

Term Information

Effective Term Spring 2025

General Information

Course Bulletin Listing/Subject Area Economics
Fiscal Unit/Academic Org Economics - D0722
College/Academic Group Arts and Sciences
Level/Career Undergraduate
Course Number/Catalog 4410
Course Title Data Management and Econometric Analysis
Transcript Abbreviation Data Mgmt Econ
Course Description Students will learn the programming skills necessary to manage projects, import data, clean data, and produce high quality output from econometric models in Python. By the end of the course students will be proficient with data-based tasks in the Python programming language and be capable of applying those skills to econometrics.
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week, 12 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites Econ 3400 or equiv. Although not required, those with credit or concurrently taking Econ 4400 or Econ 5410 will be better prepared. Students should have a basic familiarity with Python. CSE 1224 is recommended to those with no previous experience.
Exclusions
Electronically Enforced Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 45.0601
Subsidy Level Baccalaureate Course
Intended Rank Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- By the end of the course students will be proficient with data-based tasks in the Python programming language and be capable of applying those skills to econometrics.

Content Topic List

- Programming skills necessary to manage projects, import data, clean data, and produce high quality output from econometric models in Python

Sought Concurrence

Yes

Attachments

- Econ 4410 Spring 2025.docx
(Syllabus. Owner: Tobin,Ricky Mase)
- Proposal Econ 4410.docx
(Other Supporting Documentation. Owner: Tobin,Ricky Mase)
- Ohio_State_Course_Review_Concurrence_Form (1).pdf
(Concurrence. Owner: Tobin,Ricky Mase)
- Re_Concurrence request for Econ 4410.pdf: Emails with CSE
(Other Supporting Documentation. Owner: Tobin,Ricky Mase)
- Curriculum Map Update 2024 June.xlsx: Curriculum Map
(Other Supporting Documentation. Owner: Tobin,Ricky Mase)

Comments

- - If this course will be able to count in your major, please upload an updated curriculum map.
- I know there was a concurrence requested from the Dept of Computer Science and Engineering (I was cc'd on it), but no mention is made of this. Please provide the necessary documentation wrt your conversations with CSE. (If no one from CSE responded in time, then please upload the email you sent to them & add a note that no response was received in time.) *(by Vankeerbergen,Bernadette Chantal on 06/18/2024 02:27 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Tobin,Ricky Mase	06/17/2024 01:32 PM	Submitted for Approval
Approved	Yang,Huanxing	06/17/2024 03:32 PM	Unit Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	06/18/2024 02:27 PM	College Approval
Submitted	Tobin,Ricky Mase	06/25/2024 02:58 PM	Submitted for Approval
Approved	Yang,Huanxing	06/26/2024 05:44 PM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	08/16/2024 03:52 PM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Hilty,Michael Neff,Jennifer Vankeerbergen,Bernadette Chantal Steele,Rachel Lea	08/16/2024 03:52 PM	ASCCAO Approval

Econ 4410

Data Management and Econometric Analysis
2 meetings per week (1hr 20 min each)
classroom with tables

Instructor: **Dr. Ryan Ruddy, PhD**

email address: ruddy.19@osu.edu

Office Location: 303 Arps

Office Hours: [See Below](#)

1 Course Description

Students will learn the programming skills necessary to manage projects, import data, clean data, and produce high quality output from econometric models in Python. By the end of the course students will be proficient with data-based tasks in the Python programming language and be capable of applying those skills to econometrics.

Prerequisite(s): Econ 3400 or equiv. Although not required, those with credit or concurrently taking Econ 4400 or Econ 5410 will be better prepared. Students should have a basic familiarity with Python. CSE 1224 is recommended to those with no previous experience.

2 Course Materials

Required Texts:

Python for Everybody: Exploring Data in Python 3, Author: Charles Severance

This text is required for reading assignments and reference. The text is available for free from the author at the [Python for Everybody website](#).

Using Python for Introductory Econometrics, Author: Florian Heiss

This text is required for reading assignments and reference. The text is available for free from the author at [Using Python for Introductory Econometrics](#)

Recommended Text:

Introductory Econometrics, 5th Edition or higher Author: Jeffery Wooldridge

This text is required for reading assignments and is a good resource. You can use the 5th, 6th, or 7th edition.

