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Zero- and Low-Cost Textbooks (ZTC) at Laney College: Adoption Trends and Enrollment Effects

Executive Summary

In academic year **2024–2025**, **34% of course sections** at Laney College were designated as either **zero-cost** or **low-cost**, with **24% zero-cost** and **10% low-cost**. Adoption increased significantly in **spring 2025**, with nearly **half of all sections (49%)** carrying a zero- or low-cost designation, compared to **22% in fall**.

While **Open Educational Resources (OER)** were the most common zero-cost method in fall (**38%** of zero-cost sections), that share declined in spring to **18%**, both proportionally and in absolute terms—even as overall participation more than doubled. By contrast, **53% of spring zero-cost sections** reported having **no associated instructional materials**.

Adoption varied widely across subjects. In **spring 2025**, **six subjects** reached **100% zero- or low-cost adoption**, while **20 subjects** had **no adoption at all**. High-volume subjects like MUSIC and ESOL accounted for a disproportionately large share of overall adoption.

Some coding misalignments led to inconsistencies in how sections were advertised. Some qualifying sections were missing the zero-cost badge, while others were incorrectly marked as zero-cost, potentially misleading students.

A **mixed effects regression model** was used to estimate the relationship between textbook cost designation and enrollment, controlling for **instructor**, **course**, **modality**, **time of day**, and **term**. The results showed that **zero-cost designation was associated with a statistically significant estimated 4.7 percentage point increase in course fill rate**. By contrast, **low-cost designation did not show a statistically significant effect**, with wide confidence intervals indicating uncertainty about its impact.

Introduction

This report examines Laney College's adoption of zero- and low-cost textbooks (collectively referred to as **ZTC** in this report) during the 2024–2025 academic year. It also evaluates the potential impact of ZTC on student enrollment.

Definition of ZTC

Zero-Textbook-Cost (ZTC) refers to course sections that do not require students to purchase any instructional materials, including textbooks, access codes, software or bundled content. ZTC typically includes materials that are freely available online (such as Open Educational Resources), instructor-created materials, or library-provided content. It does not include the cost of other supplies (e.g. lab supplies, art materials) or optional materials**.**

Laney College defines **low-cost** textbook sections as those where the total cost of required instructional materials is **$50 or less**. These sections are separately designated and analyzed in this report.

Unless otherwise specified, **a "section"** in this report **refers to an individual course component or class code**. Because ZTC coding is applied at the class level, a course that includes both a lecture and a lab component would count as two separate sections.

ZTC Coding

ZTC sections are identified in Campus Solutions using three primary attributes: TEXT_ATTRIBUTE, XB12_ATTRIBUTE, and XB12_COST.

- The TEXT_ATTRIBUTE was developed before implementation of the XB12_ATTRIBUTE. Sections with a **Z** in the TEXT_ATTRIBUTE receive a **zero-cost badge** in the online schedule.
- The XB12_ATTRIBUTE (also known as the Course Material Code) designates sections as low-cost or identifies the specific type of zero-cost classification. Sections with an XB12_ATTRIBUTE of **D** receive a **low-cost badge**.
- The XB12_COST attribute specifies the actual dollar amount students are expected to pay for instructional materials.

A full list of codes and definitions can be found in Appendix A.

Coding Misalignment

There are occasional misalignments between the TEXT_ATTRIBUTE and the XB12_ATTRIBUTE, though these inconsistencies have decreased over time. For example:

- Some sections with **qualifying XB12 attributes** are **not coded with a Z** in TEXT_ATTRIBUTE, meaning students do not see the zero-cost badge, even though the section qualifies.

- Conversely, **some sections display a zero-cost badge** based on their Z code, but their XB12_ATTRIBUTE indicates they **do not qualify**. In these cases, the badge may be misleading to students.
- Some sections marked as low-cost (XB12_ATTRIBUTE D) are also coded as zero-cost (Z). For purposes of the online schedule, XB12_ATTRIBUTE D supersedes TEXT_ATTRIBUTE Z, so the impact to students is limited. However, this overlap does introduce inconsistencies in the underlying data.

This report will indicate when data is presented **as advertised** (based on how the section appears in the schedule) versus when data is **corrected** (based on verified XB12 coding), depending on the purpose of the analysis.

