

**The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate  
Students in the University of Texas System During the 2022 Fall Semester: A Cross-  
Sectional Study**

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## Study Aim

**Study Aim:** The purpose of this study is to evaluate differences in the prevalence of confirmed COVID-19 positive test results among University of Texas (UT) System undergraduate students attending university classes via different education modalities, such as in-person, online, and hybrid, during the 2022 fall semester. For this investigation, the exposure will be the type of education modality, which will be self-reported.

- i. **Exposure:** Exposure will be determined using a survey, where participants will report different aspects of their student life that may impact their exposure level, including whether participants attend school via in-person, online, or hybrid formats. Participants who attend at least one class in-person will fall under the in-person exposed group. Participants who attend at least one hybrid class (hybrid includes a combination of online and in-person activities) and didn't attend in-person class will fall under the hybrid exposed group. Participants who attend classes remotely fall in the unexposed group.
- ii. **Outcome:** The outcome of interest for this investigation is having a positive rapid antigen or polymerase chain reaction (PCR) test result for SARS-CoV-2 . Outcome will also be determined using a survey, where COVID-19 test result history will be assessed. Participants will be identified as having tested positive for the SARS-CoV-2 if they have at least one confirmed positive SARS-CoV-2 test, by PCR or by rapid antigen if no PCR. On the other hand, participants will be identified as not having a positive SARS-CoV-2 test result if they never take SARS-CoV-2 test, or they have only negative SARS-CoV-2 test results, by PCR or by rapid antigen if no PCR. It is worth noting that all self-reported test results will be considered for the purposes of this study in order to help investigate the total number of COVID-19 positive test results occurring amongst the student body.
- iii. **Study design:** This study will be utilizing a cross-sectional design. Data will be collected by means of a survey that will be conducted via a face-to-face interview.
- iv. **Study population:** The study population for this investigation is full-time undergraduate students that are at least 18 years old and are attending one of the eight UT System academic institutions throughout Texas. These include UT Arlington, UT Austin, UT Dallas, UT El Paso, UT Permian Basin, UT Rio Grande Valley, UT San Antonio, and UT Tyler. Participants and will be screened and interviewed for the survey during the 2023 Spring semester, specifically during

March and April 2023. The data collected for this investigation will be from the 2022 Fall semester. Note that the Fall semester lasts from August 2022 to December 2022.

## **Study Synopsis**

### **Introduction**

The ongoing COVID-19 pandemic has presented challenges to multiple facets of life, including academic instruction. When universities opened for in-person instruction, many prevention strategies to limit the spread of SARS-CoV-2, the virus that causes COVID-19, were implemented. These included mask use, vaccination, and physical distancing. However, for many university programs, adhering to these strategies can be difficult due to numerous reasons, such as the format of specialized academic programs. In scenarios where community mitigation is not ideal, one confirmed case of COVID-19 can result in a significant portion of the university community being exposed to the virus (Rebmann et al., 2021). This can lead to disruptions in staffing and student learning, and if resources are limited, these academic problems can be even greater.

### ***Current Knowledge***

There are several studies focusing on the COVID-19 within-school transmission. Zimmerman et al., 2021 studied secondary transmission of COVID-19 among kindergarten and 12th-grade in North Carolina and found 75% of within-school transmissions in high school were related to school-sponsored sports. Stage et al., 2021 studied the effects of shutdown and reopening of schools in the transmission of COVID-19 among Denmark, Norway, Sweden and Germany. They found that 7 days after school's shutdown, the growth rate decreased. Brooks-Pollock et al., 2021 modeled the dynamics of COVID-19 in the student population and concluded that a reduction of interactions during face-to-face instruction resulted in a reduction of the number of infected students. Christensen et al., 2020 also reviewed modeling studies of COVID-19 transmission in a university setting and found that all models showed the transmission of COVID-19 in universities had a significant potential. So, we need to explore explicit guidelines for effective university reopening measures (Hoffman et al. 2021; Christensen et al., 2020).

### ***Gap in Knowledge***

The impact of class delivery policies on COVID-19 transmission between university classes delivery policies and the COVID-19 transmission hasn't been studied. Most studies' findings have been based on mathematical models (Brooks-Pollock et al., 2021; Hill et al., 2021), and as a result, we wish to determine if the same can be concluded in an observational study at UT System academic institutions.

### ***Expected Outcomes***

After completion of this study, we expect to have estimated rates of COVID-19 positive test results among fully remote students and students attending at least one in-person class at the eight academic institutions in the UT university system during the 2022 fall semester. This will ultimately help evaluate differences in the prevalence of COVID-19 positive test results among University of Texas (UT) System undergraduate students attending university classes via different education modalities during the 2022 fall semester.

### Study Timeline

	Study time (June 2022 to January 2024)																			
	Year 1												Year 2							
Operational objectives	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8
<b>Study Preparation/Before Entering the Field</b>																				
Conduct literature review.	X																			
Determine the study population, study unit and sampling method to be used.	X																			
Create a sampling frame for each university.	X																			
Develop a survey to collect data.		X	X																	

Develop necessary documents such as accrual log and screening form				X																
Obtain Institutional Review Board (IRB) approval.				X																
Acquire funding for study				X																
Train study team, including field coordinators and data collectors.					X															
Pilot test survey among people who are ideally representative						X														



of the target population.																				
Make improvements based on pilot survey experience.							X													
Contact schools' colleges and request that they invite students to participate in the study by advertising it in the schools' newsletters.								X												
Advertise study in the schools' newsletters.									X											
<b>In the Field</b>																				
Screen eligible students at										X	X									

each campus and conduct face to face interviews.																				
Enter participating students in the Amazon gift card raffle.												X								
Notify raffle winners.												X								
Distribute rewards to Amazon gift card raffle winners.												X								
<b>Data Management and Analysis</b>																				
Enter data. Check and correct for errors.												X	X							
Analyze findings.														X	X	X				
<b>Data Reporting</b>																				

Prepare a report on findings and on how to replicate study.																		X	X	X	
Share findings with other researchers.																					X

**Timeline for the “The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the 2022 Fall Semester: A Cross-Sectional Study”**

## **Operational Objectives**

- **Study Preparation/Before Entering the Field**

- To conduct literature review.
- To determine the study population, study unit and sampling method to be used
- To create a sampling frame for each university
- To develop a survey to collect data
- To develop necessary documents such as accrual log and screening form
- To obtain Institutional Review Board (IRB) approval
- To acquire funding for study
- To train a study team, including field coordinators and data collectors
- To pilot test the survey among people who are ideally representative of the target population
- To make improvements based on pilot survey experience
- To contact schools' colleges and request that they invite students to participate in the study by advertising it in the schools' newsletters
- To advertise study in the schools' newsletters

- **In the Field**

- To screen eligible students at each campus and conduct face to face interviews
- To enter participating students in the Amazon gift card raffle
- To notify raffle winners
- To distribute rewards to Amazon gift card raffle winners

- **Data Management and Analysis**

- To enter data, and check and correct for errors
- To analyze findings

- **Data Reporting**

- To prepare a report on findings and on how to replicate study
- To share findings with other researchers

### **Target Population**

The target population is undergraduate full-time students that are at least 18 years old at eight UT System academic institutions including UT Arlington, UT Austin, UT Dallas, UT El Paso, UT Permian Basin, UT Rio Grande Valley, UT San Antonio, and UT Tyler for 2022 fall semester, which is from August 2022 to December 2022.

## **Eligibility Criteria**

The following list details the eligibility criteria for this study.

### **1. Inclusion criteria**

- a. At least 18 years old.
- b. Registered for at least 12 credits.
- c. Undergraduate students.
- d. Took at least one COVID-19 diagnosis test, either PCR or rapid antigen test.
- e. Studied at one of eight UT System academic institutions from August 2022 to December 2022

### **2. Exclusion criteria**

- a. Attained a positive SARS-CoV-2 test result before the start of the Fall 2022 semester
- b. Transfer students that studied at a different university during the 2022 Fall semester compared to the university they are enrolled in during the 2023 Spring semester

## Sampling Strategy

### Sampling Frame

As the purpose of our study is to study the impact of educational modalities on COVID-19 prevalence amongst undergraduate students in the university of Texas system, including UT Arlington, UT Austin, UT Dallas, UT El Paso, UT Permian Basin, UT Rio Grande Valley, UT San Antonio, and UT Tyler, who registered for the 2022 fall semester, we will collect baseline data from full-time undergraduate student. To retrieve the data that is most reliable, we will try to work with UT system that has all the contact information of undergraduate student of UT. We designed this sampling procedure:

Sampling Frame: UT Arlington, UT Austin, UT Dallas, UT El Paso, UT Permian Basin, UT Rio Grande Valley, UT San Antonio, and UT Tyler will provide the undergraduate students with their information include name, age, race/ethnicity, gender, school year, credit, phone number, street address, city, and zip code in the following sampling frame tables. So, there will be a total of 8 lists.

The selected sampling frame includes all students from all UT System, ages 18 and older. The data that will be available through this sampling frame include name, age, race/ethnicity, gender, school year, phone number, street address, city, zip code. This list will then be reduced further after applying eligibility criteria of being at least 18 years old.

Frame	Data Available
UT System/Grade	Last Name First Name Age Race/Hispanic Ethnicity Gender School name Grade (freshman, sophomore, junior, senior) credit Phone Number Street Address City Zip Code

## **Elements Included/Not Included in Frame**

It will include a list of all the students who registered in 2022 Fall semester at UT System.

