

CAUSAL EFFECT OF GENERAL EDUCATION REQUIREMENTS

at Public Four-Year Institutions in Texas

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INTRODUCTION

- Across the country, there are many changes being implemented in education
- Universities are changing their core curriculum to align with their ideological beliefs
- How does removing/adding courses to University core curriculum impact student enrollment in those respective departments?

Florida Eliminates Sociology as a Core Course at Its Universities

In December, Florida's education commissioner wrote that "sociology has been hijacked by left-wing activists."



(Hartocollis, 2024)



California State University now requires ethnic studies

(Zinshteyn, 2020)

GENERAL EDUCATION

- Part of liberal education curriculum shared by all students
- Exposure to multiple disciplines and creates the foundation for intellectual, civic, and practical skills
- Encompasses “introductory, advanced, and integrative forms of learning” (*Henschel et al, 2018*)
- Constitute ~40 credit hours (one-third of required credits for bachelor’s degree) (*Lattuca & Stark, 2014*)

LITERATURE REVIEW - SUPPORTING STUDIES

- *The Shapeless River: Does a Lack of Structure Inhibit Students' Progress at Community Colleges?* (Scott-Clayton, 2015)
 - Relation between structured paths to graduation at Community Colleges and chances of graduating
 - When students lack structure, they make poor self-evaluated decisions that lead to unsound outcomes
- *Timing Matters: Evidence from College Major Decisions* (Patterson et al, 2021)
 - Whether taking elective courses during or after the semester students make choices about majors influences their decision
 - Students are more influenced by courses taking during the semester they make decisions about major – timing is impactful for student curricular pathway choices
- *The Effects of Information Provision on the Gender Gap in Technology: Experimental Evidence From Course Enrollment and Major Decisions* (Brodnax, 2021)
 - Assesses whether female students take more STEM courses if shown a STEM core curriculum pamphlet with female students pictured
 - Students are more likely to take gen ed courses in specific areas if *nudged* by course advisors, administrators, or departments – more female students enrolled in STEM courses when shown women pictured in brochures

RESEARCH QUESTION

- *How does adding or removing courses from the General Education requirement at 4-year Public Universities in Texas change enrollment in those departments?*
- Adding (removing) a course to the general education requirement will increase (decrease) enrollment in that course, consequently increasing (decreasing) departmental funding and faculty members in that subject area.

TEXAS POLICY CONTEXT & DATA

- **October 2011:** Texas Higher Education Coordinating Board made changes to Texas Core Curriculum to standardize curricular requirements across institutions
- **Fall 2014:** These changes went into effect (reducing General Education Requirements)

- 1) Lamar University
- 2) Angelo State University
- 3) Midwestern State University
- 4) Sul Ross State University
- 5) Texas State University
- 6) Texas Tech University

Table 1*Texas Core Curriculum Credit Hours Before and After 2014 Policy Change*

Institution	Credits 2013-2014	Credits 2014-2015	Dosage
Lamar University	48	42	6
Midwestern State University	47	42	5
Sul Ross State University	46	42	4
Texas State University	46	42	4
Angelo State University	44	42	2
Texas Tech University	44	44	0 ¹

¹ Texas Tech University was given an exception from the overall credit decrease.

Notes: Table displays Texas Core Curriculum Credit Requirements before and after the 2014 Policy Change. Data comes from institution course catalogs posted online.

