ECON 144: ECONOMIC PROGRAMMING AND DATA ANALYSIS

In Workflow

1. ECON Committee Chair (lang@csus.edu)
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3. SSIS College Committee Chair (wickelgr@csus.edu)
4. SSIS Dean (mendriga@csus.edu)
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9. Catalog Editor (catalog@csus.edu)
10. Registrar's Office (k.mcfarland@csus.edu)
11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Fri, 23 Aug 2024 22:09:37 GMT
   David Lang (lang): Approved for ECON Committee Chair
2. Fri, 23 Aug 2024 22:10:01 GMT
   David Lang (lang): Approved for ECON Chair
3. Thu, 21 Nov 2024 22:12:22 GMT
   Emily Wickelgren (wickelgr): Rollback to ECON Chair for SSIS College Committee Chair
4. Fri, 22 Nov 2024 23:31:08 GMT
   David Lang (lang): Rollback to Initiator
5. Fri, 24 Jan 2025 19:07:41 GMT
   David Lang (lang): Approved for ECON Committee Chair
6. Fri, 24 Jan 2025 19:08:02 GMT
   David Lang (lang): Approved for ECON Chair
7. Mon, 03 Mar 2025 19:25:41 GMT
   Heidy Sarabia (heidy.sarabia): Approved for SSIS College Committee Chair
8. Mon, 03 Mar 2025 20:30:12 GMT
   Emily Wickelgren (wickelgr): Rollback to SSIS College Committee Chair for SSIS Dean
9. Wed, 05 Mar 2025 21:35:58 GMT
   Emily Wickelgren (wickelgr): Approved for SSIS College Committee Chair
10. Wed, 05 Mar 2025 23:01:57 GMT
    Emily Wickelgren (wickelgr): Approved for SSIS Dean

New Course Proposal

Date Submitted: Fri, 24 Jan 2025 19:04:48 GMT

Viewing: ECON 144 : Economic Programming and Data Analysis

Last edit: Fri, 24 Jan 2025 19:04:47 GMT

Changes proposed by: Raul Tadle (219695204)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Raul Tadle	raul.tadle@csus.edu	(661) 435-9141

Catalog Title:

Economic Programming and Data Analysis

Class Schedule Title:

Programming and Data Analysis

Academic Group: (College)

SSIS - Social Sciences & Interdisciplinary Studies

Academic Organization: (Department)

Economics

Will this course be offered through the College of Continuing Education (CCE)?
No

Catalog Year Effective:
Fall 2025 (2025/2026 Catalog)

Subject Area: (prefix)
ECON - Economics

Catalog Number: (course number)
144

Course ID: (For administrative use only.)
TBD

Units:
3

Is the ONLY purpose of this change to update the term typically offered or the enforcement of existing requisites at registration?
No

In what term(s) will this course typically be offered?
Fall, Spring

Does this course require a room for its final exam?
No, final exam does not require a room

Does this course replace an existing experimental course?
Yes

This course replaces the following experimental course:
ECON 196R - Economic Programming and Data Analysis

This course complies with the credit hour policy:
Yes

Justification for course proposal:
This proposed course will serve as a programming class that focuses on empirical and theoretical analyses in economics. The class will be an upper division elective that will allow students to become more comfortable with applying economic tools to access, analyze, and visualize data and theoretical models. Acquiring these skills helps the students not only with their future coursework but with job and graduate school requirements. This course was offered before as an experimental course, and it received a very positive reception from students who asked to include it in the department's upper-division elective offerings. The structure and content of this proposed class is the same as those of the successful experimental (Econ 196R) course.

Course Description: (Not to exceed 90 words and language should conform to catalog copy.)
Inquiry into the basic principles of data analysis and computer programming. The primary focus is on data management and the associated visual optimization and statistical inference in economics using programming languages, such as R and Python. More advanced topics include the use of cross validation, algorithms, and theoretical modeling for data analysis and problem-solving.

Are one or more field trips required with this course?
No

Fee Course?
No

Is this course designated as Service Learning?
No

Is this course designated as Curricular Community Engaged Learning?
No

Does this course require safety training?
No

Does this course require personal protective equipment (PPE)?
No

Does this course have prerequisites?
Yes

Prerequisite:
Econ 1A, Econ 1B, and Econ 140

Prerequisites Enforced at Registration?
Yes

Does this course have corequisites?
No

Graded:
Letter

Approval required for enrollment?
No Approval Required

Course Component(s) and Classification(s):
Lecture

Lecture Classification
CS#02 - Lecture/Discussion (K-factor=1WTU per unit)
Lecture Units
3

Is this a paired course?
No

Is this course crosslisted?
No

Can this course be repeated for credit?
No

Can the course be taken for credit more than once during the same term?
No

Description of the Expected Learning Outcomes and Assessment Strategies:

List the Expected Learning Outcomes and their accompanying Assessment Strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers). Click the plus sign to add a new row.

	Expected Learning Outcome	Assessment Strategies
1	Compare data from different sources	student projects/papers, problem sets
2	Manage information in a professional and creative visual context	student projects/papers, problem sets, examinations, presentations
3	Employ statistical inference using programming	student projects/papers, problem sets, examinations, presentations
4	Create functions, algorithms, and iterations of data analysis for problem solving	student projects/papers, problem sets
5	Develop basic theoretical models to examine the impact of stochastic shocks	student projects/papers, problem sets, presentations

Attach a list of the required/recommended course readings and activities:
An Introduction to Statistical Learning (2nd Edition).pdf
Introductory Time Series With R.pdf
Econ 196R Syllabus.pdf
An Introduction to Statistical Learning (2nd Edition).pdf
Introductory Time Series With R.pdf

Econ 144 Syllabus.pdf

For whom is this course being developed?

Majors in the Dept
Minors in the Dept

Is this course required in a degree program (major, minor, graduate degree, certificate?)

No

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

Yes

If yes, attach a description of resources needed and verify that resources are available:

Description of Resources Needed.docx

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Intellectual and practical skills
Integrative learning

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?

No

Reviewer Comments:

Emily Wickelgren (wickelgr) (Thu, 21 Nov 2024 22:12:22 GMT): Rollback: See email on 11/21/24
David Lang (lang) (Fri, 22 Nov 2024 23:31:08 GMT): Rollback: See email from emily
Emily Wickelgren (wickelgr) (Mon, 03 Mar 2025 20:30:12 GMT): Rollback: Requested by SSIS College Chair

Key: 15158