

# Committee on Teaching Reactivation Options (C-TRO)

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## Introduction

The COVID-19 pandemic has created unique challenges for nearly all aspects of life in the United States and the world. Introduction of this virus, new to our population, has upended how we work and learn, how we interact with others in our society, and how we feel about our personal health and well-being. Characteristics of COVID-19 that make it particularly difficult to manage include:

- its ease of transmission from individual to individual,
- that transmission may occur days before an infected person manifests any symptoms or from people showing no symptoms,
- its potential for serious morbidity and mortality, and
- the fact that there appears to be minimal, if any, native immunity to this pathogen in the human population.

Collectively, these characteristics require us to respond to this virus in ways that will change our daily approaches to life at Cornell, with a return to normalcy possible only after development of effective anti-viral therapeutics and/or an efficacious vaccine that can prevent disease occurrence.

The charge to our committee was to formulate recommendations about the criteria to be used in determining how to reactivate the campus for teaching. In order to meet the charge, it is necessary to also understand and study the SARS-CoV-2 virus and ground all recommendations around mitigating the public health risk presented by COVID-19. We considered this charge in three general domains:

1. Identification and containment of infection
2. Mitigation of coronavirus spread through individual and institutional-level approaches
3. Monitoring strategy to evaluate the health of our community and course-correct our response

This report is guided by current recommendations made by the Centers for Disease Control and Prevention (CDC), New York State Department of Health (NYSDOH), the Tompkins County Health Department (TCHD), and the reactivation requirements put forth by [NY Forward](#), as of June 15, 2020. Here we lay out an ambitious set of recommendations for Cornell to follow; given the rapidly changing nature of the pandemic, these proposals should serve as a comprehensive set of ideas to best safeguard both our campus and local community, understanding that some may need to be modified as conditions change. We recognize Cornell's unique environment brings together individuals from across the globe in a close-knit living and learning community. These attributes create what is so special about Cornell, but also present challenges as individuals traveling to our region may bring the virus with them. The close relationships that develop in our community also pose challenges when dealing with a virus that can spread easily among individuals. As such, some of our recommendations will involve restricting activities that members of the Cornell community have taken for granted as a part of daily life. We have approached these recommended restrictions carefully, always trying to balance personal freedoms and privacy with health risks to oneself and to others. We took into consideration the reality that spread of the virus to vulnerable individuals has severe potential consequences, and hence tried to craft recommendations with these individuals in mind.

Our committee also appreciates that Cornell is an integral part of a vibrant regional community. In many ways, but now particularly in regard to the pandemic, what happens at Cornell and decisions Cornell makes

significantly affect Ithaca, Tompkins County, and the surrounding region. Similarly, events in Ithaca impact the Cornell community. Hence, our committee's recommendations came about after consultation with our local health partners in the Cayuga Health System and the Tompkins County Health Department.

SARS-CoV-2 is and has been circulating in Tompkins County, and will continue to infect some members of our community. Additionally, it is inevitable that, as members of our community now not in the region return, some will be carrying the virus. Our overall goal is to implement approaches to campus re-activation that will mitigate the burden of infection and severity of disease, while minimizing disruption to normal campus life to the greatest extent possible.

It is important to note that the recommendations put forth in this report represent the committee's best assessment as of June 15, 2020, based on evidence gleaned from the current literature, input from many constituents in our community, and counsel from peer institutions and medical experts around the country. It will be important for these assessments to be revisited as new knowledge becomes available and the feasibility of specific recommendations is determined. In addition, we expect to receive additional guidance from New York State specific to higher education instruction and revised federal guidance, which may require modifications to these recommendations.

## Executive Summary

### Committee Charge and Membership

The Committee on Teaching Reactivation Options (C-TRO) was charged with answering the following main sets of questions: (a) What would we need in terms of testing, contact tracing, and quarantine and isolation space, and how would we prepare each of these capacities; (b) how would we protect vulnerable faculty, staff and students; (c) what changes would we need to make to travel, visitors, academic, residential, and social policies; (d) how would we ensure adequate physical distancing in classrooms, dining and other public facilities, and residential life; (e) what modifications would be needed to the way we teach and how would we deal with disruptions introduced by illness and/or quarantine; and (f) what are the projected public health, enrollment, and financial implications associated with full, partial, and no reactivation of residential instruction? Committee members were selected based on their scholarly and functional expertise, with representation from the university's constituent assemblies (see **Appendix 1**).

**Committee Membership:** The C-TRO committee, chaired by Provost Kotlikoff, comprises two sub-committees: (1) Teaching and Social Distancing (TSD), chaired by Lisa Nishii; and (2) Health Considerations (HC), chaired by Gary Koretzky.

#### Teaching and Social Distancing

Lisa Nishii (Chair)	Charles Van Loan
Shorna Allred	Kim Weeden
Joe Anderson	Pat Wynn
Lance Collins	Meejin Yoon
Deborah Estrin	
Rebecca Harrison	
David Shmoys	

#### Health Considerations

Gary Koretzky (Chair)	Jared Pittman
Frank Cantone	Paul Streeter
Jason Cole	Lorin Warnick
Peter Frazier	Isaac Weisfuse
Emmanuel Giannelis	
Charles Kruzansky	
Sharon McMullen	

## Overview of Recommendations

The first charge to our committee was to envision whether a partial or full reactivation of residential instruction is plausible in the face of the COVID-19 pandemic — or if the health and safety of our community requires that study at Cornell for the Fall 2020 semester be exclusively online. We approached this question by investigating the public health impact of inviting students back to campus through modeling the likely cadence of infection in the Cornell community (see **Appendix 2**). While some key features of SARS-CoV-2 and COVID-19 remain poorly understood, it is widely recognized that with widespread community participation, certain public health measures including personal hygiene, physical distancing, wearing face coverings, testing, and contact tracing can significantly reduce the spread of infections. Ranges of model parameters were chosen based on the most current scientific literature and information tailored to the Cornell community; multiple simulations with multiple sets of parameters were run to evaluate impacts of preventive measures. The modeling demonstrated that a robust, pooled testing program to identify infected individuals and isolate them and those with whom they had close contact will be critical in controlling the spread of COVID-19. Even with the testing program we propose in this report, infections will inevitably occur within the Cornell community and the university. In partnership with the Tompkins County Health Department (TCHD) these must be prepared for, including the impact of quarantine on faculty and staff on teaching and other programs. Moreover, the university will also need to investigate all options for providing not only quarantine space, but also appropriate resources for students, faculty, and staff to maintain their physical and mental wellness along with virtual continuity for student education. Finally, of those quarantined, only a small number would be predicted to become ill enough to warrant hospitalization, but that number is not likely to be zero.

We also modeled the likely infectious disease outcome should Cornell choose to operate the Fall 2020 semester entirely online. Paradoxically, the model predicts that **not** opening the campus for residential instruction could result in a greater number of infected individuals affiliated with Cornell, given that we expect a large number of undergraduate, graduate, and professional students will still choose to return to Ithaca, adding to the population of those who have done so already, regardless of teaching modality. This observation highlights the value of a robust, mandatory testing program, and the importance of Cornell's focused attempts to influence student behaviors that could potentially exacerbate spread of the virus. Hence, it appears that in addition to the educational advantages that would arise, opening the campus for residential instruction may be in the best interest of the health of the Cornell community, Ithaca, and surrounding communities.

Our committee also explored the many changes to campus life that would enhance safety in the face of the pandemic, should students be invited to return. The table below outlines our committee's recommendations designed to maximize public health and minimize disruptions to the work of our faculty and staff and the unique aspects of the residential and educational experience for our students. The report that follows provides extensive details around the recommendations for consideration by the University leadership.

## Summary of Outreach and Data Collection

Our committee sought counsel and advice and collaborated extensively with a range of internal and external stakeholders, including Tompkins County Health Department, Cayuga Health System, New York State, The Commission on Independent Colleges and Universities (CICU), Weill Cornell Medicine, peer institutions, and Cornell subject matter experts. We also collected data from faculty, staff, and students using surveys and submissions through the university's COVID-19 reactivation website (see **Appendix 3** for details).

## Key Recommendations for Teaching Reactivation

**1) Individual Health Monitoring:** All members of the Cornell community who are authorized to be on campus are required to monitor their health and participate in preventative measures as guided by NY Forward and implemented by Cornell.

Approaches to Consider	Description	Comments
Daily Health Screening	In compliance with NY Forward, all faculty, staff, and students authorized to be on campus must complete a health assessment each day. Cornell will begin a phased roll-out of an online tool called <a href="#">'Daily Check-in'</a> to capture input from all members of the Cornell community and (eventually) visitors.	<a href="#">Page 25</a> Roll out of the Daily Check-in will begin the week of June 15. As more individuals are given permission to work or study on campus, they will be added to those required to perform the Daily Check-in. Upon return, students will also be required to perform the Daily Check-in.
Immunization against Seasonal Influenza	Seasonal influenza will complicate diagnosis of COVID-19 and could exacerbate morbidity in those co-infected with flu and COVID-19. Universal immunization for seasonal influenza should be required for all members of the community without a medical or religious exemption. Participation must be negotiated with unions before it can be required of represented employees.	<a href="#">Page 16</a> Mandatory vaccination is a controversial subject. Our committee believes that the potential benefit is sufficiently high for this to be strongly considered.
Personal Hygiene, Physical Distancing, Face Masks and Coverings	Prevention guidelines as recommended by the CDC and NYS should be institutionalized. The <a href="#">university policy for face masks and coverings</a> is now available.	<a href="#">Pages 24-25</a> It is appreciated that there are some circumstances where facial coverings may impede required activities and where physical distancing is not practical. However, absent these circumstances these measures are among the most important for mitigating viral spread.
Behavioral Modification Policy	For faculty, staff, and students, will recommend: re-entry, prevalence, and surveillance testing; contact tracing; syndromic self-surveillance; face masks; physical distancing; isolation and quarantine protocol; flu vaccine. For staff and faculty: continued remote work and virtual meetings wherever possible. For students: restrictions on hosting social gatherings that violate public health guidelines.	<a href="#">Pages 25-26; Appendix 4</a> Use of a contact tracing assistance phone app is recommended for further consideration. The benefits for efficient contact tracing must be weighed against concerns about privacy and location data. Their utility is dependent on the willingness of community members to enable these apps on their devices, and the density and prevalence of use within the community.

## 2) Robust Viral Testing Program

The testing program will rapidly identify those people who are infected with COVID-19.

Approaches to Consider	Description	Comments
Testing for Cause	Implement a low threshold for viral testing of individuals with symptoms, those who have been in contact with a known COVID-19 positive case, or those with other individual risks for becoming infected.	<a href="#">Pages 15-16</a> Testing for all members of the community with self-identified concerns should be readily available.
Surveillance Testing	Establish a program to regularly test all faculty, staff, and students approved to work or study on campus for viral infection.	<a href="#">Pages 17-18; Appendices 2 &amp; 4</a> A scheduled program to test members of the community for COVID-19 will facilitate

	Participation must be negotiated with unions before it can be required of represented employees, and students will need to consent and agree to this in advance of their return.	identification of infected individuals so they can be isolated for their convalescence. Additionally, understanding baseline prevalence of virus in our community and then, how this may change over time, will be important for monitoring campus health.
Gateway Testing for Students	We recommend testing students remotely, if possible, before they travel to Ithaca and then upon arrival.	<a href="#">Page 18; Appendix 5</a> It is inevitable that some incoming students will be harboring COVID-19. Identifying these individuals before they leave home will allow them to convalesce before returning to Ithaca.
Testing of Students Already in Ithaca	Over the summer, a series of re-entry registration check-ins with students will be needed to develop an accurate account of the students who will be returning to off-campus housing in Ithaca or have already returned. A series of gating mechanisms should be put in place to ensure that they register their local presence and address, and, are tested (and quarantined if necessary) in a timely manner.	<a href="#">Appendix 5</a> The goals of this strategy are threefold: test and identify positive cases before the remainder of students return to campus (assuming residential instruction); calibrate models based on size of student population already in Ithaca vs. yet to return; and develop database of off-campus addresses, which currently does not exist.
Organized Testing During Student Move-in	There are currently two move-in scenarios being considered: a 4-day version that is predicated on the availability of rapid testing and an 8-day version predicated on a 24-hour test. In either scenario students will be tested immediately upon arrival and will receive a welcome package, including information about virtual orientation activities. The university should explore every option, such as providing meals through Cornell dining, to minimize contact between students.	<a href="#">Pages 18-19; Appendices 6 &amp; 7</a> Early communication about move-in protocols will be essential. Approximately 1,000 students (of whom 50% are upper-class students) will be invited to return 14 days prior to the rest of the students to participate in training (e.g., orientation leaders, RAs, etc.). They, too, will be tested. Their earlier return will allow us to phase student return and help contain the initial influx of the virus.
Required Re-Entry Checklist for Students	The full re-activation of students' key card and NetID access will be dependent on the successful completion of each of the re-entry action items. Action items should include registration of address and emergency contacts; registration with Student Disability Services (SDS) for COVID-19 accommodations if needed; completion of educational module on behavioral expectations and agreement to its terms; and testing upon arrival.	<a href="#">Pages 26-27</a> Data collected throughout will be used to differentiate between students who intend to return to campus and reside in university housing, students who intend to return to Ithaca and reside in off-campus housing, and students who intend to enroll in online courses from their residence outside of Ithaca. Care will be taken to develop hierarchies of access so that students can maintain access to the services necessary for re-entry until full reactivation of their key card access and NetIDs (which will include access to Canvas) is restored.
Testing of Environment	Continue to explore the utility of testing of wastewater and sewage for presence of coronavirus.	<a href="#">Pages 19-20</a> Continue to study the value of this intervention before instituting the practice.

### 3) Coordinated Approach to Isolation, Quarantine, and Contact Tracing

Continue to support local departments of health in an integrated approach for managing isolation, quarantine, and contact tracing efforts.

Approaches to Consider	Description	Comments
Quarantine/Isolation at Permanent Residence	Cornell Health should develop a protocol for when safe and practical to facilitate isolation or quarantine at students' permanent residence. Faculty and staff must follow the guidance from TCHD or their local health department.	<a href="#">Pages 22-23</a> Many students may prefer to be at their permanent residence, rather than in Ithaca should isolation or quarantine be necessary.
Secure Adequate Capacity	Analyses reveal that it is far more economical to contract with local hotels for quarantine space than to reserve on-campus residential units (by more than a factor of 3). As long as the no-visitors policy remains in effect, consider utilizing the Statler for isolation space given proximity to Cornell Health.	<a href="#">Pages 22-23; Appendix 7</a> Large numbers of students may need quarantine space, particularly in the beginning of the semester. Some of the campus residential units that would be best suited are houses that are organized around shared student identities; their elimination is not recommended.
Regulation of Contact Tracing	Manual contact tracing efforts are the current standard. Jurisdiction of contact tracing efforts belong to Tompkins County Health Department. Cornell will continue to support and partner with TCHD in their tracing efforts.	<a href="#">Page 23</a> Cornell is actively examining technologies that may be appropriate for assisting in contact tracing, including issues related to privacy.
Contact Tracing Immunity for Students	Students should be provided immunity from university disciplinary violations for activities they disclose during contact tracing.	<a href="#">Page 23</a> Need to avoid unintended negative consequences of behavioral restrictions on efforts to mitigate viral spread.

### 4) Protecting Vulnerable Individuals During Residential Instruction

Approaches to Consider	Description	Comments
Faculty	Vulnerable health faculty can opt to teach their courses online, and conduct office hours and advising meetings virtually, rather than in-person.	<a href="#">Pages 28-29</a> Vulnerable health faculty cannot be compelled to teach online; the comprehensive monitoring strategy outlined in this report will allow them to make informed decisions.
Staff	Consistent with current policies and to the extent possible, the university will provide resources and assistance to those who have medical or personal concerns. No staff member should be compelled to return to campus to do work that can be accomplished remotely.	<a href="#">Page 43</a> If work cannot be done remotely, supervisors should contact their local HR representative and consider the avenues noted <a href="#">on page 7</a> of the <a href="#">university's workplace guidance</a> to support the health and safety of their staff member.
Students	Students with personal health conditions (physical and mental health) that qualify for disability protection should register with <a href="#">Student Disability Services (SDS)</a> and complete a <a href="#">Disability Self-Disclosure Form</a> . Students will be assigned an SDS counselor who will recommend accommodations.	<a href="#">Pages 28-29</a> Students should not discuss medical issues with faculty or advisors, nor should faculty members be deciding accommodations. Cornell Health (including SDS) will need institutional support to increase staff capacity to manage increased demand for their services.
Graduate Students	Every effort should be made to provide accommodations for graduate students.	<a href="#">Page 29; Appendix 8</a>



	Graduate students with personal health conditions (physical or mental) that qualify for disability protections should register with SDS. Every effort should be made to provide students who do not qualify for disability protections, but who feel at risk, the choice as to whether or not to teach in person. If such requests are not resolved, they should be discussed with their DGS, department chair, Dean's Office, then the Graduate School.	The COVID-19 accommodation process has been communicated to graduate students and is documented <a href="#">here</a> . If not resolved, students may file a <a href="#">grievance</a> . Students can also report concerns about perceived misbehavior or mistreatment through the <a href="#">Cornell Hotline/Ethics Point</a> .
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#### 5) Modifications to Academic Activities

Approaches to Consider	Description	Comments
Academic Calendar	A later start is necessary to provide sufficient time to develop a revised roster that reflects changes in instructional modalities and enroll students. Long breaks encourage travel and therefore the importation of the virus from outside the community and must be avoided. Instruction should transition to online after Thanksgiving to mitigate travel risks and flu season.	<a href="#">Page 27; Appendix 9</a> Eliminating breaks raises concerns about mental health; alternative means of relieving academic pressure for students must be explored further. Students would prefer that the fall semester start earlier. However, that would not leave sufficient time to increase our testing capacity. We are hoping for a fully residential spring term that starts in the beginning of February.
Teaching Modalities	There will be two primary instructional modalities: (1) all online; and (2) in-person, with remote accessibility into the classroom for students who are off-campus (national or international) or in quarantine. Some classes may choose a hybrid approach where some elements of the course are delivered online and others in-person, or wherein student cohorts take turns participating remotely versus in-person.	<a href="#">Pages 27-28; Appendix 10</a> In large courses that involve multiple instructors, the intended modality will need to be coordinated at the course-level in a way that best serves learning outcomes and accommodates instructors' teaching preferences.
Supporting Academic Continuity	Faculty should develop back-up plans that might include pre-recorded presentations or a "standby" project that could keep students on track without classroom time. When possible, faculty should designate a colleague who can step in as needed.	<a href="#">Page 29</a> Consider establishing a Quarantine Accommodation Fund for hiring temporary instructional support in the event that a member of the instructional team (including TAs) are out sick or in quarantine.
Supporting Students in Quarantine	Instructors should assign each student a class peer who could serve as virtual study/lab partners in case they are quarantined. Hands-on courses will require creative solutions for providing short-term lab/studio experiences. The university should provide quarantine kits for each student asked to quarantine.	<a href="#">Pages 29-30</a> Disruptions to attendance will be inevitable and will require patience and flexibility on the part of faculty. Mental health consequences of social isolation are a concern; faculty and staff should check in regularly with students to provide support.
Classroom Capacity	After accounting for 6' distancing, classroom capacity is reduced to 13-24%, depending on configuration. By adding rooms not typically in the classroom	<a href="#">Pages 30-31; Appendices 11 &amp; 12</a> Final calculations of classroom occupancy will be based on a process being led by the office of the university architect in collaboration with facilities.

	inventory and optimizing the distribution of class meetings across all instructional hours, we expect to be able to accommodate the majority (if not all) of the courses with in-person components. In-person enrollment caps will be immutable; thus, students will be expected to drop courses as soon as they decide not to take a course in person. Student organizations will not be permitted to begin booking classroom space until late September or October.	Classes may need to be scheduled during the 4:30-7:30pm no-class zone if classroom demand > supply. Courses that require special facilities will be prioritized. An expedient and iterative process will be required to build a modified roster; close partnership with the Office of the University Registrar will be essential. Outdoor meeting spaces should be created using tents to accommodate student organizations.
Safety in the Classroom	All students will be required to wear face masks and sit in assigned seats. Unnecessary seats will be removed or blocked. Faculty will be required to wear masks or face shields. Faculty will be asked to take attendance using an existing tool within Canvas. Disinfectant wipes will be available for students to self-clean seats and desks before and after use. HVAC systems should be assessed and augmented where needed and feasible.	<a href="#">Pages 30-34</a> Attendance records will help with contact tracing and identification of students who may be struggling. However, attendance should not be a graded component of courses or else students may be incentivized to attend even when sick. Classes of longer duration should be assigned to rooms with highest performing HVAC systems.
De-densification of Labs, Studios and Other Academic Use Spaces	Colleges will be required to continue to refine and implement protocols for de-densifying non-classroom spaces. Guidelines and suggested solutions will be provided.	<a href="#">Pages 32-33</a> Units may choose to offer extended hours, install key card access systems, utilize reservation software, or develop remote solutions (e.g., lab kits, remote access to software).
Office Hours	Instructors are encouraged to hold virtual office hours whenever possible to eliminate congestion in the hallways; offices may not be large enough for 6' distancing.	<a href="#">Page 33</a> Departments should consider setting aside small conference rooms for faculty who wish to meet with their advisees in person.
Study Spaces	We recommend that Barton Hall or other large spaces be repurposed as quiet study spaces for students to use between classes to limit gatherings elsewhere. Temporary study carrels should be set up that will allow 6' distancing so students with headphones can use these spaces to participate in online courses if they do not have enough time to walk back to their residence between classes.	<a href="#">Page 33</a> Assess feasibility of adopting reservation system. Area must have strong WIFI. Use inventory of unused office dividers to provide temporary barriers and privacy between spaces.
Academic Policies	The regular grading policy should be reinstated. Existing university policies and processes for short-term health accommodations and health leaves of absence would apply for COVID-19 related leaves. Instructors will be asked to take attendance using their assigned seating charts, but <i>not</i> count attendance towards grades. To help guard against mental health strain associated with course overloads, we recommend that a more stringent policy	<a href="#">Pages 34-35; Appendix 13</a> Students continue to advocate for an S/U policy. Early communication from senior leadership will be critical. Faculty are actively encouraged to consider alternatives to high-stakes exams where possible and avoid grading on a curve. Counting attendance towards grades would incentivize students to attend class even when they are feeling sick. Graduating seniors who need more credits to graduate will be permitted

	regarding maximum allowable course credit hours (of 18) be adopted. A common policy should be adopted across colleges.	to petition to enroll in more than the agreed upon maximum number of credits.
Orientation Programming	Orientation programming will need to be tailored to unique needs of resuming residential instruction during a pandemic. Goals include educating students about, and motivating them to internalize, behavioral expectations and actively engaging them with each other and with campus leaders so that they do not feel disconnected or isolated during initial periods of quarantine and separation.	<a href="#">Page 35</a> One option is to create an online course about the pandemic that incorporates broad disciplinary perspectives, thereby also providing a nice introduction to the unique breadth of academic inquiry at Cornell. Coordination between university and college programming will be essential.

#### 6) Modifications to Student Life

Approaches to Consider	Comments	Comments
Student Organizations	The university should require enhanced re-registration, updated membership rosters, and assignment of a health and safety officer who will be expected to complete training in order to be eligible to request funds or reserve spaces. No communal food should be allowed. Availability of classroom space will be limited; therefore, virtual activities are strongly encouraged.	<a href="#">Page 36</a> Provide enhanced guidelines and support, facilitated through the Dean of Students, for virtual programming. Consider placing tents throughout campus to provide additional space for student groups, and visibly marking 6' circles on the grass.
Greek Life	The university should develop an addendum to the <a href="#">Risk Management and Social Events Policy</a> that requires compliance with NYS and local public health guidelines; wearing masks when there are visitors in the house; registration of public health monitors for events; coordination with SCL to ensure vendors are healthy and safe; and registering the addresses of chapter annexes.	<a href="#">Page 37</a> Some advocated for strict enforcement with strong sanctions, while others caution against risks of pushing activities "underground" where they may be more difficult to enforce. Greek leaders expressed desire to be involved in enforcement of behavioral expectations and maintain close partnership with university leadership.
Social Gatherings and Campus Events	The university should suspend in-person concerts and lectures that involve outside guests and promote innovative approaches to entirely new ways of socializing while distancing.	<a href="#">Page 38</a> Allocating funds to support new programming and advertising innovative ideas should help shift social culture.

#### 7) Modifications to Residential Life

Approaches to Consider	Description	Comments
Housing	Quads and triples should be eliminated but singles and doubles maintained. Eliminating doubles could push displaced upper-class students into more crowded living conditions off-campus. Rooms should be assigned to bathrooms to reduce # of people sharing. Keep kitchenettes and lounges open but with visible signage and 6' markings throughout. Questions about	<a href="#">Page 38-39</a> Continue modeling to identify optimal surveillance testing intervals for residents of dorm floors. Enhanced sanitation protocols to be complemented by strong expectation that students will contribute by self-cleaning. The university has little control over residential density in privately-owned Greek chapter houses and private apartments/houses.

	shared commitment to health and safety behaviors to be added to room/housemate agreements.	
Dining Halls	Consistent with NYS Reopening guidelines for dining, and to ensure proper physical distancing guidelines, all dining halls should provide to-go service, tables should be properly spaced, cutlery should be disposable, and reservations should be required for dine-in service using Open Table.	<a href="#">Page 39</a> Additional costs will be incurred to provide to-go options and deliver food to students in quarantine.
<b>8) Mental Health Considerations</b> The COVID-19 pandemic and overlapping national crisis pose significant challenges to the mental health and wellbeing of faculty, staff, undergraduate, graduate, and professional students.		
<b>Approaches to Consider</b>	<b>Description</b>	<b>Comments</b>
Mental Health and Wellbeing Services	Necessary changes to students' living and learning environment and the risk of illness related to COVID-19 for themselves, friends, and family may contribute to increased stress and decreased social support. Remote work and carrying out essential work on campus also has impact on staff and faculty wellbeing.	<a href="#">Pages 40, 43; Appendix 16</a> The Skorton Center for Health Initiatives has compiled key considerations for influencing student wellbeing. Resources developed for faculty and staff are provided in the <a href="#">COVID-19: Workplace Guide</a> from the Division of Human Resources.
<b>9) De-densification of Campus</b> Because of the dynamics of viral spread, reducing the size and number of crowds on campus where possible lessens the likelihood of transmitting the virus through our community		
<b>Approaches to Consider</b>	<b>Description</b>	<b>Comments</b>
Remote Work	Employees who can work remotely should continue to do so.	<a href="#">Pages 40, 43</a> For those who need to work on campus, schedules and workspaces should be adjusted to maintain physical distancing as much as possible.
Campus Visitors	Visits to campus by individuals not part of the Cornell community are discouraged and shall be significantly restricted, at least through the fall semester. Precise details of a campus visitor policy require further study.	<a href="#">Pages 42-43</a> Visitors pose a high risk to unknowingly bring COVID-19 into our community. Policies should emphasize only essential visitors be allowed.
Travel Guidelines	All non-essential business travel should be prohibited. Risks of travel should be advertised to the community. Cornell should continue to work on a policy guiding travelers on steps to be taken upon return.	<a href="#">Pages 43-45</a> Travel poses a risk to the community as travelers may return to the region harboring infection. Cornell should finalize a protocol articulating expectations for those returning from travel.
Partial or No Reactivation of Residential Instruction	Campus can be de-densified by inviting only some or none of students back for residential instruction. If this option is pursued, the following student groups should be given priority: new students, including transfer students; residential advisors; graduating seniors (especially in the spring); athletes (if competition will take place for their sport); and students who	<a href="#">Pages 40-42</a> Advantages: facilitates distancing in the residential dorms and campus facilities and reduces demand on classroom space. Disadvantages: Even if not invited back, student survey results reveal that a majority would be likely to return anyway (particularly those with off-campus housing leases), and many are already in Ithaca. Cornell would have little ability to

	would not otherwise be able to maintain academic progress without access to campus such as students in programs that require hands-on access to special facilities and those who lack access to internet or quiet learning spaces at home.	regulate behavior of these students under a non-residential instruction model.
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#### 10) Campaign for Public Health and Behavioral Influence Strategies

Develop a campaign emphasizing to the community the importance of the measures that will be put into place to control virus spread, reinforcing the notion that the recommendations are evidence-based, and reminding the community that adoption of these measures is key not only to personal health, but also the health of others.

