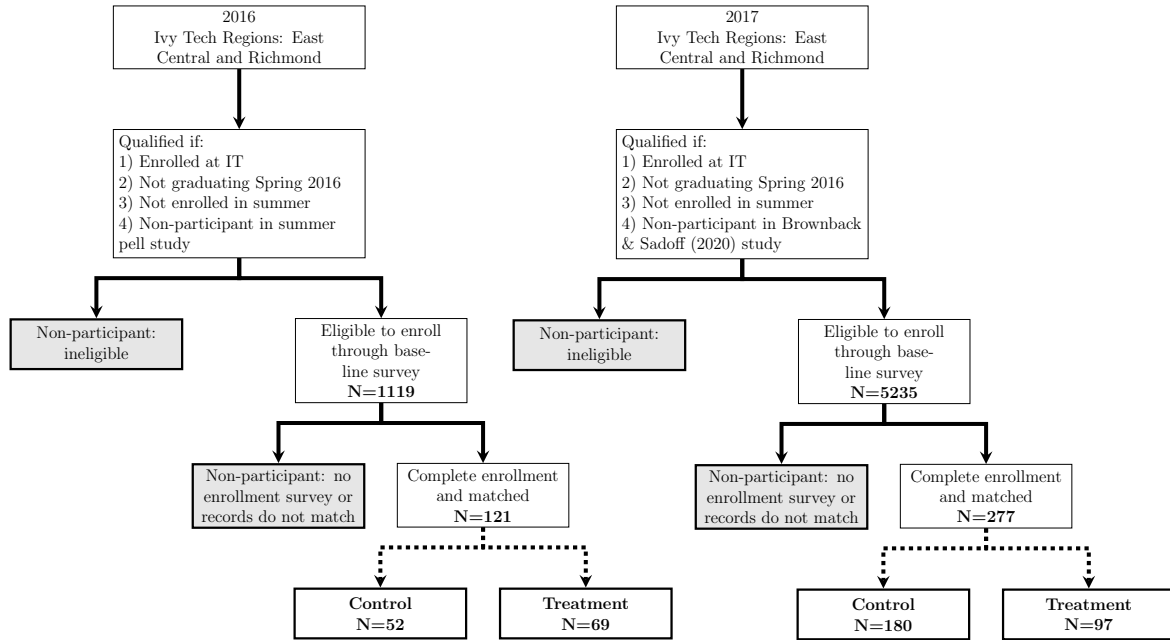


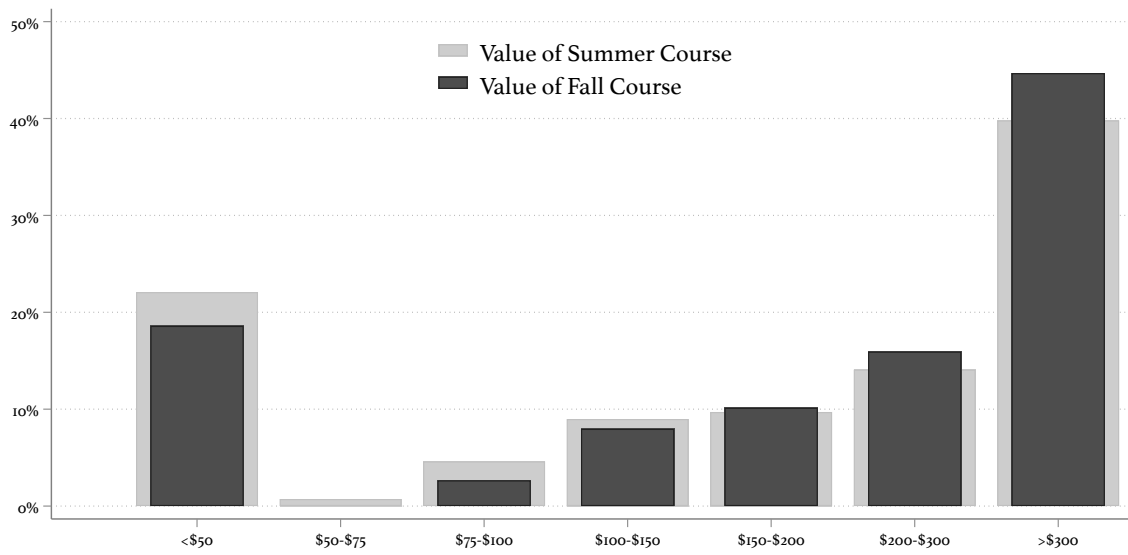
A Appendix: Figures and Tables

Figure A.1: Eligibility and Randomization for Each Recruitment Wave



Notes: Dashed arrows indicate random assignment.

Figure A.2: Baseline value for free summer course and free fall course



Notes: Based on tuition rates at the time, the tuition voucher had a face value of just over \$400. Values are given in terms of the interval between the highest amount for which the student prefers the scholarship (over cash) and the lowest amount for which the student prefers the cash (over the scholarship).

Table A.1: Demographics for Participants, Eligible Students, and Statewide Ivy Tech Population

	Summer 2016				Summer 2017			
	Study Sample	Eligible Students	Ivy Tech Population	All 2-Year Public	Study Sample	Eligible Students	Ivy Tech Population	All 2-Year Public
<i>Demographics</i>								
Male	0.397 (0.045)	0.504 (0.015)	0.429	0.439	0.271 (0.027)	0.397 (0.007)	0.432	0.439
White	0.802 (0.036)	0.815 (0.01)	0.753	0.574	0.783 (0.025)	0.847 (0.005)	0.761	0.558
Pell-Eligibility	0 (—)	0 (—)	0.45	0.346	0.648 (0.478)	N/A	0.40	0.347
<i>Baseline Academic Progress</i>								
Baseline Credits	30.917 (1.742)	26.250 (0.577)	N/A	N/A	35.110 (1.350)	24.922 (0.338)	N/A	N/A
Baseline GPA	3.008 (0.072)	2.691 (0.030)	N/A	N/A	2.929 (0.044)	2.340 (0.016)	N/A	N/A
Students	121	1,119	78,910	6,283,390	277	5,235	75,486	5,902,040

