

## **Course Number and Title: APK 4912, APK Undergraduate Research**

**Purpose and Description:** The primary purpose of this course is to provide the student an opportunity for involvement in supervised research experiences within the Department of Applied Physiology and Kinesiology. “Research” is operationally defined here as mentored, but self-directed work that enables individual students or a small group of students to explore an issue of interest to them and to communicate the results to others. Projects may involve inquiry, design, investigation, discovery, or application, depending on the topic and mentor. The student will be aware of how his or her project fits into and contributes to solving the larger problem to which it belongs. The student will usually assist an APK faculty member with a research project by helping to prepare the study and contributing in a meaningful way in meeting the objectives of the study. The student may also work with graduate students who are performing research supervised by a research faculty member. All students pursuing a research project (including a literature review paper) in UF’s Department of APK must enroll in APK 4912.

**Pre-requisites and Co-requisites:** None

**Instructor Information:** Name, Office location, Telephone number, Email address

- Office hours: Day(s), time(s)

**Graduate or Post-doctoral Student Research Mentor (where applicable):** Name, Office location, Telephone number, Email address

**Course Objectives:** After completion of this course, the student will have met one or more of the following objectives:

- Demonstrates appropriate use of scientific resources – including databases, electronic journals, library resources, etc.
- Complies with safety precautions in the laboratory
- Demonstrates data collection appropriate for a research/laboratory
- Demonstrates proper use and implementation of scientific inquiry related to research questions
- Demonstrates appropriate scientific writing skills
- Demonstrates appropriate interpersonal and communication skills
- Employs responsible and ethical principles when conducting research

The student will fully participate in the research process with a desirable outcome of a final written report that synthesizes research activities undertaken during the semester. A brief oral presentation may also be required depending on the faculty mentor’s policies for students involved with supervised research.

**Textbooks/Required Materials:** There is no required text in this course. If appropriate to the project, students are required to purchase a laboratory notebook and are encouraged to consult with their research advisor for recommendations on the style of notebook to use. Students should also ask their research advisor whether it is necessary to own a laptop computer, or other technology to perform their project tasks.

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Recommended readings include the following:

- Responsible Conduct of Research, National Science Foundation, available online at <http://www.nsf.gov/bfa/dias/policy/rcr.jsp>.
- On Being a Scientist: Responsible Conduct in Research, 2<sup>nd</sup> Edition, National Academy Press, 1995. Available at no cost at <http://www.nap.edu/readingroom/books/obas>.
- Avoiding Plagiarism Guide, George A. Smathers Marston Science Library, available online at <http://www.uflib.ufl.edu/msl/07b/studentplagiarism.html>.
- The Craft of Scientific Writing, 3<sup>rd</sup> Edition, by Michael Alley (1996), Springer-Verlag, NY, NY.
- The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors to Avoid, by Michael Alley (2002), Springer-Verlag, NY, NY.

**Attendance Policy:** Students conducting undergraduate research are expected to exercise autonomy in their work, and to complete tasks with relatively little direct oversight from their research advisor. The student should dedicate a minimum number of hours on their project that is consistent with the total credit hours sought for the experience. Besides the minimum expectations outlined in the Assessment section of the syllabus, the faculty advisor may have additional expectations for participation (attendance at group meetings, individual meetings, etc.).

The Undergraduate Research course is taken for variable credits depending on the length and intensity of research involvement, which is agreed upon by the student and faculty mentor prior to registration. Options for registration, considering credit hours earned and expected workload follow:

*0 Credit Hours:* Students can enroll in this course for 0 credit hours. The 0 credit option would be appropriate for students who are approaching a maximum number of credit hours toward their degree or who are unable to cover the cost of tuition for these credits. Students registering for 0 credit hours should carefully discuss (with their faculty advisor) the time expectations for completion of the requirements of the class. The expectations should be clearly articulated on the APK Undergraduate Research Application (attached).

*1-3 Credit Hours:* Students are expected to devote an equivalent of three hours a week of work for each credit in which they are enrolled. Students should carefully discuss (with their faculty advisor) the time expectations for completion of the requirements for this course. The expectations should be clearly articulated on the APK Undergraduate Research Application (attached).

Policies for allowable absences and make-up work follow the university attendance policies: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

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### **Assessment:**

70% *Degree to which students meet expectations.* Expectations are to be established by the research advisor and student prior to the student's enrollment in the research course. The agreed-upon expectations will be reflected on the Undergraduate Research Form signed by both the student and research advisor prior to the student's enrollment in the course. The following are minimum expectations for every student enrolled for credit: i.) perform a background literature search and review, ii.) perform experimental work or applied work that involves collection and/or manipulation of data, iii.) develop a research summary. All three of these minimum expectations as well as additional expectations (e.g., attendance at departmental and/or College research seminars, participation in research group meetings) are to be clearly established and articulated to the student by the research advisor prior to commencement of the research project.

20% *Quality of the final report and/or oral presentation (as required).* The faculty advisor will provide clear expectations of the desired format, content, and deadlines of the final report. Faculty advisors will grade the final report.

10% *Attendance.*

A final grade of satisfactory (S) or unsatisfactory (U) will be assigned for this course. The student will not receive a letter grade. A grade of S will be assigned if the student achieves at least 70% of the available points by the end of the semester. For more information on grades and grading policies, please visit: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

To provide the students a measure of performance mid-semester, the faculty advisor is expected to complete a mid-term evaluation of the student, accompanied by recommendations for improvement for the remainder of the term. The mid-term evaluation of the student should be accompanied by a one-on-one meeting between the faculty advisor and the student.