Approaches to Consider	Description	Comments
Guiding Principles and Values	Cornell should develop a statement of principles guiding our institutional response to the pandemic in order to safeguard our community, while pursuing our core values and mission. Formal policies are critical, but strong social norms are even more important for modifying behavior.	<a href="#">Appendix 14</a> The statement of guiding principles and values should be prominently displayed on the <a href="https://covid.cornell.edu">covid.cornell.edu</a> website. Student leaders will be instrumental for leading cultural change among students. Re-norming campaigns must begin even before students arrive back on campus.
Enforcement for Students	Recommend a system of progressive sanctions. Initial response would involve just the student and be educational. Subsequent violations would involve parent/legal guardian, if the student has signed a FERPA waiver. Students could lose access to university facilities and ultimately be referred to the Office of the Judicial Administrator for repeated violations that necessitate formal discipline or removal from enrollment.	<a href="#">Pages 25-27; Appendix 4</a> An educational approach is preferred to a punitive one. At the same time, it is imperative that students take the behavioral modification policy seriously and are held accountable. The review process would involve staff and students but not under the Campus Code of Conduct except in cases where formal discipline or termination from enrollment might be contemplated. Resources for enforcement do not exist and must be identified.
Campaign for Public Health and Behavioral Influence	Positive and consistent messaging about standards and expectations are needed to reinforce the social norms necessary to maintain a reactivated campus. Coordinated messaging should be delivered locally through colleges, schools, and units. Social media and student social networks must be utilized to permeate messages throughout the community.	<a href="#">Pages 45-46; Appendix 14</a> Emphasize the need to protect oneself and others. The <a href="#">central COVID website</a> will continue to be used as the primary source for news and updates.

#### 11) Comprehensive Monitoring Strategy

Establish a COVID-19 Response Committee and data-driven surveillance program to monitor COVID-19 in the Cornell community in order to quickly identify and inform course corrections as needed.

Approaches to Consider	Description	Comments
University COVID Response Committee	This committee should establish strategic priorities to align the academic and administrative functions of the university and oversee implementation teams charged with operationalizing the strategic prioritizations. A library evidence team has been commissioned to conduct literature reviews and provide decision-makers with	<a href="#">Pages 47-48, Appendix 18</a> Cornell may be required to react quickly to an evolving landscape. Faculty, staff, and students should sign-up to receive emergency notifications.

	up-to-date information on research related to COVID-19 and SARS-CoV-2.	
Data Surveillance	Establish a data dashboard to follow the cadence of infection on campus by monitoring a series of surveillance markers.	<a href="#">Pages 48-52</a> Data should be acquired, then reviewed regularly to provide information at the earliest possible moment regarding the pace of infection on campus (while maintaining HIPAA compliance).
COVID-19 Tip-Line	Community members desire a text-based tip-line for reporting violations to the social gatherings policy (and their location). Providing clarity about the purpose of the tip-line is critical so that it is not misused and information reported is sufficiently detailed and clear as to be susceptible to remedial action. Details about the scope of gatherings covered by the tip-line, the unit(s) that will monitor and respond to reports, and the process for determining appropriate university responses will be finalized by SCL in collaboration with University Counsel.	<a href="#">Pages 37-38</a> Advantages: Provides comfort to community members to know there is a mechanism for reporting unsafe social gatherings; university-led roving teams do not have the capacity to monitor on- and off-campus locations. Disadvantages: Cornell's limited authority over off-campus gatherings and residences presents operational challenges. The ability to respond to reported events will depend on the timeliness and quality of the reports, the volume, and the resources made available to respond to and resolve them.

# THREE STRATEGIES FOR CAMPUS TEACHING AND REACTIVATION IN THE ERA OF THE COVID-19 PANDEMIC

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## Strategy 1: Identification and Containment of Infection

Limiting infections in the community of SARS-CoV-2, the coronavirus that causes COVID-19 disease, is important for mitigating potential risks of reactivating campus. Because individuals infected with the virus may be asymptomatic for many days (for some, even during the entire course of their infection), the best way to know if an individual carries the virus is by testing that individual for presence of the virus. Hence, a cornerstone of our recommended strategy to limit infection within our community is a rigorous testing program.

### Viral Testing Program

A cornerstone recommendation is establishing a robust viral testing program. The goals of a testing program are to rapidly identify those individuals who are infected with COVID-19, to isolate them to prevent transmission, and to identify, test, and quarantine their close contacts. We believe that this can best be accomplished by developing internal capacity for testing using the Animal Health Diagnostic Center at the College of Veterinary Medicine and Cornell Health, and partnering with Cayuga Health System, the largest local health care delivery network in the region. Students will need to be told that consent to surveillance and gateway testing is a requirement for return to campus facilities in advance of their return. Students who are already in Ithaca would also need to be tested; the goal is to test them *before* other students return to Ithaca so that a more accurate baseline prevalence can be established, and positive cases can be contained.

#### A. Testing for Cause

##### *Individuals with Symptoms*

Our committee recommends that all members of the Cornell community be tested for virus as soon as possible if they exhibit signs or symptoms of COVID-19. Individuals that have been authorized to work on campus will be alerted to such symptoms by answering a daily self-assessment (henceforth “Daily Check-in”) that must be completed if the individual is coming to campus that day. Additionally, all members of the community should be aware of the CDC COVID-19 website that provides more detail about symptoms that might suggest COVID-19 infection. During the pandemic, Cornell Health and medical practitioners in our community will use a low threshold for instructing individuals who present with symptoms to be tested for COVID-19. ***One of the most important recommendations of our committee is that there be a public health campaign to reinforce the value of individual responsibility to seek COVID-19 testing if one believes that they may be harboring an infection, both for their protection and, importantly, the protection of others.***

##### *Contacts of Individuals Who Have Tested Positive for COVID-19*

TCHD has primary authority under state law to conduct contact tracing. All individuals identified as having COVID-19 (the “index case”) will be interviewed by TCHD to identify others with whom they have had close contact. TCHD’s contact tracing focuses on rapid identification of:

- Individuals who share living arrangements with the index case (the interpretation of which will need to be further refined for higher education contexts), and
- Individuals who have been within six feet of the index case for more than 10 minutes during the 48 hours before the onset of the index case’s symptoms, or 48 hours prior to testing (in the case of asymptomatic presentation).

All such contacts identified by TCHD should be tested for COVID-19 infection at the first opportunity. TCHD or other health department, depending on county of residence, will also require isolation<sup>1</sup> of the index case and both testing and quarantine<sup>2</sup> of close contacts<sup>3</sup> whenever possible (see “Isolation and Quarantine” below). It will again be critical that Cornell establish a communication strategy encouraging our community to work closely with TCHD or their local health department to identify all who are at risk of infection.

In addition, Cornell Health may recommend additional testing of students based on interviews with the index case to ensure that additional contacts who may have become infected are not missed. Finally, although individuals known to be COVID-19 positive will be required to isolate themselves, it is possible that a member of our community may come into close contact with an individual known to be COVID-19-positive. Similarly, it is possible that an individual from our community might encounter a COVID-19-positive patient outside of the local region. Should such contacts occur, individuals are encouraged to seek immediate testing. All members of the community will be reminded of this through the Daily Check-in.

#### *Individuals Engaging in High Risk Behaviors*

Some behaviors put individuals at higher risk for becoming infected with COVID-19, even if there was no known specific contact with a COVID-19 patient, a phenomenon known as community spread. When individuals are identified, they will also be encouraged to be tested for the virus at the earliest possible time. Examples of such circumstances include, but are not limited to, attendance at gatherings without appropriate physical distancing and/or use of face coverings and return from travel to a region with high prevalence of COVID-19. Our messaging campaign should continue to remind our community of potential risks for contracting COVID-19 and encourage testing. Such testing for students will be made available at Cornell Health, and for faculty and staff through the Cayuga Health System-sponsored Ithaca Mall testing site.

#### *Seasonal Influenza*

Although not directly related to COVID-19 testing, our committee also acknowledges that signs and symptoms of seasonal influenza can mimic the presentation of COVID-19. Additionally, co-infection with seasonal influenza and COVID-19 may substantially increase the severity of disease. Therefore, we recommend that it should be required for all members of the Cornell community to be immunized against seasonal flu in the fall 2020 unless they have a religious or medical exemption. Participation must be negotiated with unions before it can be required of represented employees.

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<sup>1</sup> Isolation is the practice of separating infected people with COVID-19 from others until they are no longer infected to limit transmission.

<sup>2</sup> Quarantine is the practice of separating healthy, close contacts of an index case for the incubation period (for COVID-19, thought to be 14 days) from others to limit transmission during the period in which the close contact may be infected, but is unaware.

<sup>3</sup> Guidance from NYS DOH on the [definition of close contacts](#).



## B. Testing for Surveillance

As noted above, one of the most vexing problems with COVID-19 is that individuals may harbor virus and transmit disease, although asymptomatic. Hence, we cannot rely solely on individuals self-identifying as needing testing. To address this concern, our committee recommends that Cornell test our community on a regular basis to catch those positive at the earliest possible time and isolate them from the community until they clear the virus. Given information available currently, we expect the surveillance testing program should be done for all faculty, staff, and students living, studying, and working on campus. The frequency of testing to minimize COVID-19 transmission will be determined based on baseline prevalence (as described below), infection trends at the start of fall semester, and infectious disease modeling. A research team led by Peter Frazier, Associate Professor, School of Operations Research and Information Engineering (an expert in population modeling and simulations) has developed COVID-19 transmission models incorporating parameter estimates from current literature, CDC guidelines, and medical expertise to provide evidence-based information to guide testing decisions (**Appendix 2**). Our committee also appreciates that over the next few weeks to months, local and national conditions will change and this changing landscape may influence the best approach to surveillance testing. Finally, our committee recognizes that scientific understanding of asymptomatic transmission of COVID-19 is continuing to develop and will require that surveillance testing programs be regularly re-evaluated as research into this important feature of the pandemic is reported.

### *Baseline Surveillance*

Our committee recognizes that currently the presumed prevalence of COVID-19 in the Tompkins County region is quite low; however, to date, there has been no rigorous assessment. Given the recent shelter-in-place order in New York State, it is very likely that the prevalence of virus in the Cornell community mirrors that of our region. However, our committee also appreciates that the reactivation of our campus will result in more interactions among members of our community (with each other and with others in the region) and bring individuals from around the world to our community. These changes may increase prevalence of COVID-19 on our campus. To understand the dynamics of infection on campus that may unfold and to be able to evaluate the significance of viral prevalence at future points in time, our committee recommends measuring the baseline prevalence of COVID-19 on campus. ***We believe that the best means to accomplish this will be to test all students, staff, and faculty who work or live on campus as soon as our testing program is established. Further, we recommend that individuals planning on returning to work or study at Cornell who have not recently been or are not currently in the region, be tested for COVID-19 immediately on return, then work or study remotely for five days, then be retested for COVID-19 before returning to the campus community.*** (See **Appendix 5** for more about testing students throughout the summer).

### *Ongoing Surveillance Testing of Our Community*

In addition to measuring baseline prevalence and testing of individuals who enter our community, our committee recommends that Cornell adopt a protocol for periodic testing that will provide a longitudinal view of coronavirus in our community, allow identification and isolation of infected individuals, and provide lead time to prevent serious outbreaks of disease. Although our committee is unanimous in its agreement that periodic surveillance is highly valuable given the current understanding of asymptomatic transmission, we do not feel that we can recommend a defined protocol for such testing as of this date; the modeling to provide guidance

remains underway. Among the issues that still need clearer resolution and being studied by the Frazier group include, but are not limited to:

- Determining if all members of the community should be tested with the same frequency or if subsets of the community should be tested more often than others;
- Addressing whether all members of community subsets should be tested or if it would be better to sample from within subsets;
- Balancing practicality and cost of testing (and compliance of those being tested) with the risks of virus remaining undetected in our populations to determine the frequency of testing;
- Understanding our off-campus students (in Ithaca), who outnumber residential students, and develop strategies to encourage compliance with testing.

Our committee appreciates that as our local data emerge, we will be in a much better position to model the future. It is our recommendation that Cornell adopt an aggressive and comprehensive testing strategy at the start of the campus reactivation in the hopes that the number and frequency of tests needed will diminish over time.

### C. Gateway Testing for Students

The largest influx of individuals to our community will be students returning for fall instruction. We have learned from others (i.e. universities bringing athletes to campus and the experience of West Point bringing back its graduating cadets) that invariably, there are individuals positive for COVID-19 among those returning to campus. We have therefore carved out a draft protocol for consideration by university leadership for viral testing for students returning to campus for fall instruction.

#### *Move-In Process for On-Campus Housing*

- Welcome materials for incoming and returning students should include instructions on best practices to avoid infection while still at home and during travel.
- Students planning to travel to the Ithaca region for the fall semester, whether planning to live on or off campus, will be asked to be tested remotely for COVID-19 and provided instructions for self-quarantine for 2 weeks prior to travel. Our committee appreciates that local testing may not be available to all of our students. Regardless of whether testing can be accomplished, Cornell will urge all students to self-quarantine for two weeks prior to leaving for Ithaca and those testing positive will be asked not to travel to Ithaca until they have recovered from infection and have been cleared to come to Ithaca by Cornell Health.
- If testing is available, students testing positive will be subject to isolation requirements as indicated by local authorities in their places of permanent residence, and those that test negatively will be invited to travel to campus.
- Upon arrival in Ithaca, students will each be provided a questionnaire about symptoms or recent contact with anyone known to be positive for COVID-19.
- All students will be tested for COVID-19 and asked to quarantine until the test results are known.
- Any student who tests positive will be counseled by TCHD on the appropriate course of action, including isolation, as indicated.

- Students who test negative may access Cornell facilities, following relevant physical distancing, face mask, and hygiene policies.
- Students will then be tested five days later for the presence of the virus, to account for the possibility of false-negative initial results or for acquisition of virus during travel.
- There may be circumstances based on COVID-19 risk assessment that would warrant quarantine of an individual student prior to joining the campus community.

### *Move-In Process for Off-Campus Housing*

Our committee recognizes that it will be easier to monitor and orchestrate the arrival of students returning to on-campus housing. Students returning to off-campus housing have more autonomy over when they return; however, they too need to be tested upon return to Ithaca. Historically, the university has not overseen any aspects of students' return to off-campus housing, and the availability of accurate information about where students live and their local contact information has been dependent on students' willingness to update this information in Student Essentials. For the 2020-2021 academic year, having an up-to-date registry of students' local addresses, contact information (cell phone number), and emergency contacts (parents or guardian, in addition to at least one close friend or roommate) will be essential, and all students – whether in on- or off-campus housing – will be required to participate in our testing program and follow our re-entry requirements. Our committee recommends that a series of gating mechanisms be put in place to cause students to register their local presence and address and get tested (and isolated if necessary) in a timely manner in order to mitigate the risks associated with the undetected importation of the virus into the community. (See **Appendix 6** for more details about move-in).

### *Strategies for Phasing the Return of Students*

Our committee discussed possible ways to phase the return of students to slow the rate at which students entering Ithaca could seed new infections. One way to do this could be to invite only first year students back first and take them through a longer orientation process (e.g., 14 days) before inviting upper-class students to return. This would, in theory, enable us to spread out the risks associated with move-in. However, many upper-class students might opt to move back to Ithaca anyway and stay with friends in off-campus housing until their on-campus rooms become available, thereby reducing the effectiveness of this phase-in strategy.

A more realistic approach may be to invite the approximately 1,000 students (of whom about 50% are upper-class students) who annually arrive on campus before first year students to participate in training (e.g., orientation leaders, residential advisors, and other student ambassadors) to return *at least 14 days prior* to the start of the move-in process for first year students so that they can all be tested (and quarantined/isolated if necessary) before their training programs begin. Many of these students live in the residential halls, making it feasible for us to dictate their return date. This year, it may be prudent to invite for early return and training a larger cohort of students that includes those who have been selected to serve as student behavioral modification guides, or public health ambassadors. Treating them as the first official wave of returnees will help contain the influx of the virus prior to the return of first year students.

### **D. Testing of our Environment**

Beyond testing individuals, our committee recommends that Cornell continue to follow the literature on the utility of environmental testing as an early warning marker of virus on the campus. One possibility might include

testing wastewater (for example of dormitories) to determine if there may be individuals that reside in those dorms who may be positive. This information may lead to directed testing of individuals or changes in how we suggest individuals interact in particular environments and how these areas are kept sanitized.

#### [E. How to Test for COVID-19](#)

There are many components to the testing strategy described above. Successfully executing this strategy will require partnerships with a number of different entities within Cornell and in the local community.

##### *Partnership with Cayuga Health System*

Our proposed testing for COVID-19 is a substantial undertaking. Individuals to be tested must be notified, samples must be acquired, labeled correctly, then prepared for analysis; samples themselves must then be run and evaluated, and results must be collected and reported in a way that maintains confidentiality. Additionally, expertise is required for billing of insurers for testing that may be covered. Because of these complexities our committee recommends that Cornell seek a partner with expertise in many of these domains. Partnership conversations are underway with Cayuga Health System, the major local health care delivery network. Recommendations about the details of this partnership are beyond the scope of this report, however our committee recommends that whatever form the partnership takes, Cornell retains control over the testing program to ensure our current needs are met and that as the testing landscape evolves, the partnership is adaptable to the changing environment. Our partner should clearly demonstrate capacity to support the extent of testing (in particular for surveillance) that will be required for the Cornell community.

##### *Cornell Health*

Cornell Health supports the physical, social, and emotional health and well-being of our student population. Our committee recommends that Cornell Health continue to be the principal point of contact for our students around COVID-19 care and be the primary entity responsible for testing for cause of students—including those with symptoms, those who have been in contact with others with COVID-19, and those identified individually as being at greater risk for community spread.

Cornell Health may be able to use their secure messaging portal to communicate with students who have been identified (e.g., through previous clinical encounters with our clinicians, or who self-disclose on their health forms) that they have risk factors for poor outcome if infected with COVID-19.

##### *The Animal Health Diagnostic Center (AHDC) at the College of Veterinary Medicine*

Cornell has on site and outstanding diagnostic laboratory with great skill at high-throughput PCR testing. The AHDC has COVID-19 testing in place and, in fact, has performed such testing in animals. Our committee appreciates and endorses the steps that are being taken to explore certification of the AHDC for diagnostic testing in humans. Utilizing the AHDC will be instrumental in supporting Cornell's capacity for its testing program.

##### *Sample Type and Acquisition*

Currently, testing for COVID-19 requires a medical worker in full protective equipment to acquire samples from individuals to be assessed. The most common type of sampling is through swabs of the nasopharynx (NP). A robust surveillance program based on NP swabbing is not feasible: maintaining the personnel numbers required for sampling may be daunting and compliance of those being tested will be at risk because of discomfort related

to NP swabbing. In order to increase the probability of a successful surveillance testing program, our committee urges Cornell to continue to take steps with Cayuga Health System and Weill Cornell Medicine to study and then incorporate a sample type and strategy that best meets our needs. Possibilities include testing of the anterior nares, saliva or buccal surfaces, or under the tongue.

Another aspect of testing that may become more available are protocols that will allow for individuals to obtain their own samples (either on their own or under supervision) and deliver those samples to a collection point. We recommend that Cornell continually monitor development of these approaches and, if sensitive enough to detect virus in asymptomatic individuals, consider their adoption. Additionally, Cornell should continue to monitor the development of point-of-care testing, an approach that provides results in minutes, rather than hours. As the semester moves forward, we may find utility in such methodology.

#### *Group (Pooled) Testing*

Given the large number of individuals we propose to test for COVID-19, testing each individual separately will likely be beyond our capacity. There are, however, protocols that allow for samples from multiple individuals to be pooled, then tested as a group. If a pool tests positive, individuals in the pool are retested to identify the individual(s) who are positive. In situations where the predicted prevalence will be low (our current state vis-à-vis COVID-19), group testing represents a savings in the time, effort, and expense needed for test processing (but not specimen collection) without decreasing sensitivity. Our committee urges Cornell and Cayuga Health System to develop the most robust group testing methodology that preserves the sensitivity that will be necessary for us to accomplish our testing goals.

#### *Data Management*

Beyond testing itself, our program to evaluate individuals infected with COVID-19 will require a robust information and data management system that is sensitive to personal privacy concerns of those being tested. Developing such an in-house information system *de novo* in the time frame needed to begin our testing program seems overly ambitious to our committee and we recommend that this be done in partnership with Cayuga Health System, where there already exists the appropriate infrastructure to manage subject results on a large scale. In whatever data management system is established, the privacy of data collected for public health purposes is paramount.

#### *Antibody Testing*

The testing protocols described thus far in this report refer to testing for evidence of current viral infection. The most common methodology for this is to examine specimens for evidence of nucleic acid and, more recently, protein derived from the virus. The other major testing modality that is becoming increasingly available is examination of blood specimens for the presence of antibodies, or proteins made by the host to combat infection. The presence of antibody does not indicate current infection with virus (or transmissibility of virus) but does indicate past infection. It is likely, but not yet proven, that the presence of antibody would confer immunity to subsequent COVID-19 infection.

At the time of our report, our committee is not recommending the use of antibody testing for several reasons. First, a number of the current antibody tests lack specificity. Hence, a positive result, especially in a low prevalence population, has an unacceptably high potential of being inaccurate. Second, it is not yet clear

whether antibody positivity does, in fact, confer protection, so it would be difficult to act on test results. Finally, individuals who discover they are antibody positive may have a false sense of security and feel less compelled to follow the recommended protections, putting themselves and others at risk. Over time, however, antibody testing may be valuable and should be reevaluated as circumstances warrant.

### *Summary of Testing Recommendations*

At the time of this report, our committee is able to recommend that Cornell develop a suite of testing approaches to ensure timely evaluation of all individuals on campus needing testing for cause, gateway testing to decrease the amount of undetected virus that enters our community, and ongoing surveillance. The precise schedule of testing, the best methodology to use, and how to divide the labor among Cayuga Health System, Cornell Health, and CVM AHDC will require additional discussion among all parties. Our committee recommends that, given the importance of rolling out a well-reasoned and practical testing program, the university leadership appoint a testing working group that will continuously evaluate options, lead pilot activities to ensure we are making appropriate progress, and make recommendations regarding questions that remain outstanding at this time.

### **F. Communication of Testing Efforts**

We recommend communicating aggregate results of our testing regime on a regular basis to ensure transparency and build trust among members of the Cornell and broader Ithaca-area community.

## **Managing Individuals Found to be COVID-19 Positive and Their Close Contacts**

### **A. Isolation and Quarantine**

Each individual found to have COVID-19 (designated an index case) needs to be isolated to prevent viral spread. The length of isolation is determined by TCHD and is dependent on the circumstances of each case, including symptoms and subsequent test results. Additionally, individuals with whom the index case had contact are identified through contact tracing and advised to be tested and quarantined for 14 days. TCHD currently reserves the right to manage contact tracing, although Cornell Health nursing staff are trained to do this. We continue to pave the way to assist TCHD in this important function. Cornell Health nursing staff also provide daily phone monitoring of isolated and quarantined students in collaboration with TCHD.

Should an individual in our community be identified as COVID-19 positive, NYSDOH requires this information to be immediately transmitted from the testing lab to the local health department. The next steps in management of positive results fall under the jurisdiction of TCHD (or other local health departments for individuals not living in Tompkins County). That being said, unique features of life in a residential university community argue for a specialized approach to identifying individuals at risk for acquiring COVID-19 and managing their separation from the larger community. For the past month, there have been weekly meetings with TCHD in an effort to map out a joint strategy for quarantine. At the time of this report, these conversations are continuing, and progress is being made. We anticipate that greater clarity around these issues will soon be forthcoming and will allow for more concrete planning of how to identify contacts that require some degree of quarantine. Our committee strongly recommends that Cornell continue these discussions with TCHD to determine the best means to share responsibility for managing circumstances when an individual from our community is identified as COVID-19 positive. We anticipate that a substantial number of individuals will need to be quarantined

through the fall semester and TCHD and Cornell should work together through the summer to develop a plan for this likelihood. Options to consider include quarantining at one's permanent residence when possible and utilizing the Statler and other local area hotels (see **Appendix 7**).

## B. Contact Tracing

Contact tracing is the process of identifying individuals who may have come into contact with someone found to be COVID-19 positive. In Tompkins County, this is regulated by TCHD and performed through interviews of index cases, asking these individuals to recall others with whom they had been in close contact with (defined as being within 6' for 10+ minutes) during the two days prior to the positive test result or the two days prior to the first onset of symptoms, whichever period is longer. While many contact tracing technologies are becoming available to assist in identifying close contacts and augment the in-person interview process, at the time of this report, there is no single technology which we can recommend. We suggest a working group be formed to continually evaluate such technologies as they evolve.

One of the most critical aspects for planning the reactivation of the Cornell campus is planning for housing and support of on-campus residents with known COVID-19 infection and their close contacts. Our committee recommends that Cornell, together with TCHD, be prepared to house a substantial number of individuals in isolation or quarantine based on the Frazier model. The restrictions on what space can be used for quarantine and what individuals can be quarantined together will need to be discussed further with TCHD. As we gain clarity on this our committee has the following recommendations to offer:

- We recognize that being quarantined for 14 days represents a significant burden and may be particularly lonely for students away from home. To meet student needs, Cornell Health should explore ways to work with TCHD to consider if individuals needing to isolate or quarantine can travel safely home for the duration of their time away from the community. This may require transport by private automobile to an environment appropriate both for quarantine and for remote learning as the student will need to pursue their studies online during the period away from campus.
- For individuals who have been living together and who all have been identified as contacts (not as COVID-19 positive), it may be possible to quarantine together and not bear the disruption of having to move from their normal residence.

Students may be hesitant to share information about having attended social gatherings in which physical distancing was not properly observed for fear of repercussions. Obtaining accurate information about close contacts is critical for mitigating viral spread. Therefore, our committee recommends that students be given immunity from any university disciplinary processes if they report unsanctioned social activities for the purposes of cooperation with contact tracing needs.



## Strategy 2: Mitigation of Coronavirus Spread

Our committee recognizes that despite our best efforts, it will be impossible to eliminate the appearance of COVID-19 on our campus. A key part of our strategy to safeguard the health of our community is to adopt measures that will limit the spread of virus from one individual to another. These mitigation efforts will require participation of everyone on our campus.

### Individual Strategies to Mitigate Viral Spread

#### A. Individual Behavior, Actions, and Expectations

Each one of the following actions, when taken seriously and done in combination, mitigate viral spread substantially. However, skipping any one of them means protection against the virus is diminished. Many of the recommendations below were written considering actions that individuals can take to protect themselves. Importantly, however, the fact that COVID-19 can silently infect individuals who can then spread the disease requires these actions to protect others as well. Our committee recognizes the community spirit of Cornell and puts forward these recommendations to help ensure policies are in place so we can optimally support and protect each other.

##### 1. *Personal Hygiene*

Respiratory viruses like SARS-CoV-2 can spread via our hands, which act like sticky traps for viruses. Our hands can pick up and retain droplets that contain the virus, then enter our bodies when we touch our hands to our faces. That is why it is so important to wash our hands with soap and water for at least 20 seconds or use a hand sanitizer with at least 60% ethanol or 70% isopropanol alcohol if soap and water are not available. Washing one's hands properly (with warm water for at least 20 seconds) and frequently is among the best strategies for preventing infection. Thorough handwashing 5 times a day reduces medical visits for respiratory infections by 45%. Our committee recommends a robust communication campaign with visible signage throughout campus to remind individuals of the importance of hand washing and not touching their face. Touchless hand sanitizer pumps should be placed strategically throughout the campus. Disinfectant wipe dispensers should be installed near the entrances of classrooms so that students can self-clean the surfaces of desks and chairs before use.

##### 2. *Physical Distancing*

All individuals will be expected to maintain at least 6' physical distancing at all times except in their private rooms. Classrooms will be modified to ensure 6' distancing between students. Individuals should avoid using elevators whenever possible and use them only when 6' distancing can be maintained. Maintaining 6' distancing mitigates risk substantially, but alone it is not sufficient.

##### 3. *Face Masks and Coverings*

SARS-CoV-2 spreads primarily through respiratory droplets emitted by infected people. Wearing a mask significantly reduces risks of transmitting the virus – they not only protect the wearer but also others as well. They contribute to reduced viral transmission by asymptomatic and pre-symptomatic wearers, especially when widely used in densely populated areas like college campuses. Even 100% cotton masks make a big difference, offering 51% filtration of respiratory droplets. Therefore, wearing face coverings will be generally mandatory when in any trafficked public areas of the university, outside one's own private rooms or spaces, and inside campus buildings (except for private offices) at all times. In residence halls students will be expected to wear masks except when they are in their own room or suite. Whenever students leave their



room, they will always have a mask around their neck and be ready to pull it over their nose and mouth when they see or encounter another individual. The expectation is that outliers will be those who are not wearing masks. Students who show up to class without a mask will be asked to leave to get one before returning. Exceptions include when eating or if wearing a mask interferes with doing one's essential job responsibilities. Some faculty may prefer to use face shields while teaching, as it may be less burdensome to project, and mic/audio quality may be better than if teaching with a mask. Expanding upon the NYS guidelines of Executive Order No. 202.17, institutional guidelines for face masks and coverings has been recommended and is [documented online](#).