Notes: Table reports means/proportions and standard errors for each group. Statistics for the statewide Ivy Tech population and 2-year public institutions nationwide were retrieved from Institute of Education Sciences (2017). Average academic progress at the time of the recruitment is not available through Institute of Education Sciences (2017) (neither Ivy Tech statewide nor 2-year public institutions nationwide). “N/A” indicates that data were not available for the characteristic in question for the indicated population.

Table A.2: Impact of Summer on Future Enrollment, Credit Accumulation, & GPA

	Summer		One Year Post-Program					
	Enrollment		Associate		Transfer		Combined	
Treatment	0.219 (0.049)	0.203 (0.050)	0.058 (0.045)	0.073 (0.038)	0.068 (0.039)	0.076 (0.032)	0.062 (0.049)	0.077 (0.039)
Constant	0.197 (0.046)	-0.493 (0.107)	0.165 (0.043)	-0.373 (0.102)	0.110 (0.038)	0.212 (0.085)	0.254 (0.048)	-0.119 (0.118)
Clustered SEs	Student	Strata	Student	Strata	Student	Strata	Student	Strata
Covariates?	N	Y	N	Y	N	Y	N	Y
Students	398	398	398	398	398	398	398	398

Notes: Results from a linear probability model (OLS) that regresses the dependent variable on an indicator variable for assignment to the treatment group. The dependent variables are: enrollment in the Summer term (Columns 1–2), graduation with an associate degree (Columns 3–4), transfer to a 4-year college (Columns 5–6), and the combination of either graduation with an associate degree or transfer to a 4-year college (Columns 7–8). Standard errors clustered at the level specified in the table. Odd columns only include covariates for cohort, while even columns include covariates for cohort, baseline GPA, baseline credit accumulation, age, race, gender, and stated plans for enrolling in the summer term, coded as 0 (No), 0.5 (Maybe), or 1 (Yes).