- a. Eligibility criteria elements included in sampling frame:
  - i. Being at least 18 years old.
  - ii. Being undergraduate students.
  - iii. Registered at least 12 credits.
  - iv. Studies at one of eight UT System academic institutions from August 2022 to December 2022.
- b. Eligibility criteria elements not included in sampling frame:
  - i. Attained a positive SARS-CoV-2 test result before the start of the Fall 2022 semester
  - ii. Transfer students that studied at a different university during the 2022 Fall semester compared to the university they are enrolled in during the 2023 Spring semester

## **Sampling Method**

A simple random sampling technique will be used for this study. First, obtaining eight lists of undergraduate student data from eight UT systems, then we will further reduce the list after applying the eligibility criteria of being at least 18 years old and registered at least 12 credits. We will split each list of students into four lists stratified by their undergraduate classification of freshman, sophomore, junior, and senior. Note that a person is classified as being a freshman if they have taken 0 to 29 course credit hours, classified as a sophomore if they have taken 30 to 59 credit hours, classified as a junior if they have taken 60 to 89 credit hour, and classified as seniors if they have taken more than 90 hours. Upon splitting each list from the 8 institutions into 4 lists, we will get a total of 32 lists such that each list includes students of one undergraduate classification level from their respective UT system institutions. Second, for each list of the 32 lists generated from the student data, each student will be assigned a 4-digit number starting from 0001. Using a computer to generate non-repeated 4-digit random numbers for each list, we will generate 273 random numbers between 01 and the number of students in each list. Each of 273 students with selected 4-digit random numbers will be selected as a sampling unit for the study.



For each UT system academic institution, each grade (a total of four grades) will do a simple random sampling. A total of 32 simple random sampling. Four grades \* eight UT System.

### **Sampling Unit**

From the sampling frame data obtained, undergraduate student aged 18 and older, registered as full-time student for 2022 Fall semester at one of eight UT system including UT Arlington, UT Austin, UT Dallas, UT El Paso, UT Permian Basin, UT Rio Grande Valley, UT San Antonio, and UT Tyler, took at least one COVID-19 diagnosis test, either by PCR or rapid antigen test from August 2022 to December 2022, not having a positive SARS-CoV-2 test prior to the start of 2022 Fall semester.

### **Study Unit**

Selected students in sampling units that agree to participate in the study.

From the random sampling units obtained, undergraduate student aged 18 and older, registered as full-time student for 2022 Fall semester at one of eight UT system including UT Arlington, UT Austin, UT Dallas, UT El Paso, UT Permian Basin, UT Rio Grande Valley, UT San Antonio, and UT Tyler, took at least one COVID-19 diagnosis test, either by PCR or rapid antigen test from August 2022 to December 2022, not having a positive SARS-CoV-2 test prior to the start of 2022 Fall semester that agree and consented to be in the study.

### **Sample Size Calculation/Fixed Sample**

$\alpha = 0.05$ ,  $\beta = 0.80$ , two-sided

$$n = \frac{[p_e(1 - p_e) + p_{ne}(1 - p_{en})](Z_{\alpha/2} + Z_{\beta})^2}{\Delta^2}$$

Comparison 1, hybrid vs. in-person:

$$p_e = 0.15$$

$$p_{ne} = 0.14$$

$$\Delta = 0.01$$

$$Z_{\alpha/2} = 1.96$$

$$Z_{\beta} = 0.84$$

$$N = 19436$$

Comparison 2, hybrid vs. remote:

$$p_e = 0.15$$

$$p_{ne} = 0.12$$

$$\Delta = 0.03$$

$$Z_{\alpha/2} = 1.96$$

$$Z_{\beta} = 0.84$$

$$N = 2031$$

Comparison 3, in-person vs. remote:

$$p_e = 0.14$$

$$p_{ne} = 0.12$$

$$\Delta = 0.02$$

$$Z_{\alpha/2} = 1.96$$

$$Z_{\beta} = 0.84$$

$$N = 4430$$

Based on “Data Suggest Little Difference in COVID Rates Between Remote, In-Person and Hybrid Instruction”, published around December 2020, incidence or prevalence among hybrid is 1.5%, incidence or prevalence among in-person is 1.4%, incidence or prevalence among remote is 1.2%. The new omicron variant is ten times more likely to infect people according to 11 Alive; so, we decided to multiply the incidence by ten. The estimated incidence or prevalence among hybrid is 15%, incidence or prevalence among in-person is 14%, incidence or prevalence among remote is 12%.

We calculate all three comparisons—hybrid vs. in-person; hybrid vs. remote; in-person vs. remote and choose 2031 in each group considering the feasibility. So, the total number of samples is

$$\frac{[0.15*(1-0.15)+0.12*(1-0.12)](1.96+0.84)^2}{(0.15-0.12)^2} * 3 = 6093.$$

***Sample Size Adjusted for non-response***

Assume a 30% non-response rate,

$$\text{Adjusted sample size} = n_{adj} = \frac{n_{estimate}}{(1 - NR)} = \frac{6093}{1 - 30\%} = 8705$$

Sample Size Adjusted for loss to -up (if applicable)

## **Recruitment Strategy**

### **Recruitment Plan**

The sampling frame will include undergraduate students at University of Texas system schools that meet eligibility criteria. To recruit participants for this investigation, an effort will be made to reach out to academic institutions in the University of Texas System. Next, the investigation will be explained to these schools to ensure that the study satisfies the school's research protocols, the research team will send a site manager to each respective school to help coordinate the project. In addition to the site manager, each research site will also be provided with a data collector and recruiter to assist with data collection and screening respectively. Since a random sampling method is being used for this investigation, the recruiter of each research team at each school will request their respective University of Texas System school for a list of undergraduate students that attend the corresponding institution. Next, the students will be filtered by the recruiter for being over 18 years old and being registered for at least 12 credit hours for the Fall 2022 semester. At each of the 8 University of Texas System schools, the recruiter will stratify these students by their undergraduate classification of freshman, sophomore, junior, or senior. At each University of Texas institution, 273 participants will be randomly chosen for each of the undergraduate classification groups. Once these participants have been selected, the site manager will contact their respective school's registrar to obtain the email address of students who have been chosen for this study. This communication will occur via email between the research team at each University of Texas school and the participants at the corresponding school, while an example message will also be provided to help maintain consistency. The emails to the students will include information about this investigation and that selected students should report to the research site for further steps, where research staff will oversee screening. The incentives for this investigation will also be included in this email in order to help further encourage student participation. The selected students will arrive at the research site to see the recruiter and will once again be educated on what the study entails and what is expected of the students. Additionally, they will be given an opportunity to ask questions. they will be screened using the screening form to whether they satisfy the eligibility criteria for this investigation via a face-face interview with the recruiter. Students that do not satisfy the eligibility criteria for this investigation will be asked to leave, while their data will be recorded in the accrual log. Students that fit the eligibility criteria will be asked to sign a consent form for the investigation, while being informed of the next steps, which is the survey. They will also be given an opportunity ask questions about things that require clarification. Depending on whether the participant consents, their data will be entered into the accrual log. Before seeing the data

collector who will fill out the survey, the students will be asked if they want enter a raffle to win a \$50 Amazon gift card, which is an incentive for this study. This procedure will continue from January 2023 until the end of the semester, which occurs in May 2023, while selected students will be sent reminders until the conclusion of the study if the researchers wait for them to complete their surveys and screening.

### **Participation Incentives**

To incentivize students for this study, all students that participate in this investigation will be entered into a raffle upon request, where 50 students at each UT campus will each be awarded a \$50 Amazon Gift card. Before data collection, students will be asked provide their name and email for the raffle. At the end of the semester, 50 participants will to be awarded Amazon gift cards as part of the raffle. Since students will have to travel to the research site to be screened and complete the surveys via a face-to-face interview, they are more likely to come if they receive a direct award such as getting a gift card, for a service they use often such as Amazon.

### **Participation Retention**

For this investigation, there will be no retention plan in place. The reason for this is that this investigation is a cross-sectional study with no follow-up as students are being surveyed at the end of the semester in regards to their experiences with school and the SARS-CoV-2 virus.

## Recruitment Form

### The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the 2022 Fall Semester: A Cross-Sectional Study

#### Screening Form

Screening Date (MM/DD/YYYY): \_\_\_\_/\_\_\_\_/\_\_\_\_

#### Section 1: Demographics

Participant's Name:

Last Name:

First Name:

Participant's Sex:

- ☐ Male
- ☐ Female
- ☐ Prefer to not answer

Participant's Ethnicity?

- ☐ Hispanic or Latino
- ☐ Not Hispanic or Latino

Participant's Racial Background?

- ☐ Asian
- ☐ Black or African American
- ☐ White
- ☐ Other
- ☐ Prefer to not answer

#### Section 2: Screening Questions

Q1 How old are you? \_\_\_\_\_ (document age)

- ☐ < 18 years of age [Not Eligible]
- ☐ 18 years of age or older [Eligible]

Q2 Are you an undergraduate student, meaning you are working towards your bachelor's degree?

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]

Q3 Are you an undergraduate student at one of the eight University of Texas (UT) System academic institutions? These include UT Arlington, UT Austin, UT Dallas, UT El Paso, UT Permian Basin, UT Rio Grande Valley, UT San Antonio, and UT Tyler.

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]

Q4 Were you student at different university during the 2022 Fall semester compared to the university you are enrolled in during the 2023 Spring semester?

- ☐ Yes [Not Eligible]
- ☐ No [Eligible]

Q5 For this semester, are you enrolled as a full-time student, meaning you are enrolled for at least 12 credits?

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]

Q6 Did you take a at least one COVID-19 test during this past 2022 Fall semester, either by polymerase chain reaction (PCR) or rapid antigen?

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]
- ☐ Don't remember [Not Eligible]

Q7 Have you had received a positive COVID-19 test result before the start for the 2022 Fall semester?

- ☐ Yes [Not Eligible]
- ☐ No [Eligible]

### Section 3: Recruitment Summary Questions/Items: Follow Steps 1 through 4

#### Step 1: Determine study eligibility

If screening questions 1, 2, 3, 4, 5, 6, AND 7 = Eligible, check "Yes"

If screening question 1, 2, 3, 4, 5, 6, OR 7 = Not Eligible, then check "No".