#### 4. *Daily Check-In*

To protect our community, individuals who are infected with COVID-19 must be identified as efficiently and as early as possible so that they can be isolated from other members of the community. A single unchecked case can, over two months, lead to thousands of infections. The surveillance testing program recommended above is designed to help catch these cases; adding daily symptoms checks augments the strategy. Our committee believes that reminding Cornellians of this on a daily basis is a key element to our success. We therefore recommend that Cornell create an online tool to help all members of our community consider the risk factors for infection with COVID-19. All students, faculty, and staff who are permitted to work or study on campus would be required to access this tool and respond to the questionnaire at the start of each day. Completion of the questionnaire will result in the respondent being instructed that they can begin their day at Cornell using standard COVID-19-related precautions or, instead, that they may be required to seek advice and perhaps undergo COVID-19 testing and/or conduct work or study remotely before returning to campus activities. The Daily Check-in tool has been created by Cornell Information Technology (CIT) and is being rolled out to faculty and staff now permitted to work at Cornell ([dailycheck.cornell.edu](https://dailycheck.cornell.edu)). Our committee recommends that as use increases, the tool be assessed for its functionality and be tweaked as needed to serve the needs of our community.

#### 5. *Exposure time*

Evidence suggests that exposure time in the company of an infected person influences chances of spread, particularly if individuals are not wearing masks or maintaining 6' distancing. Reducing exposure to less than 10 minutes makes infection less likely.

#### *Behavioral Modification Policy*

The safety of the community is dependent on the collective actions of every member. Students who do not think they can respect and abide by these expectations should plan on pursuing their Fall 2020 studies remotely, from outside of Ithaca. Options for continuing with online/remote instruction will be available to any student who cannot or does not agree to the terms of the student behavioral contract. This contract would apply to all students who return to Ithaca and wish to access campus facilities and/or in-person instruction, whether they live on- or off-campus, or are undergraduate or graduate/professional students.

We recommend that Student and Campus Life (SCL) consider the following recommended health safety behaviors for inclusion in a student behavioral contract:

- Complete the Daily Check-in, discuss symptoms with the health helpline, and stay home if instructed by Cornell Health.

- Consistently practice careful hygiene practices, which includes washing one's hands often and frequently, and thorough cleaning of personal and shared common spaces (e.g., shared bathroom sinks).
- Receive the flu vaccine once it is available (note that students may request an exemption under NYS law for medical or religious reasons).
- Participate fully and promptly in the university's testing program (which will include testing for cause as well as regular surveillance testing).
- Cooperate with contact tracing, which could include participating in a contact surveillance technology, if one is adopted by the university.
- Adherence with state, local, and university protocols for quarantining and isolation.
- Wear face coverings in public except under very limited circumstances.
- Maintain 6' distancing at all times in shared spaces even while using face coverings; do not reduce distancing or increase density of an area by rearranging or adding furniture. Acknowledge increased risks if distancing is not observed.
- No hosting of or participation in social gatherings that violate state public health guidelines (e.g., distancing, wearing masks, maximum allowable number of people).
- Adhering to restrictions on personal travel and a requirement that any travel be reported so that precautionary testing and/or quarantine recommendations can be issued as appropriate.
- Restricted access to campus buildings and dorms as deemed necessary by the university. Individuals may not hold or prop open exterior doors for other individuals.
- No external visitors allowed in dorms or other campus buildings.
- Follow traffic flow directives in buildings and do not congregate in hallways of buildings in between classes.
- Obey assigned seating arrangements in classrooms and other settings where such arrangements are made.

The terms of the behavioral contract and mechanisms for enforcement have yet to be finalized, and resources for enforcement have yet to be identified (see **Appendix 4**). Our committee recommends a system of progressive sanctions that begins with an educational approach, followed by an official warning that would be shared with a student's parents or guardian(s) and ultimately, if necessary, a loss of access to university facilities.

While committee members agree that formal policies are necessary for communicating expectations and ensuring compliance with NYS orders, we also recognize their limitations. Policies will only be effective if supported by a multi-pronged communication and educational campaign that motivates students to engage in desired behaviors. The involvement of students in this process will be essential. The social norms that are developed and adopted by students will serve as an extremely important influence on student behavior. Involving parents and guardians throughout the process will also be important.

#### *Required Re-Entry Checklist*

The full re-activation of students' key card access and NetID will be dependent on the successful completion of each of the re-entry action items. Data collected throughout will be used to differentiate between students who intend to return to campus and reside in university housing, students who intend to return to Ithaca and reside in off-campus housing, and students who intend to enroll in online courses from their residence outside of Ithaca. Care should be taken to develop hierarchies of access so that students can maintain access to the services necessary (such as purchasing academic materials) for re-entry until full reactivation of their key card access and NetIDs (which will include access to Canvas) is restored. Unapproved students will not have access to

Cornell facilities (e.g., libraries, dorms, fitness centers, etc.). In addition to registering their intentions to return to Ithaca (whether it be for a residential experience or all online instruction), students will be asked to complete the following as part of their re-entry checklist:

- Register up-to-date address, contact information (phone number), and emergency contacts (parents or guardian, as well as a close friend or roommate) in Student Essentials.
- Be tested prior to travelling to campus, if possible, and delay return to Ithaca until cleared by Cornell Health if test is positive.
- Arrange a date and location for re-entry testing; complete testing and wait to be cleared for re-entry.
- Complete a tutorial on the new behavioral contract and, if they decide to return to campus under the new terms, take and pass an associated quiz (to ensure they have actually read and understood the contract terms).
- Register with Student Disability Services (SDS) if they are in elevated risk categories for COVID-19 and wish to request accommodations.

## Institutional Strategies to Mitigate Viral Spread

### A. Actions to Prevent Viral Spread in the Academic Domain

#### *Changes to the Academic Calendar*

Our committee explored several options for a revised academic calendar that would meet the following goals:

- A slightly delayed start to the fall term to provide extra time for preparations. These include adjustments to teaching and classroom assignments and the resulting course roster; expand our viral testing capacity; modifications to facilities; procurement of supplies; and development of quality online courses;
- Avoid long breaks that allow students to travel outside of Ithaca, thereby increasing the risk of importing new infections into the community, and instead schedule breaks for periods of transition from residential to online instruction (and vice versa);
- Avoid in-person instruction during the height of flu season;
- Accommodate full, partial, or no residential instruction; and
- Under a residential fall scenario, incorporates in-person exam days prior to transitioning to online.

Community members were invited to provide input on calendar options through the Dean of Faculty website (see **Appendix 3**). Many students advocated for an earlier August start that would allow for an all-residential term to be completed before Thanksgiving. Many faculty expressed concerns about being able to compress their courses into 4, 7, or 11-week versions to fit two of the calendar options presented to them. A version of the calendar was created that represents our best effort at a compromise solution that takes into account the range of feedback provided (see **Appendix 9**). As of June 15, 2020, this calendar represents the most likely academic calendar for 2020-2021—although details related to the vacation days and spring move-in dates are still being finalized.

#### *Teaching Modalities*

If the campus is reopened for residential instruction, faculty will be provided with the choice of teaching in-person, online, or with some mix of the two; similarly, students will have a choice of whether to participate in in-person courses, enroll in an all-online semester (from any location), or a mix of the two. All students will be able

to earn course credits to fulfill degree requirements, even if they choose not to return to campus for residential instruction.

Courses will be offered in a mix of modalities (see **Appendix 10**).

- 1) Online, where all course elements are designed to be delivered online. Students can participate in the course from anywhere. Given the academic integrity challenges that emerged in online exams during the Spring 2020 semester, instructors teaching online courses will be given the opportunity to give in-person exams to students who are enrolled from Ithaca.
- 2) In-person courses, where students who are in Ithaca would participate in in-person, in the classroom. Students who are off-campus would be provided remote access into the classroom (i.e., video or zoom access). In addition, students who are in quarantine will also need remote access into the classroom. Our committee recognizes that there may be a small set of courses that require hands-on access to special facilities (e.g., labs, studios) in which learning outcomes cannot be achieved to satisfaction remotely. A process by which courses for which this may be true can apply to be exempt from the expectation of providing full-semester remote access, pending approval by the relevant college dean, should be developed. In such cases, departments must be mindful of the possible impact on students' academic progress, particularly for seniors, and offer acceptable substitutes where possible, and if necessary, be prepared to waive requirements toward graduation on a case-by-case basis.
- 3) Hybrid courses, that represent a mix of online and in-person elements. Hybrid courses may take several forms, including the delivery of lecture online with discussion, recitation, or lab sections in-person, or with alternating subsets of students attending class in-person and remotely.

The final course roster will include information for students on whether a lecture will be in-person, online only, or a hybrid with some lectures online and some in-person. This will allow students to exercise their preferences for online or in-person instruction in the fall. Guidance about possible approaches, technologies, and quality expectations for each of the modalities will be provided by the Center for Teaching Innovation, with workshops for faculty and TAs throughout the summer.

Departments will be given as much autonomy as possible to decide how to allocate their teaching resources. That said, some constraints need to be imposed centrally given that decisions that are optimal for individual departments may not be optimal for the university; we must avoid creating more inequities across students, including having large numbers of unhappy students who are “locked out” of courses they want to enroll in, or who are forced into taking third- or fourth-choice courses that do not excite them.

Our committee acknowledges that mental health issues might either be introduced or compounded by the learning modality options, the uncertainties in the calendar, and overall feelings about productivity and focus during this time. This applies to students, faculty, and staff. We recommend that students, faculty and staff engage with Cornell Health, The Skorton Center, and Counseling and Psychological Services experts early in the planning process, rather than as a response later.

### *Protecting Vulnerable Individuals During Residential Instruction*

According to the World Health Organization, people of all ages can be infected by this COVID-19. However, older people, along with individuals with pre-existing medical conditions (such as asthma, diabetes, and heart disease) or compromised immune systems are considered to be “higher risk” according to CDC guidelines. While the university cannot compel individuals in higher risk categories to avoid in-person instruction, the recommendation is that they do so; however, if early warning signs foreshadow an outbreak, faculty at higher

risk may be strongly urged to transition to online instruction. The university will provide online/remote instructional options. Faculty can opt to teach their courses online, and conduct office hours and advising meetings virtually, rather than in-person, and students can choose courses with or without in-person instruction.

Students (including graduate student assistants) with personal health conditions (physical and mental health) that may qualify them for disability protections are asked to register with [Student Disability Services \(SDS\)](#) and complete a [Disability Self-Disclosure Form](#). Students will be assigned an SDS counselor who will recommend accommodations. Students should not discuss medical issues with faculty or advisors, nor should faculty members be deciding accommodations. Graduate students who live with a vulnerable health individual or otherwise have concerns about in-person interactions should discuss their assistantship with their supervisor. If not resolved, they should discuss their concerns with their Director of Graduate Studies, and in turn with the relevant department chair, Dean's Office, and Graduate School, if needed (see **Appendix 8**). Graduate students who serve as the instructor of record are appointed as TAs, not instructional faculty; thus, the same procedures apply. If not resolved, students may file a [grievance](#). Students can also report concerns about perceived misbehavior or mistreatment through the [Cornell Hotline/Ethics Point](#).

As soon as SDS has finalized the review process for COVID-19 accommodation and has the capacity to meet increased demand for its services, the COVID-19 accommodation process should be actively publicized, keeping in mind that students at "higher risk" might be new to, or unaware of, the SDS office. Early registration is essential not only for developing accommodation plans for students, but also for giving departments time to allocate teaching resources as needed.

#### *Preparing for Academic Continuity in the Event Instructors get Sick or are Quarantined/Isolated*

All instructors electing for classroom instruction should confirm with their chairs that they have a back-up plan should they become unable to teach in-person. A back-up plan might involve pre-recorded presentations or a "standby project" that could keep students on track with the syllabus without the need for formal classroom time. Ideal, of course, would be to have a designated colleague who can take over the class for 1-2 weeks. Another option, although it would require a measure of funding, would be for a department to have a stand-by team of individuals who could serve as short-term substitutes. Graduate students who are not serving as TAs, post-docs, non-teaching faculty, and visitors provide rich pool of relevant talent. Regardless, the key is to have a plan in place at the start of the semester and to share those plans with one's department chair.

Our committee also recommends that a "Quarantine Accommodation Fund" be created using central university funds to pay for short-term alternative help in the event teaching assistants become unable to complete their duties because they are sick with COVID-19 or are quarantined/isolated and therefore unable to be present for in-person instruction.

#### *Supporting Students in Quarantine*

Instructors should plan ahead for how they will support students who are absent from the classroom for two weeks at a time when placed in quarantine. In most cases, students will remain healthy or asymptomatic and therefore able to continue their education with little disruption provided accommodations are made to provide accessible remote learning options. In the first week of class, instructors should develop a FERPA-compliant plan

for ensuring each student has peer contacts within the course who could serve as virtual “study partners” in case they must go into unplanned quarantine. Study partner pairs should not be students who sit next to each other. Although some students may want to choose their own partners, this may leave some students without partners, and it also increases the risk that both partners will be quarantined or isolated at the same time.

Instructors of hands-on courses (e.g., labs) will need to be especially creative about how to provide short-term remote lab or studio experiences. Computer labs can be accommodated by giving students remote access to software. Inexpensive hardware labs can be done remotely by creating “lab kits” that students can use in their rooms. The more specialized equipment or facilities labs would require remote acquisition of data (by the TA or another student group). Quarantined students potentially could participate in data acquisition through technology, and certainly will participate in data analysis, reports and presentations. For example, quarantined students and their lab or study partners might complete the lab activities synchronously, with the lab or study partners manipulating the materials but the quarantined student participating in lab decision-making via video chat. In the coming weeks, departments or colleges where hands-on courses are common should develop plans for promptly delivering course-specific physical materials (e.g., individual lab kits) to students who are quarantined or isolated. Additional solutions may range from reduced assignments or relaxed in-person requirements (e.g., analyze results from another group), make-up sessions, or individualized tutoring.

Our committee recommends that the university provide students with a “quarantine packing list” to bring with them to campus to facilitate rapid transition to quarantine and have “quarantine kits” available for students asked to quarantine. These kits would include basic items such as hand sanitizer, masks, thermometers, over-the-counter medications students might need, trash pick-up, etc. to help ease the burden on the student. A significant concern related to quarantine is the mental health consequences of social isolation. It is therefore critical for faculty and staff to check-in regularly with students and that students have access to virtual programming to continue engaging with the community, including with EARS, Let’s Talk, and other informal programs through CAPS.

Existing protocols for absence from academic responsibilities, including temporary accommodations through Student Disabilities Services, will be used to facilitate students’ quarantine or isolation. Longer absences or multiple absences beyond a specified window require more liberal Incomplete policies for health-related concerns.

### *Physical Distancing in Classrooms*

6’ distancing will be observed between each student; however, faculty should maintain more than 6’ distancing from the first row of students because the need to project increases aerosolization. Extra seats will either be removed or covered with clear markings to prevent use. Students should have assigned seats; instructors should be required to create and share assigned seating charts for their class meetings to facilitate contact tracing. The feasibility of assigning staggered seats for subsequent classes in the same classroom (to utilize seats not previously used in the prior class) will be explored in large classrooms with fixed seating. Students will be instructed to maintain 6’ distancing when entering and exiting classrooms. This may require staggered arrivals and departures. Provided students are at least 6’ apart from each other in the classroom, nobody in the class would automatically be considered a close contact and therefore be designated for quarantine by TCHD if any given student in the class tests positive. However, note that depending on the particular circumstances (e.g.,

length of class meetings and viral load of the index case), the university might decide the additional precaution of group testing all students in the class is warranted.

### *Classroom Capacity After Accounting for Physical Distancing*

A minimum of 6' distancing is required in the classroom to avoid group class quarantine should an individual in the classroom test positive for COVID-19. Each room size, type, configuration (fixed or flexible seating), and circulation aisles, impacts the safe distancing and specific capacity of each classroom. Examination of Cornell's classroom inventory suggests that the typical teaching space can only handle approximately 13- 24% of its normal capacity depending on its configuration.

To address this shortage, we reached out to all college and school facilities directors and deans to collect data about all classrooms that are not currently in the classroom scheduling inventory and rooms that could potentially be repurposed as classrooms to create a merged database of total possible classroom space. We carefully assessed the studio/lab situations in the College of Engineering and College of Art, Architecture and Planning to test methodologies. Three methods were used to estimate safe capacity in teaching spaces: square footage multiplier, occupancy multiplier, and computer aided design (CAD) layout of the space with 6' distancing. Square footage multiplier: 1 person per 75 square feet was used for the square footage multiplier to estimate 6' distancing between individuals, as well as factor in furniture, and circulation aisles or perimeters. Occupancy multiplier: 20% of normal classroom occupancy was used for the reduced capacity. Layout: several rooms were laid out in order to verify assumptions of the first two methods. As CAD layouts of every space were not possible for the full inventory at the time of this assessment, CAD layouts were done across a variety of sample rooms and auditoriums across campus, in order to verify the multipliers used for square footage and occupancy provided an adequate method of estimating. The estimated capacity of each space was governed by the stricter method in each case. A careful re-analysis of classroom supply and demand shows that classroom capacity should be nearly sufficient to support expected demand (see **Appendix 11** for more detail). To determine the actual capacity of each space, CAD plans with 6' distancing layouts between seats and specific to room configuration will need to be done for the full inventory of classrooms. The University Architect office contributed to the testing of layouts with 6' distancing for priority list of spaces and is now developing guidelines to share with the colleges that synthesize our learnings with state and local guidelines.

Because of limited classroom space, the full expanse of the campus facilities (including spaces not typically used for classrooms) and the class meeting schedule will need to be used, resulting in different overall course rosters than has been standard. To increase classroom supply, classes may need to be scheduled during the 4:30-7:30 p.m. block that is ordinarily off limits for undergraduate courses. Furthermore, because classroom supply is limited, more courses will have immutable caps for in-person spots. The expectation that students contribute to the collective good by dropping courses in the "shopping" period as soon as they decide not to take a course in-person will be clearly communicated when the revised course roster is published. In addition, student organizations will not be permitted to begin booking space in July as they normally would; this will be pushed back until end of September or beginning of October, as soon as faculty are satisfied that their new spaces will work.

Over the next month, a revised database of classrooms that details the precise capacity of each space after accounting for 6' distancing needs to be developed. A digital representation of each space should be created, with seating charts that instructors can fill in and submit electronically (to facilitate contact tracing).

The usual approach to building a course roster and schedule will need to be modified. We have outlined a new process that is expedient, transparent, equitable across departments and for different groups of students, and iterative; this process will need to be finalized in collaboration with the Office of the University Registrar (see **Appendix 12**). This process gives as much local control to departments as possible so that they can allocate their teaching and classroom "budgets" most effectively. This principle of local control is especially true for the subset of classes that require special facilities (e.g., labs, studio spaces), but also encompasses classes that take place in interchangeable spaces (e.g., lectures, discussion sections, seminars).

At the same time, the process must balance local control with collective needs. First, because classroom space under physical distancing is so constrained, all available classroom time will need to be used. This means that more courses will need to be scheduled for less desirable times of the day or spaces. Second, the process will include a mechanism to ensure the collective educational missions of colleges can be met, and that the aggregation of departments' priorities does not lead to inequities in educational experiences across students. As an extreme example, if all departments allocate their teaching resources and classroom budgets to courses that serve their majors, first- and second-year students may by default end up with a schedule that is filled with online courses.

#### *Additional Safety Precautions in Classrooms*

The following additional precautions should be explored as abundance of caution measures where feasible. For classes that are longer in duration, distancing should be expanded to be greater than 6'. Each instructor who will be teaching in-person should have their own microphone for the academic year, to avoid the necessity of sharing and potentially transmitting the virus. The facilities engineering team will assess HVAC systems and propose augmentations to air filtration, air exchange rates, fresh air intake/natural ventilation, humidity control, and pressurization where feasible. In classrooms that have operable windows, if natural ventilation in those spaces is determined to increase air quality and positive air flow as a complement to the HVAC system, windows should be opened whenever possible. Classes of longer duration should, ideally, be assigned to rooms with highest performing systems where possible. Although colleges may choose to install plexiglass dividers between workspaces in studios and other extended use spaces, 6' distancing must nevertheless be maintained. Installing barriers is not a suitable substitute for 6' distancing even if it reduces disease transmission, as students would still be identified as close contacts and be susceptible to quarantine if a neighboring classmate tests positive.

#### *De-densification of Teaching Labs, Studios, and Other Academic Use Spaces*

There are a range of different types of laboratories that span from relatively easy to convert to online/remote format to those fully dependent on specialized spaces or facilities that would be severely compromised by lack of physical access. Lab types, in order of increasing difficulty to convert, include: computer based labs (CS courses, simulation labs, design labs); hardware based labs with relatively low-cost and/or portable equipment; hardware labs with portable, but expensive equipment (e.g., portable SEM, circuit measurement, materials measurement); and hardware labs with immovable equipment or requiring dedicated facilities such as hoods.



Labs traditionally have much closer interactions between students (e.g., students typically work in groups of 2-5) due to pedagogical (teamwork skills) and practical considerations. And generally, a TA must be present for safety considerations. Physical distancing within a group working on an experiment may be nearly impossible and/or require structural changes in the setup of the space. On the positive side, group sizes can be lowered by expanding the number of sections (which is normally low for most labs) to include all potential meeting slots. Guidance for research labs and [research reactivation](#) is available on the university [COVID-19 website](#).

Project Team and Maker Spaces. The university has invested heavily in expanding the opportunity for students to work in less structured environments to produce projects of their own. These “maker labs” can involve industrial scale equipment with the associated training regimens to ensure safety. Because of safety considerations that preexisted the pandemic, these spaces typically have access controls in place. Physical distancing would be an added precautionary layer to their standard operating procedures. In cases where it may not be possible to maintain 6’ distancing at all times, students must be notified in advance of the risks (which include the likelihood that all members of a lab group or team would have to go into quarantine together if any one of them tests positive) and be given the choice of opting out.

Research Labs. A strong aspect of our program is the opportunity for undergraduates to engage in research with faculty. Research labs are currently being “reopened” separately; however, the initial focus is on graduate students, postdocs, and staff. Experienced undergraduate researchers can, and should, be reintegrated into research labs this fall with appropriate protocols for maintain 6’ distancing.

Studios. Studio layouts should maintain 6’ distancing. Ideally studio spaces would be limited to 50 students at any given time. Where the studio facility is significantly large enough to accommodate more than two groups of 50 simultaneously while maintaining greater than 6’ distancing, layouts, egress, HVAC systems, and other factors particular to the space should be reviewed by University Architect for approval.

*Shared study rooms and project rooms* must have 6’ distancing between desks and limited to no more than 50 people. However, if the space is extremely large, based on layout egress, HVAC system and other factors, additional occupancy may be possible if it meets NYS guidelines and is approved by University Architect.

### *Office Hours*

We recommend that instructors hold virtual office hours whenever possible to eliminate congestion in the hallways. However, faculty who wish to meet with advisees in person may do so provided they are able to maintain strict distancing, wear masks, and keep their office doors open (for air flow and to increase compliance with health precautions). Departments should consider setting aside small conference rooms that can be used for such meetings. This may be especially important for disciplines that rely heavily on whiteboards; to facilitate interactions with vulnerable health faculty, a webcam could be setup to allow faculty to interact remotely with students in the meeting room.

### *Safety Between Classes*

Traffic flows through buildings can be controlled by identifying separate entrances and exits and clearly marking the direction of pedestrian traffic on floors. Circulation and use diagrams should be developed for each building. 6’ distancing may not be possible in narrower hallways; however, provided individuals continue moving through hallways rather than congregate in them, duration of exposure between individuals that are within 6’ will remain minimal. We also note that student traffic between classes is worthy of as much consideration as is

being given to classroom layout. To give perspective, during peak time there may be 2,000 students in the buildings that surround the Arts Quad, a greenspace that has an approximate area of 60,000 sq. ft. That is 30 sq. ft/student, which is not a safe density. Careful modeling of sidewalk area and ingress/egress patterns between classes is clearly required. Plans to limit vehicular traffic so that streets can be made into pedestrian walkways would greatly reduce the density.

Lobbies, common spaces, and atria should have clear signage of maximum occupancy, 6' physical distancing, and furniture layouts and floor markers (where possible and artful) that delineate 6' distancing. Bathrooms will need to be limited in occupancy and cleaned more frequently. Hand sanitizing stations should be placed outside restrooms to reduce congestion in restrooms (e.g., don't need to enter just to wash hands) and to give people leaving the restroom a way to sanitize after touching door handles.

Students who have a combination of in-person and synchronous online courses in a given day may need a quiet space on campus where they can participate in the online course. This is particularly important for off-campus students, but even on-campus students may not have time to walk back to their dorms to take an online course. Coffee shops, atria, and "silent" library spaces are not ideal spaces to attend an online course. Therefore, we recommend that temporary carrels (using repurposed temporary office dividers) be set up in Barton or other large spaces that will allow 6' distancing and some barrier to sound. The space should have adequate wi-fi service. Implement a one-person per workspace rule and require students to use headphones to reduce ambient noise. The university should assess whether it is feasible to have students reserve these spots through an Open-Table reservation system.

We also recommend that large tents, such as those used over Commencement or Reunion weekends, be set up in the main quads (Arts, CALS, Engineering) and in open spaces near the main residence halls. Clear markings on the grass/ground should indicate 6' distancing, with folding tables and limited seating arranged strategically. During peak hours and in decent weather, operating mobile outdoor coffee or snack carts under the tents would reduce crowding in interior "hangout" spaces.

### *Physical Education Courses*

In-person physical education courses will be suspended until NY Forward guidelines indicate that gyms and fitness centers are allowed to reopen in the Southern Tier region. Until then, courses should be delivered virtually whenever possible. Once permitted to reopen, fitness classes that do not involve physical contact may resume, provided extra physical distancing (12') can be maintained and all state guidelines observed. This will require classes to be held in larger spaces and more sections of classes be offered. More rigorous and frequent sanitation protocols will be in effect, including closing facilities frequently to be cleaned. As is the case throughout campus, all staff and patrons will be required to wear masks. Building hours will be adjusted to safely accommodate varsity athletes. Finally, we recommend that extra classes be offered (e.g., jogging, walking tours, walking meditation, yoga) outdoors, and that rental fees for outdoor athletic equipment be reduced or eliminated.

### *Academic Policies* (see **Appendix 13** for more information about academic policies)

Grading Policy. We recognize that many students are interested in the continued availability of the S/U grading option in all courses. However, based on input collected from all undergraduate colleges and schools and from the registrars' office about policies being adopted at other colleges and universities, we recommend that Cornell

return to its regular grading policy in which the availability of the S/U grading option is determined by the faculty teaching the course.

Instead, our committee recommends that faculty continue to make every effort to develop alternative methods of assessment that do not rely as heavily on timed exams (which proved challenging in the Spring 2020 semester). There will continue to be students enrolled in courses from different time zones, with some participating in-person and others remotely, thereby introducing multiple modalities for exams. As much as possible, we actively encourage faculty to suspend their practice of grading on a curve to account for the complexities introduced by these dynamics.

Policies for Withdrawals and Leaves of Absence. For those students for whom continuing enrollment is not possible due to COVID-19 related illness, the existing university leave and withdrawal policies would apply. Students should work closely with college advisors and Cornell Health to make the decision that is best for them, which may be to receive a [short-term health accommodation](#) prior to making the decision to withdraw or take a [health leave of absence](#).

Attendance Policies. Students will be asked not to attend class if they are sick. Instructors should not include attendance as part of their grade for two reasons: (a) students may be absent from class because they are placed into quarantine; and (b) grading attendance will incentivize students to attend class even when they do not feel well, which is the opposite of what we need them to do for public health and safety.

However, instructors will be asked to take attendance. This will be much easier this year than in years past because instructors will have an assigned seating chart for each course, thereby making it easy to identify which students are absent. Having an attendance log will facilitate contact tracing in the event a student in the course tests positive. It will also help the instructor to identify students who may be struggling and require additional support.

Credit Hours Policy. The median number of total credit hours in which students enroll varies across colleges and class years from 14-18. The maximum allowable credit hours per semester varies slightly across the undergraduate colleges and schools, and in each instance, students who wish to exceed the maximum are required to petition for permission. It is not uncommon for students to take more credits, and in fact in focus groups for the Comprehensive Review of Mental Health (2019-2020), students remarked that they feel inadequate compared to their peers if they don't take more than the "normal" course load. Unfortunately, however, the more classes students take, the more overloaded they are with homework and exams. Course overloads are a significant source of mental health strain for Cornell students.

