FLORIDA ATLANTIC UNIVERSITY™

Graduate Programs—NEW COURSE PROPOSAL[1]

UGPC APPROVAL _____
UFS APPROVAL _____
SCNS SUBMITTAL _____
CONFIRMED _____
BANNER POSTED _____
CATALOG _____

DEPARTMENT: BIOLOGICAL SCIENCES | **COLLEGE: COLLEGE OF SCIENCE**

RECOMMENDED COURSE IDENTIFICATION:

PREFIX _____BSC_____ **COURSE NUMBER** _____6613__ **LAB CODE** (L or C) _____

(TO OBTAIN A COURSE NUMBER, CONTACT MJENNING@FAU.EDU)

COMPLETE COURSE TITLE: Biology of Sharks and Their Relatives

EFFECTIVE DATE
(first term course will be offered)
FALL 2014

CREDITS[2]: 3

TEXTBOOK INFORMATION: Biology of Sharks and Their Relatives, Second Edition, 2012. Carrier, JC, JA Musick, MR Heithaus (Eds.), CRC Press.

GRADING *(SELECT ONLY ONE GRADING OPTION)*: **REGULAR** ___X___ **SATISFACTORY/UNSATISFACTORY** _____

COURSE DESCRIPTION, NO MORE THAN THREE LINES: A study of the biology, ecology, physiology, behavior, and taxonomy of the elasmobranch fishes. Includes a review of extant families, and contemporary topics in elasmobiology through readings from the primary literature.

PREREQUISITES *: Permission of the instructor if the student is currently enrolled as an undergraduate.	**COREQUISITES*:**	**REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL)*:**

** PREREQUISITES, COREQUISITES AND REGISTRATION CONTROLS WILL BE ENFORCED FOR ALL COURSE SECTIONS.*

MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE: PH.D. IN THE RELEVANT FIELD

Faculty contact, email and complete phone number:	Please consult and list departments that might be affected by the new course and attach comments.[3]
Dr. Stephen Kajiura kajiura@fau.edu (561)-297-2677	

Approved by:	*Date:*
Department Chair:	1/30/14
College Curriculum Chair:	2/10/14
College Dean:	2/16/14
UGPC Chair:	2/26/14
Graduate College Dean:	2/26/14
UFS President:	
Provost:	

1. **Syllabus** must be attached; see guidelines for requirements: *www.fau.edu/provost/files/course syllabus.2011.pdf*
2. Review **Provost Memorandum: Definition of a Credit Hour** *www.fau.edu/provost/files/Definition_Credit_Hour_Memo_2012.pdf*
3. **Consent** from affected departments (attach if necessary)

Email this form and syllabus to *UGPC@fau.edu* **one week before** the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website prior to the meeting.

Course Syllabus for Biology of Sharks & Their Relatives

1. **Course title/number and number of credit hours**
   Biology of Sharks & Their Relatives – BSC 6613 - 3 credit hours

2. **Course prerequisites**
Permission of the instructor if the student is currently enrolled as an undergraduate.

3. **Course logistics**
   a. Term – Fall 2014
   b. Notation if online course – N/A
   c. Class location and time (if classroom-based course) – To be determined

4. **Instructor contact information**
   a. Instructor's name – Dr. Stephen Kajiura
   b. Office address – Sanson Bld, Room 215
   c. Office hours – To be determined
   d. Contact telephone number – office (561) 297-2677
   e. E-mail address – kajiura@fau.edu

5. **TA contact information (if applicable)**
   N/A

6. **Course description**
   An in-depth study of the biology, ecology, and behavior of elasmobranch fishes.

7. **Course objectives/student learning outcomes**
   By the end of this course, students will have been exposed to all of the currently recognized families of elasmobranch fishes. They will have a knowledge of the phylogeny of the group, as well as its evolution. They will be familiar with the present state of knowledge regarding their biology, physiology, biomechanics, and behavior. Human interactions with the group, including fisheries, will also be discussed. Students will have participated in shark longline fishing and tagging as well as dissections to study external and internal anatomy of representative species.

   This graduate course is designed to have a significant student teaching component. Class discussions will focus on contemporary issues in elasmobranch biology through presentations and discussions of assigned readings. The course is comprised of the following assignments:

   I. Each student presents to the class a review of their assigned elasmobranch families (see attached schedule). A short handout (2 page max) should be prepared that includes the following information:

i a description of the diagnostic characters of the family.
ii a review of the global and habitat distribution of its members.
iii a brief review of its biology, ecology, food habits, etc.
iv a bibliography of publications on species of the family. This should include only publications within the past 5 years and should be derived only from the primary literature, and not include synoptic texts. Refer to sources such as Web of Science. Some elasmobranch families will have far more publications than others, and some will have had no recent papers published. In the case of an extensive list, the bibliography need not be exhaustive. PDF versions of the handout should be made available to the instructor immediately after class for posting on the course website.