Table A.3: Treatment Effects on Transfer Outcomes and Bachelor’s Degree Attainment

	Bachelor’s Degree	Any Degree	Enrollment Length
Treatment	0.017 (0.019)	0.020 (0.020)	24.459 (24.459)
Constant	0.026 (0.050)	0.027 (0.050)	98.336 (59.048)
Students	398	398	398
Control Group mean	0.025	0.029	110.795

Notes: All estimates obtained using OLS regressions with heteroskedasticity-robust standard errors in parentheses. Dependent variables are based on transfer outcomes from the National Student Clearinghouse records as of Fall 2021 for the 2016 cohort and Fall 2022 for the 2017 cohort. “Bachelor’s Degree” is a binary dependent variable equal to one if the student has obtained a bachelor’s degree from the transfer institution. “Any Degree” is a binary dependent variable equal to one if the student has obtained a bachelor’s degree, associate degree, diploma, or certificate from the transfer institution. “Enrollment Length” is equal to the number of total days the student is enrolled at the transfer institution (coded as 0 for students that do not transfer). All regressions include covariates for cohort, GPA and credit accumulation at baseline, age, race, gender, and stated plans for the summer semester.

Table A.4: Heterogeneity: Preferences for Summer Enrollment

	Likelihood of Preferring Summer to Fall			
<i>Survey Measures</i>				
Prefer Summer Cash	0.166*** (0.055)			0.105* (0.060)
Summer Plans	0.433*** (0.072)			0.375*** (0.085)
Semesters until Planned Graduation		-0.038*** (0.011)		-0.018 (0.012)
<i>Academics</i>				
Completed Semesters at Ivy Tech		0.002 (0.003)		-0.002 (0.004)
Baseline GPA		0.018 (0.031)		0.016 (0.033)
Baseline Credits		0.002** (0.001)		0.001 (0.001)
Credits Completed in Prior Summer			0.025** (0.010)	0.008 (0.011)
<i>Demographics</i>				
Age			0.000 (0.002)	0.002 (0.002)
Male			0.168*** (0.050)	0.127** (0.052)
White				0.044 (0.060)
Constant	0.079 (0.049)	-0.028 (0.044)	0.379*** (0.072)	0.187*** (0.044)
Students	397	397	347	397
	397	397	397	397
				397
				347

Notes: Dependent variable is a binary variable equal to 1 if the student prefers summer vouchers to fall vouchers. “Prefer Summer Cash” is a binary variable equal to 1 if the student prefers cash payments in the summer over fall. “Summer Plans:” is measured from 0 – 1 based on the student’s stated plans to enroll in summer courses (1 means the student plans to enroll, 0 means the student does not). All estimates obtained using OLS regressions with heteroskedasticity-robust standard errors in parentheses. Columns 1–9 only include controls for cohort. Column 10 includes all covariates listed: cohort; GPA, credit accumulation, and completed semesters at baseline; age; race; gender; stated plans for the summer semester and for graduation; and preferences for payment in the summer. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.5: Heterogeneity: Summer Enrollment

