

A close-up photograph of autumn leaves in shades of orange, yellow, and red, with a soft, out-of-focus background.

Differential Tuition and STEM

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Barriers and Opportunities in Completing 2- and 4-year STEM Degrees

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What are Differential Tuition (DT) Policies?

- Variability in tuition assessed to students
 - By major or program (STEM and non-STEM)
 - By class status
- DT amounts may change annually
- More types of institutions are adopting such policies



Univ. of Illinois (Residents, 2013-2014)

Program	Tuition	Fees	Room and Board	Books and Supplies	Other Expenses	Total
Base Rate	11,834	3,424	10,636	1,200	2,500	29,594
Fine and Applied Arts	13,438	3,424	10,636	1,200	2,500	31,198
Chem/Life Science/Business/Engineering	16,754	3,424	10,636	1,200	2,500	34,514
Journalism/Advertising	12,614	3,424	10,636	1,200	2,500	30,374
ACES (ANSC, FSHN, TSM/ABE)	14,378	3,424	10,636	1,200	2,500	32,138
ACES (CPSC, NRES)	13,108	3,424	10,636	1,200	2,500	30,868
ACES (ACE)	13,438	3,424	10,636	1,200	2,500	31,198
LAS: ESES Online	8,472	1,708	1,800	1,200	1,200	14,380



Institutional Policies

- 45% of public universities have DT policies; adopted due to rising cost of program delivery, adaptation at peer institutions, and reduced state support (Nelson, 2008)
- 40% of doctoral degree-granting public universities have DTs, with the majority assessed by major. (Cornell/Ehrenberg, 2011)



Impact on Students

- Financial aid initially offsets DT, but cost increases over time, particularly for low-income students (George-Jackson, 2012)
- Choice of major for women and students of color negatively impacted by DT policies; expected revenues may not be realized by institutions (Stange, 2013)
- DT policies viewed by students as a signal of a program's quality, but also as unfair; did not impact choice of major for majority of students (Harwell, 2013)



Research Challenges

- Availability of data
 - IPEDS
 - College Navigator
 - Net Price Calculator
- Issues of timing
 - Institutions
 - Communication of and reasons for DT policies
 - Students, Parents, and Counselors
 - Incorporate information into decision making



Future Research - General

- How do students, parents, and counselors perceive, react to, and act upon DT policies?
 - Signal of quality, investment for future earnings
- How might financial aid offset DT and for who?
- How might students manage or navigate DT policies during college?
- How are DT revenues used by institutions?



Future Research - STEM

- What is the impact of DT policies on students' entrance into STEM or on choice of major?
- What do students in STEM with DT policies actually pay?
- Do DT policies impact retention in STEM? If so, how and for whom?
- What are the effects of DT policies versus recruitment and retention programs in STEM? Interactions with other policies and programs?



Research Opportunities

- High School Longitudinal Study of 2009 (HSLS:09)
 - Postsecondary plans, estimates of cost of college, field of study, and future occupational plans
- Annual census of institutions with DTs
- Study timing of DT awareness and how such information impacts decision making
- Institutions should examine DT, financial aid distributions, and graduation rates by major, SES, etc.



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Questions?

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