Eligible to participate

☐ Yes

☐ No →

End

**Step 2:** Provide individual with details about study, and ask them if they are interested in participating. If they agree, check "Yes", if they do not agree, check "No"

Agreed to Participate

☐ Yes

☐ No →

End

**Step 3:** Carry out the consent process.

Consented to be in study

☐ Yes

☐ No →

End

**Step 4:** Assign participant unique ID

Unique ID: \_\_\_\_\_



## Accrual Form

### The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the 2022 Fall Semester: A Cross-Sectional Study

#### Educational Modalities and COVID-19 Screening Accrual Log

FORM Number: 2.0

DATE: 4/6/2022

Version 2.0

				Eligibility Questions								
Date	UNIQUE ID	Name (Last, First)	Age	Undergraduate Student	Student at UT System School	At Least Twelve Credits	Fall 2022 COVID-19 Test	Positive COVID-19 Test Before Fall	Transfer Student	Eligible	Agreed	Consented
			[E/NE]	[E/NE]	[E/NE]	[E/NE]	[E/NE]	[E/NE]	[E/NE]	[Y/N]	[Y/N/N A]	[Y/N/N A]


E=Eligible; NE = Not Eligible; Y= Yes; N=No; NA=Not Applicable

## **Recruitment SOP**

### **The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the Fall Semester: A Cross Sectional Study**

**INSTRUCTIONS FOR USE OF:** Recruitment (Form 1.0), Accrual Log (Form 2.0)

**DATE OF CONSTRUCTION/VERSION:** *April 6, 2022; Version 2*

**PURPOSE:** The purpose of Form 1.0 is to recruit and screen for participants for the investigation. The purpose of Form 2.0 is to keep an accrual log of the participants in the study that records and keeps a record of screening form data.

**STAGE OF PROJECT FORM IS USED:** This form is utilized in the recruitment stage of the investigation.

**WHO USES THE FORM:** This form will be utilized by the recruiter for this study, who will screen potential participants for this investigation.

#### **STORAGE:**

Form 1.0 and Form will be stored in a locked file cabinet and in an encrypted server in the Principle Investigator's office. The storage process will be multifaceted and must be always secure. A data collector or field coordinator will scan the completed forms at each location to a centralized, secure server and store them in a locked file cabinet in the field coordinator's office until interviews are complete. Once complete, team member(s) will transport all completed forms in a lock box to the study's central location, specifically the Principal Investigator's office, where it will be physically stored in a locked file cabinet.

#### **DEFINITION OF ITEMS AND INSTRUCTIONS FOR USE**

##### **1. General Instructions:**

Screening and recruitment will occur after the random sampling technique has been conducted. Form 1.0 and Form 2.0 will be utilized when recruiting the sample population for this investigation, along with helping provide instructions on screening and how to fill out the accrual

log. Upon completion of screening, participants will be given an opportunity to ask any questions they may have. Next, attaining consent and adding the entry to the accrual log will begin, where the participant will be asked to fill out a consent form for the investigation. If the participant passes the screening portion of this study and chooses to enroll, they will be sent to the data collector to proceed with the survey for this investigation. The entire administration of this form will occur via a verbal format and should take approximately 10-15 minutes. The screener should have the accrual log and screening form on hand when for this part of the study.

## **2. Item Instructions:**

Section 0.1: When selected participants arrive, greet the individual and introduce themselves by stating your name, position, and name of the study using the following script:

“Hello my name is [RECRUITER NAME], and I am the [POSITION ON RESEARCH TEAM] for the research team. We are working on a project called The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the Fall Semester: A Cross Sectional Study.”

Next, tell the participant the purpose of the investigation, and will repeat the following script:

### **SCRIPT**

“The purpose of this study is to evaluate differences in the prevalence of confirmed COVID-19 cases among University of Texas (UT) System undergraduate students attending university classes via different education modalities, such as in-person, online, and hybrid, during the 2022 fall semester.”

Section 1.1: Ensure that the screening form is on hand beginning at this step. The recruiter will also tell the participant they will be screened for their eligibility for this investigation using the following script:

### **SCRIPT**

“Before proceeding with the investigation, we will first evaluate your eligibility for this by screening you with some questions.”

Next, the participant will be given asked if they have any questions before proceeding to the screening for this investigation, using the following script:

## SCRIPT

“Do you have any questions before I begin?”

If the participant has any questions, the recruiter must take the time to answer them. If the recruiter is unable to answer questions, contact the site manager for further assistance. Once the questions of the participant have been answered or the participant does not have questions, then the recruiter can proceed to looking at question 1 of **Section 1: Demographics** of the screening form. The recruiter will record today’s date in the following area in the blanks for screening date:

### Screening Form

**Screening Date (MM/DD/YYYY):** \_\_\_\_/\_\_\_\_/\_\_\_\_

Section 1.1: The recruiter will ask the potential participant to spell out their first and last name, using the following script:

## SCRIPT:

“What is your last name?”

“What is your first name?”

The responses to these questions, will be used to fill out the following question of **Section 1: Demographics** of the screening form:

Participant's Name:

Last Name:

First Name:

Section 1.2: Ask the potential participant the following script:

## SCRIPT

“Do you identify your sex to be male or female or do you prefer not to say?”

The following question will be filled out with the participant’s response:

Participant's Sex:

- ☐ Male
- ☐ Female
- ☐ Prefer to not answer

Section 1.3: Ask the potential participant the following script:

SCRIPT

"Do you identify as Hispanic or Latino, or do you identify as not Hispanic or Latino?"

Upon attaining a response to this question, the following section will filled out with the participant's response:

Participant's Ethnicity?

- ☐ Hispanic or Latino
- ☐ Not Hispanic or Latino

Section 1.4: Ask the participant the following script:

SCRIPT:

"In regards to your race, do you identify as Asian, Black or African American, White, or Other?"

Using the answer from the participant, the following question will be filled out accordingly:

Participant's Racial Background?

- ☐ Asian
- ☐ Black or African American
- ☐ White
- ☐ Other
- ☐ Prefer to not answer

Section 2.1: Look at **Section 2: Screening Questions** of the screening form. Ask the participant the following script:

SCRIPT:

“What is your age?”

If the participant response is an age that is under the age of 18, the first choice to following question will be selected, while the second choice will be selected if the participant is over 18:

How old are you? \_\_\_\_\_ (document age)

- ☐ < 18 years of age [Not Eligible]
- ☐ 18 years of age or older [Eligible]

Section 2.2: Ask the following script:

“Are you an undergraduate student? What I mean by this is are you working towards a bachelor’s degree?”

If the participant answers “Yes” then the first answer choice to this question is chosen below, while the second answer choice is chosen if the participant says “No”:

Q2 Are you an undergraduate student, meaning you are working towards your bachelor’s degree?

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]

Section 2.3: Ask the participant the following script:

SCRIPT:

“Are you a student at one of the 8 UT system institutions? If so, which school?”

If the student is a student at one of the 8 UT System institutions then one of the 8 first answer choices below will be selected depending on the participant’s, while the last choice will be selected if the student answers “No” or states a school that is not one of the first 8 answer choices:

Q2 Are you a student at one of the eight UT System academic institutions?

- ☐ The University of Texas (UT) at Arlington [Eligible]
- ☐ The University of Texas (UT) at Austin [Eligible]
- ☐ The University of Texas (UT) at Dallas [Eligible]
- ☐ The University of Texas (UT) at El Paso [Eligible]
- ☐ The University of Texas (UT) Permian Basin [Eligible]

- ☐ The University of Texas (UT) Rio Grande Valley [Eligible]
- ☐ The University of Texas (UT) at San Antonio [Eligible]
- ☐ The University of Texas (UT) at Tyler [Eligible]
- ☐ Does not attend a UT System School [Not Eligible]

Section 2.4: Ask the following script:

SCRIPT

“Were you student at different university during the 2022 Fall semester compared to the university you are enrolled in during the 2023 Spring semester?”

If the participant answers “Yes” then the first answer choice to this question is chosen below, while the second answer choice is chosen if the participant says “No”:

Q4 Were you student at different university during the 2022 Fall semester compared to the university you are enrolled in during the 2023 Spring semester?

- ☐ Yes [Not Eligible]
- ☐ No [Eligible]

Section 2.5: Ask the following script:

SCRIPT

“Are you currently enrolled as a full-time student, meaning you are taking at least 12 credits?”

If the participant answers “Yes” then the first answer choice to this question is chosen below, while the second answer choice is chosen if the participant says “No”:

Q3 For this semester, are you enrolled as a full-time student, meaning you are enrolled for at least 12 credits?

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]

Section 2.6: Ask the following script:



#### SCRIPT

“Did you take at least 1 COVID-19 test during this past Fall semester, either by polymerase chain reaction (PCR) or rapid antigen?”

If the participant answers “Yes” then the first answer choice to this question is chosen below, while the second answer choice is chosen if the participant says “No”:

Did you take at least 1 COVID-19 test during this past Fall 2022 semester, either by polymerase chain reaction (PCR) or rapid antigen?

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]

Section 2.7: Ask the following script:

#### SCRIPT:

“Did you test positive for COVID-19 prior to the Fall 2022 semester?”

If the participant answers “Yes” then the first answer choice to this question is chosen below, while the second answer choice is chosen if the participant says “No”:

Q6 Have you had received a positive COVID-19 test result before the start for the Fall 2022 semester?

- ☐ Yes [Not Eligible]
- ☐ No [Eligible]

Section 3.1: Proceed to “Section 3: Recruitment Summary Questions/Items.” Using the algorithm from the third of this form, it will be determined whether the potential participant is eligible for this study. If the potential participant is deemed eligible, then “Yes” is the answer chosen to the question below, while the second answer choice is chosen if the participant is not eligible:

**Eligible to participate**

- ☐ Yes
- ☐ No



**End Recruitment.**

In this case, say the following script to the participant:

SCRIPT:

“We are sorry, but you not eligible for this study. Thank you so much for your time!”