Several features of the 2020-2021 academic year that will be new to students could introduce new sources of stress. They include the added complexity of courses being offered in multiple modalities, disruptions associated with quarantine/isolation, and the elimination of breaks in the academic calendar to reduce the risks associated with student travel. Therefore, to proactively eliminate the added stress of being enrolled in too many courses, we recommend a more stringent policy against course overloads. Ideally, a common standard (of ~18 maximum credit hours) should be adopted across colleges to ensure equity (particularly among students enrolled in cross-college majors). Exceptions should be considered for seniors who need additional credits to graduate.

### *Orientation Programming*

Orientation programming will be even more important this year than in years past, both for keeping students engaged and for helping students to shape and internalize new norms for how to engage safely in their academic and social activities during a global pandemic. Our committee discussed various options, including a uniquely Cornellian one-credit course that examines the issues exposed by the pandemic from a wide range of disciplinary lenses including (but not limited to) epidemiology, migration, the need for human connection, societal inequities, global supply chains and international trade, climate sustainability, civic engagement, anthropology, and social psychology. Other options include engaging Cornell alumni to help students see that the only way for any person to find instruction in any study during these difficult times is for every student to care for each and every Cornellian and do their part to protect the larger community. Over the next month, the Orientation Working Group should explore the feasibility of different options and develop orientation activities designed to help students internalize the new behavioral expectations, establish communal agreements for how to keep each other safe, prepare for different contingencies, understand the science of the virus, and develop innovative ideas for how they will revise their approach to co- and extracurricular activities. Close coordination among university-wide and college-specific orientation planning groups is necessary to ensure consistency of messaging and develop a coordinated plan, including for how to engage student leaders in the process.

### [B. Actions to prevent viral spread in Student/Social Life](#)

#### *Student Organizations*

In order to be eligible to request funding or reserve space for events, all student organizations will be required to complete an enhanced re-registration of their organization, update their membership rosters, and assign a health and safety officer (who will receive special public health training). We also recommend that the following policies be put into effect under pandemic conditions:

- No communal food at events;
- Record attendance at all in-person events, to be entered into Campus Groups or another central repository;
- Plan virtual meetings and events whenever possible (because fewer rooms will be available for students), with support from campus units about how to leverage technology for virtual engagement;
- Violators will be subject to sanctions such as being prevented from accessing university resources for their activities;
- Student organizations should continue to reserve space through the 25Live system and complete the event registration form (ERF) when appropriate. Reviewers of the ERF must consider whether the venue will allow students to observe distancing requirements.

Extracurricular activities are an important part of student life; students may struggle to adapt to restrictions on their ability to interact freely. Even while recognizing the financial crisis we face, we recommend that the university invest resources in sponsoring safer social and extracurricular experiences for students. Examples include affording free access to outdoor recreational activities and equipment, virtual “drop-in” hours for student organization leaders to ask staff for help in planning safer events, creating new outdoor spaces that can be used by student groups (e.g., with 6’ circles), and sponsoring competitive student ideas for innovative programming.

### *Greek Life*

The most significant concern raised in our outreach was that if Greek Life activities were banned, they would simply “go underground.” Instead, we recommend that Student and Campus Life develop clear guidance about the activities that are allowed and partner with student leaders to promote safer social engagement. We recommend the following:

- Revise the Risk Management and Social Events policy such that it clearly states expectations to comply with NYS guidelines (i.e., related to total size, and distancing, and mask wearing requirements). Students who live together in a house count towards the total number of individuals allowed at a social gathering.
- Card readers should be used to record all attendees in order to facilitate rapid contact tracing in the event that an attendee tests positive.
- All organization leaders must participate in ongoing educational programming related to public safety and how to promote safer social events.
- At least one public health monitor should be assigned and registered to help monitor density at events and compliance with physical distancing and mask requirements.
- Every Greek organization will be required to register the addresses of their annexes.
- The Office of Sorority and Fraternity Life should begin collaborating with Greek student leadership as soon as possible, including to develop revised recruitment protocols that might enhance compliance with NYS public health guidelines (e.g., make creative use of virtual technologies).

Prohibiting students from living in fraternities and sororities is not reasonable nor possible, as many chapter houses are private property. Instead, the university should provide guidelines – some of which may be appropriate to articulate in a COVID-19 Addendum to the recognition policy, pending approval by University Counsel – regarding revised expectations for the upcoming academic year. The most important is that all chapters agree to be in compliance with NYS guidelines, at all times. This includes mandates related to physical distancing, the size of social gatherings, and mandatory face coverings. It is not yet clear whether TCHD will consider all students who live together in a chapter house to be “living together” for contact tracing purposes; at present, only housemates who have been in close contact (within 6’ for more than 10 minutes) with a known index case during the 48 hour period preceding diagnosis would be considered contacts by TCHD. Nevertheless, house members should be educated about the increased risks introduced by large communal living (some chapters house ~50 students) and be educated about the importance of creating new house agreements to protect each member’s safety and minimize the academic disruptions associated with being placed in quarantine multiple times over the semester.

Guidelines should state that chapter residents will be required to wear masks and comply with physical distancing guidelines whenever there are visitors in the house. We recommend that Greek letter organizations work with Student and Campus Life on guidelines for external vendors (e.g., house chefs) to help them maintain health and to observe safety protocols. More stringent cleaning regimens and restrictions on communal dining should also be in place.

### *Reporting Mechanism*

Community members desire a text-based tip-line for reporting violations to the social gatherings policy (and their location). Providing clarity about the purpose of the tip-line is critical so that it is not misused and

information reported is sufficiently detailed and clear as to be susceptible to remedial action is not used inappropriately (e.g., to report individuals who are not wearing masks or might appear sick). The ability to respond to reports will depend on the timeliness of the reports as well as their specificity, quality, and quantity. Details about the unit(s) that will monitor and respond to reports, and the process for determining appropriate university responses will be finalized by SCL in collaboration with University Counsel.

### *Social Gatherings and Campus Events*

Consistent with recommendations regarding visitors to campus, in-person concerts and lectures that involve outside guests should be suspended until further notice; however, technology should be leveraged to support virtual lectures, concerts, and other public events.

On-campus social events will be expected to align with state and local mandates about the maximum allowable size of gatherings, as well as expectations for distancing and mask wearing. It is important for students to understand that these guidelines may shift in either direction – become more liberal or restrictive. We recommend that the university allocate funds to incentivize and support entirely new types of social activities that enable students to connect and have fun while respecting public health guidelines.

### *C. Actions to Prevent Viral Spread in Residential Life*

Overall, our committee's assessment is that eliminating doubles is unlikely to substantially reduce the number of infections on campus for several reasons: (a) asymptomatic screening should keep overall prevalence quite low; (b) most of the new cases during the semester will be imported from the outside by off-campus students, not students living in dorms; and (c) 5-day asymptomatic screening + screening everyone on a dorm floor that has a positive case will often catch dorm floor infections before the secondary infections start to infect tertiary people, given the 2-3 day pre-infectious period. Therefore, our committee was not convinced that eliminating doubles is a superior strategy. An important consideration may be to assign people on a dorm floor to staggered surveillance testing intervals so that a portion of each dorm floor is tested each day. If an individual on a floor tests positive, we recommend that all hallmates be group tested. This would allow us to identify and contain infections before they have a chance to spread.

### *Safety in Residential Units*

The risks associated with sharing a bathroom are yet unknown. In many cases, the duration of overlapping use of bathroom facilities is likely to be less than ten minutes (students should be encouraged to take quick showers to ensure this is the case). The biggest risk may be with shared sinks into which students spit when brushing their teeth. At a minimum, we recommend that students avoid brushing their teeth at the same time as another student, and that they spray disinfectant (provided in each bathroom) before and after each use. Highly visible signage should be installed to remind students to follow safety protocols. Simple tactics, like knocking on the door before entering, can help students avoid multiple occupancy in the bathrooms. Visible usage flags (similar to those in doctors' offices) could also be installed next to bathroom entrances to signal to residents when the restroom is occupied (and by how many) for those who would prefer to avoid entering a bathroom with multiple occupants. We recommend that each room be assigned to a specific bathroom on the floor to minimize the total number of students who share a bathroom.

Other shared spaces within the dorms – such as kitchenettes and lounges – will have visible 6’ spacing markers and extra furniture should be removed to ensure distancing. Based on our outreach we do not recommend that kitchenettes and lounges be closed, as closures would simply push students into different, less visible spaces. Our committee concludes that the better strategy is to encourage safe use of public spaces.

We also recommend that all students be provided with guidelines for developing shared agreements with their room/housemates about how to protect the safety of their shared fate. Armed with evidence-based facts about factors that affect viral transmission, students should first be guided to discuss how their personal experiences with quarantine during the pandemic influence their readiness for, and perspectives about, how they will approach health-related behavioral expectations within the unit. Using discussion prompts, they should then come to agreement about issues such as: protocol for inviting visitors; shared responsibility for disinfecting surfaces; mask wearing policy within the unit; and how to let each other know if the agreement is not being followed.

### *Living-Learning Pods*

One suggestion was to consider that on-campus students might be housed in pods (groups of students that have limited exposure beyond the group) that align with their course selection. To investigate whether this might be workable for first-year students for whom such a scenario would be most feasible because they all live in university housing, we examined first-year student enrollment from Fall 2019 to assess the extent to which they could be grouped in clusters of 40-55 students such that each student within a pod has two courses in common. Had we adopted the calendar with two seven-week mini-semesters, these students would only have courses in common with students in the same pod. Modeling shows that for all but 415 students, we could group the students with two courses in common, and a majority of the remaining students could be accommodated within smaller pods (above 25). This analysis did not make use of First-year Writing Seminar classes, which would provide the means to have additional common enrollments. However, even for first-year students, there are many logistical problems in implementing this; for example, in one approach, the enrollment would have to be known (and unchangeable) prior to the housing assignment determination, in order for this to work. Additional analyses are ongoing to explore how the risk of viral transmission may vary based on different configurations of courses and the scheduling of courses. Relevant results should be taken into account when developing the course roster.

### *Safety in Dining Halls*

A system for contactless ordering and pick-up of food from campus dining facilities has been set up (through CBORD). Dine-in options will be available using a reservation system that will cap maximum occupancy according to NYS guidelines. Buffet lines should be eliminated; instead all food will be served by staff, and disposable plates and cutlery will be used. Extra chairs will be removed and plexiglass separators will be installed where needed. All floors should be marked for 6’ separation. Dish machine operators from Challenge Workforce Solutions will be re-deployed to frequently disinfect surfaces since there will be few dishes to wash other than those used in production. Very small dining facilities that cannot accommodate NYS requirements will remain closed. The university will need to provide clear guidelines for cafes that are not managed by Cornell Dining (e.g., Manndibles, Gimme! Coffee, Temple of Zeus, Vet School café).

### *Interactions with the Broader Ithaca Community*

Students will be expected to abide by NYS guidelines at all times when engaging with the broader community. Students should be aware that the prevalence of asymptomatic, mildly symptomatic, and pre-symptomatic positives is likely to be higher outside of the Cornell community where asymptomatic testing will not be the norm, and thus they must be extra careful not to expose themselves to possible infection. Public service projects and engaged learning activities that involve in-person engagement with vulnerable health populations should be suspended and learning activities should be continued virtually if possible.

### *E. Mental Health Considerations for Reactivation*

As Cornell explores options for safely reactivating instruction on campus in Fall 2020, it is important to consider and address the mental health impacts of the COVID-19 pandemic. The necessary changes to students' living and learning environments (e.g., reduced in-person contact with staff and faculty members, restrictions on extracurricular activities and social events) may contribute to increased stress and decreased social support. These, in turn, would negatively impact student mental health. For some, the economic impact of the pandemic has also resulted in increased financial pressures and/or uncertainties about future employment or internships. Furthermore, the overlapping national crisis related to systemic racism and racial violence is significantly impacting the wellbeing of many, especially Black students and other students of color. These co-occurring crises pose significant challenges to the mental health and wellbeing of undergraduate, graduate, and professional students. Therefore, reactivation plans should align with the proposed adaptations and enhancements to strategies comprising the university's comprehensive approach to student mental health and wellbeing. In addition to consideration of the educational environment and strategies to promote social connectedness and resilience, it will be important to examine approaches to increase help-seeking, identification of people in need of care, delivery of mental health services, and crisis management procedures in light of the circumstances anticipated in the fall semester (see **Appendix 16**).

Remote work and carrying out essential work on campus also impacts the wellbeing of all faculty and staff. A variety of resources related to mental and emotional wellbeing, telemedicine, physical wellbeing, workplace accommodations, and caring for children/elders is available through the Division of Human Resources and outlined in the [Working During COVID-19 Guide](#). All faculty and staff are encouraged to take advantage of these resources and seek help as needed.

### *F. De-densifying the Campus*

A central tenet for control of virus spread is to reduce the concentration of individuals on campus at any point in time. As such, until the pandemic is under better control ***our committee recommends that all faculty or staff who can perform their duties remotely should continue to do so, and that only those whose work requires them to physically be on campus should be granted permission from their college, school, or unit leadership. It will be important, both for de-densification compliance purposes and for our viral surveillance testing program, that all individuals given permission to work or study on campus be identified and register for the Daily Check-in.***

### *Partial Reactivation of Residential Instruction*

Our committee was asked to consider how we would select subsets of students to invite to campus if university leadership decided in favor of a partial reactivation of residential instruction as a means of de-densifying the campus. We recognize that any decision to invite back some subsets of students but not others will introduce



inequities and evoke strong negative reactions given the desire of nearly all students to return to campus. Nevertheless, new first-year and transfer students should be given priority in the fall semester so that they have the opportunity to experience and become acclimated to Cornell and develop a sense of community. Graduating seniors should be prioritized, at least for the spring semester. However, seniors in disciplines that have a large proportion of courses that require hands-on access to special physical facilities may require more than one semester of residential instruction to complete their degree requirements. Faculty responses to a question in our committee's reactivation survey that asked whether their course(s) require special physical spaces (e.g. labs, studio) showed significant variations across departments, as expected, with courses in some departments (e.g., animal science, architecture, art, astronomy, chemistry, chemical engineering, design and environmental analysis, earth and atmospheric sciences, electrical and computer engineering, entomology, fabric science and apparel design, food science, landscape architecture, music, performance and media arts, physics, plant sciences, veterinary medicine, etc.) being more heavily reliant on in-person access to facilities. Continuing students who serve in critical support roles such as residential advisors should also be prioritized, as should athletes if their sport will be played during a specific term. In the event that seniors are unable to secure visas in time to return for the fall semester, they should be given priority for the spring semester. Finally, research-active students at both the undergraduate and professional/graduate levels who require access to campus facilities to maintain their research should also be invited back. It is worth noting that a large percentage of graduate students who responded to the graduate student survey indicated they are currently in Ithaca and therefore should not be thought of as "returning to" Ithaca.

Finally, under any scenario, priority should be given to students who would be unable to maintain their academic progress at home due to a lack of access to internet and/or a home environment that is not conducive to learning. Student responses to our campus reactivation survey for which we had a 71% response rate among undergraduates and 48% response rate among graduate and professional students revealed the following (note: incoming students were not included in the survey population and therefore the numbers below underestimate total need):

	Concern about access to reliable internet to complete online courses	Concern about access to a quiet space that is conducive to learning
UNDERGRADUATES		
Very concerned	440 (6%)	1,722 (22%)
Somewhat concerned	1,029 (13%)	1,766 (22%)
	1,188 (15%) report being somewhat or very concerned about both	
PROFESSIONAL/GRADUATE		
Very concerned	122 (6%)	266 (11%)
Somewhat concerned	254 (11%)	389 (16%)
	278 (11%) report being somewhat or very concerned about both	

It is important to keep in mind, however, that students with off-campus living arrangements would likely return regardless of whether they are invited back for residential instruction. Therefore, efforts to de-densify the campus will have the greatest effect on first-year students who are required to live in on-campus housing. Relevant numbers appear in the table below.

	All Room Types	Singles & Doubles	Singles Only
Occupancy	6,949	6,701	4,793
% first year students (N=3,218)	46%	48%	67%

Interestingly, even among the upper-class student respondents with on-campus living arrangements, 676 indicated they are very or somewhat likely to return under an all-online scenario and 286 remain undecided. In other words, it is not just students who have signed leases for off-campus housing that intend to return to Ithaca.

### *De-densification in Residential Dorms*

At full capacity, our residential halls house a total of 6,949 students. At a minimum, our committee recommends that triples and quads be eliminated to mitigate viral spread. This results in a loss of 248 beds, which may not actually displace many students, if some students opt not to participate in residential instruction.

Further eliminating doubles would de-densify the on-campus residential population to 4,793. A total of 2,156 students would be displaced. Advantages of eliminating doubles include: reduction in the number of students who share bathrooms and other residential facilities; a one-person reduction in the likely number of close contacts that would be identified during contact tracing for on-campus residents who test positive; and better, more controlled learning environments for students who participate in online or remote access courses. In theory, eliminating doubles should also reduce demand for classroom space and reduce demands on our viral testing program. However, as noted above, our outreach suggested that many displaced students (upper-class students in particular) might choose to return anyway (to apartments in Collegetown), thereby exacerbating density off-campus where the university has less oversight. Another concern is that a singles-only policy could exacerbate loneliness at a time when social connections are curbed by the need to maintain distancing. As has been the case for many individuals during the weeks of sheltering-in-place this spring, having roommates or housemates with whom one can interact more normally (without masks and distancing) can provide much needed psychological relief from the stressors of the pandemic. What is not known is how a singles-only policy might alter student behavior in a way that negates the intended benefits of the policy (e.g., students spend more time in the rooms of hallmates).

### *Class Size*

The lower the maximum threshold for in-person enrollment, the lower the risk that the network ties between students created through their courses will lead to widespread infection. However, there are tradeoffs between risk and the quality and cross-student equity in the educational experience.

### *Campus Visitors*

Cornell is accustomed to being an open and welcoming community with virtually no restrictions on who visits and travels through our campus. The beautiful setting attracts visitors and most buildings remain unlocked at all hours. Given the need to de-densify the campus to facilitate physical distancing and the fact that visitors may unknowingly bring COVID-19 into our community, our committee recommends that campus visitors be significantly restricted, at least through the fall semester. Precise details of a campus visitor policy will still need to be worked out; however, we recommend the following as examples to be considered:

- Campus buildings should be locked and accessible only with key-card access, thus limiting ingress to members of the Cornell community and authorized visitors. Certain facilities may be open to the public (for example, the campus store), but prevailing NYS guidelines must be strictly enforced.
- Large groups of visitors (for example, prospective students wishing to tour the campus) should not be allowed.
- Official events held on campus should be restricted to members of the Cornell community.
- Outdoor spaces (e.g. the trail around Beebe Lake and the Botanical Gardens) should remain open, but Cornell's mask and physical distancing policy must be followed.
- Academic visitors should be discouraged and only allowed at the discretion of the appropriate Dean.

### *Student Travel on and Around Campus*

Our committee recommends that students be encouraged to bring bicycles or scooters to campus as a safer alternative to crowded TCAT buses. It is unfortunate that Lime bikes has decided to shut down their Ithaca service, since a bike-share (or scooter-share) service might be particularly useful this fall, when students are likely to have greater distances to travel between classes, due to the classroom availability being stretched to their full capacity.

In addition, careful study should be given to possibly shutting down several main campus roads to allow people to walk around campus in a socially distanced manner. The university should coordinate with TCAT to understand if rerouting service is feasible with making greater use of the main campus thoroughfares for pedestrian and bicycle traffic. In particular, is it possible for TCAT to offer a peripheral campus circulator system?

### *G. Workplace Guidelines*

Only employees permitted to return to work on campus after receiving direction from their supervisor should be allowed to do so once the department/unit's reactivation plan has been approved in accordance with university reactivation guidelines. Supervisors must provide their local HR representative with the names of employees who will be returning to campus to ensure compliance with the required Daily Check-in process. All other employees will be expected to continue to work remotely.

The university has procedures in place to assist employees who have medical conditions that may require accommodation and for staff who are [caring for a family member](#). Individuals with an underlying medical condition, or those who are pregnant, may submit an [ADA Reasonable Accommodation request](#), including accommodation requests for PPE, related to returning to the workplace. If an employee is unable to wear a required face covering due to medical, religious or other protected reason, they can follow the appropriate process for requesting an ADA reasonable accommodation or a religious accommodation ([University Policy 6.13.8, Religious Accommodation](#)). Telemedicine, telecounseling, and financial assistance are [now available](#) to Cornell benefits-eligible employees. Supervisors may not prevent employees from returning to work based solely on the supervisor's belief that the employee falls into the CDC's categories of individuals at higher risk for severe complications from COVID-19. The Division of Human Resources has developed [comprehensive workplace guidelines](#) that all faculty and staff must follow for the health and safety of our campus.

## H. Business and Personal Travel for Employees

Travel poses considerable risk during an infectious disease outbreak as individuals visiting locations with higher prevalence of disease may return to their homes with the pathogen. This has been demonstrated to be the case with COVID-19 as the early spread of the disease around the globe came as a result of infected travelers passing on the virus in their local communities. Although the past few months have taught us much about this particular pathogen and its mode of transmission, travel continues to be a risk. There continue to be hot spots of disease, both in the United States and abroad. These regions change on a regular basis; hence, it is nearly impossible to identify particular locations to avoid. Additionally, during travel it is often harder to maintain strict physical distancing for activities of daily living, especially if travel makes use of public transportation. Activities of daily living are also riskier during travel (for example, using shared restrooms, eating in restaurants, etc.).

Although our committee recognizes the risk of travel, we are also aware that some travel may be essential for work and that individuals will need to travel for personal reasons. We are also aware that at the time of this report, there are no governmental travel restrictions imposed on those living in Tompkins County and that it would not be appropriate for the University to oversee personal travel of our faculty or staff. We do feel, however, that it is the obligation of the university to consider steps to safeguard our community to the extent possible. Therefore, we offer the following principles for consideration in guiding our community about travel. Our committee recommends that a working group be created to assemble these principles into a policy to guide the Cornell community. We are also aware that the College of Veterinary Medicine (CVM) is piloting a means to guide its faculty and staff on steps to take upon return from travel and suggest that the working group evaluate the CVM pilot in considering next steps.

- Travel advisories should be easily accessible to all members of the Cornell community. A link to the most recent [CDC guidance on travel](#) should be prominently displayed in the Daily Check-in.
- All members of the Cornell community should be encouraged to limit travel whenever possible, particularly if that travel would require visiting regions of high viral prevalence or if it would be necessary to use public transit. All travelers should be encouraged to be especially vigilant about wearing masks and maintaining physical distancing when traveling.
- All non-essential business travel should be prohibited. Any Cornell-related travel must be approved in advance by the appropriate Dean or Vice President or their designees.
- Specific guidance should be provided for faculty who live outside of the Ithaca area and commute to Ithaca to teach or live part-time outside of Ithaca.

### *Student Travel*

Cornell-sponsored travel for students will be restricted during the fall semester. Study abroad programs will be suspended, and any Cornell-related domestic or international travel will be only allowed after institutional approval. Personal travel is also strongly discouraged because of the risk of acquiring infection when away, then returning to campus. It is understood that there may be circumstances when such travel is essential. Should a student need to travel outside of the immediate local area, the student should be encouraged to consult Cornell Health for advice on appropriate precautions and on steps to be taken upon return. Student must be prepared to be tested for COVID-19 upon return and for the possibility of a quarantine period before returning to campus.

activities. All students contemplating travel are strongly urged to visit the most up-to-date [CDC travel advisory website](#).

## Campaign for Public Health and Behavioral Influence Strategies

Given the many changes we anticipate for campus life, our committee imagines that the communication strategy should include regular and consistent messaging to the community as the campus gears up for its reactivation. Due to the diversity of audiences at Cornell and the fact that some have returned to work (e.g., to engage in and support research activity), there are immediate public health messages that are needed to ensure the safety of individuals cleared to return to campus. Over the summer, these messages should be expanded to support a robust public health and behavioral influence campaign directed to faculty, staff, students, and visitors in preparation for fall reopening activities and the 2020-2021 academic year. The constituencies to which messages should be targeted include:

- Undergraduate students
- Graduate/professional students
- Faculty
- Staff
- Visitors to campus
- Parents
- Ithaca community

Within the student population, specific messaging will be needed to address concerns within select groups, including but not limited to on-campus housing, off-campus housing, Greek life, athletes, and international students.

In order to reach all intended audiences, the university will need to deploy a range of communication and marketing tactics (see **Appendix 17** for more details). The committee recommends that messaging and asset development be led centrally as a university-level priority, utilizing public health expertise from The Skorton Center for Health Initiatives, as well as the Master of Public Health Program and behavioral science faculty expertise (see **Appendices 14 & 15**). It is important to note that success of this campaign will be contingent upon campus partners – college and school deans, vice presidents, and vice provosts, as well as student leaders – to reinforce these messages at the local level.

To ensure that all voices and needs are met, University Relations has already begun meeting regularly with Cornell Health, Student and Campus Life, Human Resources, Environmental Health and Safety, and Facilities and Campus Services to develop evidence-based messaging and signage, create a week-by-week calendar of planned (and needed) communications as members of our community return to campus, and redesign the university's [central COVID website](#) with resources and information for a broad range of audiences. The committee recommends that this central website remain as the source of information relevant for particular groups. We also recommend that as the summer and then fall semester progresses, the communication team provide regular updates to the community about the state of infection on campus and whether we anticipate relaxation or enhancements of actions needed to mitigate viral spread. It would also be useful for the communication team to put local events related to the pandemic into context of the national and international scene.

The committee recommends that this informal group be formalized into a communications working group charged with developing, and empowered to implement, a comprehensive public health and behavioral influence strategy for Cornell's Ithaca campus. This group should also serve as a conduit for identifying and working to resolve information gaps.

*Communication with the local community*

Recognizing that Cornell will not be dealing with the pandemic in isolation, our committee suggests that Cornell appoint appropriate points of contact to communicate with our community partners. This will include individuals identified as the Cornell "go-to" contacts for Cayuga Health System, the Tompkins County Department of Health, local municipalities, Ithaca College, and Tompkins Cortland Community College. This will be especially important if viral spread increases in our region as it will be critical for information to be shared quickly and effectively among all concerned.

### Strategy 3: Oversight, Implementation, and Monitoring Strategy

Many unknowns remain about how the COVID-19 pandemic will affect Cornell and the surrounding community. The reactivation of campus will likely increase the infection rate in our population of students, faculty, and staff. Changes to state and local guidelines and fiscal priorities will bring additional challenges to how we operate the campus. The ability to monitor various health-related data points while implementing swift and actionable responses will be crucial in protecting the health of our community. It is possible that we may reach a point where we can relax restrictions, but we may also be forced to implement more constrained standards to campus life, or even retreat if public health indicators require such actions. To monitor and react to the evolving impact of the pandemic on our community, we recommend that Cornell compile a series of surveillance parameters (e.g., testing, syndromic surveillance, quarantine and isolation space) in a dashboard to assess community behavior associated with interventions as well as track the incidence of disease in our Cornell Community and the broader Tompkins County population. We also recommend asking a team to review published scientific literature and other data sources to inform decisions about testing, population susceptibility, and disease progression. Lastly, we recommend the formation of a COVID Response Committee that will be responsible for reviewing the various data inputs and implement actions to mitigate disease impact to campus operations in a nimble and timely fashion.

### Response Oversight and Implementation

#### University COVID Response Committee

We recommend establishing a COVID response committee to lead an efficient and coordinated reactivation of the Ithaca campus guided by the recommendations put forth in this report. Comprised of university leadership, this committee will establish strategic priorities and policies to align the academic and administrative functions of the university and make timely, data-driven decisions. The committee will oversee implementation teams charged with leading all operational and actionable components of the strategic prioritizations (e.g. logistics of the testing program, procurement of PPE, and development of academic policies). This structure ensures the university can remain agile in managing both short- and long-term responses under changing conditions.

#### Emergency Notifications

The university operates emergency notification services through the [RAVE Guardian App](#), which enhances a user's personal safety both on- and off-campus by turning any smartphone into a personal safety device. Should the campus community need to be notified of any imminent threat to public safety (e.g., the need to shelter-in-place, sudden and extreme weather events), as well as changes in the operating status of the university (e.g., closures, delayed start), an emergency mass notification, called [CornellALERT](#), is issued. In order to receive immediate notification of important events, individuals must opt-in and provide their mobile phone number. About 78% of faculty, staff, and students are currently enrolled in the system. In order to inform the entire community of imminent threats to safety and health, including potential COVID-19-related impacts, our committee recommends that all Cornell community members be urged to provide mobile phone numbers and enroll in the notification system.

#### Surveying the Literature

We have commissioned a Cornell University Library Evidence Synthesis Service Team to conduct literature reviews to provide decision makers with up-to-day information on research findings related to COVID-19 and

SARS-CoV-2. Thus far, the team has been instrumental in providing our committee with a synthesis of the relevant quality literature around a number of different questions we have pondered. The team is committed to continuing to work with the COVID response committee and implementation teams to ensure that as data are being evaluated and decisions are being made, Cornell will have the most up-to-date analysis of the current scientific literature at its disposal. More detail about the team and its methodology can be found in **Appendix 18**.