	Summer Enrollment Rate								
Treatment	0.251** (0.100)	0.237*** (0.080)	0.051 (0.117)	0.225*** (0.074)	0.370** (0.185)	0.280*** (0.092)	0.270* (0.142)	0.231*** (0.059)	0.114 (0.107)
Prefer Summer Cash	0.150** (0.070)								
Treatment x Prefer Summer Cash	-0.035 (0.115)								
Summer Plans		0.637*** (0.078)							
Treatment x Summer Plans		-0.055 (0.112)							
Semesters until Planned Graduation			-0.042*** (0.015)						
Treatment x Semesters until Planned Grad.			0.037 (0.023)						
Completed Semesters at Ivy Tech				0.000 (0.004)					
Treatment x Completed Semesters at Ivy Tech				-0.001 (0.007)					
Baseline GPA					0.110*** (0.033)				
Treatment x Baseline GPA					-0.049 (0.061)				
Baseline Credits						0.003* (0.001)			
Treatment x Baseline Credits						-0.002 (0.002)			
Age							-0.001 (0.003)		
Treatment x Age							-0.002 (0.005)		
Male								0.056 (0.069)	
Treatment x Male								-0.005 (0.101)	
White									0.041 (0.072)
Treatment x White									0.132 (0.120)
Students	397	398	347	398	398	398	398	398	398

Notes: Dependent variable is a binary variable equal to 1 if the student enrolls in summer courses. “Prefer Summer Cash” is a binary variable equal to 1 if the student prefers cash payments in the summer over fall. “Summer Plans:” is measured from 0 – 1 based on the student’s stated plans to enroll in summer courses (1 means the student plans to enroll, 0 means the student does not). All estimates obtained using OLS regressions with heteroskedasticity-robust standard errors in parentheses. All regressions include controls for cohort. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.6: Heterogeneity: Degree Acceleration

	Graduation or Transfer One Year Post-Program					
Treatment	0.002	0.157	-0.064	0.032	0.052	0.022
	(0.070)	(0.150)	(0.071)	(0.137)	(0.077)	(0.091)
Completed Semesters at Ivy Tech	-0.002					
	(0.004)					
Treatment x Completed Terms at IT	0.008					
	(0.007)					
Baseline GPA		0.120***				
		(0.032)				
Treatment x Baseline GPA		-0.030				
		(0.052)				
Baseline Credits			0.006***			
			(0.001)			
Treatment x Baseline Credits			0.004*			
			(0.002)			
Age				-0.004		
				(0.003)		
Treatment x Age				0.001		
				(0.004)		
Male					0.002	
					(0.066)	
Treatment x Male					0.016	
					(0.099)	
White						0.138**
						(0.066)
Treatment x White						0.048
						(0.106)
Students	398	398	398	398	398	398

Notes: Dependent variable is a binary variable equal to 1 if the student graduates or transfers within one year of the program. “Prefer Summer Cash” is a binary variable equal to 1 if the student prefers cash payments in the summer over fall. “Summer Plans:” is measured from 0 – 1 based on the student’s stated plans to enroll in summer courses (1 means the student plans to enroll, 0 means the student does not). All estimates obtained using OLS regressions with heteroskedasticity-robust standard errors in parentheses. All columns include controls for cohort. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.7: Selection on Levels and Selection on Treatment Effects

	Combined	Associate	Transfer
Treatment	0.095 (0.055)	0.104 (0.046)	0.039 (0.047)
Summer Enrollment	0.174 (0.067)	0.177 (0.060)	0.023 (0.050)
Treatment \times Summer Enrollment	-0.101 (0.090)	-0.127 (0.079)	0.061 (0.078)
Students	398	398	398

Notes: Dependent variable is a binary variable equal to 1 if the student graduates or transfers (Column 1), graduates (Column 2), transfers (Column 3) within one year of the intervention. “Summer Enrollment” is a binary variable for enrollment in the summer term. All estimates obtained using OLS regressions with heteroskedasticity-robust standard errors in parentheses. All regressions include covariates for cohort, GPA and credit accumulation at baseline, age, race, gender, and stated plans for the summer semester.