A summary of coding alignment issues can be found in Appendix B.

Adoption of ZTC

Table 1. Adoption of Zero- and Low-Cost Textbooks (Corrected)

	Zero-Cost	%	Low-Cost	%	Zero- or Low-Cost	%	Total Sections
Summer 2024	24	15%		0%	24	15%	164
Fall 2024	214	18%	42	4%	256	22%	1170
Spring 2025	373	31%	209	18%	582	49%	1194
AY 2024-2025	**611**	**24%**	**251**	**10%**	**862**	**34%**	**2528**

Overall, **34% of sections** offered at Laney College in academic year 2024–2025 were designated as zero- or low-cost, with **24% identified as zero-cost** and **10% as low-cost**. This figure increased significantly from fall 2024 to spring 2025, rising from **22% (256) in fall** to **49% (582) in spring**—reflecting either increased adoption, improved identification of qualifying sections, or a combination of both.

Table 2. Adoption of Zero- and Low-Cost Textbooks (Advertised)

	Zero-Cost	%	Low-Cost	%	Zero- or Low-Cost	%	Total Sections
Summer 2024	23	14%		0%	23	14%	164
Fall 2024	195	17%	42	4%	237	20%	1170
Spring 2025	368	31%	209	18%	577	48%	1194
AY 2024-2025	**586**	**23%**	**251**	**10%**	**837**	**33%**	**2528**

Due to the coding alignment issues noted earlier, the **advertised rate** (based on schedule badges) is slightly lower, at **33%**.

Table 3. Zero-Cost Sections by XB12 Attribute (Corrected)

	XB12 Attribute	Zero-Cost Sections	% of Zero-Cost Sections
Summer 2024	A-No associated instructional material	9	38%
	C-Instructional material costs none of which are passed on to students	2	8%
	E-Only no-cost, OER instructional material	8	33%
	No Value	5	21%
Fall 2024	A-No associated instructional material	47	22%
	C-Instructional material costs none of which are passed on to students	28	13%
	E-Only no-cost, OER instructional material	81	38%
	No Value	58	27%
Spring 2025	A-No associated instructional material	198	53%
	C-Instructional material costs none of which are passed on to students	60	16%
	E-Only no-cost, OER instructional material	33	9%
	F-Only no-cost digital instructional material not meeting OER guidelines	4	1%
	G-Mix of OER and other no-cost digital material	34	9%
	No Value	44	12%

There was significant improvement in the collection of XB12 attribute data from fall 2024 to spring 2025. The percentage of sections with "No Value" decreased from 27% in fall to 12% in spring, indicating more robust reporting and better coding practices.

In **fall 2024**, the most common zero-cost designation was **E (OER instructional materials)** at **38%** of sections, followed by **A (No associated instructional material)** at **22%**.

Zero-cost XB12 attributes were expanded in spring 2025 to include:
- **F**: No-cost digital instructional materials that do not meet OER guidelines
- **G**: A mix of OER and other no-cost digital materials

This expansion explains the appearance of additional categories in the spring term.

In **spring 2025**, the most common designation shifted significantly. **A (No associated instructional material)** accounted for **53%** of all zero-cost sections, while the percentage of sections using **OER materials**—categories E and G combined—**fell from 38% to 18%**.

More notably, the **absolute number of sections coded with OER materials declined by 14**, even as the total number of sections with a valid XB12 attribute more than doubled, from 156 to 329.

This suggests that the decline in OER-coded sections is not merely a proportional shift due to increased identification of other categories, but a real drop in usage. This trend may merit closer examination by faculty and relevant committees in the coming year.

ZTC Adoption by Subject

There was a wide range of zero- and low-cost adoption across subjects. Given the broader adoption observed in **spring 2025**, this term likely serves as the best litmus test for subject-level engagement. In spring, **six subjects achieved 100% zero- or low-cost adoption**, while **20 subjects had no adoption at all**. Notably, subjects with both **high section volume and strong adoption rates**, such as **MUSIC** and **ESOL**, are doing much of the heavy lifting in raising the college's overall ZTC adoption rate.

Full tables of adoption by subject in academic year 2024-2025 and spring 2025 are available in Appendices C and D.