## Detection and Monitoring of Early Warning Markers

Both the Cornell community and Tompkins County may serve as a source of infection for the other. However, the impact of spread of the virus may be more severe for Tompkins County residents, who are more likely to be older and have pre-existing conditions than Cornell students (although not Cornell faculty/staff). The spread of the virus to nursing homes and other facilities for the elderly, nationally and internationally, has proven to be catastrophic, and severe cases requiring hospitalization and intensive care may lead to the lack of ventilators, equipment, and staff at Cayuga Medical Center. Stress on the medical system could lead to other consequences, such as people not following up for routine care and adverse health consequences due to an overwhelmed health care system. Since Cornell cannot “wall itself off” from the County, tracking indicators from both are needed to monitor the prevalence of COVID-19. We recommend exploring the establishment of surveillance systems including those below, although the final systems adopted may vary.

### The Surveillance Systems

The dashboard indicators are broken down into 3 categories: early, middle, and late. A ‘signal’ in one or more of the indicators may indicate the need for an adjustment in strategy. The types or degree of adjustments may differ between the three categories.

**Early stage indicators** measure behaviors that may precede viral infection, or track infections discovered quickly by asymptomatic surveillance. This report details a number of behavioral requirements for the Cornell community, including physical distancing, wearing face masks, and differences in uses of dining facilities. Therefore, behavioral surveillance is an important tool for monitoring compliance with these directives. A standard survey instrument should be developed to observe adherence in public places (only) on campus, such as classes, libraries, or dining facilities. A percentage of adherence by location will be tracked. Although no personal identifying information will be collected, this activity may require Institutional Review Board approval.

Another proposed activity would be to better understand what activities or practices may be associated with becoming COVID-19 positive while in Ithaca. This may allow for the identification of places or behaviors (such as attendance at parties off-campus) associated with an increase in risk of transmission. This would be conducted as a case-control study with cases of those who become SARS-CoV-2 positive while on campus (after the initial screening). Controls would be matched by affiliation (undergraduate, graduate, faculty/staff), and place of residence (on-campus vs. off-campus). Controls who are a contact of the index case, or in quarantine for another exposure, would be ineligible. Although not a surveillance system per se, this activity would provide valuable insight on subsequent guidance that could be provided to students to reduce transmission. This activity may also require Institutional Review Board approval.



SARS-CoV-2 asymptomatic testing will be a critical part of Cornell's strategy. Ordinarily, acquisition of infection may not be considered an 'early' indicator, but if asymptomatic screening is conducted frequently enough it would provide the best and most timely information on the status of COVID-19 at Cornell. These data should be tracked daily and investigated if there is evidence of increased transmission to determine any patterns, adjust requirements for isolation and quarantine beds, and provide further information for modeling efforts.

Several investigators have proposed that testing of wastewater might be an early indicator of COVID-19 infection in the community. Wastewater testing has been used for surveillance of other viral infectious diseases such as wild type (non-vaccine strain) polio, indicating local polio transmission. Since wastewater testing for COVID-19 is still experimental, our proposal is to further investigate this testing to compare to our other surveillance systems and help determine the utility of this approach.

**Middle stage indicators** rely heavily on the concept of 'syndromic surveillance' where COVID-19-like symptoms (such as dry cough, fever, or difficulty breathing) are measured as a proxy of COVID-19 infection. Syndromic surveillance has been conducted in the United States, usually through hospital emergency departments, for about 20 years. In many locations it is the first indicator of influenza in a community, displaying its utility as an early warning system. An important caveat is that symptoms for other clinical entities overlap with COVID-19-like symptoms, so a 'signal' in COVID-19 syndromic surveillance does not necessarily indicate a COVID-19 problem and may require further investigation. It will be challenging to distinguish between influenza and COVID-19-like symptoms, which is one reason why influenza vaccination this coming season will be so important.

The syndromic surveillance systems included as middle stage indicators include the online "Daily Check-in" that all Cornell community members will be required to fill out every morning, as is described elsewhere in this report. Cornell Health will also track the number of students with these symptoms through its call line and clinic. The Tompkins County Health Department is organizing a syndromic surveillance system among outpatient providers in the County. We hope to be able to access this information to better understand community transmission. Finally, the Cayuga Medical Center collects data on all patients presenting to their emergency department and can categorize it by ICD (International Code of Diseases) code. Again, we hope to work out an arrangement to share this data.

Other middle stage indicators include the results of the testing programs done by TCHD. However, testing programs may be in turn dependent on other issues not related to local transmission, including availability of test kits, hospital or provider capacity, and ongoing outbreaks of disease. As an example of the latter, should there be transmission within a Tompkins County nursing home, one might expect SARS-CoV-2 prevalence to increase simply because testing would identify additional positive persons. We also intend to track the number of people in isolation and in quarantine, both on- campus and off-campus. In addition to helping understand the "picture" of COVID-19 at Cornell, this will be useful information to track facility capacity.

**Late stage indicators** are those that signify a severe COVID-19 situation in Tompkins County. Regardless of the reasons for higher transmission, late stage indicators signal a threat to the health and safety of the Cornell community (except, perhaps, for an isolated nursing home outbreak). It is possible that all of these indicators may "signal" rapidly and indicate the need for the most severe interventions to control the outbreak. The

indicators include the total number of cases reported in Tompkins County, nursing home outbreaks, and capacity of regular and intensive care beds at Cayuga Medical Center.

### Interventions in Response to Signals

Interventions based on these indicators should be done with a complete understanding of the situation at Cornell, and not on a pre-determined numerical or percentage increase in one system. There will certainly be a degree of day-to-day variation that might not have any real significance. Some findings may indicate the need for further investigation of the signal before acting. Other findings may lead to measures to contain or mitigate the problem without further investigation. Examination of the data from all the systems may be helpful to validate the existence of a real problem because a rise in one system may be mirrored in the others.

**Early stage** interventions potentially include further education of the community on physical distancing requirements, and better enforcement of those requirements. Results from the case-control study would be provided to the community to help stop behaviors that have led to viral transmission. A geographic cluster of cases may warrant the need for an outbreak investigation to better understand the situation.

**Middle stage** indicators may require further education on the signs and symptoms associated and not associated with COVID-19. In some circumstances (especially with Cornell Health patients) a 'signal' may indicate the need for further investigation to see if/how symptoms progressed, and if the student is PCR negative, if there are alternative explanations for the findings. We should encourage TCHD and Cayuga Health System to be vigilant on investigating signals as well. Other interventions may include further education of the community, expansion of physical distancing rules, tightening travel policies, consideration of group quarantine, and a review of compliance with policies concerning the interaction of the Cornell community and older persons in the community.

Interventions to address elevated late stage indicators will likely have a large impact on the community. They might involve the quarantine of all persons living on campus, forbidding travel outside the area, or even campus closure. Disruptions to student and academic life (including pauses in instruction) would be more extreme if the university were shut down and students sent home. An emergency shutdown of the university and suspension of academic instruction would be considered a last resort.

Guidelines should also be established for handling an emergency move-out scenario that include: communication plan; exemption criteria for students who cannot return home; how to apply for financial assistance from the Access Fund, and the types of expenses that will be considered; policies for refunds and rebates; procurement of storage supplies and space. In the event of a shutdown, SCL should be provided at least one day advanced notice before plans are communicated to students.

The following table is a sample of the surveillance systems for the dashboard. All of the data acquired will be made available to the appropriate working groups and the COVID response committee for analysis and consideration of future steps.

System	Stage
Behavioral: compliance with physical distancing	Early
Case-control study to determine risk factors for transmission	Early

Cornell SARS-CoV-2 testing program	Early
Cornell wastewater testing	Early
Tompkins County testing prevalence	Middle
Tompkins County syndromic surveillance of outpatients	Middle
Cayuga Medical Center syndromic surveillance of ED visits	Middle
Daily Check-in: staff and faculty	Middle
Daily Check-in: students	Middle
Cornell Health syndromic surveillance	Middle
Cornell: # cases in isolation	Middle
Cornell: # cases in quarantine	Middle
# cases in Tompkins County	Late
Nursing home outbreaks	Late
%/# Cayuga Medical Center hospital beds with COVID-19 patients	Late
%/# Cayuga Medical Center ICU beds with COVID-19 patients	Late

Further work on this dashboard would entail the creation of a surveillance group to: determine analytic issues (such as what constitutes a signal), operationally oversee the system, maintain it, analyze the data daily/weekly (dependent), and report analytic findings to the dashboard. All of these activities represent a significant investment in terms of personnel and time but will offer the best possibility to track the efficacy of the plan to reopen the Cornell University campus.

## Tompkins County Community Impact

We have established regular dialogue with TCHD this summer to prepare for reactivation of parts of campus knowing that this will be of paramount importance as students come back to Ithaca and the campus. If the community concludes that "college students" will be, or are, bringing disease to Ithaca, there will be resistance to our reactivation plans. If the community, which includes our faculty and staff, deems student behavior in Ithaca as reckless or posing a public health threat, there could be conflicts. Regardless of how successful our policies and procedures are deemed to be by us, the community will make its judgment based on what they see and hear; thus, it is important that we communicate with them in conjunction with TCHD, Cayuga Health System, and local government leaders.

Among that actions that can help mitigate conflict within the broader Ithaca community and ensure that we can successfully bring students back to the area are:

- Inform and coordinate with local government officials, TCHD, Cayuga Health System, and other area institutes of higher education (Ithaca College and TC3) our plans for reopening in advance of making public announcements. These regular discussions are already underway and TCHD assures us that they will participate in public rollouts of our plans and serve as a validator of those plans to provide assurances to county residents and amplify our messages.
- Communicate, with the support of TCHD, university testing protocols and visitor and travel policies applicable to students, faculty, and staff to demonstrate that Cornell is taking great measures to responsibly reactivate its campus and that these restrictions could have an impact on the larger community (e.g., fewer visitors and events).

- Emphasize that Cornell is following, if not exceeding, NY Forward guidance required of higher education institutions along with the support of NYS and local governments to bring students back to campus.
- Offer regular updates to the community through a dashboard of indicators that includes well-defined metrics to measure the success of our testing and other protocols for a safe return to campus. We should clearly convey our intent to adjust policies (including testing frequencies and regimes) and reinstate remote learning should these metrics cross defined thresholds.
- Many colleges and universities around the state are not contemplating pre-and post-return testing protocols. It therefore is likely that the return of a substantial number of our students may initially increase the incidence of virus in the broader community and, as compared to other institutions, may appear that we have a larger problem than they do. Accordingly, we should avoid contrasting and comparing Cornell efforts and indicators with other colleges and universities, and clearly communicate expectations and metrics around incidence and response.
- Local elected officials should be prepared to speak to the economic importance to the region of Cornell (and other area colleges and universities) reopening safely and offer words of support about our efforts to do so.

## Appendix 1: Committee on Teaching Re-Activation Options

The C-TRO committee, chaired by Provost Kotlikoff, comprises two sub-committees:

- (1) Teaching and Social Distancing (TSD), chaired by Lisa Nishii
- (2) Health Considerations (HC), chaired by Gary Koretzky

### Membership:

	<u>Subcommittee</u>
1. Mike Kotlikoff, Chair	
2. Shorna Allred	Teaching and Social Distancing
3. Joe Anderson	Teaching and Social Distancing
4. Frank Cantone	Health Considerations
5. Jason Cole	Health Considerations
6. Lance Collins	Teaching and Social Distancing
7. Deborah Estrin	Teaching and Social Distancing
8. Peter Frazier	Health Considerations
9. Emmanuel Giannelis	Health Considerations
10. Rebecca Harrison	Teaching and Social Distancing
11. Gary Koretzky	Health Considerations, Chair
12. Charles Kruzansky	Health Considerations
13. Sharon McMullen	Health Considerations
14. Lisa Nishii	Teaching and Social Distancing, Chair
15. Jared Pittman	Health Considerations
16. David Shmoys	Teaching and Social Distancing
17. Paul Streeter	Health Considerations
18. Lorin Warnick	Health Considerations
19. Charles Van Loan	Teaching and Social distancing
20. Kim Weeden	Teaching and Social Distancing
21. Isaac Weisfuse	Health Considerations
22. Pat Wynn	Teaching and Social Distancing
23. Meejin Yoon	Teaching and Social Distancing

*Note: This committee is very large, but so the scope of their charge.*

Charge: The committee should begin by identifying and formulating recommendations about the criteria to be used in making the determination about how and when to re-activate the campus for teaching (see, for example, the guidelines being developed at state, local, and national levels).

They should next identify a range of options for re-activating the campus for teaching this fall, e.g.,

- full re-activation in late August;
- delaying re-activation by one or two months;
- phased re-activation with students arriving in waves;
- re-activation only for a subset of students (e.g., seniors and/or graduate and professional students, with other undergraduates online until the spring);

- and so on. Note that there are variations within each of these to consider, for example, if we had a delayed start, would we get rid of the winter break and run classes through January? Or are there other academic calendar changes that should be considered (e.g. shortened semester with minimal breaks to avoid/prevent travel

The committee should then use the identified criteria and options to frame answers to the questions below, as well as any other questions that they determine are significant. They should make recommendations to the president, noting both the advantages and disadvantages of each option, **not later than June 15**. They should also provide intermediate updates to the cabinet every other week.

	HC	1) What would we need in testing and contact tracing capacity, and how exactly would we use these? How can we coordinate with Cayuga Medical, Guthrie, and the Tomkins County Health department on testing and contact tracing? Should we also coordinate with Ithaca College and/or TC3?
	HC	2) What would we need in terms of capacity to quarantine and isolate students? In terms of medical care capacity on campus or in the local community? In terms of PPE supplies for student, faculty, and staff? Do we have these things and/or how would we obtain them? (E.g., would we want to hold the hotel open in case we needed it for isolation?)
TSD		3) How would we enable social distancing when students are living in dormitories?
TSD		4) How would we ensure even a modicum of social distancing given the social habits of college students? Would we ban all parties and Greek life activities?
TSD		5) What is the impact of the intensive interconnectedness of our student body? ( <a href="#">See Weeden &amp; Cornwell, "Small World Network of College Classes."</a> ) This analysis of Cornell classes shows that "there is no single course, and no single student, that if removed would eliminate the potential for mutual indirect exposure between any pair of students. This implies that a hybrid model of instruction, wherein large courses are taught online and smaller courses are taught face-to-face, cannot resolve the challenge of course co-enrollment as a potential means of transmission."
TSD	HC	6) Given that normally our campus is very open, frequent travel both to it by visitors, and from it by our own students and staff, would we need to implement policies that closed it down and prevented visitors as well as such travel? Is that even feasible? (We can't prohibit personal travel, for example.)
TSD	HC	7) How would we protect high-risk faculty and staff (over 60 and/or with pre-existing conditions)? Would all such employees be offered options for remote working, e.g., with professors teaching from home via video link?
TSD	HC	8) How would we protect high-risk students, and are there ADA requirements that we need to take into account?
TSD		9) What kinds of changes would we make to ensure social distancing? <ul style="list-style-type: none"> <li>– In the classroom and other educational settings?</li> <li>– In student life activities more broadly? (residential, dining, extracurricular)</li> <li>– In athletics? Would we be able to have athletics at all?</li> </ul>
TSD	HC	10) What is the probability that we might have to shut the campus down again mid-semester and send students home, and are we prepared to do that? What early warning markers should we look for to suggest a potential surge in infection?
TSD	HC	11) How would we deal with the fact that many international students are unlikely to be able to return in the fall?
	HC	12) How would we reassure the greater Tompkins County community that the return of students won't jeopardize community-wide public health?
TSD		13) Under various scenarios, we may see many students taking a year off, and return to campus in all 2021? How will we manage that if we are also welcoming a full-sized new class of freshmen then?
TSD		14) What are the financial implications? This should include a consideration of whether tuition levels should be changed.
TSD		15) If we could not offer classes in person in the fall, would it be financially better to shut down entirely at the undergraduate level in the fall, and instead aim to have two full semesters, one starting in Jan. 2021, and another running through the summer?

## Appendix 2: Frazier Modeling Report Executive Summary

- Initial modeling results suggest that a combination of contact tracing, asymptomatic surveillance, and low initial prevalence (supported through testing students prior to, and upon, returning to campus) can achieve meaningful control over outbreaks on Cornell's Ithaca campus in the fall semester if asymptomatic surveillance is sufficiently frequent and if we have sufficient quarantine capacity. This would dovetail with a complementary effort at Cornell to reduce transmissions through housing policy, class organization, and regulations on social gatherings.
- We use our model to predict outcomes for a full return of students, faculty and staff in the fall semester over a 16-week time period, with cases imported from returning students and from Tompkins county, counterbalanced by aggressive asymptomatic surveillance where every member of the campus community is tested every 5 days. The course of the epidemic is random, and we directly model that randomness. Accordingly, our model produces a range of potential futures. In the median random potential future, under our nominal set of parameters, 3.6% of the campus population (1254 people) become infected, and 0.047% of the campus population (16 people) require hospitalization. The 90% quantile rises to 4.02% infected and 0.051% requiring hospitalization. Of the 1254 infections in the median outcome, 570 are due to direct outside infections and ensuing additional infections prior to isolation, while 31 (0.09% of the campus population) are infected before arrival to campus but missed in the test-on-return protocol. There are an additional set of people infected before arrival, found through test-on-return, and isolated in Ithaca (22 people) or at home prior to travel (180 people).
- Outside infections from Tompkins County are predicted to be a significant source of cases. Testing every 5 days is sufficient to keep these imported cases from growing into large epidemics, but even low prevalence (e.g., 0.1%) creates a steady stream of imported cases, each of which then creates 2-3 more cases on campus before we catch the cluster. Over the course of a semester, outside infection can dominate returning students as a disease source. Measures that would reduce outside prevalence, especially among those that interact most closely with the Cornell community, are likely to also improve on-campus health outcomes and reduce quarantine needs. This includes using results from on-campus surveillance to identify transmission vectors, reducing transmission of virus from Cornell to the broader community, and expanding access to testing. Measures reducing contact between the Cornell community and those outside would have similar benefits.
- Peak Quarantine Capacity: Our preliminary nominal analysis suggests that the number of people that would need to be quarantined or isolated in the peak period following move-in is 700. This estimate includes members of the Cornell community who could self-isolate, so should be taken as an over-estimate of the needed quarantine capacity. It is highly sensitive to assumptions. Due to the uncertainty this creates, we recommend planning for a peak capacity greater than 700.
- Sustained Quarantine Capacity: Outside infections create a sustained need for quarantine and isolation capacity. While lower than peak capacity requirements, these may be significant, with hundreds of people quarantined or isolated at any given time. Since the greatest sustained source of infection will be interaction with the outside community, the quarantined population is likely to contain a larger fraction of faculty, staff, and students living off campus than the peak load following move-in. Work is ongoing to quantify these needs.
- To provide context, we also model what would happen if we did **not** open Cornell for a residential fall semester and did full virtual instruction instead. Our nominal parameters assume that 9000 students would remain in Ithaca but outside the control of the University in off-campus apartments without asymptomatic surveillance, and that a population of 15000 faculty, staff, and graduate students would remain on campus *with* asymptomatic surveillance. The median number of infections over a 16-week period in the no-reopen scenario is ~7200, which is significantly larger than the ~1200 that occur under the nominal fall-reopen parameters. This is because the loss of asymptomatic screening allows cases to grow significantly in the unmonitored student population. It is also because infections from outside Cornell, a large driver of cases in the residential-campus scenario, continue to drive cases.

- Our analysis of virtual instruction assumes that (1) virtual instruction allows asymptomatic screening only for those faculty, staff and graduate students who are assumed to continue to work/study on campus, with students living locally but taking classes remotely not included; (2) social distancing interventions are effective enough for virtual instruction students in Ithaca that contacts and transmission are comparable to residential instruction; and (3) gateway testing can be implemented for those returning to Ithaca for virtual instruction. Also note (4) our nominal scenario for residential instruction assumes full compliance with testing, quarantine and isolation. Assumptions (2) and (3) are likely overly optimistic for virtual instruction while assumption (4) may be overly optimistic for residential instruction. Other assumptions would create different predictions. Work continues to understand sensitivity to parameter choice, but early results suggest the conclusion that residential instruction has better health outcomes than virtual instruction is robust to assumptions.
- In all of our modeling results, modifying modeling parameters by only a modest amount from nominal values can result in substantially different numbers of infections and hospitalizations. Some parameter combinations, that we consider to be not implausible, can yield extremely serious consequences if interventions do not adjust to meet the challenge. Such outcomes point to the need to design a robust early-warning system. Regular asymptomatic testing as evaluated here can supply this early warning.
- Moreover, such scenarios suggest that the best course of action may be one that can *adapt* to facts on the ground, e.g., by adjusting asymptomatic screening frequency based on observed prevalence, or by beginning with stronger protections for vulnerable populations that can be relaxed if the risk level permits.
- In addition to uncertainty about parameters, our model cannot fully capture the intricacies of the real world. For example, it is difficult to accurately capture the interactions between the Cornell and non-Cornell communities.
- We developed a second model of outside infections that would appear equally reasonable to the one we present here, but whose number of outside infections imported is a factor of 3 smaller when passed the same raw parameters. A full list of model limitations is given in the report.
- Under a range of plausible parameter settings, regular asymptomatic testing is essential to keeping the epidemic under control; without it we see a significant increase in infections and hospitalizations. We envision that this asymptomatic testing would be enabled by the capacity at Cornell's Animal Health Diagnostic Center, with costs controlled through group testing. Work continues with collaborators in the College of Veterinary Medicine to validate group testing protocols and obtain regulatory approval. While substantial cost savings may be possible with large pool sizes (20 or more), we focus our analysis on a more conservative method using pools of size 5 in which we are more confident that a false negative rate of 10%, which is comparable to that of individual testing, can be achieved. (This false negative rate does not include a post-exposure low viral load period during which we assume PCR cannot detect infection).
- A small number of cases originating from Cornell students or employees could multiply in the broader community given that aggressive asymptomatic screening is not available to the general public, especially as social distancing measures are lifted. The cases thus created could then return to re-infect the Cornell community. This proliferation of cases in the broader community is not captured by our model.
- Modeling suggests other opportunities for reducing infections and hospitalizations: increasing the number of infectious cases identified with each contact trace by encouraging students to take phone calls from health department contact tracers; controlling the number of contacts per day and transmission probability per contact through housing policy, classroom design, and regulations on social gatherings; leveraging on-campus surveillance to alert Tompkins County to vectors infecting individuals on campus (e.g., Ithaca City Schools, a business in Collegetown); and perhaps even expanding test access beyond the Cornell community to help reduce prevalence in Ithaca and thus reduce outside infections.
- There are also unmodeled opportunities to reduce infection. Of interest is directed asymptomatic surveillance, e.g., follow-up testing on a dorm floor if a resident living on that floor is identified as positive. Such interventions are likely to reduce the required frequency of undirected asymptomatic surveillance. Also, we hypothesize that testing everyone



on a deterministic schedule (each person is tested once every 5 days) will outperform testing randomly, though our model assumes random testing to simplify computation.

- Toward the goal of quantifying uncertainty, we are continuing efforts to estimate parameters, provide ranges of plausible parameter values against which we should plan, and investigate the impact of modeling assumptions. This effort is supported by a literature review being conducted by the Cornell library and a set of reviews provided by experts both within and outside Cornell on a previous version of this report.
- In parallel, we are using the model to investigate the impact of having vulnerable individuals stay away from campus and modifications to student housing. We are also adding the capability to differentiate student from faculty/staff populations.

## Appendix 3: Summary of Methods for Community Outreach, Input, and Feedback

The Committee on Teaching Reactivation Options undertook a variety of outreach and consultation methods including hosting 5 Town Hall meetings and facilitating a discussion at 2 Faculty Senate meetings (Table 1); this is in addition to the 4 Town Halls hosted by the Provost (Table 2) and a number of surveys and focus groups (Table 5) and consultations with stakeholders (Tables 3-4). For the Provost's Town Halls, faculty could submit their questions ahead of time via Qualtrics and questions were also posed during the webinar via the Q&A (Table 2). The Provost Town Halls, which drew over 3,000 participants and generated 221 questions via Qualtrics and 269 questions via the Q&A on topics related to the reactivation of research, teaching, and fall semester planning. Outreach activities took the form of Town Halls with both faculty and graduate students, including multiple presentations and updates to the faculty senate.

The Town Halls were conducted in collaboration with the Committee on Reactivation of Research (C-ROR), the Committee on Preparation of Online Teaching (C-POT), and the Graduate School and were an opportunity to provide participants with updates on committee progress and receive vital input on key concerns communicated to the reactivation committee representatives. One example is a Town Hall on Personal Risk that was hosted directly in response to the overwhelming concerns C-TRO and C-POT representatives were hearing from various Town Halls and the Faculty Sounding Board groups. Another example was the Town Hall focused on equity with the Graduate and Professional Student Diversity Council that was planned in response to equity concerns surfaced by graduate students that were not being centrally discussed. These Town Halls generated many dozens of questions that were communicated and taken up by C-TRO in their deliberations. The Town Halls were all well attended (most had over 100 participants) and were organized in collaboration with the Dean of Faculty, the Graduate School's Office of Inclusion and Engagement, and Cornell Housing for the Residential Faculty and Staff Town Hall.

One key issue raised during many of the Town Halls was the issue of **personal risk**, for those teaching (faculty and graduate students). There is a deep fear among faculty and graduate students with chronic health conditions of being forced into teaching situations that would put them at increased personal risk. Additionally, many faculty and graduate students without chronic health conditions indicated that they live with someone (e.g. spouse, parent, child) that does have chronic health conditions and are unsure whether there would be accommodations for faculty and graduate students living with those with chronic health conditions. There was also a need to acknowledge that power differences may influence the ability of a faculty or graduate student to truly have a choice with regard to how they weigh their own or their family's personal risks. Concerns were also expressed of a possible second wave of coronavirus and contraindications of the flu with COVID-19. The Town Hall meetings also revealed a strong desire to understand the **COVID-19 metrics and models** that the university is using to keep track of COVID-19 relative to our capacity for hospitalizations, ventilators, treatment, and the threshold that, if surpassed, would trigger another campus evacuation. Many referenced Governor Cuomo's daily COVID-19 press briefings as a good example of communication with the public about how the state was faring in terms of tests, outbreaks, hospitalizations, capacity, challenges, inter-agency cooperation, and messages of hope. **Equity concerns** were also prioritized and discussed at many of the Town Hall meetings.

**Table 1. Committee on Teaching Reactivation Options (C-TRO) Outreach Activities.**

	Date
Graduate Student Town Hall (TAs) (with C-POT and GPSA)	May 7
Graduate & Professional Student Diversity Council Town Hall (w/C-ROR & C-POT)	May 12
Faculty Senate (C-TRO discussion)	May 13
Faculty Town Hall on Personal Risk (with C-POT)	May 21
Faculty Town Hall on Academic Integrity Hall (with C-POT)	May 27
Faculty Senate (C-TRO and C-POT discussion)	June 3

Residential Faculty and Staff Town Hall	June 4
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**Table 2. Provost Town Halls on Reactivation.**

Topic	Participants (n)	Qualtrics questions received (n)	Q&A questions received (n)
COVID-19 (May 4)	558	56	48
Research (May 27)	1,208*	72*	100*
Fall Semester Planning (June 3)	766	49	64
Online and Hybrid Instruction (June 11)	615	44	57
TOTAL	3,147	221	269

\*included graduate students

**Table 3. Stakeholders consulted by the Committee on Teaching Reactivation Options.**

<b>INTERNAL</b>	
University Architect	Provide floorplans for classrooms and develop system that can be adopted across colleges for modifying layouts for classrooms and other potential instructional spaces.
Cornell Facilities	Provide data from the Facilities Inventory System to supplement the classrooms already in the classroom scheduling system; provide assistance in manually evaluating A/V capabilities and furniture layout in rooms.
Cornell Information Technologies	Provide data about WIFI strength in residential halls, assess possible tracing technologies, develop online “Daily Check-in” portal, and provide guidance on key card access and NetID activation.
Center for Teaching Innovation	Provide insights about possible techniques for providing remote accessibility into in-person courses.
Assistant Vice President of Student and Campus Life	Provide insights on how to adapt Sorority and Fraternity Life and Campus Activities; helping to design public health ambassador program.
University Counsel	Provide counsel on existing contracts between the university and students and possible revisions for the upcoming academic year.
Facilities Management	Provide data about spaces across the university that could be added to the classroom inventory, conduct manual checks on classroom spaces and HVAC system.
Athletics & Recreation	Input about possible virtual PE courses and planned modifications to fitness centers.
Cornell Health	Skorton Center and Counseling and Psychological Services (CAPS) staff (Tim Marchell, Robin Hamlich, Laura Santacrose, and Catherine Thrasher-Carroll) provided insights and contributions regarding mental health considerations and public health messaging.
College of Veterinary Medicine	Coordinating with Dean Lorin Warnick and the Animal Health Diagnostic Center to support testing strategy.
<b>EXTERNAL</b>	
Cayuga Medical Center	Coordinating with Cayuga Medical Center on a testing regimen.
Local Landlords/Property Managers	12 of the largest local landlords/property managers in Ithaca (primarily Collegetown) that account for about 40% of the off-campus housing market in Ithaca; coordinating with them on communication strategies for their tenants.
Tompkins County Health Department (TCHD)	Regular meetings to discuss how testing, contact tracing, and quarantine protocols would apply within university context.
Weill Cornell Medicine	Attended medical grand rounds to gain research insights on SARS CoV2. Consulted with Dean Augustine Choi and colleagues from the Division of Infectious Disease and

	Department of Pathology and Laboratory Medicine on testing strategy and operational best practices to mitigate viral spread.
Peer Institutions	Regular discussions with IVY+ and NYS institutions related to campus reopening plans, testing strategy, and quarantine protocols. Additional one-on-one conversations with scientific and clinical leaders and epidemiologists around the country.