If the potential participant is deemed eligible, then they will be asked if they would like to participate in this study, while also being asked if they have any remaining questions about enrollment via the following script:

SCRIPT:

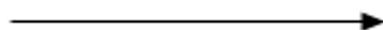
“You have been deemed eligible for this study, let us proceed to the consent form stage of this study.”

The potential participants will be provided with a consent form to sign if they choose to participate. For help on this step refer the 3<sup>rd</sup> part of this forum, refer to Form 3.0. If the potential participant decides to participate then the following question will be marked “Yes”, but marked “No” if they choose not to participate:

**Consented to be in study**

☐ Yes

☐ No



**End Recruitment.**

Section 3.2: Upon completion of the above steps, the participant will be assigned a unique identification number to help identify them. All participants receive this number regardless of whether they are enrolled. Next the participant that have consented will be asked if they would like to be entered into a raffle for \$50 Amazon gift card that will be given out to 50 students with the following script:

SCRIPT:

“Would you be interested in being part of raffle to win a \$50 dollar Amazon gift card for participating in this study?”

If they answer yes to the above question, they will be entered into the raffle, while they will not be entered if they answer no. After assigning the participant a unique ID and obtaining or not obtaining consent to participate in the raffle, read the following script:

SCRIPT: "Thank you for your time. If you have any questions, please contact the study using the information provided on the consent form, and if you change your mind to participate at any time, please let us know. Now, please wait for the data collector to come and conduct the interview."

Upon completion of this screening and consent, the participant will wait for the data collector to come receive them, which will involve the next phase of the investigation: the survey.

Section 3.3: Make sure the accrual file is on hand. Utilize the screening form and consent status to fill out the accrual log to document participants that have been deemed eligible or ineligible for the investigation for personal records for the research team.

### **3. Algorithm Instructions**

For the algorithm, Section 2: Screening Questions will be utilized. To begin this algorithm, look at the following question first:

How old are you? \_\_\_\_\_ (document age)

- ☐ < 18 years of age [Not Eligible]
- ☐ 18 years of age or older [Eligible]

If the answer recorded to this question is "< 18 years of age [Not Eligible]", then the screening process can be terminated as the participant is not eligible for this study as they are under 18 years. However, if "18 years of age or older" is the choice chosen, then the screening process can proceed as the participant is over 18 years old and eligible for this study. Upon proceeding, the recruiter must look at the following question:

Are you an undergraduate student, meaning you are working towards your bachelor's degree?

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]

If the answer recorded for this question is “No”, then the screening process can be terminated as the participant is not eligible for this study as they are not an undergraduate student. However, if the “Yes” option is chosen, then the screening process can proceed as it means the participant is an undergraduate student. Upon proceeding, the recruiter must look at the following question:

Are you student at one of the eight UT System academic institutions?

- ☐ The University of Texas (UT) at Arlington [Eligible]
- ☐ The University of Texas (UT) at Austin [Eligible]
- ☐ The University of Texas (UT) at Dallas [Eligible]
- ☐ The University of Texas (UT) at El Paso [Eligible]
- ☐ The University of Texas (UT) Permian Basin [Eligible]
- ☐ The University of Texas (UT) Rio Grande Valley [Eligible]
- ☐ The University of Texas (UT) at San Antonio [Eligible]
- ☐ The University of Texas (UT) at Tyler [Eligible]
- ☐ Does not attend a UT System School [Not Eligible]

If the answer recorded for this question is “Does not attend a UT System School”, then the screening process can be terminated as the participant is not eligible for this study as they do not attend a UT System school. However, if any of the other choices for this question are chosen, then the screening process can proceed as it means the participant attends a UT System school. Upon proceeding, the recruiter must look at the following question:

Were you student at different university during the 2022 Fall semester compared to the university you are enrolled in during the 2023 Spring semester?

- ☐ Yes [Not Eligible]
- ☐ No [Eligible]

If the answer recorded for this question is “Yes”, then the screening process can be terminated as the participant is not eligible for this study as the student was a student at another university during the Fall . However, if the “No” option is chosen, then the screening process can proceed as it means the participant was an undergraduate at the same school they are currently attending. Upon proceeding, the recruiter must look at the following question:

For the Fall 2022, were you enrolled as a full-time student, meaning you are enrolled for at least 12 credits?

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]

If the answer recorded for this question is “No”, then the screening process can be terminated as the participant is not eligible for this study as they were not enrolled as a full-time student in the fall semester. However, if the “Yes” option is chosen, then the screening process can proceed as it means the participant was enrolled as a full-time student in the fall semester. Upon proceeding, the recruiter must look at the following question:

Did you take at least 1 COVID-19 test during this past Fall 2022 semester, either by polymerase chain reaction (PCR) or rapid antigen?

- ☐ Yes [Eligible]
- ☐ No [Not Eligible]

If the answer recorded for this question is “No”, then the screening process can be terminated as the participant is not eligible for this study as they did not take COVID-19 test during the past Fall semester. However, if the “Yes” option is chosen, then the participant can be enrolled in the study. Upon proceeding, the recruiter must look at the following question:

Have you had received a positive COVID-19 test result before the start for the Fall 2022 semester?

- ☐ Yes [Not Eligible]
- ☐ No [Eligible]

If the answer recorded for this question is “No”, then the screening process can be terminated as the participant is not eligible for this study as they did not take COVID-19 test during the past Fall semester. However, if the “Yes” option is chosen, then the participant can be enrolled in the study.

## **Consent Form**

### **INFORMED CONSENT TO TAKE PART IN RESEARCH**

**Study Title:** The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the 2022 Fall Semester: A Cross-Sectional Study

**Principal Investigator:** Cecilia Colom, BS; Qian Qian, MS; Chandershekhar Shori, BS, BSA

**Study Contact:** Cecilia Colom, 713-500-XXXX

We are inviting you to be in a research study conducted by investigators at the University of Texas Health Science Center at Houston. We are studying the differences in the prevalence of confirmed COVID-19 cases among University of Texas (UT) System undergraduate students attending university classes via different education modalities, such as in-person, online, and hybrid, during the 2022 fall semester.

If you agree to be in our study, we will ask you to complete a 30-question survey on different aspects of your Fall 2022 semester university education, including COVID-19 testing and class formats. You do not have to be in the study if you do not want to; it is your choice. You can change your mind at any time and there will be no penalty. Your total time commitment is expected to be about 1 visit, 40-45 minutes per visit, including the time allotted for screening.

You do not have to share any information that you are not comfortable sharing. You can stop participating at any time.

We will be careful to keep your information confidential. There is always a small risk of unwanted or accidental disclosure. We plan to record your survey answers with your permission. Any notes or recordings will be kept private by Cecilia Colom. Any digital files will be encrypted and password protected. You can decide whether you want your name used.

If you have any questions about this study, please call Cecilia Colom at 713-500-XXXX. If you have any complaints, suggestions, or questions about your rights as a research volunteer,

please contact the UTHealth Committee for the Protections of Human Subjects (CPHS) at 713-500-7943.

_____ Printed Name of Subject	_____ Signature of Subject	_____ Date
_____ Printed Name of Person Obtaining Informed Consent	_____ Signature of Person Obtaining Informed Consent	_____ Date

## Consent Form SOP

### **The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the 2022 Fall Semester: A Cross-Sectional Study**

**INSTRUCTIONS FOR USE OF:** Consent (Form 3.0)

**DATE OF CONSTRUCTION/REVISION:** April 6, 2022, version 1.0

**PURPOSE:** This form is used to obtain informed consent from study participants. This form is administered in person during the survey interview visit.

**STAGE OF PROJECT FORM IS USED:** Study Recruitment

**WHO USES IT:** Field Coordinator, Study Recruiter, Principal Investigator

#### **WHERE IT IS STORED/FILED:**

Form 3.0 will be stored in a locked file cabinet and in an encrypted server in the Principal Investigator's office.

The storage process will be multifaceted and must be secure at all times. A data collector or field coordinator will scan the completed forms at each location to a centralized, secure server and store them in a locked file cabinet in the field coordinator's office until interviews are complete. Once complete, team member(s) will transport all completed forms in a lock box to the study's central location, specifically the Principal Investigator's office, where it will be physically stored in a locked file cabinet.

## **DEFINITION OF ITEMS AND INSTRUCTIONS FOR USE:**

**General Instructions:** This form will guide you through the informed consent process. You will provide a verbal overview of the study and the risks involved with participation. Please read this overview as written. Do not read the consent form to the individual unless they appear to have difficulty reading the document or they ask you to read it to them.

Hand the consent form to the participant, and a pen, and read the following to them:

"Hello, thanks for taking time to participant in our study of the impact of educational modalities on COVID-19 prevalence amongst undergraduate students in the University of Texas System during the Fall 2022 semester. You have been randomly selected to participate in our study, and since you meet our study's eligibility criteria, we want to ask you to participant in our study. Next, I will guide you through the informed consent process."

## **2. ITEM INSTRUCTION:**

### **INVITATION TO TAKE PART**

We are inviting you to be in a research study conducted by investigators at the University of Texas Health Science Center at Houston (UTHealth Houston). This study will last almost two years.

### **STUDY PURPOSE**



We are studying the differences in the prevalence of confirmed COVID-19 cases among University of Texas (UT) System undergraduate students attending university classes via different education modalities, such as in-person, online, and hybrid, during the Fall 2022 semester.

### **STUDY PROCEDURES AND TIME COMMITMENT**

If you agree to be in our study, we will ask you to complete a survey with 30 questions on different aspects of your Fall 2022 semester university education, including COVID-19 testing and class formats. You do not have to be in the study if you do not want to; it is your choice. You can change your mind at any time and there will be no penalty. Your total time commitment is expected to be about 1 visit, 40-45 minutes per visit, including the time for screening.