Table 4. Subjects with Highest Zero- and Low-Cost Adoption Rates, Spring 2025 (Corrected)

	Sections						
Subject	**Zero-Cost**	**%**	**Low-Cost**	**%**	**Zero- or Low-Cost**	**%**	**Total**
ECT	3	19%	13	81%	16	100%	16
MUSIC-CM	11	100%		0%	11	100%	11
LCI	3	100%		0%	3	100%	3
LIS	2	100%		0%	2	100%	2
GEOL	1	100%		0%	1	100%	1
SOCSC	1	100%		0%	1	100%	1
CULIN	20	65%	10	32%	30	97%	31
COMM	11	92%		0%	11	92%	12
MUSIC	52	54%	34	35%	86	89%	97
DANCE	22	88%		0%	22	88%	25
PHOTO	18	86%		0%	18	86%	21
SPAN	13	81%		0%	13	81%	16
ESOL	66	54%	33	27%	99	81%	122
JOURN	12	80%		0%	12	80%	15

Table 5. Zero- and Low-Cost Adoption Rates, Subjects with 30 or More Total Sections, Spring 2025 (Corrected)

	Sections						
Subject	Zero-Cost	%	Low-Cost	%	Zero- or Low-Cost	%	Total
CULIN	20	65%	10	32%	30	97%	31
MUSIC	52	54%	34	35%	86	89%	97
ESOL	66	54%	33	27%	99	81%	122
MATH	37	64%	5	9%	42	72%	58
ENGL	12	33%	13	36%	25	69%	36
BIOL	23	59%	3	8%	26	67%	39
ART	8	9%	51	56%	59	65%	91
BUS	4	13%		0%	4	13%	31
CIS	4	11%		0%	4	11%	35
CARP		0%	3	10%	3	10%	30
SPFT		0%		0%		0%	46
WELD		0%		0%		0%	44

Table 6. Subjects with No Zero- or Low-Cost Adoption, Spring 2025 (Corrected)

	Sections						
Subject	Zero-Cost	%	Low-Cost	%	Zero- or Low-Cost	%	Total
ATHL		0%		0%		0%	5
CHEM		0%		0%		0%	24
COPED		0%		0%		0%	1
COSM		0%		0%		0%	15
DANCFOLK		0%		0%		0%	1
ECON		0%		0%		0%	5
ETHST		0%		0%		0%	6
HLTED		0%		0%		0%	7
HUMAN		0%		0%		0%	3
JAPAN		0%		0%		0%	4
LABST		0%		0%		0%	1
M/LAT		0%		0%		0%	5
MACH		0%		0%		0%	20
NATAM		0%		0%		0%	1
PHIL		0%		0%		0%	9
PHYS		0%		0%		0%	9
PSYCH		0%		0%		0%	16
SPFT		0%		0%		0%	46
THART		0%		0%		0%	12
WELD		0%		0%		0%	44

ZTC Effect on Enrollment

A prior analysis comparing fill rates of zero-cost sections from **academic years 2020–2021 to 2023–2024 showed consistent increases in fill rates ranging from four to eight percentage points** for ZTC sections compared to normal-cost sections. However, **this was not a true *like-for-like* comparison**, as it relied on the full schedule without controlling for differences in course offerings or section-level characteristics. Additionally, ZTC adoption was significantly lower in earlier years and has steadily increased over time.

For academic year 2024–2025, the objective was to **determine whether ZTC sections have a measurable impact on enrollment when accounting for potential confounding variables**—such as the course itself, instructor, time of day, and instructional modality. For this analysis, ZTC attributes were used **as advertised**, since it is the advertised status on course schedules that would influence enrollment.

Ideally, the most interpretable approach would involve matched comparisons between near-identical sections (e.g., same course and modality, differing only in ZTC status). However, such matched pairs were sparse and yielded inconclusive patterns.

To address this, a **mixed-effects linear regression model was used to estimate the association between ZTC status and section fill rate, adjusting for other factors**. Fill rate was used as the dependent variable representing enrollment demand.