**Table 4. Faculty Senate Representative Sounding Board group.**

Rosemary Avery	Professor	Policy Analysis and Management
Cynthia Bowman	Professor	Law School
Maria Fitzpatrick	Associate Professor	Policy Analysis and Management, Director of Cornell Institute for Public Affairs
Drew Margolin	Assistant Professor	Communication
Patrick O'Grady	Professor	Entomology
Madeleine Udell	Assistant Professor	Operations Research
Ira Wasserman	Professor	Astronomy/Physics
Mark Wysocki	Sr. Lecturer	Earth and Atmospheric Sciences
Ariana Kim	Associate Professor	Music
Catherine Appert	Associate Professor	Ethnomusicology & Faculty -in-Residence

### Outreach and Feedback on Calendar Options

The calendar options generated much feedback and discussion; nearly 1,000 comments were submitted on the Dean of Faculty page where the 6 possible calendar options were posted (Table 3). Student indicated a strong preference for an early start to the semester and then ending at Thanksgiving break. An early semester start is appealing for many reasons but has little viability due to the need for testing capacity to be in place and the lead time needed for the university (10 weeks) to develop the course roster and prepare financial aid packages. Additionally, the overlap with existing summer commitments and lack of childcare would make an early start impossible to achieve in practice. Preferences for an online fall semester centered on issues of personal risk for students and faculty and the Ithaca community. Of the 6 calendar options, the enthusiasm seemed greatest for Option 1, which is a fall start at the regular time on-campus and then proceeding online after Thanksgiving with a Spring starts online at the regular time and switching to on-campus in early March.

### *Return to Campus with Enhanced Safety Protocols*

Student survey results (n=10,365) reveal that 65% (n=5,144) of undergraduate students are “very likely” and 19% (n=1,484) are “somewhat likely” to return to campus if residential instruction is offered with enhanced safety protocols. For housing, 63% (n=3,231) of undergraduates that are “very likely” to return live in off-campus housing for which they already have a lease, 24% (n=1,222) will live in residence halls, 10% (n=502) will live in Fraternity or Sorority Housing, and 3% (n=158) don’t know or indicated “other”.

Graduate students have a strong intention to return to campus under either scenario; 75% of graduate students are “somewhat or very likely” to return to campus whether residential instruction is offered or if all classes are taught remotely.

For those undergraduates who were “somewhat likely” to return to campus in the fall for a residential semester or who indicated that “it depends,” the primary factors that might affect their decision to return to campus are their ability to have face-to-face instruction (59%), ability to participate in campus social life (57%), ability to participate in extracurriculars (55%), physical or mental health (48%), ability to maintain adequate social distancing on campus (43%), family finances (31%), physical or mental health of family or friends (27%), ability to live on campus (20%), ability to live near campus (17%), and ability to travel to the U.S. (12%).

For those undergraduates that indicated they were “not likely” to return to campus for a residential semester in the fall (11%, n=863), the primary reasons why they would not enroll are their physical or mental health (62%), limitations on ability to participate in campus social life (58%), constraints around participation in extracurriculars (51%), and requirements to follow enhanced health precautions (41%).

#### *All Courses Taught Remotely*

Student survey results (n=10,365) reveal that only 32% (n=2,560) of undergraduates would be “very likely” to enroll if all classes are taught remotely and 23% (n=1,813) are somewhat likely”. For those undergraduates who were only “somewhat likely” to enroll if all courses were taught remotely or who indicated that “it depends,” the primary factors that might affect their decision to enroll are their physical or mental health (57%), family finances (50%), the physical or mental health of family or friends (25%). If all fall courses are taught remotely, 31% (n=2,487) of undergraduates indicated that they would be “very likely” and 22% (n=1,753) would be “somewhat likely” to return to Ithaca for the semester while 35% would be “not likely” (n=2,804) and 11% (n=864) of undergraduate respondents are undecided. Thus, even if all fall courses are taught online, many students will still return to Ithaca.

Undergraduates “not likely to enroll” at Cornell in the fall if all course were taught remotely described the factors driving this decision as a preference to wait until in-person activities resume on campus (89%), their physical or mental health (40%), family finances (35%), and physical or mental health of family and friends (13%). Access to reliable internet and a quiet space to work that is conducive to learning also factored into the decisions of undergraduates to enroll if Cornell taught all courses remotely; 49% of those “not likely” to enroll in a remote fall semester are also “very concerned” about reliable internet access and 46% of those “not likely” to enroll to a remote fall semester are “very concerned” about access to a quiet space conducive to learning. Concerns about reliable internet access and a quite space conducive to learning were greater among for underrepresented minorities, those students on financial aid, and first-generation students compared to non-URM students, those not on financial aid students, and students who are not first generation in their family to go to college.

Principles and constraints that informed the discussions and deliberations related to the calendar options are listed below.

#### **Calendar Options Principles**

1. Protect the health and safety of our Cornell and broader Ithaca communities.
2. Continue to deliver excellent instruction and learning opportunities across a broad diversity of disciplines.
3. Provide opportunity for on-campus/in-person instruction for all students.
4. Avoid risks associated with student travel and flu season.
5. Allow extra time for move-in to test and clear students as they move back to campus.
6. Ensure students are able to satisfy requirements for graduation and degree progression.

7. Promote flexibility and choice for instructors and students.
8. Provide a combination of online, hybrid, and in-person courses (with all courses being accessible remotely).

### Calendar Option Constraints

1. A standard term must be between 14-21 weeks (inclusive of finals). A term may contain shorter modules as long as they fall within the start and end date of the term.
2. Must have at least 30 weeks of instruction for the academic year across two standard terms. Any week with just one day of academic activity counts as a week.
3. Spring and summer terms cannot overlap. Delaying the end of the spring term is conditional on our ability to: (a) move commencement; and (b) either shorten summer session or shift its dates without adversely impacting the Fall '21 term.
4. It is realistically not an option to starting the fall term earlier than usual, as it would not allow sufficient time for all of the preparations and modifications needed to welcome students back. (For example, COVID-19 testing logistics would have to be in place and 10-12 weeks are needed for the Registrar to create the Course Roster and Financial Aid also needs significant lead time to calibrate Financial Aid packages). Faculty would also have less time to develop new online courses.
5. Adding a full summer term introduces numerous challenges for faculty with K-12 children. Increases demands on teaching; complicates sequencing of courses; Conflicts with experiential learning opportunities for students (e.g., internships, research, etc.). Switching to a trimester system would be a “foundation-level” change that would necessitate changes in every aspect of enrollment and registration, financial aid, and reporting. It does not appear to be a viable option at this time.
6. Breaks provide valued stress relief but introduce significant public health risks if community members travel. In calendar options in which breaks have been eliminated while students are in residence, it may be possible to add single “no class” weekdays at different points in the semester.

### Survey and Focus Group Data

In addition to the Town Halls, a number of surveys and focus groups were implemented to garner input directly from faculty and students (graduate and undergraduate). A reactivation of teaching survey was conducted of faculty as well as a Dept. Chair survey (Table 3). For students, a graduate and professional student survey was conducted across the C-POT, C-TRO, and C-ROR committees (Table 5). Sixteen focus groups with undergraduates were conducted along with a survey of undergraduates that garnered over 10,000 student responses. The overall tone of the comments provided on the faculty reactivation of teaching survey revealed an overwhelming expression and understanding of the unprecedented situation facing Cornell as well as an appreciation for the complicated planning decisions facing senior administration, and concerns for the welfare of colleagues, students, and the Ithaca community. The survey also revealed a willingness to adapt traditional courses to online formats.

**Table 5. Surveys, Focus Groups, Comment Pages, and Hackathons related to reactivation.**

	Participants/Responses (n)
<b>FACULTY</b>	
Dean of Faculty C-TRO comment webpage*	43
Dean of Faculty Calendar Option comment webpage*	908
Dean of Faculty Comment Page on Teaching and Personal Risk	284
University Reopening Committee webpage*	110

Faculty Reactivation of Teaching Survey	1,573
Dept. Chair Survey	100+ departments
<b>STUDENTS</b>	
Student Restart Survey (graduate and undergraduate)	10,365
Graduate and Professional Student Survey (C-POT & C-TRO)	2,209
Undergraduate Student Survey	4,661
Weekly Meetings with Greek Tri-Council Leadership	3
Student Leader Focus Group on Social Norming (May 19)	20
Professional Fraternity Council Focus Group (May 22)	5
Various Student Organization Focus Groups (May 26)	5
Various Student Organization Focus Group (May 28)	10
Student Leader Focus Group on Social Norming (May 29)	20
Various Student Organization Focus Group (June 1)	8
Student Leader Focus Group on Social Norming (June 3)	20
Various Student Organization Focus Group (June 5)	5
Student Athlete Focus Group (June 8)	10
Student Leader Focus Group on Social Norming (June 10)	20
Multicultural Greek and Fraternal Council (June 11)	8
College of Human Ecology: Humecathon (May 29)	45
ILR School: ILR Ideas Lab (June 9)	45
Academic Focus Group (AAP)	7
Academic Focus Group (HumEc)	7
Academic Focus Group (CALS)	7
Academic Focus Group (ENG)	7
Focus Group with Intergroup Dialogue Project Facilitators	10
<b>EXTERNAL</b>	
Landlords and property managers (May 18)	12
Landlords and property managers (May 28)	12
Landlords and property managers (June 11)	12

\*While these webpages were hosted by the Dean of Faculty, they received comments from both faculty and students.

### Behavioral Scientists and COVID-19 Messaging

A team of behavioral scientists (Table 6) were convened to draw on faculty expertise in social norm interventions, social influence, motivation, social messaging, and compliance, so that the C-TRO recommendations are informed by evidence of what would be most effective in supporting positive public health behaviors. Under any re-opening scenario, we will need to implement and enforce new rules and remain in compliance with federal, state, and local orders. However, we cannot just rely on formal rules and sanctions. We want community members to internalize the need to abide in positive, safe behaviors to protect each other and our community. We want to help students make smart choices. This sub-group developed a document titled *“CU Safe: Messaging Ideas to Minimize Harm While Reopening Cornell University During the COVID-19 Pandemic”* (see Appendix). This document lays out behavioral expectations and messages that could be utilized in a communications campaign. We recommend that messaging be informed by the Skorton Center’s *“COVID-19 Behavioral Influence Strategies”* plan and *“CU Safe: Messaging Ideas to Minimize Harm While Reopening Cornell University During the COVID-19 Pandemic”* given the complementarity and evidence-based strategies present in both that could inform a communications campaign for faculty, staff, and students (see Appendix).

**Table 6. Behavioral Scientists sub-group of the Committee on Teaching Reactivation Options (B)C-TRO, which authored the document, “CU SAFE: Messaging Ideas to Minimize Harm While Reopening Cornell University During the COVID-19 Pandemic.”**

Name	Title
Neil Lewis	Assistant Professor of Communication and Social Behavior and Assistant Professor of Communication Research in Medicine, Division of General Internal Medicine, Weill Cornell Medical College
Drew Margolin	Associate Professor of Communication
Vanessa Bohns	Associate Professor, Department of Organizational Behavior (ILR)
Poppy McLeod	Professor and Chair of the Department of Communication (CALS)
Diane Bailey	Geri Gay Professor of Communication
Alice Lee	Assistant Professor, Organizational Behavior
Brian Lucas	Assistant Professor, Organizational Behavior
<b>C-TRO Committee Members</b>	
Shorna Allred	Associate Professor, Center for Conservation Social Sciences, Depts. of Natural Resources & Global Development
Joe Anderson	President, Student Assembly
Rebecca Harrison	Ph.D. Candidate, Science and Technology Studies
Patricia Wynn	Vice President, Student and Campus Life
Lisa Nishii	Vice Provost for Undergraduate Education and Professor of Human Resource Studies
Kim Weeden	Jan Rock Zubrow '77 Professor of the Social Sciences, Director of the Center for the Study of Inequality

## Summary of Hackathons

### College of Human Ecology: HumEcathon

The College of Human Ecology HumEcathon took place on May 29<sup>th</sup>, 2020. This event was organized by the Dean's Undergraduate Advisory Council and led by Isabella Harnick ('21). The topic was "Reactivating College Campuses for In-Person Teaching". A total of 45 students participated across 11 teams, who chose one of six subtopics: Virtual Learning, Teaching, The Academic Calendar, Student Connection during Social Distancing, Mental Health, and Housing and Dining. Vice Provost Nishii kicked off the event by introducing the topic and its importance. Teams consulted with relevant staff and faculty experts (such as CHE facilities director Kristie Mahoney) during their deliberations. After working in their teams for two hours, each team provided a "lightening round" presentation, as well as a recorded 5-minute slide show. The HumEcathon was judged by Sr. Associate Dean Frey, Deans Fellow Casasola, and Dean Dunifon.

The Judge's choice award went to a Hannah Bidegare-Curtis, Neri Yun, Eniola Oladipo, and Rebecca Woodie for their submission focused on **student mental health**. Creative ideas included the distribution of care kits for those in quarantine (physical kits for those on campus and a virtual kit for those learning from home). These kits would include snacks, a mask, a journal, and information about health-related services. The team also developed a student mental health advocates program to normalize seeking support, as well as to facilitate access to and increase the reach of existing mental health services. Finally, this team designed solidarity wristbands to be worn on campus to express support for social distancing, as well as solidarity with those who may be sick or under strain.

Rushil Shah, Tushar Khan, and Amrit Hingorani won the people's choice award for their virtual learning proposal, with the tagline "When can I CU Again?" This team focused on **virtual teaching**—what works well and what does not (suggesting that fewer exams and more project-based learning is best-suited for virtual teaching, for example). They had some great



ideas of how to use project-based teaching effectively in a virtual setting, proposed creative virtual extracurricular activities (such as virtual cooking classes and fashion shows), proposed hiring additional TAs to allow for more small group in person instruction, and suggested a bi-weekly check in model that professors could use when teaching virtually. This team also proposed using a program called REMO for virtual activities and engagement during orientation, which allows students to choose and move between groups, virtually.

Other ideas that came out of the HumEcathon are listed below:

**Teaching in person:** for lab classes TAs could do demos online rather than in the lab; supplies for experiments pre-measured to avoid contact among many people; having students who are all taking the same series of classes stay in the same classroom while the professors rotate between them; the use of study buddies to create small groups that could safely meet in person within a larger class; increasing the use of online polling in classes in order to reduce talking and allow for participation among both in-person and remote students; ways to reduce touchpoints and exposure in classrooms (such as giving students supplies to clean their own desk area when entering a classroom, stickers on the floor indicating where students can line up to get into a classroom, and adequate spacing between the faculty and the students).

**Student life:** use Cornell's existing events registration system to know when events are happening, to control the size, and to find out who attended.

**Maintaining health:** a mandatory course on social distancing/public health at the start of the year; student-led contract tracing team; Cornell Trace, in which students scan a QR code when entering any building; monitoring the nature and volume of calls to Cornell Health to get an early indication if a spike in illness is occurring; a take home kit with a mask as well as instructions and necessary supplies for safely washing it; a COVID hotline for questions and concerns; Wellness Wednesdays with a focus on physical and mental health

### **ILR School: Ideas Lab for Reopening**

Teams were asked to consider the following prompt and questions:

College campuses, by their very nature, bring people together for shared learning experiences and social interactions to create a community of scholars. Social distancing practices, required to ensure personal safety, create unique challenges in such an environment.

The teams should consider the following questions:

- What challenges does social distancing present for the student population? The campus community?
- What responsibility do students have for protecting peers, faculty and staff, and the community of Ithaca against the spread of disease?
- How can students create and encourage socially responsible behaviors?
- What does this look like in an academic setting? Social setting?
- How might students engage with the physical space on campus? Ives Hall?
- How should new social norms be developed and adopted?
- How should these new social norms be communicated?
- What should a social contract include? What should be the terms of a social contract?
- How should students respond to non-adopters?
- What should the consequences be for non-adopters?
- What would best practices look like for encouraging social responsibility?

Teams then presented recommendations which were considered in preparing this report.

## Appendix 4: Behavioral Modifications Policy

All activities on campus will take place against the backdrop of restrictions imposed by New York State as a part of the reopening approval process. Requirements for activities other than instruction are already published as part of the Phase 2 guidelines ([Link to Phase 2 Guidance](#)). Additional guidance regarding requirements for resuming instructional activities is expected in June and July. Compliance with those requirements will be mandatory and would take precedence over the following recommendations (unless Cornell has decided to impose stricter requirements than those in the guidelines).

Cornell's authority to impose behavioral restrictions on members of the campus community depends on the target constituency:

- For students, enforcement is best predicated on building access and/or use of their NetID. Enforcement will be routed via a contractual agreement, not the Campus Code. Additional details, including procedures for determining violations and imposing sanctions of the contractual agreement and who will staff those processes, need to be worked out by the Division of Student and Campus Life and University Counsel. Cornell has the broadest authority and ease of enforcement over students living in residence halls. The University has broad authority but will face enforcement difficulties over students living off campus who want to attend classes in person or use University facilities. Cornell will have little authority over students living off campus and taking classes online only.
- For faculty and staff, Cornell has fairly broad authority over on-campus behavior of faculty and staff, but that authority is subject to a changing regulatory environment. The University will have to bargain with unions over most of the behavioral limitations discussed below. Faculty and staff who work remotely will not be subject to these restrictions.
- For contractors and visitors, additional policy development is needed to determine who the University will allow on campus and under what circumstances. In general, Cornell can impose the same requirements on these individuals as it can place on students, faculty, or staff on campus.

We believe that inspirational, effective, and persuasive education will be a critical component of any behavioral modification program, especially given the difficulty of monitoring certain segments of the campus community. Units should work with University Communications over the summer to develop cohesive and effective communication campaigns relevant to their roles within the University.

Recommended as Mandatory		
Population & Activity	Detailed Recommendation	Notes
ALL: SARS CoV-2 initial prevalence testing	Testing prior to and/or upon return to campus, including a HIPAA waiver to allow for internal data sharing at Cornell for epidemiological purposes	Assumes validated saliva testing is available. If not, only initial prevalence testing and testing for cause is likely to be successful. Require a HIPAA waiver to allow for internal data sharing at Cornell
ALL: SARS CoV-2 surveillance testing	Participation in surveillance testing program	Require a HIPAA waiver to allow for internal data sharing at Cornell
ALL: Contact tracing	Must cooperate with TCHD and Cornell Health contact tracing efforts in a timely manner	
ALL: Syndromic self-surveillance	Must be filled out on a daily basis by individuals coming to a Cornell facility.	In broad form, required by NYS regulation. Details currently being worked on by HC Subcommittee and others at Cornell.

ALL: Face masks	Required in all University facilities, including workplaces, classrooms, dining facilities (unless eating), and residence halls (except when on assigned floor)	In broad form, required by NYS regulation.
ALL: Social distancing	Maintain >6 feet separation whenever possible in all University facilities	In broad form, required by NYS regulation. Reduce seating capacity in dining halls and use reservation system to prevent overcrowding
Staff: Remote work	Employees who may work effectively on a remote basis should continue to do so for the foreseeable future. Meetings should be held by Zoom or phone	Likely to be strongly encouraged or required by NYS regulation.
On-campus resident students, Isolation & quarantine	Any individual testing positive, and their roommates/ suitemates, may be removed and isolated as per TCHD. Other students on the floor may be quarantined for fourteen days as per TCHD.	Consider grouping students in residence halls by major/program to minimize academic impacts and promote social bonding. Isolation and quarantine are under the purview of Tompkins County Health Department (TCHD).
Off-campus students: Isolation & quarantine	Same rules as for on-campus students, except entire apartment or group residence may be isolated as per TCHD.	Cornell should attempt to provide sufficient quarantine/isolation space for off-campus students who cannot do so effectively in their residence, although it is not legally required, with priority given to actively symptomatic individuals. Isolation and quarantine are under the purview of Tompkins County Health Department (TCHD).
All students: hosting social gatherings	Students are prohibited from hosting social gatherings that violate New York State guidelines (i.e., related to maximum size, distancing requirements, wearing masks).	Social hosts will be held accountable. Details related to reporting and sanctioning procedures have yet to be finalized.
ALL: flu shots	Strongly encouraged for all populations, along with an educational campaign stressing need for flu shots in particular in this year.	If desired, could be legally required (with exceptions for medical and religious exemptions).
ALL: Opt-in to RAVE and CornellALERT	This should be mandatory for all Cornell students, faculty and staff	This is a mechanism for receiving emergency messages.
<b>Recommended for Further Consideration</b>		
All faculty, staff, and students: use of a contact tracing assistance phone app	Use of any app should be optional. Any selected app would ideally be an industry standard (not a proprietary Cornell app) and should be protective of personal privacy and location data.	There is not a strong trend in higher education in favor of using these apps. Legislation has been introduced that would restrict the use of such apps, particularly those which employ location tracking.

## Appendix 5: Measuring the Prevalence of COVID-19 Among Students Already in Ithaca and Those Returning to Off-campus Housing

Students returning to off-campus housing have much more autonomy over when they return; however, they too need to be tested prior to the start of the academic year. Students who are already in Ithaca should ideally be tested prior to the arrival of returning students so that more accurate baseline prevalence can be established. Historically, the university has not overseen any aspects of students' return to off-campus housing, and the availability of accurate information about where students live, and their local contact information has been dependent on students' willingness to update this information in student essentials. For the 2020-2021 academic year, having an up-to-date registry of students' local addresses, contact information (cell phone number), and emergency contacts (parents or guardian and at least one close friend or roommate) will be essential, and all students who are in Ithaca – whether in on- or off-campus housing – will be required to participate in our testing program and follow our re-entry requirements.

Over the summer, a series of re-entry registration check-ins with students will be needed to develop an accurate list of the students who will be returning to off-campus housing in Ithaca or have already returned. A series of gating mechanisms should be put in place to ensure that students register their local presence and address and are tested (and quarantined if necessary) in a timely manner.

### **Recommended Implementation next steps:**

- Develop a timeline for summer check-in with students that is coordinated with key steps they will need to complete for enrolling in fall courses; this coordination will create the necessary “friction” to ensure compliance. Key steps may include: (1) reporting whether they are currently in Ithaca (and then being tested if they are) prior to being given access to the revised course roster; (2) publishing the revised course roster so that students can make final decisions about their plan for the fall depending on the modality (in-person, hybrid, online) of the courses in which they intend to enroll; (3) a follow-up check-in with students to capture any changes in intentions to return to Ithaca and/or students who have returned to Ithaca since step #1 and need to be tested, with clear guidance that students who fail to provide updates and be tested as appropriate will be blocked from pre-enrolling in courses; (4) after students pre-enroll in courses, we will be able to detect students who have registered for in-person or online courses but have not yet reported intentions to return to off-campus housing; and (5) students who have not yet returned to Ithaca will be asked to register their intended arrival data and mode of transportation and be given instructions on where to get tested immediately upon arrival. Throughout this process, students will receive clear communication about why it is essential that they be tested and warned that failure to comply will result in their NetID access to Canvas courses being blocked.
- An important consideration will be clearly differentiating between students who will be participating in remote instruction from a location outside of the Ithaca area and therefore are not expected to follow our testing protocols.

## Appendix 6: Move-in Protocol

A key factor in controlling the spread of the virus will be identifying new cases as individuals enter/re-enter the community. Therefore, the move-in process needs to be carefully orchestrated to reduce, as much as possible, interaction with individuals outside of the community and congestion in and out of the dorms as families drop off their children and their luggage. While conditions may alter this view, our current recommendation is that all students be tested upon arrival into the community and quarantined or isolated until they are cleared by Cornell Health.

Our goal is to avoid long quarantine periods upon arrival whenever possible both because it is a lonely way to start one's academic year and because of the financial implications; however, depending on whether students are able to get tested and self-quarantine two weeks prior to departing for Ithaca and depending on their mode of transportation, some students may inevitably need to be quarantined for longer periods and be re-tested more times than other students.

There are currently two move-in options being considered for ***students returning to on-campus housing***:

	<b>Option A (assumes 24-hour testing)</b>	<b>Option B (assumes 2 to 4-hour rapid testing)</b>
Arrival location	Day 1 arrivals = testing sites on campus, then assigned dorm room; Day 1-8 arrivals test on campus then transport to hotel *	Testing site(s) first, then assigned dorm room if negative or hotel if positive
Protocol for families	Not allowed to enter residential halls or stay with student in hotel	Not allowed to enter residential halls or stay with student in hotel
Location of first night of quarantine	Assigned dorm room for Day 1 arrivals. For remaining days, hotel after testing*	Hotel if positive, assigned dorm room if negative.
Arrival timing	4,000 students arrive on Day 1, are tested on campus, and taken to their assigned res hall room. Day 2, anyone who tested positive is relocated to isolation hotel room. 800 students arrive on Days 2, 4 and 6, are tested on campus, dropped off at a hotel to be quarantined for at least one night pending test results.	Students in doubles arrive two days apart to allow time for first student to be tested and either cleared or moved to hotel; Phasing determined by building and room type (single/double)
Total length of move-in	8 days	4 days
Testing location	Multiple campus locations (e.g., Crescent Lot), ideally, drive-throughs	Multiple campus locations (e.g., Crescent), ideally, drive-throughs
Location of first night of quarantine	Assigned dorm room for Day 1 arrivals. For remaining days, hotel after testing*	Hotel if positive, assigned dorm room if negative.
Security of quarantine	Residential Life staff in the dorms. For Day 2-8 arrivals, built-in surveillance in hotels; anonymity of next-room neighbors may reduce temptation to meet other students	Residential Life staff will monitor the floors to ensure all students are remaining in their room overnight unless they need to use one of the restrooms; built-in surveillance for students isolated in hotels

Food	Delivered by Cornell Dining	Delivered by Cornell Dining
Factors impacting feasibility	Availability of needed hotel rooms and ability to test ~4000 on Day 1	Assumes availability of rapid testing (within 2 hours to 4 hours), with capacity to test 1600/day
Advantages	Financial savings; first wave of 4,000 students get to settle into their rooms right away, more reliable separation of students who arrive directly at hotel (Day 2 and after), lower risk of transmission	Separation of positive vs negative students upon arrival; capacity to quarantine for multiple days without worrying about arrival of roommate; all cleaning conducted by hotels.
Disadvantages	Longer overall move-in period; Per person, per night cost of ~\$100 after Day 1. Greater risk of students (who arrive on Day 1) mixing prior to being cleared because of shared bathrooms and temptation to meet floormates. Residential life team will monitor closely. Disruption of having to move Day 1 students who test positive. Difficulty of estimating # of nights needed; complexity of organizing transportation between hotels and dorms.	None, if rapid testing is available this is efficient and cost effective. The cadence would be Day 1, ½ of North Campus Doubles, ½ of South Campus Doubles, ½ of West Campus Doubles; Day 2, ½ of Program House Doubles, ½ of Program House singles, etc., working our way through the entire portfolio within 4 days with an “extra” day at the end for stragglers.
Luggage	Day 1: students move their own luggage in after being tested. Days 2 through 8, shuttles arranged to transport students and their luggage to and from the hotels and their assigned res hall room.	Students arrive with luggage to dorms

\*Up to 4,000 students will arrive on the first move-in day and move directly into their dorm rooms. There will be just one student for every room. On day 2, anyone with positive results will be moved to isolation hotel space and dorm rooms will be cleaned. On days 2, 4, and 6, 800 students will arrive on campus and be tested, after which they will drive to a hotel to be quarantined for at least one night until test results determine whether they can move into their dorm rooms or be moved to a separate hotel that will be set aside for isolation space (isolated students must be in separate hotel from quarantined students).

