

ECO 5434

SYLLABUS

ANALYSIS OF ECONOMIC DATA



COURSE INFORMATION

- **Course Hours:** TR 1:20 PM-2:35 PM
- **Course Meeting Location:** Bellamy, Room 033
- **Credit Hours:** 3 hours
- **Prerequisites:** None



COURSE DESCRIPTION

This course provides a basic introduction to modern data analysis methods. We will use R Studio and R Markdown to produce several projects that embed the R code for data collection, data analysis, generation and interpretation of results into a single, reproducible report in HTML and PDF formats that may be updated with a single file execution step. Our primary focus will be on short-term forecasts of economic variables. Topics include: data collection and formatting into a “tidy” data frame (an updated version of SQL); forecasting methods; forecast ensembles and averaging; time-series methods such as ARIMA, VAR and VECM; and nowcasting using large data sets with mixed frequencies, different beginning and ending dates, and missing data.




COURSE INSTRUCTOR




 Paul Beaumont

 Associate Professor of Economics

 beaumont@fsu.edu (<mailto:email@fsu.edu>)

 (850) 644-7085

 Economics / Bellamy 276

Office Hours: by appointment

 Emails will be responded to within 24 to 48 hours.



LEARNING OBJECTIVES

By the end of this course you will:

1. be familiar with the essential techniques in economic data analysis and forecasting;
2. know how to specify a model that is consistent with economic theory;
3. be able to choose an appropriate statistical method to estimate the model;
4. interpret your estimation and forecast results;
5. prepare a brief technical report using R Markdown that can be easily updated and understood by a non-specialist.



COURSE MATERIALS

Textbook:

- The required textbook for this course is free and available online from the link on the Canvas page. All other assigned reading material will be posted on the course Canvas page.

Software:

- We will make extensive use of RStudio and R Markdown. You may also occasionally find

Stata, SAS, or Gretl to be useful.



STUDENT RESPONSIBILITIES

- Students should log on to Canvas at least every other day to check for course updates.
- Students are expected to keep up with the class, engage with the course material, and submit assignments by the due dates.
- Assignments, quizzes, and exams are expected to be products of individual students per the **FSU Academic Honor Policy** (<http://registrar.fsu.edu/bulletin/undergraduate/information/integrity/>). Students should not discuss any of the questions with each other before or during the actual assignments, activities, quizzes, or exams without instructor approval.
- To receive maximum points for questions, students need to follow the instructions carefully, follow word limits as instructed, and use spell and grammar checking.
- To be successful in this course, students need to complete all required assignments and tests.



GRADING POLICY

Your course grade will be determined from a series of short "Try It" projects, "Group" projects, and a final project:

| | |
|----------------------|-----|
| Try It mini-projects | 40% |
| Projects | 30% |
| Final project | 30% |



TECHNOLOGY REQUIREMENTS

Course content is accessible through Canvas. Students will need to be able to view videos, write and upload assignments, post to discussion boards, and take assessments. Students should have access to high-speed internet and updated software. Mobile devices may be used to view course content, upload assignments, and take assessments as determined by the

instructor. To view the most current technology requirements, visit the [FSU Canvas support site](https://support.canvas.fsu.edu/kb/article/899-technology-recommendations-for-learning-online-at-fsu/) [\(https://support.canvas.fsu.edu/kb/article/899-technology-recommendations-for-learning-online-at-fsu/\)](https://support.canvas.fsu.edu/kb/article/899-technology-recommendations-for-learning-online-at-fsu/).



CANVAS SUPPORT

Need help with Canvas? Contact FSU Canvas Support:

✉ **Email:** canvas@fsu.edu (<mailto:canvas@fsu.edu>)

📞 **Phone:** (850) 644-8004

🌐 **Website:** support.canvas.fsu.edu (<http://support.canvas.fsu.edu>)

🕒 **Hours:** 8am to 5pm, Monday - Friday



FSU LIBRARIES RESOURCES & SERVICES

Whether on campus or learning online, you can [access library resources easily](https://lib.fsu.edu/service/campus-access) (<https://lib.fsu.edu/service/campus-access>). You'll find databases, tutorials, workshops, and other helpful resources in the [FSU Libraries for Students](#) Canvas org site (all students are enrolled automatically). For recommended research resources and ways to connect with [your librarians](https://lib.fsu.edu/service/library-liaisons) (<https://lib.fsu.edu/service/library-liaisons>), look for "Library Tools" in your Canvas course navigation.