### **BENEFITS**

To incentivize students to be involved in this study, we will provide fifty \$50 Amazon gift cards. All university students may benefit in that we hope that this study will allow us to better understand how university policies influence the prevalence of COVID-19.

### **RISKS AND/OR DISCOMFORTS**

There are essentially no risks related to this study.

We will be careful to keep your information confidential. There is always a small risk of unwanted or accidental disclosure. We plan to upload your survey in the data base, transport and store your survey with your permission at Cecilia Colom's office at UTHealth Houston – School of Public Health. Any notes or recordings will be kept private by Cecilia Colom. Any digital files will be encrypted, and password protected. You can decide whether you want your name used.

### **COSTS, REIMBURSEMENTS AND COMPENSATION**

All the procedures in this study will be done at no cost to you.

### **QUESTIONS**

If you have any questions about this study, please call Cecilia Colom at 713-500-XXXX. If you have any complaints, suggestions, or questions about your rights as a research volunteer, please contact the UTHHealth Committee for the Protections of Human Subjects (CPHS) at 713-500-7943.

Sign below only if you understand the information given to you about the research and choose to take part. If you decide to take part in this research study, a copy of this signed consent form will be given to you, either by email or by hard copy.

### 3. Consent vs. Non-Consent

**Consented:** Obtain the participant's signature, date and time followed by your signature, date and time. Photocopy or hardcopy the consent form and provide the participant with the copied consent as required. Ensure that you have retained the original, signed consent form.

_____ Signature of Study Participant	_____ Date	_____ Time (If applicable)
_____ Signature of Person Obtaining Informed Consent	_____ Date	_____ Time (If applicable)

Once participant and study recruiter sign the consent form, read the following script:

SCRIPT: "Thank you for consenting to participate in the study. We will now assign you a unique study ID so that you may take part in the study interview. If at any time you choose to no longer participate in the study, please contact the study research team using the information provided on the copy of your consent form."

#### **Not Consented:**

If the participant does not consent to participating in the study after you provided a copy of the consent form to the participant, read the following script:

SCRIPT: "Thank you again for taking time to come here today. We understand that you don't consent to participant in this study."

Afterwards, circle back to recruitment form and accrual log, mark "No" on the screening form and accrual log's Consent section.

## Data Collection

### Annotated Survey

#### **The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the 2022 Fall Semester: A Cross-Sectional Study**

The purpose of this study is to evaluate differences in the prevalence of confirmed COVID-19 cases among University of Texas (UT) System undergraduate students attending university classes via different education modalities, such as in-person, online, and hybrid, during the 2022 fall semester

Unique Study Number [UniqueID]

---

---

Interviewer Identification Number [InterviewerID]

---

---

Q1 What is your birthdate? Please use mm/dd/yyyy format. [birthdate]

Missing = 99

---

---

Q2 Would you describe your sex as male, female, or do you prefer to not answer? [sex]

Missing = 99

☐ Male [0]

☐ Female [1]

☐ Prefer to not answer [2]

-----

Q3 What is your ethnicity? Would you or would you not describe yourself as Hispanic or Latino?  
[ethnicity]

Missing = 99

- ☐ Hispanic or Latino [0]
  - ☐ Not Hispanic or Latino [1]
  - ☐ Prefer to not answer [2]
- 

Q4 Would you describe your racial background as Asian, Black or African American, White, other, or do you prefer to not answer? [race]

Missing = 99

- ☐ Asian [0]
  - ☐ Black or African American [1]
  - ☐ White [2]
  - ☐ Other [3]
  - ☐ Prefer to not answer [4]
-

Q5 What University of Texas (UT) School do you attend? Do you attend UT Arlington, UT Austin, UT Dallas, UT El Paso, UT Permian Basin, UT Rio Grande Valley, UT San Antonio, or UT Tyler? [UT\_campus]

Missing = 99

- ☐ University of Texas (UT) Arlington [0]
  - ☐ University of Texas (UT) Austin [1]
  - ☐ University of Texas (UT) Dallas [2]
  - ☐ University of Texas (UT) El Paso [3]
  - ☐ University of Texas (UT) Permian Basin [4]
  - ☐ University of Texas (UT) Rio Grande Valley [5]
  - ☐ University of Texas (UT) San Antonio [6]
  - ☐ University of Texas (UT) Tyler [7]
-

Q6 What grade level are you classified as? Are you considered a college freshman, sophomore, junior, or senior?

Undergraduate students are usually classified by the number of hours of college credit they have earned. A student is a freshman until 30 hours have been earned, a sophomore until 60 hours have been earned, a junior until 90 hours have been earned, and a senior until graduation.

[college\_grade]

Missing = 99

- ☐ Freshman [0]
  - ☐ Sophomore [1]
  - ☐ Junior [2]
  - ☐ Senior [3]
  - ☐ Don't know [4]
-



Q7 Usually, how did you get to the university during the Fall 2022 semester?

Private transportation includes walking, skating, cycling, and driving. Public transportation includes riding buses and trams.

With that in mind, when going to the university, did you always use private transportation, always use public transportation, mostly use private transportation, mostly use public transportation? Or did you use an equal mix of public and private transportation? [transportation]

Missing = 99

- ☐ Always by private transportation [0]
- ☐ Always by public transportation [1]
- ☐ Mostly by private transportation [2]
- ☐ Mostly by public transportation [3]
- ☐ Equal mix of public and private transportation [4]
- ☐ I did not go to campus. [5]

*Skip To: Q12 If Usually, how did you get to the university during the Fall 2022 semester? Private transportation... = I did not go to campus. [5]*

---

Q8 Approximately, in minutes, how long did it take you to get to the university during the Fall 2022 semester? [transport\_time]

Not applicable = 88

Missing = 99

---

-----

Q9 During the Fall 2022 semester, for how many hours were you on campus per week? This does not include the time spent at campus dormitories. [hours\_inperson]

Not applicable = 88

Missing = 99

☐ 1-3 hours [0]

☐ 4-6 hours [1]

☐ 7-9 hours [2]

☐ 10-12 hours [3]

☐ 13-15 hours [4]

☐ 15+ hours [5]

-----

Q10 During the Fall 2022 semester, did you usually wear a mask when on campus? Would you say yes, no, or sometimes? [mask\_status]

88 = Not applicable

99 = Missing

☐ Yes [0]

☐ No [1]

☐ Sometimes [2]

---

Q11 During the Fall 2022 semester, did you usually make an effort to practice 6-feet of social distance on campus? Would you say yes, no, or sometimes? [socialdistance]

88 = Not applicable

99 = Missing

☐ Yes [0]

☐ No [1]

☐ Sometimes [2]

---

Q12 During this Fall 2022 semester, which format are your classes in?

In-person courses are taught on campus at the scheduled course times in person. Online courses are taught fully online, either by two formats - synchronous (meet at same time) or asynchronous (do not meet). Hybrid learning includes a combination of online and in-person activities.

With that in mind, are your classes fully hybrid, online, in-person, a mix of hybrid and online, a mix of hybrid and in-person, a mix of online and in-person, or a mix of hybrid, online, and in-person? Or are your classes another combination format not discussed? [class\_format]

Missing = 99

- ☐ Fully Hybrid [0]
- ☐ Online [1]
- ☐ In-Person [2]
- ☐ Mix of Hybrid and Online [3]
- ☐ Mix of Hybrid and In-Person [4]
- ☐ Mix of Online and In-Person [5]
- ☐ Hybrid, Online, and In-Person [6]
- ☐ Other [7]
- ☐ Don't know [8]

*Skip To: Q14 If During this Fall 2022 semester, which format are your classes in? In-person courses are taught on... = Online [1]*

*Skip To: Q14 If During this Fall 2022 semester, which format are your classes in? In-person courses are taught on... = Other [7]*

*Skip To: Q14 If During this Fall 2022 semester, which format are your classes in? In-person courses are taught on... = Don't know [8]*

---

Q13 Think about your Fall 2022 in-person or hybrid class with the most students.  
Approximately, how many students are in that class? [studentnum\_class]

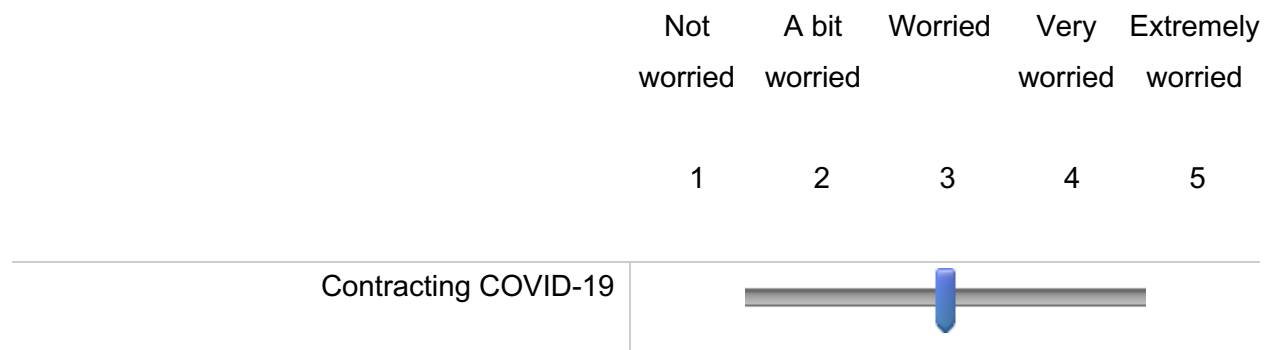
Not applicable = 88

Missing = 99

---

Q14 On a scale of 1-5, how worried are you about contracting COVID-19? Are you not worried, a bit worried, worried, very worried, or extremely worried?  
(1 means not worried at all about contracting the virus, while 5 means you are very worried about contracting the virus) [covidworry]

Missing = 99



Q15 During the Fall 2022 semester, did you experience any COVID-19 symptoms such fever, cough, difficulty breathing, sore throat, congestion, new loss of taste or smell, unusual fatigue, body aches, headache, nausea or vomiting, and/or diarrhea? Or did you not have symptoms?

