

GENETICS AND HUMAN PERFORMANCE

PET5936 ~ 3 CREDITS ~ SPRING 2022 ~

INSTRUCTOR:

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Preferred Method of Contact: Canvas messaging

Office Hours: by appointment (Zoom link will be provided)

OFFICE HOURS:

By appointment

MEETING TIME/LOCATION: Canvas platform

COURSE DESCRIPTION: PET 5936 - Special Topics/Seminars: Genetics and Human Performance.

PREREQUISITE KNOWLEDGE AND SKILLS: That are no required course that must be completed prior to enrolling in in this course.

REQUIRED AND RECOMMENDED MATERIALS: There are no required textbooks for this course. In addition to the lectures, research/review articles will be part of the reading assignments and will be provided (PDFs) as part of the course material.

COURSE FORMAT: Students will watch pre-recorded lectures and study the corresponding PDF slides. Students will read Research/review article that cover topics integral to this course. Students will also complete assignments based on Bioinformatics tools available online (free access). Each of these learning formats are meant to engage students on regular basis with the material.

COURSE LEARNING OBJECTIVES: In this course I will introduce the basic principles of genomics and genetics, and the underlying technologies relevant to quantitative genetics and genetic epidemiology research. I will present to you the evidence for the role of genetic variation in sports performance and risk of injury traits. The course assignments are designed to encourage the development of analytical skills that will enable you to evaluate and critically reflect on the quality of published research in the field of sports genomics, its practical applications, and its future.

By the end of this course, students should be able to:

- Explain and define basic genetics and genomics methods and terminology introduced in the course.
- Analyze and evaluate the quality of research which association genetic variation (small differences in DNA sequence among individuals) with sports performance and risk of injury traits.
- Compare and contrast different views on the future of genetics/genomics in sports especially regarding genetic testing, gene doping, and sex/gender differences.

COURSE AND UNIVERSITY POLICIES:

ATTENDANCE POLICY: Active participation in the course is mandatory. Students are permitted unlimited attempts on module practice assignments so that they may review any missed questions or prepare for quizzes and exams. Interaction with the course online Yellowdig discussion board is part of the final grade in the course.

PERSONAL CONDUCT POLICY: Students are expected to review and adhere to the UF Netiquette guide for online courses <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the instructor. Furthermore, you are obliged to report any condition that

facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the instructor or TA in this class.

MAKE-UP POLICY: Quizzes and Exams may not be submitted late. Students will be permitted to access the exams early upon receipt of evidence of a viable explanation for the need for such an accommodation. Requirements for make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the [online catalog](https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx) at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

There are opportunities for submitting some assignments after the due date for 50% of the grade. These are listed in your Course Schedule.

ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

COURSE EVALUATIONS: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

GETTING HELP:

Health and Wellness

- U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575
- Counseling and Wellness Center: <https://counseling.ufl.edu/>, 352-392-1575
- Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161
- University Police Department, 392-1111 (or 9-1-1 for emergencies)
<http://www.police.ufl.edu/>

Academic Resources

- E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>

- Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. <https://career.ufl.edu/>
- Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>
- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>
- Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/> On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

Inclusion, Diversity, Equity and Accessibility (IDEA)

- <http://hhp.ufl.edu/about/idea/>
- For suggestions or concerns related to IDEA, please reach out to Dr. Joslyn Ahlgren, APK IDEA Liaison and Undergrad Coordinator, jahlgren@ufl.edu

Other Student support services

Academics & Study Habits

- [Free Knack Tutoring](#) (Student Success Initiative)
- [Teaching Center](#) (CLAS)

Balance

- [LinkedIn Learning Courses](#) (LinkedIn)
- [Time Management Resources](#) (GatorWell)

Careers & Employment

- [Career Planning Services & Events](#) (C3)
- [Career Planning Hub in Canvas](#) (C3)
- [Success Coaching](#) (Student Success Initiative)