Required Laptop:

All students will need a laptop capable of running [Python](#) and the additional software listed below that they can bring to class. If you do not have a laptop, the University has a [program to borrow machines](#).

Required Software:

The course will utilize [Python](#) for data analysis. There are several commonly used interfaces for Python. We will use [Jupyter Notebook](#) and [Spyder](#). These are free programs. There are cloud computing sites available that can run through a web browser such as [mybinder.org](#).

Some assignments will be completed on [Data Camp](#). The DataCamp for universities program provides free access to students. A sign-up link will be posted on Carmen.

3 Class Attendance Policy:

Students are expected to attend all classes. Attendance will not be taken. In class exercises will be crucial for understanding problem sets and exams.

4 Course Requirements and Grades

- **Problem Sets 20%** There will be 3 problem sets assigned during the semester. You are encouraged to work together on problem sets, but must turn in your own assignment in your own words with your own code. Assignments must be submitted on Carmen. Problem sets typically take 1-3 hours to complete.
- **Project 15%** There will be a project due near the end of the semester. All projects must be replicable with a python script that you submit. The project will require students to find and clean a data set, produce descriptive statistics, produce graphics, and conduct some analysis. Students can choose any economics related topic. Projects can be papers or presentations. Papers must be less than 10 pages and presentations are limited to 7 minutes. Students can complete projects with up to 3 people in a group.
- **Data Camp Assignments 15%** Students will be assigned DataCamp classes to complete on a weekly basis. Completion of DataCamp classes requires completing the course earning at least 70% of the allotted experience points for an assignment.¹ Data camp assignments will typically take 0.5-2 hours to complete.
- **Two Exams 25% each** There will be two in person exams, The first exam will take place at mid semester and the 2nd exam will take place during the final exam period. Exams will consist of a set of exercises with a supplied data set. All exams require the use of a computer and are open book.

Letter Grade Distribution:

Use the syllabus to calculate your current grade. The grade calculated by Carmen will not always correctly calculate the missing grades.

>= 93	A	73 - 76	C
90 - 92	A-	70 - 72	C-
87 - 89	B+	67 - 69	D+
83 - 86	B	60 - 66	D
80 - 82	B-		
77 - 79	C+	<= 59	E

5 Help with coursework:

5.1 Emails

Short questions can always be answered by email. All emails received prior to 5:00 pm on a weekday will be answered that day. Send emails directly to ruddy.19@osu.edu.

5.2 Economics Learning Center

During Autumn and Spring Semesters, the Department of Economics runs the Economics Learning Center in 385 Arps, where advanced undergraduate students provide free tutoring for students in

¹DataCamp will give correct answers and hints if you are stuck. If you take the answers and hints, you do not gain the full experience points. You cannot complete the assignments by asking the program for all of the answers.

ECON 2001, 2002, 4001, and 4002; assistance with other classes is frequently available as well. Note that the purpose of the tutoring center is not to provide answers to assignments, but to help students learn economics. As the student, you are ultimately responsible for all course work you submit. Additional information can be found at <https://economics.osu.edu/economics-learning-center>.

5.3 Office Hours:

Office hours are available 4 hours per week in 303 Arps. Additional Zoom office hours are also available by appointment on Monday, Tuesday, and Thursday. Please visit <https://go.osu.edu/ruddyoffice> to book an appointment. If you are unable to come during those times, arrangements can be made to meet at other times.

6 Academic integrity

6.1 AI

The use of AI in programming is commonplace and AI is an acceptable tool to aid in the completion of tasks. Cut and pasted code from ChatGPT or similar tools that does not run or complete the assigned task will not be given credit for exams or problem sets.

6.2 Open Book Exams

All exams in this class are open book. You are free to use internet sources that do not involve interaction with other people. Old message board posts and AI are permissible. Posting questions to message boards or sending communication to others during the exam is not acceptable.

6.3 Ohio State's academic integrity policy:

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

7 Disability Services

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are isolating while waiting for a COVID-19 test result, please let me know immediately. Those testing positive for COVID-19 should refer to the [Safe and Healthy Buckeyes site](#) for resources. Beyond five days of the required COVID-19 isolation period, I may rely on Student Life

Disability Services to establish further reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu.

8 Religious Accommodations

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the [Office of Institutional Equity](#).

[Policy: Religious Holidays, Holy Days and Observances](#)

9 Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu.