Check all answers that apply. [symptoms]

Missing = 99

- ☐ Fever [0]
- ☐ Cough [1]
- ☐ Difficulty breathing [2]
- ☐ Sore throat [3]
- ☐ Congestion [4]
- ☐ New loss of taste or smell [5]
- ☐ Unusual fatigue [6]
- ☐ Body aches [7]
- ☐ Headache [8]
- ☐ Nausea or vomiting [9]
- ☐ Diarrhea [10]
- ☐ No symptoms [11]
- ☐ I had symptoms but don't remember which I had [12]



---

Q16 During the Fall 2022 semester, how many times did you get tested for COVID-19?

This could have been with a polymerase chain reaction test, otherwise known as a PCR test, or a rapid antigen test. PCR tests are done by a nose swab, and test results generally take at least a day. Rapid antigen tests are done by collecting nose or throat secretions by a swab, and usually provide quick results, within 15 minutes. Most at-home tests are rapid antigen tests.

[covid\_testnum]

Missing = 99

---

---

Q17 During the Fall 2022 semester, what type of COVID-19 test did you take? Did you take a polymerase chain reaction test, otherwise known as a PCR test, a rapid antigen test, both PCR and rapid antigen tests, or you do not know which type?

PCR tests are done by a nose swab, and test results generally take at least a day. Rapid antigen tests are done by collecting nose or throat secretions by a swab, and usually provide quick results, within 15 minutes. Most at-home tests are rapid antigen tests.

[covidtest\_type]

88 = Not applicable

99 = Missing

- ☐ Polymerase chain reaction (PCR) [0]
- ☐ Rapid antigen [1]
- ☐ Both PCR and rapid antigen [2]
- ☐ Don't know [3]

*Skip To: Q19 If During the Fall 2022 semester, what type of COVID-19 test did you take? Did you take a polymerase... = Rapid antigen [1]*

*Skip To: Q20 If During the Fall 2022 semester, what type of COVID-19 test did you take? Did you take a polymerase... = Don't know [3]*

---

Q18 During the Fall 2022 semester, when did you test positive for COVID-19 using a PCR (polymerase chain reaction) test? Did you test positive during August, September, October, November, and/or December 2022? [PCRcovidpos\_num]

88 = Not applicable

99 = Missing

☐

August 2022 [0]

☐

September 2022 [1]

☐

October 2022 [2]

☐

November 2022 [3]

☐

December 2022 [4]

---

Q19 During the Fall 2022 semester, when did you test positive for COVID-19 using a rapid antigen test? Did you test positive during August, September, October, November, and/or December 2022? [rapidcovidpos\_num]

88 = Not applicable

99 = Missing

☐

August 2022 [0]

☐

September 2022 [1]

☐

October 2022 [2]

☐

November 2022 [3]

☐

December 2022 [4]

---

Q20 Before the start of the Fall 2022 semester, how many times did you test positive for COVID-19, using a PCR (polymerase chain reaction) and/or rapid antigen test?

[covidtest\_before]

99 = Missing

---

---

Q21 Are you fully vaccinated against COVID-19?

Fully vaccinated means a person has received their primary series of COVID-19 vaccines. For example, two weeks after second dose of Pfizer-BioNTech or Moderna vaccine, or two weeks

after first dose of Johnson & Johnson vaccine would be considered fully vaccinated.

Would you say that you are or are not fully vaccinated? Or are you partially vaccinated, meaning you do not have all doses to be considered fully vaccinated? [vaccinated]

99 = Missing

☐ Yes [0]

☐ No [1]

☐ Partially [2]

*Skip To: Q23 If Are you fully vaccinated against COVID-19? Fully vaccinated means a person has received their pr... = No [1]*

---

Q22 How many COVID-19 vaccine booster doses have you received? Have you received one, two, or three booster doses? Or do you not remember?

A COVID-19 booster shot is an additional dose or doses of a vaccine. [covidbooster]

88 = Not applicable

99 = Missing

- ☐ One booster dose [0]
  - ☐ Two booster doses [1]
  - ☐ Three booster doses [2]
  - ☐ Don't remember [3]
- 

Q23 During the Fall 2022 semester, did you have or not have health insurance? Or do you not remember your past health insurance status? [healthinsurance]

99 = Missing

- ☐ Yes [0]
- ☐ No [1]
- ☐ Don't remember [2]

*Skip To: Q25 If During the Fall 2022 semester, did you have or not have health insurance? Or do you not remember... != Yes [0]*

---

Q24 If you had health insurance during the Fall 2022 semester, what kind of insurance plan did you have? [h\_insurancetype]

88 = Not applicable

99 = Missing

---

---

Q25 During the Fall 2022 semester, what type of housing did you live in? Did you live in a campus dormitory, apartment, house, or other type of housing? [housing\_type]

99 = Missing

☐ Campus dormitory [0]

☐ Apartment [1]

☐ House [2]

☐ Other [3]

---

Q26 During the Fall 2022 semester, how many people did you usually live with?  
[coresident\_num]

99 = Missing

---

*Skip To: Q28 If Condition: How many people do you usua... Is Equal to 0. Skip To: How often do you usually go out per w....*

---

Q27 If you lived with others during the Fall 2022 semester, how many times did they go out per week, on average?

In this case, to go out is to leave your house and go somewhere, especially something enjoyable like eating at a restaurant or going to a social event. [room\_go\_out]

88 = Not applicable

99 = Missing

---

Q28 How many times did you go out per week, on average, during the Fall 2022 semester?

In this case, to go out is the same as the question above. It is to leave your house and go somewhere, especially something enjoyable like eating at a restaurant or going to a social event. [you\_go\_out]

99 = Missing

---



---

Q29 Last year, that is 2022, what was your household income from all sources, before taxes, in United States (US) dollars? This income includes you and any other household members.  
[income]

99 = Missing

- ☐ Less than \$20,000 [0]
  - ☐ \$20,000 - \$39,999 [1]
  - ☐ \$40,000 - \$59,999 [2]
  - ☐ \$60,000 - \$79,999 [3]
  - ☐ \$80,000 - \$99,999 [4]
  - ☐ \$100,000 - \$149,999 [5]
  - ☐ More than \$150,000 [6]
  - ☐ Don't know [7]
  - ☐ Prefer to not answer [8]
-

Q30 Do you have additional comments, questions, or concerns that you would like to share?  
[add\_comment]

99 = Missing

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## **Survey SOP**

### **The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the 2022 Fall Semester: A Cross-Sectional Study**

**INSTRUCTIONS FOR USE OF:** Survey (Form 4.0)

**DATE OF CONSTRUCTION/VERSION:** *March 2, 2022; Version 2.0*

**PURPOSE:** This form is used to interview participants.

**STAGE OF PROJECT FORM IS USED:** Data collection

**WHO USES THE FORM:** Data Collector, Study Coordinator, Principal Investigator

**STORAGE:** Form 0004 will be stored in a locked file cabinet and in an encrypted server in the Principal Investigator's office.

The storage process will be multifaceted and must be secure at all times. A data collector or field coordinator will scan the completed forms at each location to a centralized, secure server and store them in a locked file cabinet in the field coordinator's office until interviews are complete. Once complete, team member(s) will transport all completed forms in a lock box to the study's central location, specifically the Principal Investigator's office, where it will be physically stored in a locked file cabinet.

## **DEFINITION OF ITEMS AND INSTRUCTIONS FOR USE**

### **1. General Instructions:**

The study's survey is to be administered face-to-face and is intended for use by trained data collectors. Verbally ask the survey questions as written and mark the participant's answers using a No. 2 pencil. Only when instructed to do so, hand the corresponding response card to the participant in order to answer the question accordingly.

Please fill in the “Unique Study Number” and 3-digit “Interviewer Identification Number” at the beginning of each survey. The “Unique Study Number” is a text-number combination that is assigned during Form 3.0.

Mark the participant’s answers to multiple choice or check-all-that-apply questions by placing an “X” over the space directly to the left of the participant’s response. For open-ended questions, write down the participant’s answer in the space provided. If no answer is provided to open-ended questions, write “N/A” in the space provided.

Some questions require the use of a response card. When using response cards, carefully follow the specific item instructions. Response cards can also be found in the Appendix. No question is to be skipped unless indicated to do so. Possible skip patterns are indicated in the item instructions.

Since this survey covers different topics, it is important to carefully direct the participant when the topic is changing, and a new set of questions is being asked. The survey should not take more than 30 minutes.

## **2. Item Instructions:**

The following information provides instructions for each question on Form 0004.

**Item 1 of non-survey questions:** Enter the Unique Study Number assigned to the participant.

**Item 2 of non-survey questions:** Enter the Interviewer ID of the team member that administers the interview.

### **Read the script.**

SCRIPT: “Today I’m going to ask you about different aspects of your Fall 2022 semester university education, including COVID-19 testing and class formats. First, I’m going to ask you some questions about yourself.”

**Items 1 through 4:** Read each question as written and mark only a single answer for each. Make sure each question is answered. If the participant declines to answer any question, skip to the following question if a *Prefer to not answer* option is not provided.

**Read the script.**

SCRIPT: "Now I'm going to ask you some questions about your Fall 2022 education."

**Items 5 and 6:** Read each question as written and mark only a single answer for each. Make sure each question is answered. If the participant declines to answer any question, skip to the following question.

**Item 7:** Read the question as written and mark only a single answer for each. Make sure the question is answered. If the participant declines to answer the question, skip to the following question.

If item 7 is answered "I did not go to campus", skip to item 12.

**Item 8:** Read the question as written and write down the participant's answer in the space provided. Make sure the question is answered. If the participant declines to answer the question, write down "N/A" in the space given and skip to the following question.