COURSE POLICIES

COMMUNICATIONS/NETIQUETTE

For Discussions:

- Please use polite, respectful behavior when posting your responses to prompts in the Discussion Boards.

- Be mindful of how you express your emotions and humor, and be sensitive to the cultural and ability differences of your online peers.
- Keep postings to the point, and make sure your comments are relevant to the topic of discussion.
- Avoid messages such as, "Wow," "Way to go," or "Ditto" and aim for comments that validate other members' ideas through careful explanation of why.
- When replying, give a short description in the subject line of what you are replying to, and use correct punctuation and spelling throughout your post.

For Email Communication:

- For email, please respond to your instructor's and peers' messages within a 24-hour period.
- Use a brief description in the subject line that outlines the topic of discussion.
- Avoid using slang or profane words.
- Use your instructor's correct title he or she prefers for communication.
- Avoid using emoticons, such as smiley faces, and maintain a professional demeanor.
- Sign your email messages using your full name.
- AVOID USING ALL CAPS. This makes the message visually difficult to read and is perceived by the reader as "shouting."
- Use correct spelling, grammar, and punctuation, just as you would for any communication.
- Ask yourself whether you would be comfortable if someone other than the intended receiver were to read your message. Remember, email is not a completely secure form of communication.
- Refrain from "flaming," which is expressing a strongly held opinion without tact or regard for others. Don't assume that recipients will know the intent of the message (e.g., "just kidding"). It reads differently when it's in print (electronic or not).
- Report any inappropriate communication considered to be of a serious nature to your instructor, as it may be a violation of University policy.
- Treat others with respect by making messages clear and succinct.

PARTICIPATION & LATENESS POLICY

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

POLICY FOR ASSIGNMENTS

All assignments must be turned in on time or penalty points of 10% per day will be charged.

POLICY ON RESPONDING TO STUDENTS

- Email responses typically within 24 to 48 hours.
- Graded assignments are typically returned within 1 week after the due date.



UNIVERSITY POLICIES

UNIVERSITY ATTENDANCE POLICY

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

Please note: Because students who test positive for COVID-19 are required to self-isolate for ten (10) days, positive COVID-19 test results, required isolation orders, or documentation of contact tracing should all be considered valid documentation for missing class.

ACADEMIC HONOR POLICY

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and... [to] strive for personal and institutional integrity at Florida State University." (For more details see the [FSU Academic Honor Policy and procedures for addressing alleged violations](http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy) (<http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy>).

ACADEMIC SUCCESS

Your academic success is a top priority for Florida State University. University resources to help you succeed include tutoring centers, computer labs, counseling and health services, and services for designated groups, such as veterans and students with disabilities. The following information is not exhaustive, so please check with your advisor or the Dean of Students office to learn more.

PROCESS FOR RESOLVING ACADEMIC PROBLEMS OR GRIEVANCES

Please use this [step-by-step guide to resolving academic problems](https://www.fda.fsu.edu/sites/g/files/upcbnu636/files/Media/Files/General%20Academic%20Appeals/Academic_Problem-Solving_Flowchart_Binder_Oct-2020.pdf) (https://www.fda.fsu.edu/sites/g/files/upcbnu636/files/Media/Files/General%20Academic%20Appeals/Academic_Problem-Solving_Flowchart_Binder_Oct-2020.pdf) to begin the process of communicating with your instructor to resolve any confusion or difficulty you may be having in the course. Detailed information on FSU's grievance procedure, including special instructions for students enrolled in an FSU branch campus, is maintained on the General Bulletin's [Academic Integrity & Grievances](https://registrar.fsu.edu/bulletin/undergraduate/information/integrity/index.cfm) (<https://registrar.fsu.edu/bulletin/undergraduate/information/integrity/index.cfm>) webpage. Out-of-state distance learning students should review the Office of Distance Learning [Complaint Resolution](https://distance.fsu.edu/about-us/complaint-resolution) (<https://distance.fsu.edu/about-us/complaint-resolution>) page for additional procedures.