Table A.8: Demographics that Predict Take-Up of Summer Scholarships

	Prefer Summer Course	Prefer Summer Cash	Summer Plans	Semesters until Planned Grad.	Completed Semesters	Baseline GPA	Baseline Credits	Age	Male	White
Never-Takers	-0.357*** (0.073)	-0.150** (0.064)	-0.253*** (0.042)	0.537 (0.381)	0.047 (1.140)	-0.333*** (0.116)	-5.604 (3.792)	1.750 (1.942)	-0.008 (0.077)	-0.064 (0.070)
Never-Takers + Compliers	-0.317*** (0.063)	-0.094* (0.048)	-0.243*** (0.033)	0.825*** (0.307)	-0.221 (0.967)	-0.270*** (0.090)	-6.124* (3.455)	0.440 (1.493)	-0.063 (0.064)	-0.042 (0.058)
Always-Takers + Compliers	-0.134* (0.072)	-0.059 (0.054)	-0.020 (0.034)	0.402 (0.384)	-0.312 (1.050)	-0.187* (0.101)	-4.458 (3.744)	0.356 (1.622)	-0.007 (0.074)	0.037 (0.061)
Constant: Always Takers	0.460*** (0.066)	0.816*** (0.054)	0.696*** (0.038)	4.614*** (0.337)	7.485*** (0.993)	3.259*** (0.102)	36.046*** (3.440)	28.133*** (1.788)	0.424*** (0.072)	0.828*** (0.062)
Students	397	397	398	347	398	398	398	398	398	398

Notes: Dependent variable is a binary variable equal to 1 if the student enrolls in summer courses. “Prefer Summer Course” is a binary variable equal to 1 if the student prefers summer vouchers to fall vouchers. “Prefer Summer Cash” is a binary variable equal to 1 if the student prefers cash payments in the summer over fall. “Summer Plans” is measured from 0 – 1 based on the student’s stated plans to enroll in summer courses (1 means the student plans to enroll, 0 means the student does not). All estimates obtained using OLS regressions with heteroskedasticity-robust standard errors in parentheses. Columns 1–9 only include controls for cohort. Column 10 includes all covariates listed: cohort; GPA, credit accumulation, and completed semesters at baseline; age; race; gender; stated plans for the summer semester and for graduation; and preferences for payment in the summer. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

B Appendix: Materials

Figure B.1: 2017 Recruitment Email Text

Dear [NAME],

The East Central and Richmond Regions of Ivy Tech have just been awarded funds as part of a research study to help additional students attend summer classes. We will be distributing vouchers to cover the cost of tuition for one (1) three-credit hour course for Summer 2017 at Ivy Tech (over a \$400 value). The voucher will not cover books or fees.

We have a limited number of vouchers, so we ask that interested students enroll in the program by May 3, 2017. After May 5, 2017 we will draw names randomly to assign the free tuition vouchers. You can enroll at the following link: <http://tinyurl.com/IvyTechSummer17>

These vouchers are intended for students who plan to continue through Fall 2017 or will graduate with a credential at the end of Summer 2017.

Please contact your campus Bursar Office for any questions:

Figure B.2: Incentive-Compatible Elicitation of Scholarship Preferences

For each of the following, which do you prefer?

- | | | |
|-----------------------------------|---------------------------------------------|---------------------------------|
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | A Full-Priced Fall Course |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$100 discount on a Fall Course |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$200 discount on a Fall Course |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$300 discount on a Fall Course |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |
| \$300 discount on a Summer Course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |
| \$200 discount on a Summer Course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |
| \$100 discount on a summer course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |
| A Full-Priced Summer Course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |

Figure B.3: Incentive-Compatible Elicitation of Summer Scholarship Value

For each of the following, which do you prefer?

- | | | |
|----------------------|---------------------------------------------|---------------------------|
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$300 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$200 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$150 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$100 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$75 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$50 gift card on June 5 |

Figure B.4: Incentive-Compatible Elicitation of Fall Scholarship Value

For each of the following, which do you prefer?

- | | | |
|--------------------|---------------------------------------------|------------------------------|
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$300 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$200 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$150 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$100 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$75 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$50 gift card on August 21 |

Figure B.5: Incentive-Compatible Elicitation of Preferences for Cash

For each of the following, which do you prefer?

