

## Course Syllabus

# STAT 540: Statistics for Decision Making

- Description:** *A study of statistical concepts and methods to facilitate decision making. Content includes analysis of variance, simple and multiple regression, correlation, time-series analysis, and nonparametric methods.*
- Credit Hours:** 3
- Frequency:** Offered every semester
- Audience:** Required for the M.S. in Analytics and Modeling  
Elective for the M.S. in International Economics and Finance
- Prerequisites:** An introductory statistics course
- Format:** 3 class sessions (50 minutes each) per week
- Textbook:** Statistics for Business and Economics, by Anderson, Sweeney, and Williams  
(*recommended, not required*)
- Technology:**
- (1) Course materials and grades are maintained in Blackboard. Students should check Blackboard regularly.
  - (2) Use of Microsoft Excel is required for the homework. Microsoft Excel can be found on all campus computers and can also be downloaded freely from the University at this link: <https://www.microsoft.com/en-us/education/products/office?ms.officeurl=getoffice365?ms.officeurl=getoffice365>.
  - (3) A calculator that is NOT on a cell phone/tablet/computer or other device with internet access is required for the exams.
- AARC:** The Access and Accommodations Resource Center (AARC) is the campus office that works with students to provide access and accommodations in cases of diagnosed mental or emotional health issues, attentional or learning disabilities, vision or hearing limitations, chronic diseases, or allergies. You can contact the office at [aarc@valpo.edu](mailto:aarc@valpo.edu) or 219.464.5206. Students who need, or think they may need, accommodations due to a diagnosis, or who think they have a diagnosis, are invited to contact AARC to arrange a confidential discussion with the AARC office. Further, students who are registered with AARC are required to contact their professor(s) if they wish to exercise the accommodations outlined in their letter from the AARC.
- Notice of Cancellation:** Notifications of class cancellations will be made through Blackboard with as much advance notice as possible. It will be both posted on Blackboard and sent to your Valpo e-mail address. If you don't check your Valpo email account regularly or have it set-up to be forwarded to your preferred email account, you may not get the message. Please check Blackboard and your Valpo email (or the e-mail address it forwards to) before coming to class.

**Emergency  
Protocol:**

VU's Emergency Notification System (ENS) uses multiple forms of communication, including e-mail, building alarms, outdoor sirens, message boards, computer alerts, Twitter, and public address messaging. Please review the specific procedures for this class found in Blackboard. Remember: "Siren inside, GO outside; Siren outside, GO inside." To evacuate, gather your personal belongings quickly and proceed to the nearest exit. Do not use the elevator. To shelter in place, move away from the windows and stay low to the ground; lock or barricade the door if there is a threat of violence.

**Student Learning Objectives:**

- A. Students can perform statistical analyses, including one-way ANOVA, two-way ANOVA, simple and multiple regression, logistic regression, time-series analysis, chi-square tests, and non-parametric methods.
- B. Students can identify and explain the limitations of statistical analyses and when they should or should not be used.
- C. Students can utilize statistical software to create effective data visualizations and carry out appropriate statistical analyses.
- D. Students can clearly communicate the results of statistical analyses in both oral and written form through the use of both technical and nontechnical language.