In either scenario, students will likely be limited to two suitcases and a backpack. This may increase their desire to shop at local stores when they first arrive, which carries its own health risks. Therefore, we will provide students with the option to pre-ship their luggage using Big Red Shipping and Storage, and will deliver these shipments to their dorm room for them prior to move in. The Cornell Store will also offer “Dorm in a Box” –reasonably priced items that students can choose from a menu of dorm necessities – that we can deliver to students’ rooms before they arrive.

We recommend that students receive a welcome package (including a reusable mask, thermometer, hand sanitizer) describing the next steps in their move-in protocol, available support resources, and virtual orientation activities (e.g., live-

stream movie events curated by Cornell Cinema, short videos introducing them to unique learning opportunities such as through Engaged Cornell, etc.).

**Recommended Implementation steps for move-in to on-campus housing:**

- The official start date and protocol for move-in will be determined by policies established by Residential Programs in collaboration with Cornell Health and informed by testing capacities in August.
- Over the summer, a series of re-entry registration check-ins with students will be needed to develop an accurate list of the students who will be returning to campus, from where, how, and into which dorm, so that a local schedule can be developed and communicated to students. Students who will be travelling to Ithaca by public transportation (plane or bus) will inevitably be exposed to greater risk of infection during travel and may need to be quarantined for longer than one night so that they can be retested a few days after arriving. These students should be invited back to campus before students who will be driving straight to campus by car. Transportation from the airport and the Ithaca bus station to hotels will be arranged by the university.
- Continue conversations with area hotels and sign contracts once the exact dates of move-in have been established.
- A concern identified by the committee is that with a longer than usual move-in period, students will have more free time before the first day of instruction, thereby enabling more socializing which could set risky precedents. Orientation programming is needed not just for incoming first year students but also for re-norming returning upper-class, professional, and graduate students to prepare for campus life during this pandemic.

**Recommended Implementation steps for move-in to off-campus housing:**

- Develop a timeline for summer check-in with students that is coordinated with key steps they will need to complete for enrolling in fall courses; this coordination will create the necessary “friction” to ensure compliance. Key steps may include: (1) reporting whether they are currently in Ithaca (and then being tested if they are) prior to being given access to the revised course roster; (2) publishing the revised course roster so that students can make final decisions about their plan for the fall depending on the modality (in-person, hybrid, online) of the courses in which they intend to enroll; (3) a follow-up check-in with students to capture any changes in intentions to return to Ithaca and/or students who have returned to Ithaca since step #1 and need to be tested, with clear guidance that students who fail to provide updates and be tested as appropriate will be blocked from pre-enrolling in courses; (4) after students pre-enroll in courses, we will be able to detect students who have registered for in-person or online courses but have not yet reported intentions to return to off-campus housing; and (5) students who have not yet returned to Ithaca will be asked to register their intended arrival data and mode of transportation and be given instructions on where to get tested immediately upon arrival. Throughout this process, students will receive clear communication about why it is essential that they be tested and warned that failure to comply will result in their NetID access to Canvas courses being blocked.
- An important consideration will be clearly differentiating between students who will be participating in remote instruction from a location outside of the Ithaca area and therefore are not expected to follow our testing protocols.
- See below for more detailed move in information

## Appendix 7: Hotel Use for Isolation/Quarantine

Our committee recommends that, to the degree possible, Cornell contract with area hotels for quarantine and isolation space rather than seat aside on-campus housing for several reasons: it is more economical to do so; our need for quarantine space will not be fixed over the course of the academic year; doing so allows us to separate infected and potentially infected individuals from other students on campus; local hotels need the business; and built-in surveillance systems provide the additional benefit of helping us ensure that students do not break quarantine.

Several area hotels are interested in contracting with Cornell to serve as quarantine or isolation spaces. Staff in Student and Campus Life have received specific quotes from hotels for the following scenarios.

1. Move-In (dates TBD)
2. Move-In + One Month
3. Fall semester

	<b>Example Residences</b>	<b>Total # of beds under regular occupancy (includes RA beds)</b>	<b># of Isolation beds possible</b>
Graduate	Hasbrouck (current Isolation units)	8	8
Undergrad	Residence 1	305 (9 RA)	80
Undergrad	Residence 2	96 (4 RA)	48
Undergrad	Residence 3	57 (2 RA)	17
		466 (15 RA)	153

\*Total # of beds (466) also represents total number of displaced students.

For every 1 quarantine bed created in residential housing, approximately 3.33 inventory beds are lost.



## Appendix 8: Accommodations and Options for Graduate Students

The following list identifies processes for Cornell to follow regarding various scenarios for graduate students related to COVID-19 concerns vis-à-vis academic progress and engagement, including coursework, dissertation and thesis research, and assistantship responsibilities. The processes below will be used to discuss and determine appropriate accommodations (via Student Disability Services) or other options (via the campus offices described below). *A guiding principle is to strive to foster graduate students' abilities to complete their degrees.*

**Possible Accommodations (disability/health-related) or Options for Graduate Students May Include the Following, as Appropriate for the Situation (this is not an exhaustive list):**

- Remote/online learning, teaching, and/or research opportunities.
- Revised responsibilities (e.g., revised learning assignments; pivoted research - e.g., change from lab-based research to computation-based research; revised assistantship duties with same funding source).
- Revised funding source (e.g., change from TA to RA/GRA; change to different TA with different teaching responsibilities).
- Additional PPE – personal protective equipment – provided by the university/department/PI (e.g., N95 masks, protective gowns).
- Being on campus in different shifts during de-densified time periods.
- Rescheduling on-campus duty times to enable getting to campus in a way that avoids public transportation (or uses public transportation, depending on what the barrier is).
- Issuing parking space close to location of academic activity if required to be on campus at non-standard times.
- Taking leave of absence (health leave, personal leave) from academic program.
- Etc.

Nature of Concern about Returning to Campus	Process (1) Related to coursework & academic research progress (2) Related to assistantship duties	Comments
<b>I: Personal health condition (physical health, mental health)</b>	<p>For (1) and (2): Graduate student contacts <a href="#">Student Disability Services</a> (SDS) to register, completing a <a href="#">Disability Self-Disclosure Form</a> and sharing <a href="#">documentation</a> as possible. The student will be assigned an <a href="#">SDS counselor</a>.</p> <p>If student disagrees with decision about accommodations/options, student should <a href="#">use established appeal process</a> for SDS.</p> <p><a href="#">If a faculty disagrees</a> with accommodation, Dean of Faculty and VP of SCL make final decision.</p> <p>If SDS determines accommodation is not warranted, SDS counselor will advise the student about what other office(s) on campus to consult for assistance (e.g., Graduate School).</p>	<p>Graduate students should not be discussing medical issues with instructors/supervisors/faculty advisors, nor should faculty members be deciding accommodations.</p> <p><i>Note:</i> Cornell cannot make blanket decisions like requiring all elevated-risk-for-COVID students to attend remotely. Cornell may advise that at-risk students stay home.</p> <p>University leadership has said: Faculty, TAs, staff, and students in elevated risk categories would be advised not to attend in-person classes.</p> <p>SDS may consult possible list of accommodations above and develop others.</p>

		<p>In developing accommodations, SDS will consult with academic program/faculty advisor/ instructor/ assistantship supervisor as relevant to the situation.</p> <p>Assistantship fund source continues to pay stipend, unless SDS determines accommodation to perform essential assistantship responsibilities is not possible.</p>
<p><b>II: Tested positive for COVID-19 or contact tracing required by Tompkins County Health Department (TCHD) to quarantine for up to 14 days</b></p>	<p>For (1) and (2): When confirmed by TCHD, student must be allowed to remain quarantined for required time.</p> <p>University provides accommodations via SDS as above.</p>	<p>Graduate students should not be discussing medical issues with instructors/supervisors/faculty advisors, nor should faculty members be deciding accommodations.</p> <p>Student may continue to engage remotely, for courses and research/scholarship, as personal health allows (e.g., if positive but asymptomatic).</p> <p>Student cannot be compelled to conduct assistantship duties while in mandated quarantine.</p> <p>Assistantship fund source continues to pay stipend while in quarantine.</p>
<p><b>III: Vulnerable health individual in household.</b></p> <p>Concerned about infecting other family member/etc.</p>	<p>For (1) coursework, academic research: (A) Student discusses with faculty advisor (B) If not resolved, then discuss with faculty Director of Graduate Studies. (C) If not resolved, then discuss with Graduate School Associate Dean Jan Allen. (D) If not resolved, student may invoke <a href="#">Grievance Procedure</a></p> <p>For (2) assistantship duties: (A) Student discusses with assistantship supervisor. (B) If not resolved, then discuss with faculty Director of Graduate Studies. (C) If not resolved, then discuss with Department Chair of stipend appointment department. (D) If not resolved, discuss with Deans Office in college in which department is located. (E) If not resolved, discuss with Graduate School Associate Dean Jan Allen. (F) If not resolved, student may invoke <a href="#">Grievance Procedure</a>.</p>	<p>See possible options from list above.</p> <p>Assistantship fund source continues to pay stipend while process occurs. Assistantship stipend may terminate at conclusion of process if assistantship duties cannot be conducted and/or funding source (e.g., sponsored funds) does not allow stipend payment when duties are not conducted.</p>
<p><b>IV: General concerns</b></p>	<p>If related to personal health, contact SDS as above.</p> <p>For (1) coursework, academic research:</p>	<p>See possible options from list above.</p>

<p><b>about returning to campus in the midst of a global pandemic.</b></p>	<p>If not related to personal health:  (A) Student discusses with faculty advisor  (B) If not resolved, then discuss with faculty Director of Graduate Studies.  (C) If not resolved, then discuss with Graduate School Associate Dean Jan Allen.  (D) If not resolved, student may invoke <a href="#">Grievance Procedure</a>.</p> <p>For (2) assistantship duties:  If not related to personal health:  (A) Student assistantship supervisor.  (B) If not resolved, then discuss with faculty Director of Graduate Studies.  (C) If not resolved, then discuss with Department Chair of stipend appointment department.  (D) If not resolved, discuss with Deans Office in college in which department is located.  (E) If not resolved, discuss with Graduate School Associate Dean Jan Allen.  (F) If not resolved, student may invoke <a href="#">Grievance Procedure</a>.</p>	<p>Assistantship fund source continues to pay stipend while process occurs. Assistantship stipend may terminate at conclusion of process if assistantship duties cannot be conducted and/or funding source (e.g., sponsored funds) does not allow stipend payment when duties are not conducted.</p>
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## Appendix 9: Proposed 2020-2021 Academic Calendar

### Fall term attributes:

- Begins the week before Labor Day; teach through Labor Day
- 2 weekdays off in the semester – proposed but not finalized
- 8 days of in-person “semifinals” prior to transitioning to online instruction
- Transition to online after Thanksgiving
- Term ends on 12/21; number of days for final assignment deadlines and finals TBD

Week 1	8/30/2020	9/5/2020				TS			
Week 2	9/6/2020	9/12/2020		Labor Day					
Week 3	9/13/2020	9/19/2020							
Week 4	9/20/2020	9/26/2020							
Week 5	9/27/2020	10/3/2020							
Week 6	10/4/2020	10/10/2020					Day off		
Week 7	10/11/2020	10/17/2020		Indigenous					
Week 8	10/18/2020	10/24/2020							
Week 9	10/25/2020	10/31/2020							
Week 10	11/1/2020	11/7/2020							
Week 11	11/8/2020	11/14/2020				Veterans			SD
Week 12	11/15/2020	11/21/2020	SD	SD	semifinals	semifinals	semifinals	semifinals	semifinals
Week 13	11/22/2020	11/28/2020	semifinals	semifinals	semifinals	Move	TNKS GVG	Move	Move
Week 14	11/29/2020	12/5/2020	Move						
Week 15	12/6/2020	12/12/2020							
Week 16	12/13/2020	12/19/2020						Finals	Finals
Week 17	12/20/2020	12/26/2020	Finals	Finals					

### Spring term attributes:

- Delayed start of 2/9
- End the weekend after Memorial Day (one week after Ithaca College)
- Option to have a full residential semester – but if pandemic conditions force us to delay student move-in, we can start online and pause at any point later in the semester to move students on to campus
- Weekdays off and/or a “no assignments” week TBD
- Start of summer session delayed by one week to maintain full 12-week session, with slight delay to start of fall 2021 term

SPRING 2021									
Weeks of Instruction: Standard 17 weeks; (hopefully) all residential									
Program Weeks	Start Date	End Date	U	M	T	W	R	F	S
Week 1	2/7/2021	2/13/2021			TS				
Week 2	2/14/2021	2/20/2021							
Week 3	2/21/2021	2/27/2021							
Week 4	2/28/2021	3/6/2021							
Week 5	3/7/2021	3/13/2021							
Week 6	3/14/2021	3/20/2021							
Week 7	3/21/2021	3/27/2021							
Week 8	3/28/2021	4/3/2021							
Week 9	4/4/2021	4/10/2021							
Week 10	4/11/2021	4/17/2021							
Week 11	4/18/2021	4/24/2021							
Week 12	4/25/2021	5/1/2021							
Week 13	5/2/2021	5/8/2021							
Week 14	5/9/2021	5/15/2021							
Week 15	5/16/2021	5/22/2021						Slope Day?	SD
Week 16	5/23/2021	5/29/2021	SD	SD	Finals	Finals	Finals	Finals	Finals
Week 17	5/30/2021	6/5/2021	Finals	Finals	Finals				Commencement
Week 18	6/6/2021	6/12/2021	Commencement						

## Appendix 10: Teaching Modalities

	<b>In-person</b> (with remote access into classroom for students off-campus)	<b>Fully Online</b>	<b>Hybrid</b>
Where is the instructor?	In the classroom	Anywhere (Online)	In the classroom for in-person portions
Where are students?	In the classroom	Anywhere (Online)	In the classroom for in-person portions; online for the rest
How will students off-campus participate?	Instructor provides remote access to classroom (e.g., video access) throughout semester*	Same as students on campus (online)	Online for online portions, remote access to in-person portions
Students in Quarantine	Same as students who are off-campus	Can continue participating online with other students	Remote in for in-person portions, participate online for other
Where would class discussions take place?	In the classroom (and remotely/online for off-campus students)	Online	Flexible (e.g., discussions might be in-person while lectures are online)
Assessment alternatives	In-person or take-home	Online if possible, with option for in-person exam if deemed critical	Flexible
Technology	A/V capture of in-person classroom teaching (will require quality mic and Zoom)	Zoom, Panopto, Kaltura, etc.	Mix
ADA guidelines	Auto-captioning options for video lectures SDS-identified accommodations	Captioning Best efforts at PDF remediation	Auto-captioning options for video lectures SDS-identified accommodations

\*A small set of courses that require hands-on access to special facilities (e.g., labs, studios) may be exempt from providing full-semester remote access into the course (subject to approval by relevant dean) if learning outcomes cannot be achieved to satisfaction remotely. However, more limited remote access or other accommodations will need to be provided for quarantined students who are enrolled in the in-person course

## Appendix 11: Analysis of Classroom Capacity

We compiled an inventory of rooms, grouped them into ten buckets based on estimated safe capacity, and used F19 data to estimate the demand for rooms in each bucket. We then estimated whether we have a surplus of rooms under different assumptions that relate to teaching in the 4:30-7:30 Free Time Zone (FTZ) and having longer gaps between meeting times. The following table displays the “input data” data and the results of key sub-computations. *The bottom line is that (1) we can manage but will probably have limited teaching in the FTZ, (2) faculty will have to adjust to new constraints, (3) room scheduling will be as tight around the clock as it is now during “prime time”, and (4) without taking advantage of suitable teaching space that is not currently used for instruction, there would be insufficient space to handle demand.*

### Data and the Calculations

Room Size	Classroom-Hour Demand			Total Demand	Rooms			Room Surplus (Size Specific and Actual)					
	Small	Med	Large		A	B	Total	Long (40h)		Current (36.6h)		Short (33.3h)	
1-to-5	519			<b>519</b>									
6-to-10	1242			<b>1242</b>	70	41	111	79	143	77	123	73	93
11-to-15	2106			<b>2106</b>	33	31	64	11	64	6	46	0	20
16-to-20	1776			<b>1776</b>	58	26	84	39	53	35	40	30	20
21-to-25	948			<b>948</b>	17	10	27	3	14	1	5	-2	-10
26-to-30	600	118		<b>718</b>	10	6	16	-2	11	-4	4	-8	-8
31-to-35	507	120		<b>627</b>	10	4	14	-2	13	-4	8	-8	0
36-to-40	334	69		<b>403</b>	4	2	6	-5	15	-6	12	-7	8
41-to-45	343	44		<b>387</b>	13	3	16	6	20	5	18	4	15
46-to-50	205	189	154	<b>548</b>	22	6	28	14	14	13	13	11	11

### Room Size

- A “21-to-25 room” has a maximum safe capacity of 21, 22, 23, 24, or 25.
- A room that has a safe capacity of X would typically have a normal capacity of around 6X.

### Classroom Hours and Total Demand

- We identify three class sizes: Small (1-50), Medium (51-100), and Large (>100).
- Each class demands a certain number of “classroom-hours”. Thus, a class that meets three times a week for 50 minutes demands 2.5 classroom-hours.
- An entry in the small, medium, or large columns reflects the total classroom-hour demand for a given room size. Thus, for small classes the total classroom-hour demand for 21-to-25 rooms is 948.
- Total Demand for given room size is the sum of the small, medium, and large classroom-hour demands.

### Surplus Computation

Whether or not the inventory of rooms can accommodate classroom-hour demand depends on the number of hours per week that are available for teaching. We identify three possibilities:

- Current = 36.6 hours. This is based more or less what we have now. Eight 50-minutes daytime slots during any weekday and two 50-minute evening slots on Mondays and Wednesdays.  $((8 \times 50 \times 5 + 2 \times 50 \times 2) / 60 = 36.6.)$
- Long = 40.0 hours. Same as Current but adds a 50-minute slot in the 4:30-7:30 Free Time Zone (FTZ) on Mondays, Tuesdays, Wednesdays, and Thursdays.

- Short = 33.3 hours. Same as Current but with only seven 50-minute daytime slots.

The “surplus computation” for given room size starts out as follow

$$\text{Room Size Surplus} = (\text{Total Number of Rooms}) - (\text{Total Demand} / \text{Hours Open for Business})$$

The Room Size Surplus is reported in **green**. Noting that in practice the surplus for a given room size includes the surpluses for all larger room sizes we obtain the actual surplus which is reported in **red**. (This reflects that a classroom of size 31-35, can be used, for example, to accommodate a class of size 26-30.) These are the key values in the table. A negative entry signals “insufficient availability”.

### **Notes**

#### **Blank Cells in the Table**

We assume that any class meeting with an enrollment of 50-100, will either be limited in enrollment to 50, or else be reconfigured into sections that require half the previous size, and hence for class meetings of this size, there are only requirements for rooms with more than 25 seats in them. Similarly, for classes bigger than 100, we assume that the resulting classroom size could only effectively use the largest allowable classroom size, with 46-50 seats.

#### **Big Lectures with Multiple Sections/Labs**

A class with one large lecture and multiple sections, where each student attends lecture twice per week (say, for 75 minutes each lecture) and one of the sections each week (say, for 75 minutes) is accounted for in the following way. The “class meeting” of the lecture (with, say, 125 students) is treated as a large class meeting students and thereby contributes these 2.5 hours (that is, 150 minutes) to the cell with value 154. If there are 5 sections with 25 students, each of those class meetings contributes 1.25 hours (so a total of 6.25) to the cell with the value 948. From the survey of department heads, a significant fraction of the medium and large classes would have their lecture portions offered only online, and this fraction was used to determine the expected demand for classrooms to hold in-person lectures for these class meetings.

#### **75-minute Classes**

If we substitute the standard meeting times for Tuesday and Thursday with 75 minutes, we have 5 75-minute slots between 8am and 4:30pm, for a total of 375 minutes, instead of the 400 minutes usable from 8 50-minute classes. However, by adjusting the 75-minute time slots, this could be increased to 400 minutes, and hence using this value as the number of teachable minutes for any classroom between 8am and 4:30pm is a close approximation.

#### **Impact of 30% of Faculty not wanting to teach in person**

Although faculty not wanting to teach in person will diminish the demand for classrooms, it is unclear whether it wouldn’t work better from an educational point of view to still have the class meeting in person (possibly with a TA monitor, as was done in many zoom classes, to facilitate asking questions during the lecture). Hence, this net change in demand for classrooms will be less substantial. Furthermore, departments might try to align teaching assignments so as to have classes that would be online anyway taught by faculty that opt for delivering content remotely.

#### **Impact of 30% of students not wanting to attend in person**

Some students will not be able to attend in person, thereby decreasing the demand for classrooms. However, this will, on average, just decrease the size of the needed classroom. For classes of size more than 100, this effect is negligible; for classes between 50 and 100, this might increase the desire to have an in-class format, either by having the students attend remotely on alternate days, since a greater fraction of students could attend on each day. And for classes below 50, this just shifts the size classroom needed gradually to require a somewhat smaller room.

## Appendix 12: Classroom Scheduling

As we noted in the main report, the process of devising a course schedule that takes advantage of all available classroom resources should differentiate between interchangeable spaces (lectures, discussion sections, seminars), and the subset of class meetings for which special facilities are required. Departments will need to develop the schedule for special facilities, since the revised capacity of these facilities can only be understood locally. Our classroom scheduling process thus focuses on the portion of the schedule that uses interchangeable spaces.

1. A schedule implementation team will provide each department chair with a spreadsheet with all class meetings on the Fall 2019 roster and their enrollments.

The spreadsheet will include a row for every class meeting in F2019 for which a room was assigned, not including independent study, field, or and research class meetings. The columns will indicate enrollment in Fall 2019 and give a space for chairs to flag any class meetings for which that department is not the parent.

Chairs will decide, based on this information, whether they want their final allocation of rooms for courses of 50-100 based on the maximum course size of 46-50, or instead, if we should allocate based on using two classrooms of half that enrollment. (At this stage, chairs must select the same allocation strategy for all of their 50-100 student courses, but this will not constrain how the department distributes its allocation at the course level in a later step.)

Chairs can also indicate major curricular changes between F2019 and F2020 that would affect their final allocation in a meaningful way. For example, staffing shortages in F2019 or an unusual number of faculty leaves may have made their F2019 roster appreciably thinner than their planned F2020 roster.

This spreadsheet will also include a tentative allocation of classroom hours/week, visible to chairs, based on the department's F2019 use of rooms for lecture, discussion, and seminar meeting types. This tentative allocation will be computed as follows.

- For each class meeting in F2019 of a given size (1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41-45, and 46-50), we compute the total number of minutes of class time in classrooms with that current capacity under physical distancing.
- For class meetings with enrollments of larger than 100, we will compute the total number of minutes of class time in F2019 and multiply by  $\frac{1}{3}$ , and then add this product to the total minutes for the 46-50 classroom bucket. This fraction is based on the committee's preliminary survey of chairs, which indicated that about  $\frac{1}{3}$  of the 100+ person courses in responding departments would be either split into independently taught sections or split into groups of students that alternate attending in person and online throughout the week. The survey indicated that the remaining  $\frac{2}{3}$  of class meetings of that size would likely be online only.
- For class meetings with enrollments between 50 and 100, we again multiply the total number of minutes by  $\frac{1}{3}$ , and (depending on the selection made for the department) either add this quantity to the allocation for classrooms of adjusted size 46-50, or add twice that number of minutes for the allocation of classrooms of half that size. For example, for 300 total minutes for class meetings of size 71-80 students, a department would either receive 100 minutes for a classroom of size 46-50, or 200 minutes for classrooms of size 36-40.

Chairs will have a hard and fairly short deadline to respond with corrections to our roster and major concerns about disparities between F2019 and F2020, as well as substantial differences between their responses indicated to the earlier survey relative to the aggregated response. We recommend 3 business days.



2. Based on these corrected F2019 data, the implementation team will determine a revised allocation, based on a preliminary estimates of classroom availability for each range of class sizes. This will likely just be a small rescaling of the original allocations, to ensure overall feasibility.

Because the  $\frac{1}{3}$  multiplier for large courses is based on aggregate results from a chair's survey (and some large departments didn't answer the survey), the revised allocation will consider the feedback we get from departments on how they prefer to manage their 50+ student courses.

3. The implementation team will distribute the revised classroom allocations to chairs, along with their complete F2020 rosters. In conversation with their faculties, chairs will finalize the list of classes they wish to offer in F2020, given their classroom allocation and available teaching resources. They will also be asked to devise schedules for specific rooms that they are allocated (see below) of a given size.

At this stage, departments must also make a final decision about how to manage each class meeting that, based on prior years, may enroll more than 50 students. The choices are: split the course into independently taught sections with fewer than 50 students each, implement an "alternate day of the week" structure where students are in-person some days of the week and online in others, cap the course at 50, or teach the class meeting online. (Note that if the class meeting is a lecture, the associated discussion sections may still be in-person.)

Departments will also need to identify which class meetings will be online and which will be in person or partially online (under the "alternate day of the week" model). Courses that are online only will not count against their room allocations.

We also recommend that, where possible, the implementation team assign particular classrooms to particular departments and ask the department to *completely fill* the weekly schedule for that classroom. This would give departments more control and allow them to minimize scheduling conflicts within their programs, coordinate with other departments that often share students (e.g., in a joint undergraduate program), and be sensitive to faculty and section leaders who have firm constraints on the timing of their courses (e.g., an instructor with school-aged children may not be able to teach an 8 am class or discussion section).

Suppose, for example, that the Math department has an allocation of 100 hours/week of classrooms of effective capacity of 31-35 students, and the standard weekly schedule the University adopts has 40 teaching hours per week. The Math department might be allocated two student classrooms of that size, or 80 classroom hours of a 31-35 student classroom, to schedule in a way that is sensitive to potential scheduling constraints and instructor needs. Note, however, that Math would need to fully schedule those two classrooms through all 40 hours of the standard weekly schedule; otherwise, there will not be sufficient capacity campus-wide for the full roster.

A more centralized mechanism, coordinated by the registrar, will schedule the residual classroom hours that are not allocated to specific departments. In the example above, Math was instructed to fill 80 hours of meetings in two specific classrooms, but their "budget" for classrooms of that size was 100 hours. The remaining 20 hours, or 0.5 of a classroom with a 31-35 student capacity, would still be budgeted to Math, but it would be scheduled centrally. (The alternative, of asking Math to work with the other department(s) who are also allocated a fraction of that classroom's weekly hours, strikes us as too complicated and inefficient.)

Note: We recommend departments are given a hard deadline of a week to complete this step. We recognize this will be a challenge.

4. Departments and units with specialized classroom needs will be asked to provide a similar schedule for class meetings that require special facilities, typically of class type LAB, FIELD, etc. Departments should follow their usual process for scheduling these rooms, although the class meeting times may need to be altered to be consistent with canonical hours that are set centrally. Departments can begin scheduling the special rooms as soon as these canonical hours have been announced, but we recommend that they have 2-3 days to integrate the special room and interchangeable room schedules.
5. The implementation team will integrate all of the departments-scheduled rooms and times and the centrally scheduled rooms and times. Once it has created a tentative class-time schedule, we recommend that departments have a short period (2-3 days) to look over this schedule to check for significant conflicts. We also recommend more transparency at this point than is typical, allowing all faculty to crowd-source the task of “debugging” the schedule.

At this stage, departments that had to limit in-person course offerings because of their classroom allocation may request access to otherwise unscheduled classroom hours. The goal is to augment the in-person fall course offerings to the maximum capacity of the university’s classroom space.

6. Once the department-level review is complete, college deans will be asked to review their colleges’ course offerings. The goal of this review is to ensure that we’re offering sufficient in-person classes across levels of students and curricular goals (e.g., general education and distribution requirements, freshman writing seminars, required courses in majors, small seminars for upper division students). This is consistent with our goal of ensuring that all students, regardless of their level, who are on campus in fall have at least some in-person educational experiences (if they want them). Deans should also consult with the directors of academic programs that rely on, but do not directly control, department-based curricula (e.g., the Knight Writing Program).

## Appendix 13: Academic Policy Questions

### **How will we respond to inevitable calls for changes in the way we grade?**

The primary rationale for changing the grading policy in the spring 2020 term was to provide relief in response to the mass disruption caused by a sudden move to online instruction, including changes in course expectations and assessment. For the fall 2020 term, students will have the information they need about the intended modality of each course and can make course selections accordingly. College leadership, registrars, and faculty are largely in favor of returning to Cornell's normal grading policy in which the grading options available in a particular course are pre-determined by the faculty teaching those courses. There are pedagogical reasons underlying these decisions, including the need to provide students with more detailed assessments regarding their performance in a course to inform their decisions about subsequent courses to pursue. Furthermore, although majors across the colleges agreed to a temporary relaxation of the graded prerequisites for affiliating with a major by allowing S grades to count for affiliation, continuing this practice will both overwhelm majors by increasing enrollment in them and also be a disservice to students whose chances of performing poorly in the major may be masked by simplified S/U distinctions. Lastly, because colleges and universities across the nation have indicated their intentions to return to normal grading practices, Cornell students who intend to apply go graduate/professional programs could actually be put at a disadvantage when being compared to peers from other universities who have grades in core requisite courses. Continued S/U grades also pose challenges for reporting students' "satisfactory academic progress" for maintaining eligibility for federal and state financial aid. Taken together, despite the fact that many students are advocating for an S/U grading option to be universally available across all courses, we recommend against doing so.