To ensure that each observation represented a clearly defined condition, the analysis was limited to enrollment master sections with consistent characteristics in fall 2024 and spring 2025. Master sections were excluded if they had multiple course components (e.g., lecture and lab) with mixed attributes—such as multiple instructors, varying ZTC statuses, or conflicting modalities/times—across their components. Sections with irregular or undefined enrollment caps (such as open-entry/open-exit labs, independent study, or zero-capacity) were also removed.

Finally, to isolate the effect of ZTC from course popularity, only courses (SUBJECT and CATALOG NUMBER) that offered variation in ZTC status across sections were retained. This allowed the model to estimate the effect of cost status *within courses*, rather than across structurally different offerings.

Figure 1. Mixed Effects Regression Model

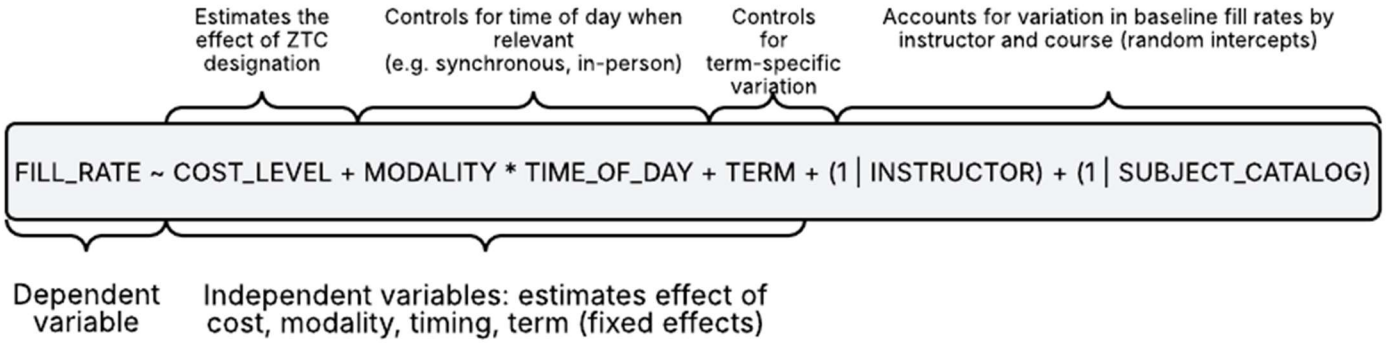
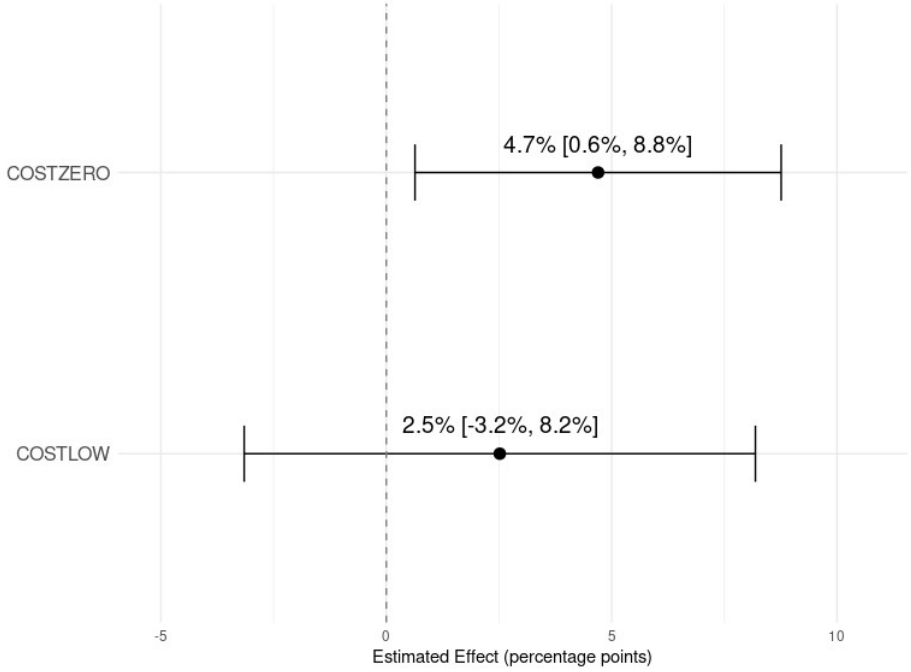


Figure 2. Estimated Effect of Textbook Cost Designations on Course Fill Rate



The results of the mixed effects model showed a **statistically significant association between zero-cost textbook designation and higher fill rates**. Courses identified as zero-cost in fall 2024 and spring 2025 exhibited, on average, a **4.7 percentage point higher fill rate compared to courses without a cost designation,** after adjusting for instructional modality, time of day, academic term, instructor, and course. The 95% confidence interval for the **estimated effect ranged from 0.6 to 8.8 percentage points**, indicating a consistently positive association.