**Item 9:** Hand the participant the response card for item 9 along with a No. 2 pencil and read the following script. Then, read the question as written. Make sure the question is answered, If the participant declines to answer the question, skip to the following question. (See Appendix for the response card.)

SCRIPT: "We would like to know about your time on campus during the Fall 2022 semester. I am going to read the question and a list of categories. Using the card, think about your Fall 2022 semester and please answer the question."

**Items 10 through 11:** Read each question as written and mark only a single answer for each. Make sure each question is answered. If the participant declines to answer any question, skip to the following question.

**Item 12:** Hand the participant the response card for item 12 along with a No. 2 pencil and read the following script. Then, read the question as written. Make sure the question is answered. If the participant declines to answer the question, skip to the following question. (See Appendix for the response card.)

SCRIPT: "We would like to know about the format of your Fall 2022 semester classes. I am going to read the question and a list of different educational formats. Using the card, think about your Fall 2022 semester education and please answer the question."

If item 12 is answered "Online", "Other", or "Don't know", skip to item 14.

**Item 13:** Read the question as written and write down the participant's answer in the space provided. Make sure the question is answered. If the participant declines to answer the question, write down "N/A" in the space given and skip to the following question.

#### **Read the script.**

SCRIPT: "Now I'm going to ask you some health-related questions."

**Item 14:** Read the question as written and mark only a single answer for the question by circling the number or word that corresponds with the participant's answer. Make sure the question is answered. If the participant declines to answer the question, skip to the following question.

**Item 15:** Hand the participant the response card for item 15 along with a No. 2 pencil and read the following script. Then, read the question as written. Make sure the question is answered. If the participant declines to answer the question, skip to the following question. (See Appendix for the response card.)

SCRIPT: "We would like to know about any possible COVID-19 symptoms that you may have experienced during the Fall 2022 semester. I am going to read you the question and a list of symptoms associated with COVID-19. Using the card, think about the question and please reply."

**Item 16:** Read the question as written and write down the participant's answer in the space provided. Make sure the question is answered. If the participant declines to answer the question, write down "N/A" in the space given and skip to the following question.

**Item 17:** Read the question as written and mark only a single answer for the question. Make sure the question is answered. If item 17 is answered "Rapid antigen", then skip to item 19. If item 17 is answered "Don't know", then skip to item 20. If the participant declines to answer the question, skip to the following question.

**Items 18 through 19:** Read each question as written and mark all answers that apply. They are check-all-that-apply questions, and multiple answers can be selected for each. Make sure each question is answered. If the participant declines to answer any question, skip to the following question.

**Item 20:** Read the question as written and write down the participant's answer in the space provided. Make sure the question is answered. If the participant declines to answer the question, write down "N/A" in the space given and skip to the following question.

**Item 21:** Read the question as written and mark only a single answer for the question. Make sure the question is answered. If item 21 is answered "No", then skip to item 23. If the participant declines to answer the question, skip to the following question.

**Item 22:** Read the question as written and mark only a single answer for the question. Make sure the question is answered. If the participant declines to answer the question, skip to the following question.

**Item 23:** Read the question as written and mark only a single answer for the question. Make sure the question is answered. If item 23 is *not* answered "Yes", then skip to item 25. If the participant declines to answer the question, skip to the following question.

**Item 24:** Read the question as written and write down the participant's answer in the space provided. Make sure the question is answered. If the participant declines to answer the question, write down "N/A" in the space given and skip to the following question.

**Read the script.**

SCRIPT: “Now I’m going to ask you some general questions about your household.”

**Item 25:** Read the question as written and mark only a single answer for the question. Make sure the question is answered. If the participant declines to answer the question, skip to the following question.

**Item 26:** Read the question as written and write down the participant’s answer in the space provided. Make sure the question is answered. If item 26 is answered “0”, then skip to item 28. If the participant declines to answer the question, write down “N/A” in the space given and skip to the following question.

**Items 27 through 28:** Read the question as written and write down the participant’s answer in the space provided. Make sure the question is answered. If the participant declines to answer the question, write down “N/A” in the space given and skip to the following question.

**Item 29:** Hand the participant the response card for item 29 along with a No. 2 pencil and read the following script. Then, read the question as written. Make sure the question is answered. If the participant declines to answer the question, skip to the following question. (See Appendix for the response card.)

SCRIPT: “We would like to know about your household income for the past year, that is 2022. Think about all sources of income. This includes your income and that of any other household member. Then, using the card, please answer the question.

**Item 30:** Read the question as written and write down the participant’s answer in the space provided. Make sure the question is answered. If the participant declines to answer the question, write down “N/A” in the space given. If the participant does not have any additional comments, write down “None” in the space given.

**Read the script.**

SCRIPT: “That is the end of the interview. Thank you for your time.”



## Data Management & Analysis

### Data Codebook

***The Impact of Educational Modalities on COVID-19 Prevalence Amongst Undergraduate Students in the University of Texas System During the 2022 Fall Semester: A Cross-Sectional Study***

Survey Question	Variable Name	Numeric Code	Description
	UniqueID	Text-Number Combination (e.g., AR0001)  Recruitment Location AR = UT Arlington AU = UT Austin DA = UT Dallas EP = UT El Paso PB = UT Permian Basin RG = UT Rio Grande Valley SA = UT San Antonio TY = UT Tyler  Number = assigned participant number (4 digits from 0001 to 9999)	Unique ID assigned to each study participant
	InterviewerID	3-digit number ranging from 001 to 999	Unique ID assigned to each study interviewer

Q30	add_comment	Text description  99 = Missing	Participant's additional comments
Q1	birthdate	MMDDYYYY Month = MM Day = DD Year = YYYY 99 = Missing	Participant's date of birth
Q12	class_format	0 = Fully Hybrid 1 = Online 2 = In-Person 3 = Mix of Hybrid and Online 4 = Mix of Hybrid and In-Person 5 = Mix of Online and In-Person 6 = Hybrid, Online, and In-Person 7 = Other 8 = Don't know 99 = Missing	Format of classes participant took
Q6	college_grade	0 = Freshman 1 = Sophomore 2 = Junior 3 = Senior 4 = Don't know 99 = Missing	Participant's grade level classification at University of Texas (UT) School
Q26	coresident_num	Text description  99 = Missing	Participant's household size
Q22	covidbooster	0 = One booster dose 1 = Two booster dose	Participant's COVID-19 booster dose status

		2 = Three booster doses 3 = Don't remember 88 = Not applicable 99 = Missing	
Q20	covidtest_before	Text description  99 = Missing	Number of times participant tested positive for COVID-19 before the start of Fall semester
Q16	covid_testnum	Text description  99 = Missing	Number of times that participant got tested for COVID-19 during Fall semester
Q17	covidtest_type	0 = Polymerase chain reaction (PCR) 1 = Rapid antigen 2 = Both PCR and rapid antigen 3 = Don't know 88 = Not applicable 99 = Missing	Type of COVID-19 test that participant took
Q14	covidworry	1 = Not worried 2 = A bit worried 3 = Worried 4 = Very Worried 5 = Extremely worried  99 = Missing	Participant's self-reported rating of how worried they are of contracting COVID-19
Q3	ethnicity	0 = Hispanic or Latino 1 = Not Hispanic or Latino	Participant's ethnicity

		2 = Prefer to not answer 99 = Missing	
Q24	h_insurancetype	Text description  88 = Not applicable 99 = Missing	Kind of insurance plan participant had
Q23	healthinsurance	0 = Yes 1 = No 2 = Don't remember 99 = Missing	Participant's health insurance status
Q9	hours_inperson	0 = 1-3 hours 1 = 4-6 hours 2 = 7-9 hours 3 = 10-12 hours 4 = 13-15 hours 5 = 15+ hours 88 = Not applicable 99 = Missing	Number of hours participant was on campus per week aside from campus dormitories
Q25	housing_type	0 = Campus dormitory 1 = Apartment 2 = House 3 = Other 99 = Missing	Type of housing participant lived in
Q29	income	0 = Less than \$20,000 1 = \$20,000 - \$39,999 2 = \$40,000 - \$59,999 3 = \$60,000 - \$79,999 4 = \$80,000 - \$99,999 5 = \$100,000 - \$149,999	Participant's household income for 2022

		6 = More than \$150,000 7 = Don't know 8 = Prefer to not answer 99 = Missing	
Q10	mask_status	0 = Yes 1 = No 2 = Sometimes 88 = Not applicable 99 = Missing	How often participant wore a mask on campus
Q18	PCRCovidpos_num	0 = August 2022 1 = September 2022 2 = October 2022 3 = November 2022 4 = December 2022 88 = Not applicable 99 = Missing	Months in which the participant tested positive for COVID-19 when using the PCR test
Q4	race	0 = Asian 1 = Black or African American 2 = White 3 = Other 4 = Prefer to not answer 99 = Missing	Participant's race
Q19	rapidcovidpos_num	0 = August 2022 1 = September 2022 2 = October 2022 3 = November 2022 4 = December 2022 88 = Not applicable 99 = Missing	Months in which the participant tested positive for COVID-19 when using the rapid antigen test

Q27	room_go_out	Text description  88 = Not applicable 99 = Missing	How often participant's roommates went out per week. This will be a positive integer value collected by the interviewer.
Q2	sex	0 = Male 1 = Female 2 = Prefer to not answer 99 = Missing	Participant's sex
Q11	socialdistance	0 = Yes 1 = No 2 = Sometimes 88 = Not applicable 99 = Missing	Participant's effort into practicing six feet of social distance
Q13	studentnum_class	Text description  88 = Not applicable 99 = Missing	Number of students in participant's largest in-person or hybrid class
Q15	symptoms	0 = Fever 1 = Cough 2 = Difficulty breathing 3 = Sore throat 4 = Congestion 5 = New loss of taste or smell 6 = Unusual fatigue 7 = Body aches 8 = Headache 9 = Nausea or vomiting	List of symptoms that are related to COVID-19

