

STAT 140A: LINEAR MODELS

In Workflow

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Approval Path

1. Fri, 29 Sep 2023 03:48:36 GMT
Vincent Pigno (vincent.pigno): Approved for MATH Committee Chair
2. Fri, 29 Sep 2023 16:33:17 GMT
Kimberly Elce (kelce): Approved for MATH Chair
3. Wed, 04 Oct 2023 22:53:13 GMT
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
4. Wed, 04 Oct 2023 23:03:54 GMT
Shannon Datwyler (datwyler): Approved for NSM Dean
5. Mon, 30 Oct 2023 20:23:49 GMT
Katie Hawke (katiedickson): Approved for Academic Services

New Course Proposal

Date Submitted: Thu, 28 Sep 2023 23:48:06 GMT

Viewing: STAT 140A : Linear Models

Last edit: Wed, 04 Oct 2023 22:53:01 GMT

Changes proposed by: Clark Fitzgerald (223005263)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Clark Fitzgerald	fitzgerald@csus.edu	916-278-4748

Catalog Title:

Linear Models

Class Schedule Title:

Linear Models

Academic Group: (College)

NSM - Natural Sciences & Mathematics

Academic Organization: (Department)

Mathematics & Statistics

Will this course be offered through the College of Continuing Education (CCE)?

No

Catalog Year Effective:

Fall 2024 (2024/2025 Catalog)

Subject Area: (prefix)

STAT - Statistics

Catalog Number: (course number)

140A

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 term only

Does this course require a room for its final exam?

Yes, final exam requires a room

Does this course replace an existing experimental course?

Yes

This course replaces the following experimental course:

STAT 196L - Linear Models

This course complies with the credit hour policy:

Yes

Justification for course proposal:

This will be a required course for the new statistics BS degree. Based on our experience teaching the course in Spring 2023, we added stronger prerequisites and a different textbook.

Linear modeling is the core of everyday statistical work and is a standard class when studying statistics. As such, it fills a gap in our current statistics offerings.

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)

Practical statistical modeling of data using professional-grade statistical software. Simple and multiple linear regression, analysis of variance, logistic regression, variable transformation, variable selection, model selection, residual analysis.

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:

Stat 115A and Stat 128 and (Math 35 or Math 100)

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	Apply regression by fitting linear models, conducting hypothesis tests, constructing confidence intervals, and making predictions.	homework, projects, exams
2	Evaluate the appropriateness of models using diagnostic plots, statistics, and residual analysis.	homework, projects, exams
3	Interpret model parameters by communicating results for a general audience.	homework, projects, exams
4	Select appropriate models by considering the bias variance tradeoff.	homework, projects, exams
5	Use statistical software by fitting models to real world data.	homework, projects, exams

Attach a list of the required/recommended course readings and activities:

Stat 140A recommended course readings activities.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?)

Yes

Has a corresponding Program Change been submitted to Workflow?

Yes

Identify the program(s) in which this course is required:**Programs:**

BS in Statistics

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

No

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

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

Please attach any additional files not requested above:

stat140A-syllabus.pdf

Key: 15011