For courses designated as **low-cost**, the estimated increase in fill rate was approximately 2.5 percentage points, but this effect **was not statistically significant**. The confidence interval **spanned from –3.2 to 8.2 percentage points**, suggesting greater uncertainty around the impact of the low-cost label. In contrast to zero-cost courses, **low-cost designation does not appear to be associated** with a reliable difference in enrollment behavior.

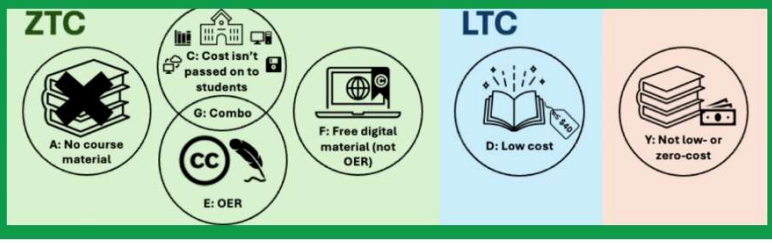
Model Limitations

While fill rate offers a practical measure of enrollment, it isn’t a perfect stand-in for student demand. Because fill rate is capped by maximum enrollment limits, it may underestimate interest in high-demand classes. If those caps aren't set consistently or appropriately across courses, the metric can also give a skewed picture of actual enrollment dynamics. Additionally, by excluding courses that consistently carry the same cost status (e.g., always zero-cost or always normal-cost), the analysis may not fully reflect trends across the broader schedule. Although the model accounts for major factors like instructor, course, modality, time of day, and term, other influences likely play a role and aren't captured here.

Appendix A. Zero- and Low-Cost Designations (XB12 Attributes)

Course Material Codes: Explained

Choose the **best** fit for your class. Make sure that you choose A, C, E, F, or G if there is no cost to the student and D or Y if the student must buy books or software.
These codes are only for **instuctional materials** (books or software). If your class has extra costs for equipment (kits, lab supplies, art supplies, etc.), do not include this cost when choosing a code.



Code	Definition	Examples
A	***No cost to students:*** **Section has no associated course material**	• No readings used in the class section
C	***No cost to students:*** **Section has course material costs none of which are passed on to students**	• Classroom set of textbooks • Library resources • District software subscriptions
D	***Low cost:*** **Total cost of all required course materials/textbooks is $50 or less.**	• Books or software are required • Texts cost $50 or less at the Laney bookstores
E	***No cost to students:*** **Section uses only no-cost, OER course material**	• OER is free material that is openly available outside your class and in which users are legally permitted to make copies of the material. • This includes works in the **public domain** or with a **Creative Commons license**

F	***No cost to students:*** **Section uses only no-cost digital course material that does not meet OER guidelines**	• Freely accessible, copyrighted material without an open license, such as:
		  ◦ Instructor-created content that has not been released under an open license
		  ◦ Newspaper articles found on the open web
		  ◦ YouTube videos
		  ◦ Freely accessible software

G	***No cost to students:*** **Section uses a mix of no-cost OER and other cost bearing resources, but no costs are passed to the student**	• Any combination of materials from codes C & E
Y	**Section does not meet no-cost or low-cost course material criteria**	• Total cost of all required course materials/textbooks is above $50. • "Course materials" refers to the textbook, lab book, software and/or homework system needed to participate in the course.