**Absences and Make-up Work:** Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

**University Support Services:** Besides the departmental advising office, resources available on campus to help students meet academic and professional goals and address personal challenges, include the following:

- UF Center for Undergraduate Research, <http://cur.aa.ufl.edu>
- Career Resource Center, Reitz Union, <http://crc.ufl.edu>, 352-392-1601
- Student Mental Health, Student Health Care Center, 280 Fletcher Drive, <http://www.shcc.ufl.edu>, 352-392-1171
- U Matter, We Care Web Site, <http://www.umatter.ufl.edu/>, 352-294-CARE

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- UF Counseling and Wellness Center, <http://www.counsel.ufl.edu/>, 3190 Radio Road, Annex in Peabody Hall, 352-392-1575
- HIPAA, <http://privacy.health.ufl.edu/training/hipaaPrivacy/instructions.shtml>

**Academic Integrity Policy:** All students registered at the University of Florida have agreed to comply with the following statement: *“I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.”*

In addition, the following pledge is either required or implied on all work submitted for credit: *“On my honor I have neither given nor received unauthorized aid in doing this assignment.”*

Because of the self-guided nature of the research endeavor, the research student must take measures to ensure that she or he follows the highest ethical behavior, especially regarding collecting, recording, and reporting of data. If you have any questions regarding ethical conduct in your research, first consult your research advisor.

If you witness any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at:

<http://www.dso.ufl.edu/judicial/procedures/academicguide.html>.

**Accommodation for Students with Disabilities:** Students who will require an accommodation for a disability must contact the Dean of Students Office of Disability Resources in Peabody 202 (phone: 352-392-1261). Additional information is available at the University of Florida Disability Resources website: <http://www.dso.ufl.edu/drp/services/>. In keeping with UF policy, the student, not the instructor, is responsible for arranging accommodations when needed. Once notification is complete, the Office of Disability Resources will work with the instructor to accommodate the student.

### **RESPONSIBILITIES OF THE STUDENT**

1. Work actively doing research and participating in other related activities for a minimum of 3 hours each week for every credit hour enrolled in the course.
2. Keep clear accurate records of your work.
3. Conduct research in a responsible and ethical manner. Follow the UF Honor Code at all times.
4. Follow all safety protocols and ask questions about safety protocols before performing any procedure about which you are unsure.
5. Ask for assistance when you need it.
6. Keep your faculty research advisor / mentor informed of your results.
7. If required, learn to work on a team while also pursuing independent research on your project.
8. Write and submit a research report following the guidelines and expectations of your faculty advisor and/or mentor.
9. Present your research findings in an oral presentation.
10. Strive to go beyond the minimum expectations of preparing a literature review and project plan, performing the research, and writing a final report, as appropriate and specified by your advisor. Seek opportunities for sharing your work with the scientific community through conference presentations, or writing and submitting papers for publication in refereed journals.

### **RESPONSIBILITIES OF THE FACULTY ADVISOR AND STUDENT MENTOR**

1. Provide support and supervision of the student (either directly or by referring her/him to someone else, e.g., graduate student or postdoctoral mentor).
2. Meet regularly with the student to review her/his progress and to provide guidance in moving forward in her/his project.
3. Arrange for all safety training that is appropriate for the student to ensure her/his safety in your laboratory.
4. Help the student understand the broader context in which her/his research project fits and understand the basis for methods and procedures used.
5. Provide a mid-semester evaluation of the student's performance, accompanied by recommendations for improving performance for the remainder of the semester.
6. Provide feedback and establish deadlines on the student's
  - literature review
  - project plan
  - final report
7. Assign the student's final grade.
8. Encourage the student to go beyond the minimum expectations of preparing a literature review and project plan, performing the research, and writing a final report.

**UNIVERSITY OF FLORIDA DEPARTMENT OF APK  
UNDERGRADUATE RESEARCH APPLICATION**

**Note:** All undergraduate students pursuing research with a faculty member at the University of Florida are required to enroll in 0-3 credit hours of APK Undergraduate Research (APK 4912) under the section number of the student's degree program.

Once this application is completed, the student should present it to her/his academic advisor prior to enrolling in APK 4912.

**Student Information (to be completed by the student applicant):**

Date: \_\_\_\_\_

Name (last, first, middle initial):		UFID Number:				
Local Street Address:						
City, State, Zip Code:		Phone:				
Major:	Current Class/College:	Expected Graduation Date:				
Gatorlink E-mail Address:						
Term (please check one):	Fall	Spring	Summer:	A	B	C

**BRIEF DESCRIPTION OF RESEARCH PROJECT (if applicable):**

I have prepared the research description above in consultation with my research advisor. I have read the responsibilities of the student included on this application, and agree to undertake these responsibilities.

**Student's Signature:** \_\_\_\_\_

I understand that by registering for this course at zero (0) credits I may be assessed a tuition fee for 1 credit if I am not registered for any additional coursework during the requested term.

**Student initials:** \_\_\_\_\_

**Faculty Advisor Information (to be completed by Faculty Advisor):**

Name:	College and Department: HHP/APK
E-Mail Address:	Campus P.O. Box: 118205

**Graduate Student/Post-Doctoral Mentor (if applicable):**

Name:	College and Department: HHP/APK
E-Mail Address:	Campus P.O. Box: 118205

Will the student's project involve export-controlled research?

Yes  No

Will the student's research involve with an infectious agent or clinical samples?

Yes  No

Will the student's research involve methods or procedures requiring specific safety training?

Yes  No

If yes, describe specific training that the student will receive prior to performing these activities.

How many credits is the student registering for:

What are your expectations for the student's attendance in this project (e.g., estimated hours/week in your laboratory, in seminars, group meetings, etc.)?

I approve of the research description submitted by the student applicant. I have read the responsibilities of the research advisor (see next page) and agree to undertake these responsibilities.

**Faculty Advisor's Signature:** \_\_\_\_\_