9 CORE COMPONENT AREAS

- Texas Higher Education Coordinating Board changed requirements
- Standardization of credit hours across universities
- Wide range of skills developed through component areas

Component Area	Credits 2013-2014	Credits 2014-2015	Dosage
Communication	6	6	0
Mathematics	3	3	0
Life and Physical Sciences	6	6	0
Language, Philosophy, and Culture	3	3	0
Creative Arts	3	3	0
American History	6	6	0
Government/Political Science	6	6	0
Social/Behavioral Sciences	3	3	0
Component Area Code	6-12	6	0-6

DATA

- Information from course catalogs at 6 Institutions
- Administrative student transcripts

ANGELO STATE UNIVERSITY

Member, Texas Tech University System

2014-15 CATALOG

UNDERGRADUATE & GRADUATE

GENERAL INFORMATION

UNDERGRADUATE & GRADUATE

Core Curriculum Requirement Effective Fall 2014

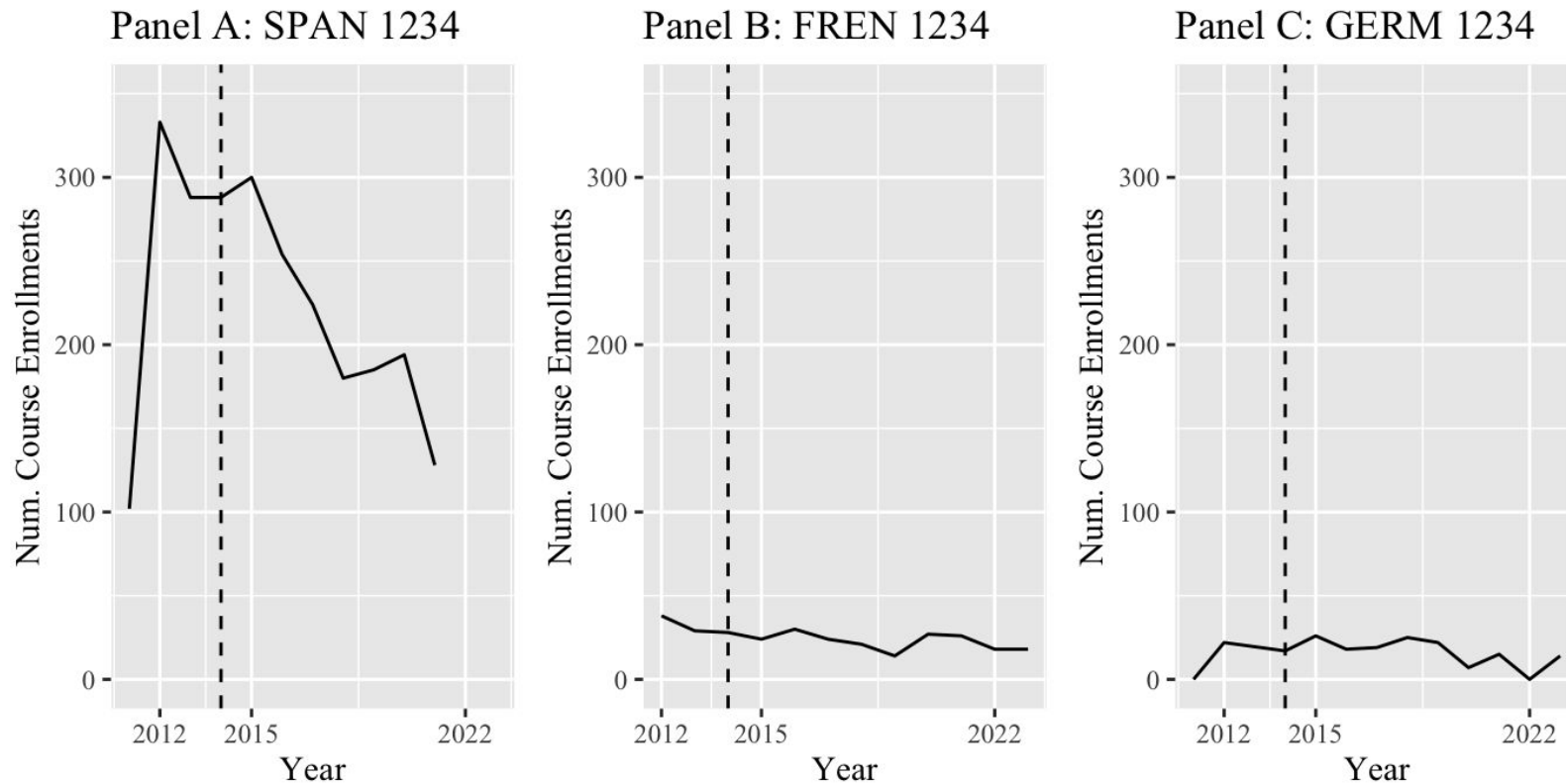
The core curriculum is designed to ensure that Texas Tech University graduates to areas of study that are traditionally regarded as development of a broadly educated person. These areas of study include: life and physical sciences; social and behavioral languages; philosophy and culture; creative arts; American history; political science; government; and the world of common Texas Tech University core curriculum complements with Texas courses and Texas Higher Education Coordinating Board state college and department degree requirements when choosing core curriculum courses.