- | | | |
|---------------------------|---------------------------------------------|------------------------------|
| \$50 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$100 gift card on August 21 |
| \$50 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$75 gift card on August 21 |
| \$50 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$50 gift card on August 21 |
| \$75 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$50 gift card on August 21 |
| \$100 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$50 gift card on August 21 |

Figure B.6: Elicitation of Barriers to Summer Enrollment

If you don't enroll in summer courses at Ivy Tech, what would be the reason(s)? Please check any responses that apply or provide your own:

I already received my degree from Ivy Tech

I'm transferring to another school

I don't want to take any more courses at Ivy Tech

I don't like to take courses in the summer

I can't afford to take summer courses

I don't have time to take summer course

I have to work

I have to take care of children who are out of school for the summer

Other

B Appendix: Materials

Figure B.1: 2017 Recruitment Email Text

Dear [NAME],

The East Central and Richmond Regions of Ivy Tech have just been awarded funds as part of a research study to help additional students attend summer classes. We will be distributing vouchers to cover the cost of tuition for one (1) three-credit hour course for Summer 2017 at Ivy Tech (over a \$400 value). The voucher will not cover books or fees.

We have a limited number of vouchers, so we ask that interested students enroll in the program by May 3, 2017. After May 5, 2017 we will draw names randomly to assign the free tuition vouchers. You can enroll at the following link: <http://tinyurl.com/IvyTechSummer17>

These vouchers are intended for students who plan to continue through Fall 2017 or will graduate with a credential at the end of Summer 2017.

Please contact your campus Bursar Office for any questions:

Figure B.2: Incentive-Compatible Elicitation of Scholarship Preferences

For each of the following, which do you prefer?

- | | | |
|-----------------------------------|---------------------------------------------|---------------------------------|
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | A Full-Priced Fall Course |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$100 discount on a Fall Course |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$200 discount on a Fall Course |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$300 discount on a Fall Course |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |
| \$300 discount on a Summer Course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |
| \$200 discount on a Summer Course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |
| \$100 discount on a summer course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |
| A Full-Priced Summer Course | <input type="radio"/> <input type="radio"/> | A Free Fall Course |

Figure B.3: Incentive-Compatible Elicitation of Summer Scholarship Value

For each of the following, which do you prefer?

- | | | |
|----------------------|---------------------------------------------|---------------------------|
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$300 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$200 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$150 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$100 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$75 gift card on June 5 |
| A Free Summer Course | <input type="radio"/> <input type="radio"/> | \$50 gift card on June 5 |

Figure B.4: Incentive-Compatible Elicitation of Fall Scholarship Value

For each of the following, which do you prefer?

- | | | |
|--------------------|---------------------------------------------|------------------------------|
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$300 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$200 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$150 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$100 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$75 gift card on August 21 |
| A Free Fall Course | <input type="radio"/> <input type="radio"/> | \$50 gift card on August 21 |

Figure B.5: Incentive-Compatible Elicitation of Preferences for Cash

For each of the following, which do you prefer?

- | | | |
|---------------------------|---------------------------------------------|------------------------------|
| \$50 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$100 gift card on August 21 |
| \$50 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$75 gift card on August 21 |
| \$50 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$50 gift card on August 21 |
| \$75 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$50 gift card on August 21 |
| \$100 gift card on June 5 | <input type="radio"/> <input type="radio"/> | \$50 gift card on August 21 |

Figure B.6: Elicitation of Barriers to Summer Enrollment

If you don't enroll in summer courses at Ivy Tech, what would be the reason(s)? Please check any responses that apply or provide your own:

I already received my degree from Ivy Tech

I'm transferring to another school

I don't want to take any more courses at Ivy Tech

I don't like to take courses in the summer

I can't afford to take summer courses

I don't have time to take summer course

I have to work

I have to take care of children who are out of school for the summer

Other