		10 = Diarrhea 11 = No symptoms 12 = I had symptoms but don't remember which I had 99 = Missing	
Q7	transportation	0 = Always by private transportation 1 = Always by public transportation 2 = Mostly by private transportation 3 = Mostly by public transportation 4 = Equal mix of public and private transportation 5 = I did not go to campus 99 = Missing	Transportation means participant used to get to University of Texas (UT) School classes
Q8	transport_time	Text description  88 = Not applicable 99 = Missing	Time it took participants to get to their University of Texas (UT) School. The units of this variable will be minutes.
Q5	UT_campus	0 = University of Texas (UT) Arlington 1 = University of Texas (UT) Austin 2 = University of Texas (UT) Dallas 3 = University of Texas (UT) El Paso	University of Texas (UT) School participant is enrolled at as a student

		4 = University of Texas (UT) Permian Basin 5 = University of Texas (UT) Rio Grande Valley 6 = University of Texas (UT) San Antonio 7 = University of Texas (UT) Tyler 99 = Missing	
Q21	vaccinated	0 = Yes 1 = No 2 = Partially 99 = Missing	Participant's COVID-19 vaccination status
Q28	you_go_out	Text description  99 = Missing	How often the participant went out per week. This will be a positive integer value collected by the interviewer
<b>Newly Developed Variables</b>			
<b>Composite Variable</b>			
Q27, Q28	total_go_out	Text description  888 = Not applicable 999 = Missing	Total number of times the individuals of one residential unit went out per week
Description:			



This variable represents the total number of times the individuals of one residential unit went out per week. This variable is created by taking the sum of the you\_go\_out and room\_go\_out variables.

Formula: total\_go\_out = room\_go\_out + you\_go\_out

If room\_go\_out = 99 or you\_go\_out = 99, then total\_go\_out = Missing [999]

If room\_go\_out = 88, then total\_go\_out = Not applicable [888]

### **Collapsed Variable**

Q8	transport_time_category	1 = <15 minutes 2 = >=15 and <30 minutes 3 = >=30 and <45 minutes 4 = >=45 and <60 minutes 5 = >= 60 minutes	Time it takes participants to get to UT School
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#### **Description:**

This variable is calculated and derived from transport\_time which is an open-ended question that requires a text description. Collapsed variable transport\_time from an infinite number of categories to five categories. If the value given for transport\_time is less than 15 minutes, it is collapsed into transport\_time\_category group 1 of values <15 minutes. If the value given for transport\_time is equal or greater than 15 minutes but less than 30 minutes, it is collapsed into transport\_time\_category group 2 of values >= 15 and <30 minutes. If the value given for transport\_time is equal or greater than 30 minutes but less than 45 minutes, it is collapsed into transport\_time\_category group 3 of values >= 30 and <45 minutes. If the value given for transport\_time is equal or greater than 45 minutes but less than 60 minutes, it is collapsed into transport\_time\_category group 4 of values >=45 minutes and <60 minutes. If the value given for transport\_time is equal or greater than 60 minutes, it is collapsed into transport\_time\_category group 5 of values >= 60 minutes.

**Table 1. Summary statistics of undergraduate students in the University of Texas System at 2022 fall semester**

Variables	Completel y in-person	Fully Hybrid	Remote	Statistical test
Age	mean (SD <sup>1</sup> )	mean (SD)	mean (SD)	
Sex				
Male	n (%)	n (%)	n (%)	
Female	n (%)	n (%)	n (%)	
Prefer to not answer				
Ethnicity				
Hispanic or Latino				
Not Hispanic or Latino				
Prefer to not answer				
Racial background				
Asian				
Black or African American				
White				
Other				
Prefer to not answer				
Attended UT School				
UT Arlington				
UT Austin				
UT Dallas				

UT El Paso

UT Permian Basin

UT Rio Grande Valley

UT San Antonio

UT Tyler

Grade level

Freshman

Sophomore

Junior

Senior

Don't know

How to get to the university classes

Always by private transportation

Always by public transportation

Mostly by private transportation

Mostly by public transportation

Equal mix of public and private  
transportation

Not applicable to me. I do not go to  
campus.

How long it takes to the university  
classes

How many hours on campus per week

0 hours

1-3 hours

4-6 hours

7-9 hours

10-12 hours

13-15 hours

15+ hours

Did you wear a mask when on campus

Yes

No

Sometimes

Make an effort to social distance at  
school

Yes

No

Sometimes

The format of the classes

Hybrid

Online

In-Person

Mix of Hybrid and Online

Mix of Hybrid and In-Person

Mix of Online and In-Person

Hybrid, Online, and In-Person

Other

Don't know

How many students are in that in-person  
or hybrid class with the most students

How worried about contracting COVID-  
19

Not worried

A bit worried

Worried

Very worried

Extremely worried

Experienced any of the COVID-19<sup>2</sup>  
symptoms

Fever

Cough

Difficulty breathing

Sore throat

Congestion

New loss of taste or smell

Unusual fatigue

Body aches

Headache

Nausea or vomiting

Diarrhea

No symptom

I had symptoms but don't remember  
which I had

How many times get tested during Fall  
2022 semester

What type of COVID-19 test

Polymerase chain reaction (PCR)

Rapid antigen

Both PCR and rapid antigen

Don't know

When test positive for COVID-19 by  
PCR during semester

August 2022

September 2022

October 2022

November 2022

December 2022

When test positive for COVID-19 by  
rapid antigen test during semester

August 2022

September 2022

October 2022

November 2022

December 2022

Test positive for COVID-19 before the  
Fall 2022 semester

Are you fully vaccinated against COVID-19

Yes

No

Partially

Received a COVID-19 vaccine booster dose

One booster dose

Two booster doses

Three booster doses

Don't remember

Do you have health insurance

Yes

No

Don't remember

Type of housing you live

Campus dormitory

Apartment

House

Other

How many people do you usually live with

How many times do others usually go out per week, on average

How many times do you go out per week

Household income in 2021

Less than \$20000

\$20000-\$39999

\$40000-\$59999

\$60000-\$79999

\$80000-\$99999

\$100000-\$149999

More than \$150000

Don't know

Prefer to not answer

Total number of times the individuals of one residential unit go out per week

Transportation time category

<15 minutes

$15 \leq < 30$  minutes

$30 \leq < 45$  minutes

$45 \leq < 60$  minutes

$\geq 60$  minutes

Ratio of number of positive result versus number of negative result

---

For continuous variable, the statistical test would be two sample t-test if normality satisfied, Mann-Whitney U test if not.



---

For categorical variable, the statistical test would be fisher exact test if any cell  $<5$ , Chi-square test if not.

Age is computed from the date of beginning of semester minus birthdate.

\*p-value  $< 0.05$

<sup>1</sup> SD stands for standard deviation.

<sup>2</sup> COVID-19 stands for coronavirus disease. It is caused by the SARS-CoV-2 virus.

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## Appendix

### Response Cards

As discussed in the instructions for the use of the survey, there are a few response cards to be used throughout the interview. Survey items 9, 12, 15, and 29 have their own response cards. When using the response cards, refer to both the survey instructions and this appendix. The response cards allow the research team to get a better idea of the participant's answers by reducing underreporting of certain experiences.

**The following is the response card for item 9. Use it only as directed in the instructions for the survey.**

---

Q9 During the Fall 2022 semester, for how many hours were you on campus per week? This does not include the time spent at campus dormitories.

- ☐ 1-3 hours
  - ☐ 4-6 hours
  - ☐ 7-9 hours
  - ☐ 10-12 hours
  - ☐ 13-15 hours
  - ☐ 15+ hours
-

**The following is the response card for item 12. Use it only as directed in the instructions for the survey.**

---

Q12 During this Fall 2022 semester, which format are your classes in?

In-person courses are taught on campus at the scheduled course times in person. Online courses are taught fully online, either by two formats - synchronous (meet at same time) or asynchronous (do not meet). Hybrid learning includes a combination of online and in-person activities.

With that in mind, are your classes fully hybrid, online, in-person, a mix of hybrid and online, a mix of hybrid and in-person, a mix of online and in-person, or a mix of hybrid, online, and in-person? Or are your classes another combination format not discussed?

- ☐ Fully Hybrid
  - ☐ Online
  - ☐ In-Person
  - ☐ Mix of Hybrid and Online
  - ☐ Mix of Hybrid and In-Person
  - ☐ Mix of Online and In-Person
  - ☐ Hybrid, Online, and In-Person
  - ☐ Other
  - ☐ Don't know
-

**The following is the response card for item 15. Use it only as directed in the instructions for the survey.**

---

Q15 During the Fall 2022 semester, did you experience any COVID-19 symptoms such fever, cough, difficulty breathing, sore throat, congestion, new loss of taste or smell, unusual fatigue,

body aches, headache, nausea or vomiting, and/or diarrhea? Or did you not have symptoms?  
Check all answers that apply.

- ☐ Fever
- ☐ Cough
- ☐ Difficulty breathing
- ☐ Sore throat
- ☐ Congestion
- ☐ New loss of taste or smell
- ☐ Unusual fatigue
- ☐ Body aches
- ☐ Headache
- ☐ Nausea or vomiting
- ☐ Diarrhea
- ☐ No symptoms
- ☐ I had symptoms but don't remember which I had

---

**The following is the response card for item 29. Use it only as directed in the instructions for the survey.**

---

Q29 Last year, that is 2022, what was your household income from all sources, before taxes, in United States (US) dollars? This income includes you and any other household members.

- ☐ Less than \$20,000
  - ☐ \$20,000 - \$39,999
  - ☐ \$40,000 - \$59,999
  - ☐ \$60,000 - \$79,999
  - ☐ \$80,000 - \$99,999
  - ☐ \$100,000 - \$149,999
  - ☐ More than \$150,000
  - ☐ Don't know
  - ☐ Prefer to not answer
-