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Appendix B. Coding Misalignment and Implications

		Text Attribute		
	XB12 Attribute	**None**	**"Z"**	**Implication**
Summer 2024	A-No associated instructional material	3	6	5 zero-cost sections not advertised
	C-Instructional material costs none of which are passed on to students	2		
	Y-Does not meet no-cost or low-cost instructional material criteria	20	4	4 sections possibly incorrectly advertised as zero-cost
Fall 2024	A-No associated instructional material	31	16	34 zero-cost sections not advertised
	C-Instructional material costs none of which are passed on to students	3	25	
	D-Low instructional material costs (as defined locally)	23	19	Data complication; no impact to student
	Y-Does not meet no-cost or low-cost instructional material criteria	120	15	15 sections possibly incorrectly advertised as zero-cost
Spring 2025	A-No associated instructional material	1	197	5 zero-cost sections not advertised
	C-Instructional material costs none of which are passed on to students	4	56	
	D-Low instructional material costs (as defined locally)	198	11	Data complication; no impact to student

Appendix C. ZTC Adoption by Subject, Academic Year 2024-2025 (Corrected)

	Sections						
Subject	**Zero-Cost**	**%**	**Low-Cost**	**%**	**Zero- or Low-Cost**	**%**	**Total**
MUSIC-CM	11	100%	0	0%	**11**	**100%**	11
LIS	5	100%	0	0%	**5**	**100%**	5
SOCSC	2	100%	0	0%	**2**	**100%**	2
JOURN	25	83%	0	0%	**25**	**83%**	30
PHOTO	40	82%	0	0%	**40**	**82%**	49
COMM	18	75%	0	0%	**18**	**75%**	24
ANTHR	14	74%	0	0%	**14**	**74%**	19
BIOL	49	66%	3	4%	**52**	**70%**	74
ESOL	113	44%	50	19%	**163**	**63%**	258
CONMT	0	0%	10	63%	**10**	**63%**	16
GRART	11	24%	17	37%	**28**	**61%**	46
ECT	7	21%	13	39%	**20**	**61%**	33
MUSIC	65	37%	34	19%	**99**	**57%**	175
HIST	13	54%	0	0%	**13**	**54%**	24
CULIN	20	34%	10	17%	**30**	**51%**	59
MATH	68	47%	6	4%	**74**	**51%**	146
LCI	3	50%	0	0%	**3**	**50%**	6
GEOL	1	50%	0	0%	**1**	**50%**	2
GEOG	9	39%	2	9%	**11**	**48%**	23
MEDIA	16	32%	6	12%	**22**	**44%**	50
ENGIN	5	31%	2	13%	**7**	**44%**	16
DANCE	22	42%	0	0%	**22**	**42%**	53
SPAN	13	41%	0	0%	**13**	**41%**	32
ASAME	4	36%	0	0%	**4**	**36%**	11
POSCI	9	36%	0	0%	**9**	**36%**	25
BNK/F	2	33%	0	0%	**2**	**33%**	6
ENGL	12	15%	13	16%	**25**	**31%**	81
KIN	0	0%	14	30%	**14**	**30%**	46
ART	8	4%	51	26%	**59**	**30%**	197
M/SVN	2	22%	0	0%	**2**	**22%**	9
AFRAM	4	14%	2	7%	**6**	**21%**	28
FREN	1	20%	0	0%	**1**	**20%**	5
ARCH	0	0%	7	18%	**7**	**18%**	38
LRNRE	0	0%	1	14%	**1**	**14%**	7
CIS	11	13%	0	0%	**11**	**13%**	88
BUS	10	12%	0	0%	**10**	**12%**	81
SPFT	12	11%	0	0%	**12**	**11%**	106
CHIN	0	0%	1	10%	**1**	**10%**	10
E/ET	4	7%	1	2%	**5**	**9%**	54
WDTEC	0	0%	5	9%	**5**	**9%**	56
CARP	0	0%	3	5%	**3**	**5%**	56
SOC	1	4%	0	0%	**1**	**4%**	23
COUN	1	4%	0	0%	**1**	**4%**	28
ATHL	0	0%	0	0%	**0**	**0%**	23
CHEM	0	0%	0	0%	**0**	**0%**	46
COPED	0	0%	0	0%	**0**	**0%**	2
COSM	0	0%	0	0%	**0**	**0%**	38
DANCFOLK	0	0%	0	0%	**0**	**0%**	1
ECON	0	0%	0	0%	**0**	**0%**	12
ETHST	0	0%	0	0%	**0**	**0%**	13
HLTED	0	0%	0	0%	**0**	**0%**	16
HUMAN	0	0%	0	0%	**0**	**0%**	11
JAPAN	0	0%	0	0%	**0**	**0%**	10
LABST	0	0%	0	0%	**0**	**0%**	2
M/LAT	0	0%	0	0%	**0**	**0%**	11
MACH	0	0%	0	0%	**0**	**0%**	43
NATAM	0	0%	0	0%	**0**	**0%**	2
PHIL	0	0%	0	0%	**0**	**0%**	20
PHYS	0	0%	0	0%	**0**	**0%**	22
PSYCH	0	0%	0	0%	**0**	**0%**	29
THART	0	0%	0	0%	**0**	**0%**	20
WELD	0	0%	0	0%	**0**	**0%**	90
Grand Total	**611**	**24%**	**251**	**10%**	**862**	**34%**	**2528**