AMERICANS WITH DISABILITIES ACT

Florida State University (FSU) values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive, and welcoming. FSU is committed to providing reasonable accommodations for all persons with disabilities in a manner that is consistent with academic standards of the course while empowering the student to meet integral requirements of the course.

To receive academic accommodations, a student:

- (1) must register with and provide documentation to the Office of Accessibility Services (OAS);
- (2) must provide a letter from OAS to the instructor indicating the need for accommodation and what type; and,

(3) should communicate with the instructor, as needed, to discuss recommended accommodations. A request for a meeting may be initiated by the student or the instructor.

Please note that instructors are not allowed to provide classroom accommodations to a student until appropriate verification from the Office of Accessibility Services has been provided.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the

Office of Accessibility Services (Tallahassee Campus) [_\(https://dsst.fsu.edu/oas\)](https://dsst.fsu.edu/oas)

874 Traditions Way

108 Student Services Building

Florida State University

Tallahassee, FL 32306-4167

(850) 644-9566 (voice)

(850) 644-8504 (TDD)

oas@fsu.edu (<mailto:oas@fsu.edu>)

<https://dsst.fsu.edu/oas>

Student Accessibility Services (Panama City Campus) [_\(https://pc.fsu.edu/students/student-affairs/sas\)](https://pc.fsu.edu/students/student-affairs/sas)

Office of Student Affairs

4750 Collegiate Drive

2nd Floor Barron Building (Room 215)

Florida State University Panama City

Panama City, FL 32405

(850) 770-2172 (office)

(866) 693-7872 (toll free)

Email: sds@pc.fsu.edu (<mailto:sds@pc.fsu.edu>)

<https://pc.fsu.edu/students/student-affairs/sas> [_\(https://pc.fsu.edu/students/student-affairs/sas\)](https://pc.fsu.edu/students/student-affairs/sas)

FREE TUTORING FROM FSU

On-campus tutoring and writing assistance are available for many courses at Florida State University. High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

Tallahassee Campus

For more information, visit the Academic Center for Excellence (ACE) Tutoring Services' comprehensive list of on-campus tutoring options - see the [Academic Center for Excellence \(ACE\) Tutoring Services' website](http://ace.fsu.edu/tutoring) (<http://ace.fsu.edu/tutoring>) or contact tutor@fsu.edu (<mailto:tutor@fsu.edu>).

Panama City Campus

The PC campus provides both in-person and remote tutoring. In-person tutoring is available at the Robbins Center for Academic Excellence and Innovation in the Holley Building (which also houses the Digital Design Studio). Remote tutoring will be available through Zoom. To inquire about tutoring options for the PC campus, please visit the [Peer Tutoring website](https://pc.fsu.edu/students/academic-advising-student-success-center/peer_tutoring) (https://pc.fsu.edu/students/academic-advising-student-success-center/peer_tutoring) or contact an academic advisor in the Advising Center in the Holley Building to discover your options.

CONFIDENTIAL CAMPUS RESOURCES

Various centers and programs are available to assist students with navigating stressors that might impact academic success. These include the following:

[Victim Advocate Program](https://dsst.fsu.edu/vap) (<https://dsst.fsu.edu/vap>)

University Center A,
Room 4100, (850) 644-7161,
Available 24/7/365,
Office Hours: Monday-Friday 8am-5pm

<https://dsst.fsu.edu/vap> (<https://dsst.fsu.edu/vap>)

[Counseling & Psychological Services \(Tallahassee Campus\)](https://counseling.fsu.edu/)

(<https://counseling.fsu.edu/>)

Askew Student Life Center, 2nd Floor
942 Learning Way
(850) 644-8255 / (850) 644-TALK
<https://counseling.fsu.edu/>