10 Student Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to

diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

11 Commitment to a diverse and inclusive learning environment

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

12 Readings and Topics List

This calendar is a rough outline of topics to be covered. Exact weeks vary depending on holidays and pace of class.

Week	Content
Week 1	<ul style="list-style-type: none"> - Introduction to Python, Spyder, and Jupyter - Reading: Python For Everybody (Py4E) Chapter 1-3 - Data Camp Assignment: Introduction to Python (All Sections)
Week 2	<ul style="list-style-type: none"> - Python as a calculator, Variable types, lists, conditional statements, NumPy - Reading: Py4E 6 - Data Camp Assignment: Intermediate Python (1,2)
Week 3	<ul style="list-style-type: none"> - Opening Data Sets in Python, getting descriptive statistics - Reading: Using Python for Introductory Econometrics (UPFIE) Sections 1.3-1.5 - Data Camp Assignment: Intermediate Python (3,4), Intro to data importing (1)
Week 4	<ul style="list-style-type: none"> - Descriptive Statistics Tables, Jupyter Notebooks - Reading: Data Camp Jupyter Notebook Guide - Data Camp Assignment: Intro to data importing (2), Data Manipulation with pandas (1,2)
Week 5	<ul style="list-style-type: none"> - Data Visualization Intro - Reading: UPFIE 1.4 - Data Camp Assignment: Data Manipulation with pandas (3,4)
Week 6	<ul style="list-style-type: none"> - More Data Visualization and Maps - Reading: Py4E 16 - Problem Set 1
Week 7	<ul style="list-style-type: none"> - Loops and Functions - Reading: Py4E 5-6 - Data Camp Assignment: Introduction to data visualization with matplotlib (1-3)
Week 8	<ul style="list-style-type: none"> - Problem Set 2 Due: CPS Wage Differences by Sex and Race - Exam 1 (See above for exam date)
Week 9	<ul style="list-style-type: none"> - Regression basics - Reading: UPFIE Sections 2.1-2.2 - Data Camp Assignment: Introduction to linear modeling in Python (1,2)
Week 10	<ul style="list-style-type: none"> - Regression with polynomials, factors, logs, and interactions - Reading: UPFIE sections 2.4, 6.1, 7.1-7.3 - Data Camp Assignments: Manipulating Time Series Data in Python (1), Time Series Analysis in Python (1)

Week 11	<ul style="list-style-type: none"> - Organizing Time Series Data, creating lags, creating differences, Graphing Time Series, FREDr package - Reading: UPFIE sections 10.1-10.2 - Problem Set 3 Due: FRED Time Series Analysis
Week 12	<ul style="list-style-type: none"> - Organizing panel data, Graphs with Panels, Fixed Effects Regressions - Reading: UPFIE sections 13.1-14.4 - Data Camp Assignment: Reshaping Data with Pandas (1-2)
Week 13	<ul style="list-style-type: none"> - Organizing a Paper or Presentation - Reading: UPFIE (19.1-19.3)
Week 14	<ul style="list-style-type: none"> - Student Presentations - Projects Due - Additional topics from below if time permits
Final Exam Week	<ul style="list-style-type: none"> - Final Exam
Time Permitting	<ul style="list-style-type: none"> - Difference in Differences Regression and Graphics, Probits and Logits in R, Instrumental Variables, Dash Apps

Rationale

The department of economics is proposing a Data Management and Econometric Analysis (4410).

Econ 4410 will focus on preparing data for econometric analysis and outputting that analysis. This is a course that has been specifically requested by students and the economic advisory board to better prepare students for the job market. Students have pointed out similar course offerings at other universities. Informal class surveys have indicated high demand for the course.

Course Objectives

Students will learn the programming skills necessary to manage projects, import data, clean data, and produce high quality output from econometric models. By the end of the course students will be able to apply the skills learned in their econometrics classes to real world data in the Python programming language.

Relationship to other Courses/Curricula

Currently the department offers three undergraduate econometrics courses Elementary Econometrics 4400, Econometrics I (5410), and Econometrics II. Those courses focus on the theory and application of econometrics. This is typically done with data prepared by the textbook publishers or the instructor. Real world data is not cleaned and prepared for analysis and there is not enough time to also teach those skills in the econometrics courses. The software most often used in econometrics courses, STATA, is more user friendly than Python requiring little class time to teach basic operations. Python is now significantly more popular in the private sector but will require more class time than is available in current econometrics courses. Econ 4410 will complement the econometrics skills taught in other classes.