Emotional Health & Stress

- [Mindfulness Resources](#) (CWC)
- [Semester-Long Group Counseling](#) (CWC)
- [Stress Resources](#) (GatorWell)
- [Well-Being](#) (Student Success Initiative)

Finances

- [Budgeting & Finance Tools](#) (SFA)
- [College Scholarships](#) (HHP)
- [Financial Resources](#) (U Matter, We Care)

Student Involvement

- [College Opportunities](#) (HHP)
- [Peer Mentoring](#) (Student Success Initiative)
- [Student Organizations at UF](#) (GatorConnect)

GRADING:

Evaluation Components (number of each)	Points Per Component	Weighted % of Total Grade
Homework (6)	60 (6 x 10)	25%
Quizzes (6)	60 (6 x 10)	25%
Exams (3)	60 (3x20)	25%
Presentation (1)	20	20%
Yellowdig participation	100 points	5%

Quizzes and Exams – Questions will be a combination of multiple choice, true/false, fill in the blank or short answers. Students are not permitted access to any kind of materials or notes during these quizzes and exams. While most of the questions will be on the lectures, some questions will be on the required readings.

Homework – Homework assignments are short essay type. These questions are specific to the reading assignments; however they will require integrating knowledge gained from the Lectures.

Presentation – The presentation grade is $\frac{3}{4}$ based on your presentation and $\frac{1}{4}$ based on your peer review evaluation of 2 presentations that I will assign to you. The peer reviews will be based on the “peer evaluation form” that will be posted as assignments.

HONORLOCK SYSTEM REQUIREMENTS: Quizzes and Exams will be proctored using HonorLock. You will not need to sign-up or schedule a testing time, nor will you need to create an account. To ensure your device is compliant with HonorLock, a series of pre-assessment checks must be performed before gaining access to the exam. Please do so in advance of the exam; we are unable to further accommodate for individual technological issues that may detract from your exam time.

Specifications necessary for HonorLock to work are listed below:

System compatibility and setup:

- HonorLock is only supported through Google Chrome web browser on Mac, PC (no other mobile devices or tables are supported)
- Students must install the HonorLock Extension within Chrome
- HonorLock will not support Windows 8, Windows 8.1, Mac OSX 10.11 and Mac OSX 10.12. You can find the updated Minimum System Requirements and a system compatibility test at www.honorlock.com/support.

Additional considerations using HonorLock for exams:

- You will need to take the exam on a desktop computer or laptop with a webcam and microphone set up on your chosen device. This will not work on mobile devices or tablets, including iPads and smart phones.
- You need to make sure that the camera is facing YOU at all times – if the camera does not stay facing you or if you are out of frame, the exam will pause, preventing you from continuing even midway through. This will detract from your exam time.
- You need to open Canvas on the Google Chrome internet browser and to download the HonorLock Chrome Extension. Other internet browsers will not be compatible with HonorLock.
- Make sure you have a stable Internet connection wherever you are taking the exam (i.e. good Wi-Fi).
- A 360-degree scan of your testing room/environment will be required. If you are using a laptop, you will need to pick up your laptop and rotate it for the room scan, including your examination surface (i.e. desk, table), floor space, your lap, etc. The testing environment should be cleared of any clutter, no notes, or textbooks laying out. These could constitute a violation of the Honor Code (i.e. academic dishonesty).
- Make sure the room you are taking the exam in is well-lit and that you are by yourself. Rooms that are not bright enough may get flagged as “blurry” or “unclear”. Avoid posters or photographs on the wall behind you; try to minimize noise (i.e. talking aloud). These will also flag your exam, which will be reviewed by a member of the instructor team for the course to confirm or refute any academic dishonesty.
- You must have a valid and clear photo identification (ID) card (Gator ID, driver’s license, passport) to show at the start of the exam. Make sure the image is clear.
- Only one screen (i.e. cannot have multiple monitors) and one tab (i.e. the tab that is being used for the exam) in Chrome is allowed. HonorLock has an integrity algorithm that can detect search-engine use, so do not attempt to search for answers, even if it is on a secondary device.
- An HonorLock Practice Quiz will be set up under Quizzes in Canvas. Please go through this practice test well in-advance of taking the exam. This practice quiz allows you to go through all of the pre-assessment checks so you will know what to expect when taking the exam itself. Take the practice quiz on the device you intend to take the exam on, in the same environment (building, room, etc).
- Failure to meet the items above may result in a 0 grade. If you encounter any issues with the testing platform or the exam, you should immediately contact HonorLock for assistance. If this fails, you need to email your course instructor right away with specific details (i.e. screenshots of your chat conversation with HonorLock with time stamps) of what occurred so that they can assist you as quickly as possible.