A. Communication: 9 hours	MATH 1451	Calculus I
Courses in this core component area focus on developing ideas and expressing them clearly, considering the effect of the message, fostering understanding, and building the skills needed to maximize the potential for effective change through communication. Courses involve the formation of clear, concise, written, and visual language that enable people to exchange messages appropriate to the subject, audience, and purpose.	MATH 1452	Calculus II
Students graduating from Texas Tech University should be able to develop ideas and express them clearly, considering the effect of the message, fostering understanding, and building the skills needed to communicate effectively.	MATH 1530	Precalculus
	MATH 2300	Statistical Methods
	MATH 2345	Introduction to Statistics
	MATH 2370	Application to Business
	MATH 2371	Elementary Analysis
	MATH 2372	Elementary Analysis

RESULTS

Figure 1

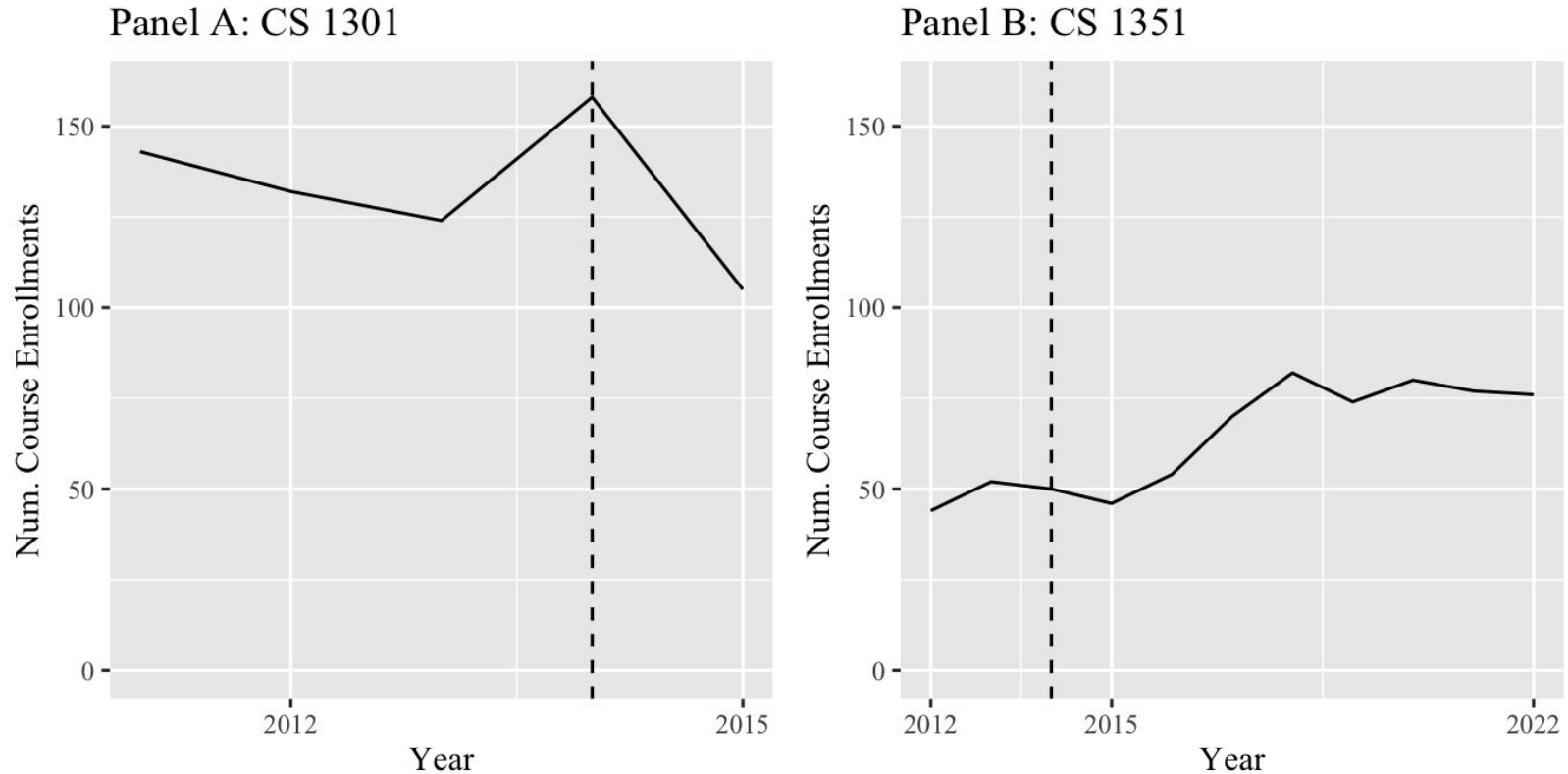
Course Enrollments in Select Courses at Midwestern State University Over Time