[FSU PC Counseling Center \(Panama City Campus\)](https://pc.fsu.edu/students/student-affairs/counseling-services) (<https://pc.fsu.edu/students/student-affairs/counseling-services>)

Kathleen Duval, LCSW
Barron Building, Room 303

(850) 770-2174 (office)

(850) 832-3594 (cell)

<https://pc.fsu.edu/students/student-affairs/counseling-services>

University Health Services [_\(https://uhs.fsu.edu/\)_](https://uhs.fsu.edu/)

Health and Wellness Center,

(850) 644-6230

<https://uhs.fsu.edu/>

FSU FOOD PANTRIES

FSU has established Food Pantries where students in need can pick up non-perishable food items freely and anonymously. The Food Pantry is available during the pandemic, and it is free and open to all students to take what they need. Donations for collection of non-perishable food items are encouraged.

For more information about the Tallahassee Food Pantry, visit the **Tallahassee Food for Thought Pantry website** [_\(https://dos.fsu.edu/resources/food-for-thought-pantry\)](https://dos.fsu.edu/resources/food-for-thought-pantry) [_\(https://dos.fsu.edu/resources/food-for-thought-pantry\)](https://dos.fsu.edu/resources/food-for-thought-pantry). The pantry is located at University Center A, Suite 4148. If you have questions or concerns, contact the Department of Student Support and Transitions at dsst@fsu.edu or (850) 644-2428.

For more information about the Panama City Food Pantry, visit the **PC Food Pantry website** [_\(https://pc.fsu.edu/students/student-services/food-pantry\)](https://pc.fsu.edu/students/student-services/food-pantry) [_\(https://pc.fsu.edu/students/student-services/food-pantry\)](https://pc.fsu.edu/students/student-services/food-pantry). The pantry is located at Holley West Hall. If you have questions or concerns, contact Kathleen Duval LCSW at krduval@fsu.edu or (850) 770-2174.

SYLLABUS CHANGE POLICY

"Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice."








COURSE SUMMARY

All course assignments and texts with due dates are listed below. To be successful in this course, be sure to complete all required assignments and tests by the due date.

Course Summary:

| Date | Details | Due |
|------------------|---|----------------|
| Wed Feb 2, 2022 |  Try it: Time series plot. https://fsu.instructure.com/courses/184928/assignments/1382392 | due by 11:59pm |
| Fri Feb 4, 2022 |  Try it: STL decomposition https://fsu.instructure.com/courses/184928/assignments/1382391 | due by 11:59pm |
| Fri Feb 11, 2022 |  Try it: Fit, diagnose and forecast (https://fsu.instructure.com/courses/184928/assignments/1382390) | due by 11:59pm |
| Wed Feb 16, 2022 |  Try it: Evaluate forecast accuracy. https://fsu.instructure.com/courses/184928/assignments/1382388 | due by 11:59pm |
| Fri Feb 25, 2022 |  Scenario Forecasts https://fsu.instructure.com/courses/184928/assignments/1382384 | due by 11:59pm |
| Wed Mar 2, 2022 |  Try it: Exponential smoothing https://fsu.instructure.com/courses/184928/assignments/1382389 | due by 11:59pm |

| Date | Details | Due |
|------------------|---|----------------|
| Wed Mar 9, 2022 |  <u>Try it: ARIMA models</u> (https://fsu.instructure.com/courses/184928/assignments/1382387) | due by 11:59pm |
| Fri Mar 25, 2022 |  <u>Forecast Averaging</u> (https://fsu.instructure.com/courses/184928/assignments/1382383) | due by 11:59pm |
| Fri Apr 8, 2022 |  <u>VAR/VECM</u> (https://fsu.instructure.com/courses/184928/assignments/1382385) | due by 11:59pm |
| Fri Apr 29, 2022 |  <u>Final Project</u> (https://fsu.instructure.com/courses/184928/assignments/1382382) | due by 11:59pm |
| |  <u>Roll Call Attendance</u> (https://fsu.instructure.com/courses/184928/assignments/1382386) | |