There are two Python courses in the department of computer science and engineering, Introduction to computer programming in Python (CSE 1224) and Programming in Python (4256). Econ 4410 will go through the basics of Python quickly. We have added to our syllabus that students with no Python experience are encouraged to take CSE 1224 prior to enrollment in Econ 4410. CSE 1224 will not be a required pre-requisite because it will require students to enroll in six credit hours of programming courses in order to learn the econometrics skills.

There is a statistics course in data management and programming in R (Stat 5730). The main focus of Econ 4410 will be Python.

The techniques and terms used in econometrics and other similar fields (statistics, data science, etc.) are often different. We want a course that is specific to the skills that economists use in data analysis.

Ohio State Department Course Review Concurrence Form

The purpose of this form is to provide a simple system of obtaining departmental reactions to proposed new courses, group studies, study tours, workshop requests, and course changes. A letter may be substituted for this form.

Academic units initiating a request which requires such a reaction should complete Section A of this form and send a copy of the form, course request, and syllabus to each of the academic units that might have related interests in the course. Initiating units should allow at least two weeks for responses.

Academic units receiving this form should response to Section B and return the form to the initiating unit. Overlap of course content and other problems should be resolved by the academic units before forwarding this form and all other accompanying documentation to the Office of Academic Affairs.

A. Information from academic unit *initiating* the request:

Initiating Academic Unit: Economics Date: 5/24/2024

Registrar's Listing: Economics 4410

Course Number: _____ Level: U P G Credit Hours: 3

Course Title: Data Management and Econometric Analysis

Type of Request: New Course Group Studies Workshop Study Tour Course Change

Academic Unit with related interests asked to review the request (use a separate form for each unit while requesting concurrences from multiple units): Department of Statistics

Date responses are needed: _____

B. Information from academic units *reviewing* the request:

- The academic unit **supports** the proposal
 The academic unit **does not support** the proposal.

Please explain:

- The academic unit suggests:
Revised to remove similarities with STAT 5731

Signature of Department Chair

Signature of Graduate Studies Chair (if applicable)

From: [Yang, Huanxing](#)
To: [Ruddy, Ryan](#)
Cc: [Ye, Lixin](#); [Abito, Mike](#); [Tobin, Rick](#)
Subject: Re: Concurrence request for Econ 4410
Date: Thursday, June 13, 2024 10:52:26 PM
Attachments: [image001.png](#)

Hi Rick,

Are you the designated person to submit the course proposal? If yes, please submit the proposal. If not, please let me know who the designated person is in the department.

Thanks,
Huanxing

From: Ruddy, Ryan <ruddy.19@osu.edu>
Sent: Thursday, June 13, 2024 10:21 PM
To: Yang, Huanxing <yang.1041@osu.edu>
Cc: Ye, Lixin <ye.45@osu.edu>; Abito, Mike <abito.1@osu.edu>
Subject: Re: Concurrence request for Econ 4410

Huanxing, (Mike and Lixin)

I updated and attached the syllabus and course rationale to reflect the issues with CSE 1224. The syllabus and course rationale need to be submitted at: <https://curriculum.osu.edu/>. I do not have access to the site. According to the submission resources site "The official curriculum portal for The Ohio State University, curriculum.osu.edu access is limited to designated faculty and staff members within a department/unit (typically faculty directors and Academic Program Specialists)." All of the necessary information is in the attached documents.

Ryan



Ryan Ruddy, PhD

Senior Lecturer Department of Economics

Assistant Director Sports & Society Initiative

Faculty Co-Advisor Sports Analytics Association

ruddy.19@osu.edu

[Office Hours Bookings](#)

From: Yang, Huanxing <yang.1041@osu.edu>
Sent: Wednesday, June 12, 2024 10:00 AM

To: Ruddy, Ryan <ruddy.19@osu.edu>
Cc: Ye, Lixin <ye.45@osu.edu>; Abito, Mike <abito.1@osu.edu>
Subject: Fw: Concurrence request for Econ 4410

Hi Ryan,

CSE has not responded to my message on May 31. I assume that it is reluctant concurrence. Please add CSE 1224 as a recommended course in your syllabus, and start the next stage of process (submit the proposal to the college).

Since I will start travelling tomorrow, you can ask Lixin or Mike for help if I do not respond to you in time.