Notes: Figure displays course enrollments in SPAN 1234, FREN 1234, and GERM 1234 at Midwestern State University from the 2011 to 2022 academic years. Data comes from administrative student transcripts housed at the University of Texas at Dallas.

Figure 2

Course Enrollments in Select Courses at Angelo State University Over Time



Notes: Figure displays course enrollments in CS 1301 and CS 1351 at Angelo State University from the 2011 to 2022 academic years. Data comes from administrative student transcripts housed at the University of Texas at Dallas.

Table 2*Regressing Course Enrollments on General Education Requirements*

Factors	(1)	(2)	(3)
Is Gen Ed	573.562*** (17.2475)	33.6654*** (7.43123)	36.2244*** (7.41919)
R-squared	0.166	0.938	0.938
Observations	206,946	206,946	206,946
Controls for Academic Year	X		X
Controls for Course		X	X

Notes: Standard errors in parenthesis. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Table displays results of linear regression tests conducted on several factors related to courses being classified as General Education courses, which are Academic Year and Subject Number. Data comes from administrative student transcripts housed at the University of Texas at Dallas.

LIMITATIONS

- Primarily Quantitative Data: observe course enrollments but not student decision-making
 - Theoretical Mechanism (student decision-making links gen ed courses and course enrollments)
- Lack of a Causal Relationship: confounds causal relationship because there are factors that influence course enrollments left unconsidered
 - i.e. Brodnax (2021) increased female student enrollment in STEM courses by advertising these courses in a brochure featuring female students

THEORETICAL IMPORTANCE

- Students are less likely to take courses removed from General Education curriculum
 - Introductory and “easier” courses
- For incoming students, strategic adding/removal of General Education courses can shift student majors
 - i.e. Adding STEM courses can increase STEM Majors
- Student enrollment in courses can directly increase/decrease funding in those departments
 - Increases when courses are part of General Education Curriculum

POLICY IMPLICATIONS

- Florida: STOP WOKE Act
- Policies that enforce/remove particular courses from general education requirements impacts student course and career decisions
- Policymakers can create effective curriculum structures to guide undecided students to success



(Suarez et al, 2024)

FUTURE WORK

- Departmental Budgets
- Student Major Choices
- Qualitative research: interviews, surveys, etc.

THANK YOU!

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