GRADING SCALE:

Percent	Grade	Grade Points
90.0 - 100.0	A	4.00
87.0 - 89.9	A-	3.67
84.0 - 86.9	B+	3.33
81.0 - 83.9	B	3.00
78.0 - 80.9	B-	2.67
75.0 - 79.9	C+	2.33
72.0 - 74.9	C	2.00
69.0 - 71.9	C-	1.67
66.0 - 68.9	D+	1.33
63.0 - 65.9	D	1.00
60.0 - 62.9	D-	0.67
0 - 59.9	E	0.00

All course assignments are administered and graded within the Canvas course page, so students will have access to all grades as they submit assignments. Any assignment that requires the instructor to manually grade some aspect of it will be graded within one week of its due date. Final Grades will be rounded up. The table below provides a reference. More detailed information regarding current UF grading policies can be found here: <https://catalog.ufl.edu/UGRD/academic-regulations/gradesgrading-policies/>. Any requests for additional extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e. asking for preferential treatment) and will be handled accordingly.

SUCCESS AND STUDY TIPS:

- Complete all assignments requirements. Each one is meant to engage you on regular basis with the material.
- Review lectures more than once is recommended
- Reading assigned research papers is integral to the learning process. Only going over the presentations is not enough to achieve the objectives of this course and earn a good grade.
- Read all announcements posted by the instructor.
- Reach out to your instructor.
- Reach out to other students in your class.

WEEKLY COURSE SCHEDULE:

Week	Dates	Lecture Topic (required reading pages)	Assignments
1	Jan 5-9	Class introduction and Syllabus	IWF (Introduce Yourself Video)
2	Jan 10-16	Module 1-Genetics Basics	
3	Jan 17-23		Q1 and H1 due on Sunday
4	Jan 24-Jan 30	Module 2-Overview: Exercise/sports performance	
5	Jan 31-Feb 6		Q2 and H2 due on Sunday
6	Feb 7-13	Module 3-Gene variants associated with sports performance	
7	Feb 14-20		Q3 and H3 due on Sunday
8	Feb 21-Feb 27	Module 4-Gene variants associated with risk of injury	Exam 1 due on Sunday
9	Feb 28-Mar 6		Q4 and H4 due on Friday Mar 4
10	Mar 7-13	Spring Break <i>Incomplete assignments part 1 due for 50%</i>	
11	Mar 14-20	Module 5-Ethnicity, Sex/Gender considerations in sports performance	Presentation draft 1 due Sunday
12	Mar 21-27		Q5 and H5 due on Sunday
13	Mar 28-Apr 3	Module 6-Genetic testing and gene doping in sports performance	
14	Apr 4-10		Q6 and H6 due on Sunday
15	Apr 11-17	Finalize and Post Presentations	Presentation final due on Sunday
16	Apr 8-24	<i>Incomplete assignments part 2 due for 50%</i>	Exam 2 due on Tuesday Apr 19 Presentation Peer reviews due Tuesday Apr 20

Disclaimer

This syllabus represents the objectives and tentative plans for the course. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, will be communicated clearly, are not unusual, and should be expected.

Copyright statement

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