Appendix D. ZTC Adoption by Subject, Spring 2025 (Corrected)

	Sections						
Subject	**Zero-Cost**	**%**	**Low-Cost**	**%**	**Zero- or Low-Cost**	**%**	**Total**
ECT	3	19%	13	81%	16	100%	16
MUSIC-CM	11	100%		0%	11	100%	11
LCI	3	100%		0%	3	100%	3
LIS	2	100%		0%	2	100%	2
GEOL	1	100%		0%	1	100%	1
SOCSC	1	100%		0%	1	100%	1
CULIN	20	65%	10	32%	30	97%	31
COMM	11	92%		0%	11	92%	12
MUSIC	52	54%	34	35%	86	89%	97
DANCE	22	88%		0%	22	88%	25
PHOTO	18	86%		0%	18	86%	21
SPAN	13	81%		0%	13	81%	16
ESOL	66	54%	33	27%	99	81%	122
JOURN	12	80%		0%	12	80%	15
MATH	37	64%	5	9%	42	72%	58
ENGL	12	33%	13	36%	25	69%	36
POSCI	9	69%		0%	9	69%	13
BIOL	23	59%	3	8%	26	67%	39
ANTHR	6	67%		0%	6	67%	9
ASAME	4	67%		0%	4	67%	6
ART	8	9%	51	56%	59	65%	91
GRART	4	15%	13	48%	17	63%	27
KIN		0%	14	58%	14	58%	24
HIST	6	50%		0%	6	50%	12
BNK/F	1	50%		0%	1	50%	2
FREN	1	50%		0%	1	50%	2
LRNRE		0%	1	50%	1	50%	2
GEOG	4	40%		0%	4	40%	10
CONMT		0%	3	33%	3	33%	9
ARCH		0%	7	30%	7	30%	23
ENGIN	2	29%		0%	2	29%	7
AFRAM	4	27%		0%	4	27%	15
CHIN		0%	1	25%	1	25%	4
M/SVN	1	25%		0%	1	25%	4
MEDIA	5	21%		0%	5	21%	24
WDTEC		0%	5	18%	5	18%	28
BUS	4	13%		0%	4	13%	31
CIS	4	11%		0%	4	11%	35
CARP		0%	3	10%	3	10%	30
COUN	1	10%		0%	1	10%	10
SOC	1	10%		0%	1	10%	10
E/ET	1	4%		0%	1	4%	26
ATHL		0%		0%		0%	5
CHEM		0%		0%		0%	24
COPED		0%		0%		0%	1
COSM		0%		0%		0%	15
DANCFOLK		0%		0%		0%	1
ECON		0%		0%		0%	5
ETHST		0%		0%		0%	6
HLTED		0%		0%		0%	7
HUMAN		0%		0%		0%	3
JAPAN		0%		0%		0%	4
LABST		0%		0%		0%	1
M/LAT		0%		0%		0%	5
MACH		0%		0%		0%	20
NATAM		0%		0%		0%	1
PHIL		0%		0%		0%	9
PHYS		0%		0%		0%	9
PSYCH		0%		0%		0%	16
SPFT		0%		0%		0%	46
THART		0%		0%		0%	12
WELD		0%		0%		0%	44
Grand Total	**373**	**31%**	**209**	**18%**	**582**	**49%**	**1194**