**Instructor:**

Robert Bubb Office: Spidle 206B e-mail: [robert.r.bubb@auburn.edu](mailto:robert.r.bubb@auburn.edu)

**Course Website:** All course content, except for grades and Zoom passwords for student hours, will be posted on the course website. Grades and Zoom passwords for student hours will be posted on Canvas. You can also find the course by typing *Robert Bubb Analytics* into a Google search or by using the following URL:

<https://robertbubb.weebly.com/analytics-for-the-social-and-behavioral-sciences.html>

**Student Hours:** There are four student hours available a week for student consultation. These are your hours to ask questions or review content. Because of the current COVID-19 situation, student hours will be conducted via Zoom meetings. You will need video and audio enabled for student hours. The student hour times will be posted on the course website under the “Student Hours” page. The student hour password is posted on the Canvas homepage.

**Course Communication:** E-mail is the official communication between faculty and students at Auburn University. Make sure your e-mail account sends alert to your most used device.

**Computer Issues:** You are responsible for ensuring that the device you are using has the required software and settings to complete the online lectures. If the device is not letting you complete a lecture, then I highly recommend updating or installing the necessary software or finding a new device that has the required software or settings.

We will use Microsoft Office Excel for data analyses. Steps and procedures will be shown using a PC. As such, it is highly recommended that you use a PC. If you plan to use a Mac for the course, the steps will be similar; however, we may not be able to help you with software questions.

**Course Objectives:** This course introduces the basic methods of collecting, organizing, and analyzing data for the behavioral sciences. By the end of the course, you should be able to:

1. Develop and apply analytical skills necessary for mathematical computations
2. Apply statistical results to sound decision making practices
3. Demonstrate competency in entering, analyzing, and interpreting data in Microsoft Excel
4. Develop basic occupational skills useful for successful employment
5. Know and understand basic terminology associated with statistics in the behavioral sciences

**REFERENCE TEXT:** The textbook provides an additional perspective on the material. Multiple perspectives will help you understand. I highly recommend that you use the textbook in conjunction with the lectures, read for comprehension and ask, think about, and then answer “why” and “how” questions.

Nolan, S. A., & Heinzen, T. E. (2011). *Essentials of Statistics for the Behavioral Sciences*. New York, NY: Worth Publishers.

**COURSE REQUIREMENTS**

**Syllabus Signature**: Under the Module 1 page on the course website there is a link for you to indicate that you have read and understand the entire syllabus and the accompanying policy links—including the academic honesty policy link. The syllabus is an agreement between each student and the instructor. By electronically signing and submitting the agreement, you acknowledge and understand the requirements of the course. *No course grades can be assigned until your electronic signature has been received.* Please submit by **Tuesday, February 1st**. There is a 1-point penalty for each late day.

**Online Lectures**: There are five online lecture modules. Each module is worth 25 points. Your lowest module grade will be replaced with the average of the other four modules in case of extenuating circumstances. Flipping the classroom is an effective technique to learn course material (Deslauriers et al., 2011). When a classroom is flipped, out-of-class time is used for viewing and taking notes on lectures (rather than completing homework problems). In-class time is used for problem solving, active learning activities, and demonstrations. *As such, you will be required to view lectures prior to the beginning of class*. **Lectures are posted on the course website under the appropriate module**. I recommend that you follow along in your textbook and take notes as you view lectures. I also highly recommend that you find a quiet, study area that is free from distractions when you watch the lectures. *You must complete the online lecture by each deadline date to receive credit.* ***Because the class time is directly related to what you learn in the online lectures, late work will not be accepted for credit.*** *Grades for lectures are based on viewing the entire lecture and an 80% performance on the following review questions.*

**Attendance**: Because of the COVID-19 situation, the course has been designed to be flexible. However, I highly recommend that you do not miss a class as much as it is humanly possible. The class moves very quickly, and you will feel lost if you miss a day. It is critical that you ask questions and know what is going on in the class. If you miss class, then you are required to let me know as soon as possible. *You are solely responsible to find out what is missed if you are absent*. To encourage attendance and participation, two professionalism points will be provided for each class day. The professionalism points are added to the numerator and denominator of your course grade at the end of the semester (they are not extra credit points but will always equal a 100% grade).

**Group Assignments**: There are 9 assignments. Each assignment is worth 10 points. Your lowest two assignment grades will be dropped in case of extenuating circumstances. The group assignments will be completed during class time and will be open resource (e.g., textbook, notes, Internet, group members, instructors); *however, the work must be your own*. Groups will be randomly assigned. Each student should submit her or his own spreadsheet after submitting answers via the link (DO NOT copy another student’s spreadsheet as your own, to copy is academically dishonest. Excel spreadsheets keep an edited history). Assignment completion, as well as working with your peers, will increase success on the exams.

**Examinations:** There will be 5 exams (see syllabus schedule for due dates and directions). Each module exam is worth 50 points and will be administered in class. Given the cumulative nature of statistics, the examinations will also be cumulative. Later concepts in a statistic course are built upon concepts learned earlier. Like the online lectures, the lowest exam grade will be replaced with the average of the remaining exams.

**COURSE GRADING**

Syllabus Signature 20 points 20 points

Online Lectures 5 @ 25 points 125 points

Group Assignments 7 @ 15 points 105 points

Examinations 5 @ 50 points 250 points

**Total Points Possible 500 points**

Extra Credit up to 20 points

Professionalism Points varies

**GRADE POINTS NEEDED**

A (90%) 450

B (80%) 400

C (70%) 350

D (60%) 300

F (below 60%) below 300

**POLICIES AND RESOURCES**

Below are several links to common university policies and resources. You are responsible for knowing the contents therein. Please let me know if any clarifications are needed.