Best,
Huanxing

From: Yang, Huanxing <yang.1041@osu.edu>
Sent: Friday, May 31, 2024 10:26 AM
To: Sivilotti, Paul <paolo@cse.ohio-state.edu>
Cc: Ye, Lixin <ye.45@osu.edu>; Abito, Mike <abito.1@osu.edu>; Williamson, Donald <williamson.413@osu.edu>; Fosler-Lussier, Eric <fosler@cse.ohio-state.edu>
Subject: Re: Concurrence request for Econ 4410

Hi Paul and Eric,

Thanks for reviewing the proposal of Econ 4410. Our curriculum committee met and discussed your responses.

First, let me explain again why we are developing this course. It is largely in response to requests from our students and the alumni advisory board. They want a course that gives them the skills to apply the concepts that they learn in their econometrics courses to real world data. Taking such a course would make them more competitive on the job market. We agree with this assessment.

You proposed the idea of making CSE 1224 as a pre-req for Econ 4410. After reviewing the syllabus of 1224, we identified several problems. First, if we add 1224 as a pre-requisite, then we are requiring students to complete 6 credit hours in order to get through the econometric techniques. Many students have tight schedules and time frames that will not allow them to take both courses. Second, it seems that CSE 1224 was designed for engineering students. A significant part of the course covers using Python to solve engineering problems. This is not necessary for Econ students. Our goal is to get our students to the point where they can clean

a raw data set, perform econometric analysis, and report their results. Third, Python is quite easy to learn. Making 1224 a pre-req would be cumbersome for students that have basic Python skills from self-teaching or other sources.

We also had another concern about making CSE 1224 a pre-req. Our BA students are only required to complete Math 1148 (or higher) for their degree. 1148 does not appear to meet the pre-requisites for 1224. 1148 is similar to some of the listed courses though.

As it stands, it makes more sense to make CSE 1224 a recommended course before taking Econ 4410. For example, we can include a statement in the syllabus that states that "the course requires basic pre-requisite knowledge of Python. Those skills are taught in CSE 1224..."

For our students, what they really need is a 1-credit hour basic intro Python course, which teaches the basics of Python. BTW, the Stats department has developed a 1-credit hour intro course of R. If you offer such a course in the future, we would be happy to add it as a pre-req for Econ 4410.

Please let us know your thoughts on the proposed solution: making 1224 a recommended course before taking Econ 4410 for now, and add a 1-credit hour intro Python course (with lower math requirement) as a pre-req after you develop such a course in the future. We are also open to making adjustments to the material taught in Econ 4410 as situations evolve.

Thanks for your consideration and we are looking forward to your response.

Best,
Huanxing

Huanxing Yang
Professor and Chair
OSU Econ

From: Sivilotti, Paul <paolo@cse.ohio-state.edu>

Sent: Wednesday, May 22, 2024 7:26 PM

To: Yang, Huanxing <yang.1041@osu.edu>

Cc: Ye, Lixin <ye.45@osu.edu>; Abito, Mike <abito.1@osu.edu>; Williamson, Donald <williamson.413@osu.edu>; Fosler-Lussier, Eric <fosler@cse.ohio-state.edu>

Subject: RE: Concurrence request for Econ 4410

Hi Huanxing—

Thanks for sharing the syllabus for the proposed new course ECON 4410: Data Management and Econometric Analysis. Our curriculum committee met and discussed the proposal.

The projects involve applications and data sets related to econometric data, but, significantly, the course assumes no programming background. Our concern is that, in practice, such a course will necessarily end up involving significant introductory instruction in Python programming--perhaps more than was anticipated in course design. It is easy to under-estimate the time and instruction needed for students to become capable in a programming language like Python, let alone “proficient”.

Hence, we can not offer concurrence for the course, as-is. However, we are happy to discuss options... In fact we have some new models under development right now that I believe would be worth discussing further. I am adding to the cc list our Associate Chair, Eric Foster-Lussier, who is leading those development efforts. I invite you to connect with him to see if those new models might provide a path forward for this proposal.

Alternatively, you could add CSE 1224 as a pre-req (or co-req) for ECON 4410. That would have the benefit of letting you focus in ECON 4410 on the interesting data manipulation and analysis problems in econometrics. There are seats available in CSE 1224 so access wouldn't be a problem. That path is pretty straight forward, but happy to discuss that option further too.

