau.edu>
Subject: course proposal support

Dear Alan Kersten,

I am Rodrigo Pena, an Assistant Professor at the Biological Sciences Department here at FAU.
I am proposing a course Artificial Intelligence in Biology BSC 6895, a Graduate version of an already approved undergrad one.

While seeking approval from the graduate programs committee, I was advised to ask for your support regarding this course.

I have attached documentation for your review, and I am happy to meet with you to discuss any concerns you might have. Let me know.

Best,
Rodrigo

Rodrigo Pena, PhD
Assistant Professor
Department of Biological Sciences
Florida Atlantic University
url: penaslab.com

Outlook

Spring AI Applications in Biology course

From Joe Schumacher <Joe.Schumacher@mpfi.org>
Date Fri 12/6/2024 12:00 PM
To Rodrigo De Oliveira Pena <penar@fau.edu>

EXTERNAL EMAIL : Exercise caution when responding, opening links, or opening attachments.

Hi Rodrigo!

Hope your semester is wrapping up nicely. I wanted to touch base regarding the Spring data science course. It looks like all three sections are seeing healthy enrollment, and the Honors section has about 5 FAU High School Students and 3 FAU Honors students. Are we thinking about basically the same arrangement as last year? Last year on Fridays, Tucker Hindle and myself held unofficial office hours for the honors section to help them along with their final projects throughout the semester. We were thinking of doing something similar this year, but also I think I dropped in on the lectures to talk about the Max Planck data sets that the students had access to. Happy to do so again, maybe earlier in the semester if you think it would be ideal. Let me know if you have any thoughts!

All the best,
Joe

Joseph Schumacher, PhD
AVP of Scientific Operations

Max Planck Florida Institute for Neuroscience
One Max Planck Way Jupiter, FL 33458 USA
Mobile +1 212 920 0647
joe.schumacher@mpfi.org | www.mpfi.org

Outlook

AI apps in Biology course - new potential dataset

From Tricia Meredith <TMEREDI1@fau.edu>
Date Thu 12/12/2024 12:58 PM
To Rodrigo De Oliveira Pena <penar@fau.edu>
Cc Tucker Hindle <thindle2016@fau.edu>; Joe.Schumacher@mpfi.org <joe.schumacher@mpfi.org>

Hi Rodrigo, I hope you're doing well!

I am checking in ahead of your spring AI Application in Biology course to see if you're interested in an idea that we have. Our Lab School has a partnership with the Wahoo Bay group. They have a new live, underwater camera at the bay and would like to eventually have AI fish identification implemented with the footage. At this stage, we are working with a program called spotAI and will need to have some amount of video data manually annotated before training some models and maybe even comparing their accuracy. Do you think that any components of this could fit as an option for student in your class to choose for their class final project? Please let us know your thoughts. We are happy to discuss further if you would like!

Thank you,
Tricia

Tricia Meredith, Ph.D.
Director of Research | FAU Lab Schools
Assistant Research Professor | College of Education
Florida Atlantic University
tmeredi1@fau.edu | 561-297-4486

Outlook

Re: AI Applications in Biology

From Raquel Assis <rassis@fau.edu>
Date Mon 1/13/2025 5:24 PM
To Marianne Porter <mporte26@fau.edu>
Cc Rodrigo De Oliveira Pena <penar@fau.edu>; Hari Kalva <hkalva@fau.edu>

Hi Marianne,

We heard back from our faculty, and they have no obligations to the new course proposal. I think this would be a great elective course for some of our bio-focused students as well, so maybe we can discuss that once the course is established.

Just one note - the titles on the form and syllabus are different. I assume the syllabus is correct because it's been updated?

Best,
Raquel

Raquel Assis, Ph.D.
Associate Dean for Graduate Studies, Associate Professor, and I-Health Fellow
College of Engineering and Computer Science
Florida Atlantic University
http://assisgroup.fau.edu/

From: Marianne Porter <mporte26@fau.edu>
Sent: Friday, January 10, 2025 3:06 PM
To: Raquel Assis <rassis@fau.edu>
Cc: Rodrigo De Oliveira Pena <penar@fau.edu>; Hari Kalva <hkalva@fau.edu>
Subject: Re: AI Applications in Biology

Great, thank you, Raquel!

Happy new year!

m

Marianne Porter, PhD
Florida Atlantic Biomechanics Lab
(The FAB Lab)
www.mepbiomechanics.com
Associate Professor
Department of Biological Sciences
Co-Director, Marine Science and Oceanography Master's Program
Florida Atlantic University
Boca Raton, FL 33431
www.fau.edu

> On Jan 10, 2025, at 3:03 PM, Raquel Assis <rassis@fau.edu> wrote:

Outlook

Re: BSC 6895

From Gary Perry <perryg@fau.edu>
Date Tue 2/4/2025 3:49 PM
To Alan Kersten <akersten@fau.edu>; Rodrigo De Oliveira Pena <penar@fau.edu>; William Alexander <walexander@fau.edu>

Hi Rodrigo,

Thanks for the discussion of your proposed course BSC 6895 and for the adjustments you made so as not to overlap too much with Will Alexander's course. Your revised proposal is approved.

Cheers
Gary

Gary W. Perry, PhD
Professor of Neuroscience & Acting Director
Center for Complex Systems
& Department of Psychology
Charles E. Schmidt College of Science
Florida Atlantic University
777 Glades Road
Boca Raton, FL 33431
Email: perryg@fau.edu

FLORIDA ATLANTIC UNIVERSITY

From: Alan Kersten <akersten@fau.edu>
Sent: Tuesday, February 4, 2025 1:57 PM
To: Rodrigo De Oliveira Pena <penar@fau.edu>; Gary Perry <perryg@fau.edu>; William Alexander <walexander@fau.edu>
Subject: Re: BSC 6895

Hi Rodrigo,
The Psychology Department supports your revised proposal for an Artificial Intelligence in Biology graduate course (BSC 6895). Please let us know if there is anything else we can do to help to secure approval for this course.
Sincerely,
Alan

Alan Kersten
Professor and Chair
Department of Psychology
Florida Atlantic University
Boca Raton, FL 33431

From: Rodrigo De Oliveira Pena <penar@fau.edu>
Sent: Wednesday, January 29, 2025 11:47 AM
To: Gary Perry <perryg@fau.edu>; William Alexander <walexander@fau.edu>; Alan Kersten <akersten@fau.edu>
Subject: Re: BSC 6895

Hi all,

Following our meeting, I reviewed the syllabus with your suggestions (thank you!)
I would appreciate if you could have a look at this new version and see if the overlap was removed.

The only topic that I kept is week 13, where I thought it could be a good idea to introduce the concept of artificial neural networks where I would use the time to promote the Computational Neuroscience course taught by Will. Although I would not teach it, but mostly show the types of applications that one can address with such tool (hence I call it Future). I think that by doing this, students that are interested in neuroscience could go to his class and learn all about it.

I'd be happy to change it further if you have more suggestions.

Best,
Rodrigo

Rodrigo Pena, PhD
Assistant Professor
Department of Biological Sciences
Florida Atlantic University
url: penaslab.com

From: Rodrigo De Oliveira Pena <penar@fau.edu>
Sent: Thursday, January 23, 2025 7:36 AM
To: Gary Perry <perryg@fau.edu>; William Alexander <walexander@fau.edu>; Alan Kersten <akersten@fau.edu>
Subject: Re: BSC 6895

Hi Gary, sorry to hear that. I hope you feel better.

Best,
Rodrigo

Rodrigo Pena, PhD
Assistant Professor
Department of Biological Sciences
Florida Atlantic University
url: penaslab.com