**MATLAB for Kinesiology (KINE 8970)**

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| **Instructor:** | **Wei Liu, Ph.D** |
| **Meeting Times:** | **Hybrid Course** |
| **Meeting Place:** | **Hybrid Course** |
| **Office:** | **301 Wire Road, New Kinesiology Building (107)** |
| **E-mail Address:** | [**wzl0022@auburn.edu**](mailto:wzl0022@auburn.edu) |
| **Office Hours:** | **By Appointment or Tue: 9am – 11am**  **Thurs: 9am – 11am** |
| **Credit Hours:** | **3 semester hours** |
| **Date Syllabus Prepared:** | **Summer 2014** |
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**REQUIRED TEXTBOOK:**

MATLAB online manual (<http://www.mathworks.com/help/matlab/>)

**COURSE DESCRIPTION:**

The purpose of this course is to introduce the process of programming using MATLAB, specifically for those with no prior programming experience and minimal quantitative training. This class will explore examples, terms, and programming needs relevant to those in Kinesiology.

**COURSE INSTRUCTIONAL OBJECTIVES:**

The student will demonstrate an understanding of and the ability to:

1. Understand MATLAB language and functions
2. Perform computational function in solving matrix problems
3. Able to debug MATLAB program
4. Able to write an independent MATLAB program with different functions

**COURSE REQUIREMENTS**

The class will be made up of lab assignments, and final project. If a computer problem occurs with the Canvas system you must notify the instructor immediately. Lab assignments and final project will cover material that has already been covered in class, thus it is vital to keep up with the information throughout the semester. There will be no make-ups unless an excused absence is pre-arranged. Lectures handouts (PowerPoint) will be provided to students at varying points throughout the semester on Canvas. Students will be responsible for the material covered in these lectures. Students are responsible for any assigned reading material, even if not directly referenced in a lecture.

Lab assignments will follow the lecture and reading material. Students are expected to fully participate with their classmates while completing their lab assignment within the designated time period.

Final project is expected to be completed with no outside assistance including, but not limited to notes, lecture material, or other students (enrolled or not enrolled in the class), unless otherwise noted by the instructor.

**GRADING SCALE:**

The grading scale for this course is as follows:

**A = 90 – 100% Lab Assignments: 60%**

**B = 80 – 89%**

**C = 70 – 79% Final Project:** **40%**

**D = 60 – 69%**

**F = Under 59% Total: 100%**

Extra Credit opportunities will be provided during this semester. Every student will have an equal opportunity to earn the credit. A grade will be given based on the accumulation of the “lab assignments, and final project.”

**HONESTY CODE:**

The University Academic Honesty Code and Regulations pertaining to Cheating will apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee. For detailed information please refer to the University Policies site for Auburn University.

**CLASS POLICY STATEMENTS**

Participation: Students are expected to participate in all class discussions and participate in all laboratory exercises. It is the student’s responsibility to contact the instructor **PRIOR** to class if an illness or emergency requires the student to miss class. Any missed work due to a University approved excuses MUST be made-up within 5 days.

Attendance/ Absences: Attendance is required at each class meeting. If an exam is missed, a make-up exam will be given only for University-approved excuses as outlined in the **Student Policy eHandbook** ([www.auburn.edu/studentpolicies](https://sn2prd0202.outlook.com/owa/redir.aspx?C=l1Af7ZR-3U20TvsUqgeBlqDZW2bcs88IoHDr-4JYbG7zZmIIyke8sJYOyp_5XZAKBRbTMhB0auI.&URL=http%3a%2f%2fwww.auburn.edu%2fstudentpolicies)). Arrangements to take the make-up exam **must be made in advance** and the exam taken within 5 days of the missed exam. Students who miss an exam because of illness should inform the instructor prior to the missed class if possible. A doctor’s statement for verification of sickness is required and should clear the absence with the instructor the day the return to class. Other unavoidable absences from campus must be documented and cleared with the instructor in advance. No late assignments or quizzes will be accepted outside of extreme circumstances noted by the professor. Please carefully adhere to established assignment deadlines. In such a case the professor will have the discretion of lowering the assignmenta percentage of the overall grade for each day that it is late.

Questions/ Help: Students are encouraged to ask questions and seek extra help on a regular basis. **Please do not wait** until the day before an exam or laboratory is due.

Students Accommodations: Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1228 Haley Center, 844-2096 (V/TT).

Professionalism: As faculty, staff, and students interact in professional settings, they are expected to demonstrate professional behaviors as defined in the College’s conceptual framework. These professional commitments or dispositions are listed below:

* Engage in responsible and ethical professional practices
* Contribute to collaborative learning communities
* Demonstrate a commitment to diversity
* Model and nurture intellectual vitality

**TENTATIVE SCHEDULE**

**Week Topic**

Week 1 Introduction to Matlab and Matrices

Week 2 Matlab Calculation Functions

Week 3 Contingencies

Week 4 File Input-Output, Modules and Functions

Week 5 Graphics, Plot and Animation

**The above content, schedule and procedures in this course are subject to amendments at the discretion of the instructor.**