AU Policies: <http://www.auburn.edu/student_info/student_policies/>

AU Biggio Center for the Enhancement of Teaching and Learning Distance Learning: <http://wp.auburn.edu/biggio/distance-learning/>

AU Office of Information Technology (IT Help Desk):  <http://www.auburn.edu/oit/>

AU Title IX: [www.auburn.edu/titleix](http://www.auburn.edu/titleix)

Academic Honesty Code: <https://sites.auburn.edu/admin/universitypolicies/Policies/AcademicHonestyCode.pdf>

**Academic Honesty**: Responses to online or exams should be your work and no one else’s. Academic dishonesty will result in a referral to the Academic Honesty Committee. Academic dishonest behaviors include (but are not limited to) copying exam items or lecture spreadsheets, taking exams with unauthorized materials, signing into lectures as someone other than yourself, submitting counterfeit documentation for absences, or plagiarizing material from classmates, the Internet, or published sources. Recommended sanctions for dishonesty will be, at minimum, a “0” grade on the assignment in question and at most, expulsion from Auburn University. If you are unsure about what constitutes dishonest behavior, please ask me for clarification.

**Make-up Policy**: The make-up policy is already embedded in the course design. There are dropped grades for assignments and a replacement grade for the exams and online lectures. These opportunities are there in case you miss class for no fault of your own. The material for the course is available online with a minimum of 3 days for completion. In other words, complete the course work as soon as possible and do not procrastinate. Because of the generous grading flexibility in the course, I recommend a medical withdrawal from the course for extenuating circumstances that impact your grade beyond the embedded make-up opportunities.

**Accessibility Policy:** Please notify me if you are a student with a disability recognized by AU who requires accommodations that are not covered by the design of the course (use my userid **rrb0005** when submitting electronically). We can discuss any additional arrangements that may be deemed necessary. I will need a copy of your Accommodation Memo. If you do not have an Accommodation Memo but need accommodations, please contact the Office of Accessibility, 1228 Haley Center, 844-2096 <http://accessibility.auburn.edu/> .

**Harassment Policy:** Auburn University is committed to providing an environment that is free from discrimination and harassment based on protected class.  If you believe you have been the victim of harassment or discrimination based on race, color, religion, national origin, disability, age, or sex (including sexual orientation, gender identity, and gender expression), we encourage you to report it.  If you report sexual assault or sexual misconduct to a faculty member, the faculty member is obligated to notify the University’s Title IX Coordinator about the basic facts of the incident.

**ePortfolio:** The Human Development and Family Studies (HDFS) department supports the Auburn University ePortfolio initiative. All HDFS majors are required to develop an ePortfolio that identifies their professional goals and incorporates examples of learning, classwork, and/or experience to demonstrate their preparation for accomplishing those goals. You are encouraged to consider how your experience in this class relates to your professional goals and how your work in the course might be included in your ePortfolio. Student resources regarding ePortfolios can be found at <http://wp.auburn.edu/writing/eportfolio-project/>.

**Course Schedule**

The course schedule is tentative to the progression of the course. Any changes will be given advanced notice and will be in the best interest of the students and the course. If major adjustments are made to the schedule, a new schedule will be distributed. **Exam due dates are bolded.**

#### **Day Class Activity Week**

13 Jan Overview of Course & Syllabus **Week 1**

18 Jan Module 1 & 2: Basics of Statistics **Week 2**

20 Jan Module 1 & 2: Basics of Statistics

25 Jan Module 1 & 2: Basics of Statistics **Week 3**

**27 Jan**  **In-class Group Assignment #1**

01 FebModule 1 & 2: Basics of Statistics **Week 4**

**03 Feb**  **In-class Group Assignment #2**

**08 Feb** **Exam 1**  **Week 5**

10 Feb Module 3: Single Sample Statistical Tests

15 Feb Module 3: Single Sample Statistical Tests **Week 6**

17 Feb Module 3: Single Sample Statistical Tests

**22 Feb** **In-class Group Assignment #3** **Week 7**

24 Feb Module 3: Single Sample Statistical Tests

**01 Mar In-class Group Assignment #4** **Week 8**

**03 Mar** **Exam 3**

**08 Mar Spring Break**  **Week 9**

**10 Mar** **Spring Break**

15 Mar Module 4: Statistical Tests for Two Samples **Week 10**

**17 Mar** **In-class Group** **Assignment #5**

22 Mar Module 4: Statistical Tests for Two Samples **Week 11**

**24 Mar** **In-class Group** **Assignment #6**

**29 Mar** **Exam 3** **Week 12**

31 Mar Module 5: Statistical Tests for Three or More Samples

05 Apr Module 5: Statistical Tests for Three or More Samples **Week 13**

**07 Apr**  **In-class Group** **Assignment #7**

12 Apr Module 5: Statistical Tests for Three or More Samples **Week 14**

**14 Apr** **In-class Group** **Assignment #8**

**19 Apr** **Exam 4 Week 15**

21 Apr Module 6: Statistical Tests for Predicting Individuals

26 Apr Module 6: Statistical Tests for Predicting Individuals

**28 Apr**  **In-class Group** **Assignment #9** **Week 16**

**03 May Sec 002 Exam 5 at noon**

**05 May Sec 001 Exam 5 at noon**