Best wishes,
--paul

From: Yang, Huanxing <yang.1041@osu.edu>
Sent: Thursday, May 16, 2024 9:45 AM
To: Sivilotti, Paul <paolo@cse.ohio-state.edu>
Cc: Ye, Lixin <ye.45@osu.edu>; Abito, Mike <abito.1@osu.edu>; Williamson, Donald <williamson.413@osu.edu>
Subject: Re: Concurrence request for Econ 4410

Hi Paul,

Thanks for letting me know. I will be waiting for the responses from your committee.

Best,
Huanxing

From: Sivilotti, Paul <paolo@cse.ohio-state.edu>
Sent: Wednesday, May 15, 2024 2:07 PM

To: Yang, Huanxing <yang.1041@osu.edu>

Cc: Ye, Lixin <ye.45@osu.edu>; Abito, Mike <abito.1@osu.edu>; Williamson, Donald <williamson.413@osu.edu>

Subject: RE: Concurrence request for Econ 4410

Hi Huanxing—

Thanks for the updated syllabus. The change to Python does make it somewhat more complicated from the CSE perspective. (There are generally no concerns with courses that use R, but courses that are introduction-to-programming using Python often have considerable overlap with our existing intro programming courses in Python.)

I will need to circulate this new version with our curriculum committee and get back to you...

Best wishes,

--paul

From: Yang, Huanxing <yang.1041@osu.edu>

Sent: Wednesday, May 15, 2024 1:44 PM

To: Arora, Anish <anish@cse.ohio-state.edu>; Sivilotti, Paul <paolo@cse.ohio-state.edu>

Cc: Vankeerbergen, Bernadette <vankeerbergen.1@osu.edu>; Ye, Lixin <ye.45@osu.edu>; Abito, Mike <abito.1@osu.edu>

Subject: Re: Concurrence request for Econ 4410

Dear Anish,

Based on the response from the Stats Department, we have changed the proposal of Econ 4410: it now focuses on using Python instead of R. The revised proposal and syllabus are attached.

Please review the revised proposal and email your responses/concurrences to me.

*Responses are due by **Thursday, May 23, 2024**.* Please note that if the Department of Economics does not hear back from you by that date, concurrence will be assumed.

Thank you for your consideration,

Huanxing

Huanxing Yang

Professor and Chair

OSU Econ

From: Arora, Anish <anish@cse.ohio-state.edu>

Sent: Thursday, May 9, 2024 11:40 AM

To: Yang, Huanxing <yang.1041@osu.edu>; Sivilotti, Paul <paolo@cse.ohio-state.edu>

Cc: Vankeerbergen, Bernadette <vankeerbergen.1@osu.edu>; Ye, Lixin <ye.45@osu.edu>; Abito, Mike <abito.1@osu.edu>

Subject: RE: Concurrence request for Econ 4410

Dear Huanxing,

Our Curriculum Committee will work through its process to clarify and respond to this request. Since we are starting summer, our curriculum chair Prof. Paul Sivilotti will be in touch with you with questions and timeline issues should they arise.

With best wishes,

Anish

Anish Arora

Professor and Chair, Computer Science and Engineering

Faculty Director, 5G-OH Connectivity Center

arora.9@osu.edu

Ingrid Rivera

Executive Assistant

rivera.153@osu.edu

614-292-5973 Office



THE OHIO STATE UNIVERSITY

From: Yang, Huanxing <yang.1041@osu.edu>

Sent: Thursday, May 9, 2024 11:22 AM

To: Arora, Anish <anish@cse.ohio-state.edu>

Cc: Vankeerbergen, Bernadette <vankeerbergen.1@osu.edu>; Ye, Lixin <ye.45@osu.edu>; Abito, Mike <abito.1@osu.edu>

Subject: Concurrence request for Econ 4410

Dear Anish,

I am contacting you regarding a new course proposal, as you are the chair of CSE.

Please find attached a proposal for new course Econ 4410 "Data Management and Econometric Analysis." The Department of Economics is requesting concurrence for the proposed new course. Please email your responses/concurrences to me. *Responses are due by **Thursday, May 23, 2024**.* Please note that if the Department of Economics does not hear back from you by that date, concurrence will be assumed.

Best,
Huanxing

Huanxing Yang
Professor and Chair
OSU Econ