II. Each week we will cover a different chapter from the required text. For each session, two students will present an overview of the topic. The students will also lead a class discussion on the assigned readings, chosen in conjunction with the instructor (see attached schedule). Remember, it is the duty of discussion leaders to only answer technical questions about the papers and to keep the discussion moving along. It is the responsibility of each student in the class to critically review each paper and raise their questions to the group. For example, has the author formally stated a hypothesis or question? Is the methodology correct or appropriate? Are the data adequate and have the appropriate statistical analyses been performed? Do the data justify the author's conclusions? A significant portion of your grade will be based upon your class participation in these discussions for the duration of the course.

III. A final presentation on a topic of the student's choosing will be presented in class during the student symposium on December 10. The talk will not exceed 15 minutes, including questions and answers. Each student will choose a topic in consultation with the instructor.

8. **Course evaluation method**

Family presentation	30
Chapter presentation & discussion	30
Participation	20
Symposium presentation	20
Total	100

Labs:
Some class sessions will be supplemented with labs in which specimens will be dissected to study external and internal anatomy. More information will be provided as experiment dates are finalized.

Field trip:
A required field trip aboard the R/V Bellows will take place for two days between September 23-26. The field trip will include longline fishing,

trawling, and tagging of coastal sharks. Transportation and meals on board the vessel will be provided. Other local fishing trips off Boca Raton may be scheduled throughout the semester.

9. Course grading scale (optional)

10. Policy on makeup tests, late work, and incompletes

If a student cannot attend an exam or hand in a homework project on time due to circumstances beyond their control then the instructor may assign appropriate make-up work. Students will not be penalized for absences due to participation in University-approved activities, including athletic or scholastics teams, musical and theatrical performances, and debate activities. These students will be allowed to make up missed work without any reduction in the student's final course grade. Reasonable accommodation will also be made for students participating in a religious observance. Also, note that grades of Incomplete ("I") are reserved for students who are passing a course but have not completed all the required work because of exceptional circumstances. A grade of "I" will only be given under certain conditions and in accordance with the academic policies and regulations put forward in FAU's University Catalog. The student must show exceptional circumstances why requirements cannot be met. A request for an incomplete grade has to be made in writing with supporting documentation, where appropriate.
Religious accommodation:
Reasonable accommodation will be made for students participating in a religious observance.

11. Special course requirements (if applicable)

N/A

12. Classroom etiquette policy (if applicable)

University policy on the use of electronic devices states: "In order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular telephones and pagers, are to be disabled in class sessions."

13. Disability policy statement

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) -- in Boca Raton, SU 133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures.

14. Honor Code policy statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty, including cheating and plagiarism, 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 at http://www.fau.edu/regulations/chapter4/Reg_4.001_5-26-10_FINAL.pdf

15. Required texts/readings

Biology of Sharks and Their Relatives, Second Edition, 2012. Carrier, JC, JA Musick, MR Heithaus (Eds.), CRC Press.

16. Supplementary/recommended readings (optional)

17. Course topical outline

Lecture schedule (tentative):

Date	Topic (chapter)	Guest Lecturers
27-Aug	Introduction and Dissection	
03-Sep	2. Elasmobranch Phylogeny	
10-Sep	5. Locomotion	
17-Sep	6. Feeding Mechanics	Dr. Philip Motta
24-Sep	Field trip	
01-Oct	7. Metabolism	
08-Oct	8. Feeding	
15-Oct	9. Telemetry	Dr. Nick Whitney
22-Oct	10. Reproduction	
29-Oct	11. Physiology	
05-Nov	12. Sensory Biology	Dr. Stephen Kajiura
12-Nov	13. Age and Growth	
19-Nov	14. Fisheries	Dr. David Kerstetter
26-Nov	15. Predatory-Prey Interactions	Dr. Derek Burkholder
03-Dec	19. Movement	Dr. Jeremy Vaudo
10-Dec	Student symposium	

Family presentation schedule:

Date	Family
27-Aug	No presentations

03-Sep	Chlamydoselachidae	Hexanchidae	Echinorhinidae	Squalidae
10-Sep	Centrophoridae	Etmopteridae	Somniosidae	Dalatiidae
17-Sep	Pristiophoridae	Squatinidae	Heterdontidae	Parascylliidae
24-Sep	Field trip			
01-Oct	Brachaeluridae	Orectolobidae	Hemiscylliidae	Ginglymostomatidae
08-Oct	Stegastomatidae	Rhincodontidae	Mitsukurinidae	Odontaspididae
15-Oct	Pseudocarcharhiidae	Megachasmidae	Alopiidae	Cetorhinidae
22-Oct	Lamnidae	Scyliorhinidae	Proscylliidae	Pseudotriakidae
29-Oct	Leptochariidae	Triakidae	Hemigaleidae	Carcharhinidae
05-Nov	Sphyrnidae	Pristidae	Rhinidae	Rhinobatidae
12-Nov	Platyrhinidae	Narcinidae	Narkidae	Hypnidae
19-Nov	Torpedinidae	Arhynchobatidae	Rajidae	Plesiobatidae
26-Nov	Hexatrygonidae	Urolophidae	Potamotrygonidae	Dasyatidae
03-Dec	Gymnuridae	Myliobatidae	Rhinopteridae	Mobulidae
10-Dec	Student symposium			