Instead, our committee recommends that faculty continue to make every effort to develop alternative methods of assessment that do not rely as heavily on timed exams (which proved to be challenging in the spring 2020 semester). There will continue to be students enrolled in courses from different time zones, with some participating in-person and others remotely, thereby introducing multiple modalities for exams. As much as possible, we encourage faculty to suspend their practice of grading on a curve to account for the complexities introduced by these dynamics. Also, while instructors will be asked to take attendance, we do not recommend that it be graded so as to discourage students coming to class when they are not well. We have specific recommendations regarding course attendance that are detailed below.

### **Attendance policies**

Students will be asked not to attend class if they are sick. Instructors should avoid including attendance as part of their grade for two reasons: (a) students may be absent from class because they are placed into quarantine; and (b) grading attendance will incentivize students to attend class even when they do not feel well, which is the opposite of what we need them to do for public health and safety.

However, instructors will be asked to take attendance. This will be much easier this year than in years past because instructors will have an assigned seating chart for each course, thereby making it easy to identify which students are absent. Having an attendance log will facilitate contact tracing in the event a student in the course tests positive. It will also help the instructor to identify students who may be struggling and require additional support.

### **What will our withdrawal policy be for students who are quarantined or isolated? What about students who become ill?**

All instructors will be guided to plan ahead for how they will support students who are absent from the classroom for two weeks at a time when placed in quarantine. In most cases, students will remain healthy or asymptomatic and therefore able to continue their education with little disruption provided accommodations are made to provide accessible remote learning options.

For those students for whom continuing enrollment is not possible due to illness the existing university leave and withdrawal policies would apply. Students should work closely with college advisors and Cornell Health to make the decision that is best for them, which may be to receive a [short-term health accommodation](#) prior to making the decision to withdraw or take a [health leave of absence](#). The effective date of the leave/withdrawal would determine whether a student's academic record reflects a W. The date of a student's withdrawal also determines their tuition liability for the semester, regardless of the reason for the leave/withdrawal. Families are encouraged to purchase the optional Cornell Elective Tuition Refund Plan, which will cover up to 85% of their tuition charges in the event the student withdraws from the university due to a covered illness. The cost per student for 2019/2020 was only \$186 per semester.

**How lenient will we be in granting requests to defer enrollment for a year? If a large number of students defer, what will we do with applications for Fall 2021? How will we manage that if we are also welcoming a full-sized new class of first year students then?**

Incoming students who would like to defer their first enrollment based on the reactivation decision that is announced will be asked to reinitiate their request. At this time, it is difficult to estimate the volume of such requests. Our hope is that assuming that the North Campus Residential Expansion project has been completed, we will be able to accommodate their return together with a full incoming class of 2025. However, a larger incoming class will stress the capacity of college advising and student services offices increase enrollment in already large introductory courses.

In order to support students who may choose to defer for just one semester, we recommend that the university begin as soon as possible to plan for a robust summer sessions roster for 2021 to support students' academic progress.

**Would we consider enrolling an additional cohort of students into some of our online classes for next year, perhaps hiring new PhDs to help manage them, as a way of both generating revenue and expanding outreach?**

Providing equity and access are core Cornell values. If an additional cohort of students is admitted, they too should be provided access to not only online but also in-person (with remote accessibility into the classroom) and hybrid courses. An online-only start would be especially problematic in fields with many courses that require hands-on access to special facilities. Furthermore, even if a cohort of students were invited to enroll in online-only courses for the 2020-2021 academic year, the assumption is that they would enroll in-person in subsequent years, which would increase future crowding of cohorts. Finally, any surplus of instructional capacity will need to be reserved to support the multiple course modalities being offered and to provide back-up instructional talent to support faculty and TAs who may be sidelined due to illness or quarantine.

## Appendix 14: Messaging Ideas to Minimize Harm While Reopening Cornell University During the COVID-19 Pandemic

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### **Summary**

Cornell students, faculty, and staff will need to hear and see consistent and repeated messages that raise awareness of our campus and the broader Tompkins County community's limited readiness to handle an outbreak (a moderate and factual fear appeal), motivates them to engage in behaviors to prevent such an outbreak, and teaches the behavioral skills to enact those behaviors in effective ways.

These messages will need to come from/be endorsed by a variety of sources - central administration, faculty, influential students (e.g., leaders of Greek organizations, student body leadership, captains of popular sports teams, etc.) to convey community unity around these messages.

The messages in this outline are synergistic with the COVID-19 Behavioral Influence Strategies outlined by the Skorton Center for Health Initiatives (see **Appendix 15**).

### **Preliminary Message Outline**

Cornell University has a long history of building and protecting strong communities during moments of crisis.

At a time when the United States was fighting over whether our national divisions were too strong for us to be one country, Ezra Cornell and Andrew Dickson White founded a university where any person could find instruction in any study.

The university that they created and that we now claim as our own has made it through two world wars, *another* global pandemic (1918), a great depression (1929-1939), a great recession (2007-2009), the H1N1 disease outbreak (2009), and many other tragedies in between, and each time we learned important lessons that allowed us to emerge as a stronger community than we were before.

Our ability to succeed during these difficult moments has depended on one thing: our commitment to caring for each other. The only way for any person to find instruction in any study is for each of us to look out for, and help, each other--for each and every Cornellian to do our part to protect our larger community. That is what has allowed us to thrive in the past and what we need to survive right now during the current COVID-19 pandemic.

A hallmark of Cornell is that, as a world-class research institution, we have some of the best minds in epidemiology, public health, and infectious disease. Indeed, the leading national voice in the COVID-19 response, Dr. Anthony Fauci, is a Cornellian. Weill Cornell Medicine and the College of Veterinary Medicine are applying the best scientific tools available in viral modeling and are monitoring public health and working in concert with Cayuga Medical Center, Cornell Health, and the

Tompkins County Dept. of Public Health. Cornell's approach is evidence-based and rooted in the latest medical and behavioral scientific developments.

As we all know by now, the coronavirus is a deadly disease that can spread rapidly between people who come into close contact with each other, even if those people don't know it at the time because they are asymptomatic. All it takes is one person to set off a chain of infections that can easily infect the entire community. That is not something we can allow to happen. Because, frankly, we do not have the capacity to handle it if it did. There are over 20,000 students on our campus alone. 20,000 students on one of the three campuses that call Tompkins County home...but only 8 Intensive Care Unit beds in our local medical center.

Ethically, having so few ICU beds in a county with so many students means that the university has a strong duty to both our own community and Tompkins County to prevent an outbreak; otherwise, people will almost surely die, as they have around the globe. A local outbreak would be devastating for people of all ages. Although mass-media coverage of COVID-19 has focused on the elderly as the primary at-risk group, it is noteworthy that in Tompkins County the age group with the highest rate of infections to date has been 20-29-year olds. We all need to be vigilant. Practically, the need to prevent an outbreak means that the university must monitor cases assiduously, and in the event that an outbreak becomes too likely, take drastic pre-emptive action, including a strict shelter-in-place order or even sending everyone home again as occurred in March. No one wants this to happen.

This information is not meant to scare us but to underscore the gravity of the situation we are in. We are Cornell, and so we can get through this. But the only way that we will succeed is if every single Cornellian does our part. Every student. Every faculty member. Every staff member. We must all work together.

## Appendix 15: COVID-19 Behavioral Influence Strategies

### Skorton Center for Health Initiatives

As Cornell prepares for reactivation in Fall 2020, the university's public health approach to preventing COVID-19 will require a comprehensive, integrated plan for influencing student behavior (particularly in relation to students' social lives). The goal of these efforts will be to optimize adherence to protective behaviors and reduce opportunities for viral transmission.

#### THEORETICAL CONSIDERATIONS:

- **Underlying needs and desires.** Social connection is necessary for mental health and most people are naturally drawn to physical proximity. College-age students may be seeking friendship, affiliation with identity groups, a romantic relationship and/or sexual connection, participation in team sports or other opportunities to connect and de-stress with friends. Whether simply hanging out, partying, or engaging in intimacy, desire for connection is strong and activities like these are the norm for young adults.
- **Propensity for risk-taking.** Risk-taking is a common feature of adolescence and young adulthood. Moreover, questioning and sometimes challenging authority is a common developmental aspect of this age group. While some students may underestimate the risk COVID-19 poses, others may decide that the potential benefits of various behaviors outweigh the risk of harm to themselves or others. These risks include both the potential health risk of spreading the virus, and the likelihood of "getting in trouble" for violating community guidelines.
- **Influence of peers and culture.** Adherence to COVID-19 health guidelines is influenced by cultural factors, including the perceived norms of the groups with which students identify, the student body as a whole, and society. Consistent with social norms theory, an April 2020 survey of over 9,000 Cornell students identified a) high levels of protective COVID-related attitudes and behavior, and b) an underestimation of the extent to which their peers shared their concerns and commitments.
- **Moral reasoning.** When making decisions involving morals/ethics, students vary in the extent to which they consider the potential harm to others. As reflected in Moral Foundations Theory, considerations of harm (e.g., potential harm from COVID-19) are central for some, while alternate values (e.g., fairness, group loyalty) have similar or greater importance for others.

#### PREVENTION PHILOSOPHIES:

- **Deterrence:** a system of accountability for violations of an explicit behavioral contract may motivate some students to refrain from risky behaviors. Deterrence strategies can focus on influencing the behavior of individuals and groups.
- **Harm reduction:** a harm reduction approach recognizes that at some point students may choose to act in ways that are not entirely consistent with health guidelines and/or a behavioral contract. It is therefore important to provide them with information to help reduce the risk of harm (i.e., of contracting the virus themselves or spreading it to others). Harm reduction can apply to the behavior of individuals and groups.

#### STRATEGIES:

- **Policy enforcement**
  - Establishing clear expectations and consequences will be necessary to achieve deterrence.
  - Although students may agree to a behavioral contract reluctantly, requiring them to do so would nevertheless establish a shared understanding of community expectations.

- While mechanisms for individual accountability will be needed, enforcement may inadvertently complicate contact tracing since students may be reluctant to identify those with whom they have been in contact if those individuals have been in violation of the university's behavioral contract (or Code of Conduct).
- Rather than focusing on the behavior of individuals, a more effective strategy might be to prioritize requirements for groups, teams, and organizations that ban large and unregulated social gatherings. Imposing firm sanctions for group-level violations may serve to deter high-risk behaviors without raising the specter of ostracizing an individual or "sending students home" for violations.
- Policy enforcement must be done in a non-biased manner that is sensitive to the current national crisis and longstanding concerns among communities of color regarding discriminatory and abusive police practices.
- **Communications (to students, parents, staff, and faculty who work with students)**
  - **Leadership statements:** strong leadership statements from President Pollack and others about the moral/ethical standards for our community during the pandemic (i.e., How ought we to act?) and the values we hold (e.g., Cornell as a caring community) can foster a culture of shared responsibility (i.e., a "fair" approach) with a common goal of getting back to normal as much and as soon as possible.
  - **Policy statements:** communications to students (and parents) set behavioral expectations and relay potential consequences in order to deter risk-taking.
  - **Social norms messages:** campaigns to promote a positive culture by identifying positive norms within the student body and communicating them through media messages. Use tailored approaches within subpopulations (e.g., Greek life) and individual groups (e.g., student organizations, identity groups, athletic teams, and fraternity and sorority chapters).
  - **Risk-reduction information:** messaging should include universal precautions pertaining to the whole campus (e.g., how to socialize safely), and selective messages for students to reduce the harms within high-risk situations (e.g., parties with alcohol).
  - **Bystander education:** guidance about how to engage someone whose behavior poses a significant risk of spreading COVID-19 can increase the likelihood of interventions.
- **Peer influence initiatives**
  - **Peer ambassadors:** an SCL organization of trained peer health "ambassadors" who could engage in in-person interventions/education with other students on and off campus to promote adherence to health guidelines and/or behavior contracts. A peer-based educational approach can reduce the need for interventions by law enforcement officials.
  - **Training for organization leaders:** education about how to hold lower-risk social events and challenge those who attempt to hold high-risk events (e.g., large, unregulated gatherings).



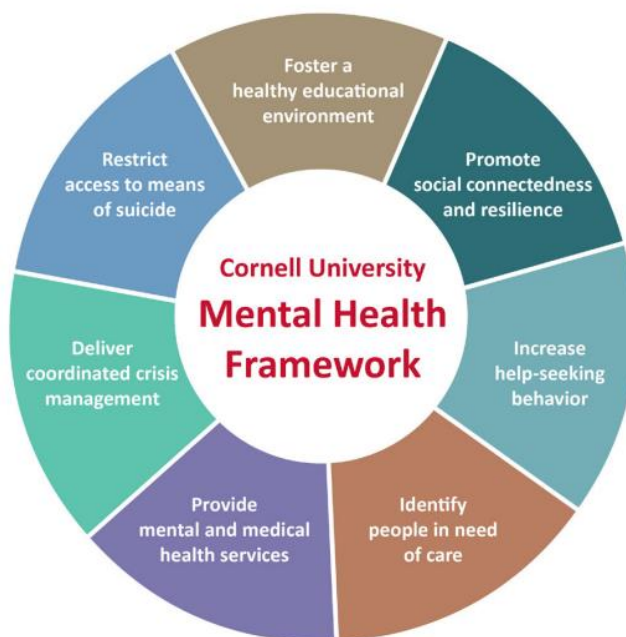
## Appendix 16: Mental Health Considerations for Campus Reactivation

### INTRODUCTION

As Cornell explores options for safely reactivating instruction on campus in fall 2020, it is important to consider and address the mental health impacts of the COVID-19 pandemic. In addition, it is vital to respond to the emotional impact of the overlapping national crisis related to systemic racism and racial violence. These co-occurring crises pose significant challenges to supporting the mental health and well-being of undergraduate, graduate, and professional students.

Graduate and professional student leaders recently conducted a survey of their peers' experience during the COVID-19 pandemic on behalf of the Subcommittee on Teaching and Social Distancing of the Committee on Teaching Reactivation Options. The survey included questions related to well-being, physical health, and mental health; results were compiled, and a report was provided to committee members. This document complements that report by surfacing key considerations and concerns, and making recommendations, below. It has been informed by input from graduate student leaders, including members of the group that administered the survey. A limitation of this report is a lack of undergraduate input, which was solicited but unsuccessfully achieved, likely due to a very tight turn-around deadline.

[Cornell's comprehensive and integrated public health approach to mental health](#) provides a useful framework for examining key issues related to the reactivation of campus for fall semester 2020.



### FOSTER A HEALTHY EDUCATIONAL ENVIRONMENT

#### *Key Considerations and Concerns:*

- Modifying the academic schedule may have unintended negative consequences for student health and well-being. For example:
  - If the academic calendar is condensed and students are expected to complete coursework at an accelerated pace to complete classes before Thanksgiving, this could increase stress and anxiety among students (especially if fall break is removed in the updated calendar).
  - Students with special learning styles and/or disabilities may be impacted disproportionately.

- Relationships between students and academic advisors/faculty may be impacted by decreased in-person interactions.
- Students' residential circumstances may inhibit their ability to create a successful, productive learning environment, particularly if some instruction is conducted remotely.

#### ***Specific Concern for Graduate and Professional Students:***

- ***Relationship with faculty advisor:*** Graduate students shared that some of their peers are experiencing too little communication from their faculty advisor during this difficult time (e.g., disengagement), while others are experiencing too much communication (e.g., micro-managing). While the Graduate School has disseminated information about this issue, graduate students have said they are not sure how effective this communication has been in influencing faculty members' choices.
- ***Concerns about expectations:*** Graduate students are experiencing concerns about navigating their return to Ithaca (for those who have been away), returning safety to campus, expectations to teach undergraduates remotely or in-person, and being required to conduct research at a rapid pace to make up for the lost time during the spring 2020 semester. Some graduate students do not know how to navigate those potential conflicts, especially if they do not feel comfortable or safe returning to campus or interacting with undergraduate students.

#### ***Strategies and Recommendations:***

- Clear leadership statements from senior university officials and student leaders that include:
  - A timely acknowledgement about societal events that are unfolding.
  - Acknowledgement and recognition that the changes in the educational environment (e.g., online learning vs. in-person instruction, changes to the academic calendar) may have on one's mental health and well-being and/or level of productivity.
  - Active promotion of resources and de-stigmatization of help-seeking behavior.
- Develop and disseminate updated guidelines/tips for faculty on ways to support undergraduate, graduate, and professional student mental health during the COVID-19 pandemic. Guidance should address the pandemic-related incidents of racial/ethnic violence toward people of Asian descent, and the co-occurring incidents of racial violence that have resulted in protests nationwide. For example, tips for talking with advisees could include how to acknowledge and normalize the challenges and toll of COVID-19 and/or the trauma many people have faced in relation to the recent incidents of racial violence against Black people.
- Develop educational materials to illustrate reasonable vs. unreasonable expectations faculty can ask of students and promote resources to support students navigating these challenges. Examples of unreasonable expectations identified by graduate students:
  - An advisor expecting a student to work in the research lab 70 hours a week because they are the only member of the lab team physically located in Ithaca.
  - An advisor expecting a student to go into the lab at odd hours of the night (between 10pm - 7am) because they are limiting the number of personnel allowed in the facility at a time.
  - An advisor expecting a student to work double overtime because they can do research remotely while others cannot do their research at all.

### **PROMOTE SOCIAL CONNECTEDNESS AND RESILIENCE**

#### ***Key Considerations and Concerns:***

- Necessary public health measures (e.g., physical distancing, limited size gatherings, isolation of positive COVID-19 cases and 14-day quarantine periods for potential exposures) inevitably inhibit social connectedness with others.
- Students may experience increased social isolation and feelings of loneliness, especially if they are living alone rather than with peer roommates or housemates, or if living at home with family who may not have a shared understanding of the undergraduate or graduate school experience.

- Young adults may be susceptible to peer pressure, including pressure to engage in social contact that increases the risk of COVID-19 viral transmission. Finding ways to connect virtually without the benefit of touch, visual cues, or shared engagement is logistically challenging and emotionally taxing. There may be subgroup-specific concerns, for example:
  - Undergraduate student athletes who are used to daily practice and regular athletic competition may experience an increase in loneliness if athletic practice and competition cannot occur safely.
  - Graduate students who live alone and are engaging in research independently may experience increased social isolation.
  - Individuals or non-majority or marginalized communities (e.g., LGBTQ students) may face further isolation if they are not living in supportive spaces.
- Extracurricular clubs, activities, and events which often provide opportunities for social connectedness and belonging will need to be halted and/or significantly modified to adhere to physical distancing measures.
  - Recruitment for student organizations may be limited, which will further compound the barriers students have in finding connection.
  - Non-majority students may face added difficulty finding connectedness and support on campus.
  - Members of Greek life chapters, athletic teams, and other student organizations may face peer pressure to behave in ways that violate administrative guidelines or public health best practices related to COVID-19.

#### ***Strategies and Recommendations:***

- Provide instructors (faculty, graduate students, TAs) with online strategies to help people feel recognized and like they belong (e.g., welcome people as they join Zoom either verbally and/or saying hello to them in the Chat at the beginning of class)
- Provide opportunities for connection, conversation, and normalization of feelings:
  - Cornell Health could provide additional CAPS workshops, support and/or therapy groups designated for different types of students (e.g., specific to graduate students).
  - Campus Activities and the Big Red Barn could provide virtual social events.
- Consider potential online spaces that could be used for community building. This is important for most students, but especially important for students who hold marginalized identities.
- Consider interventions or strategies to build resilience remotely, including:
  - online resilience building/stress management program available to all students
  - online sleep interventions
  - safe and physically-distanced time in nature (e.g., Nature Rx).
  - physical activity that can be done with low risk of viral transmission.

### **INCREASING HELP-SEEKING BEHAVIOR**

#### ***Key Considerations and Concerns:***

- Students from marginalized communities may need additional outreach and/or new/expanded pathways to seeking care.
- Some students remain unaware of the availability of campus support services, including telehealth services for mental health support.

#### ***Strategies and Recommendations:***

- Caring Community website revision/replacement
  - Update a webpage to serve as the landing page/gateway for information about campus resources, local resources, and international resources to support students wherever they may be residing [caringcommunity.cornell.edu].

- Consider expanding parent and family communication and education to inform them about mental health issues, indicators of distress, and services/resources.
- Engage existing student organizations to increase help-seeking behavior virtually (e.g., Cornell Minds Matter, Reflect at Cornell, graduate student field associations)

## **IDENTIFY PEOPLE IN NEED OF CARE**

### ***Key Considerations and Concerns:***

- Assess for the need to modify existing campus structures that identify people in need of care. For example, the Alert Team and AOD Team work to identify students in need of care and to connect them with appropriate resources in-person. These structures will need to adapt to address a partially remote campus operation.
- Staff and faculty have been provided guidance on how to recognize and respond to students in distress based on cues that were appropriate and relevant before COVID-19 (e.g., if a student has been absent from class for a few days).
  - Without the availability of as many community “eyes and ears” on students, we may not know who is experiencing high levels of mental distress (e.g., How does distress manifest at a distance? What are signs people should know to look for in a remote living and learning environment?)
- Reconsider which student may be in greatest “need of care” at this time:
  - Marginalized students:
    - Communities of color are not only disproportionately affected by COVID-19 but are also facing significant added trauma related to institutional and systemic racism.
  - Financially-insecure students:
    - Students may be experiencing family loss of income related to the economic collapse and/or loss of their own part-time jobs.
  - Survivors of abuse:
    - Students may have been exposed to physical or emotional abuse, relationship violence, substance abuse, etc. while being quarantined or in lockdown with family members and friends.
  - Students struggling with alcohol or other drug abuse may be increasing use due to increased emotional distress but may be doing so in isolation (and thus not identified as readily by others).
  - Backdrop of collective trauma: the extent of grief and loss varies with individual experience, but to an extent there is a universal experience of loss that is shared by all members of the community during the pandemic.
  - Concern specific to graduate students who are teaching undergraduate students: Emotional burden of noticing and supporting undergraduate students they are teaching who may be struggling in some capacity.
    - Graduate students often have teaching responsibilities and those who are teaching are noticing that their undergraduate students are also experiencing high levels of distress. The emotional labor of working to find ways to support the undergraduate students is contributing to a decline in the mental health and well-being among some graduate students.

### ***Strategies and Recommendations:***

- Consider having academic advisors, Directors of Undergraduate Study (DUS) and Directors of Graduate Study (DGS) reach out to students in their departments more regularly during the fall 2020 semester to do check-ins and share resources.
- Update bystander intervention trainings for undergraduate, graduate, and professional students as well as faculty and staff about how to notice and respond to students or peers in distress in a partially virtual context.
  - Develop educational materials to help graduate and professional students be better equipped to identify if a peer or someone in their department may be experiencing distress, including best practices for how to navigate a conversation with a peer about getting help.

- Provide education that includes updated information about signs that a student may be in distress in a virtual instruction or remote learning environment, what people can say in the moment and how to refer students to additional support. These resources should be provided to faculty, graduate students who are teaching, and academic services staff in the colleges.
- Work to develop and widely share resources that exist to support graduate students who are working to support a student in distress and the resources that are available to support the student in distress (wherever they may be located).

## **PROVIDE MENTAL AND MEDICAL HEALTH SERVICES**

### ***Key Considerations and Concerns:***

- Potential for increased need of bereavement and grief support for students who have experienced the death of a loved one during the COVID-19 pandemic.
- Potential for increased need of mental health support to address the collective trauma students are experiencing during the COVID-19 pandemic including the public health pandemic but also the ramifications from economic losses, the political crisis, as well as they racial violence and civil unrest the U.S. is facing.
- Potential for increased need of support for students who are dealing with anxiety and the unprecedented levels of uncertainty, especially about the future (e.g., job/internship prospects).
- Uncertain utilization of mental and medical health services in Fall 2020:
  - Routine preventative medical appointments and procedures have been delayed during the first phase of the pandemic.
  - People may be less willing to seek medical care if worried about risk of contracting COVID-19 at Cornell Health.
- If resources will be largely limited to telehealth services, not all health-related needs may be met and not all students may be able to access telehealth services (or want to access telehealth services for a variety of reasons):
  - lack of private space where they are living
  - laws prohibiting clinicians from practicing in some states or outside of the country
- International students who are unable to return to Ithaca safely may be particularly vulnerable due to lack of access to mental health/counseling services and medical services for students who are not residing within the U.S.
- Victim advocacy and the support it provides will not be in-person, which limits accompaniment to services and hearings.
- Need for pandemic-related support groups (e.g., bereavement groups for those students affected by pandemic deaths, and support groups for students in fields facing disproportionately high unemployment, such as the hospitality industry).
- Uncertainty exists regarding the mental health impacts of a range of pandemic-related impacts to campus life: quarantining in residence halls, loss of socializing in dining halls, eliminating breaks from the calendar, loss of in-person student activities, eliminating sports, and closing outlets for stress relief (e.g., gyms, social gatherings).

### ***Strategies and Recommendations:***

- Increase number of support and therapy group offerings.
- Increase promotion of services that remain available to students depending on their location.
- Increase/ improve promotion of international mental health hotlines: <https://ibpf.org/resource/list-of-international-suicide-hotlines/>

## **DELIVER COORDINATED CRISIS MANAGEMENT**

### ***Key Considerations and Concerns:***

- Significantly larger numbers of students may be experiencing situations that warrant coordinated crisis management support from the university.

***Strategies and Recommendations:***

- Increase Crisis Management capacity to be able to provide support to meet the demand.
- Consider expanding Community Support Team staff who provide support to groups in the aftermath of tragedies or other crises and consider how to scale this support up.

**RESTRICT ACCESS TO MEANS OF SUICIDE**

***Key Considerations and Concerns:***

- The social, economic, and emotional effects of the COVID-19 pandemic may be contributing to an increase in the potential for death by suicide.
- Firearms purchases have increased nationwide, which may elevate the risk of suicide.

***Strategies and Recommendations:***

- Provide education (including for family and friends) about gun safety measures (e.g., proper storage) and the importance of removing firearms and other methods of self-harm from the residences of suicidal individuals.

## Appendix 17: Public Health and Behavioral Influence Communication Needs and Tactics

University Relations, in partnership with Cornell Health, Student and Campus Life, Human Resources, Environmental Health and Safety and Facilities and Campus Services, will develop and implement a comprehensive public health and behavioral influence strategy for Cornell's Ithaca campus. This plan will be developed following decisions from university leadership related to fall reopening and will be reviewed frequently and at key decision points during campus reopening to assess the effectiveness of the tactics, success in reaching our target audiences and the strength of the messages. In the meantime, we have identified a set of communications needs and tactics that will be considered as part of this plan.

### Communications Needs

- **Leadership messages:** Strong and consistent leadership messages from the president, provost, deans and vice presidents about the standards for our community during the pandemic (i.e., How ought we to act?) and the values we hold (e.g., Cornell as a caring community) can foster a culture of shared responsibility (i.e., a "fair" approach) with a common goal of getting back to "normal" as soon as possible. Equally important will be leadership and reinforcement of messages from supervisors and student leaders.
- **Policy statements:** communications to students (and parents) to set behavioral expectations and relay potential consequences in order to deter risk-taking.
- **Social norms messages:** campaigns to promote a positive culture by identifying positive norms within the student body and communicating them through media messages. Use tailored approaches within subpopulations (e.g., Greek life) and individual groups (e.g., student organizations, identity groups, athletic teams, and fraternity and sorority chapters).
- **Risk-reduction information:** messaging should include *universal* precautions pertaining to the whole campus (e.g., how to socialize safely), and *selective* messages for students to reduce the harms within high-risk situations (e.g., parties with alcohol).
- **Bystander education:** guidance about how to engage someone whose behavior poses a significant risk of spreading COVID-19 can increase the likelihood of interventions.
- **Peer influence initiatives**
  - **Peer ambassadors:** an SCL organization of trained peer health "ambassadors" who could engage in in-person interventions/education with other students on and off campus to promote adherence to health guidelines and/or behavior contracts. A peer-based educational approach can reduce the need for interventions by law enforcement officials.
  - **Training for organization leaders:** education about how to hold lower-risk social events and challenge those who attempt to hold high-risk events (e.g., large, unregulated gatherings).

### Tactics

A broad campaign approach will begin support the above messaging needs with the following tactics, including but not limited to:

- **Partner toolkits:** The Communications Working Group will create "toolkits" for campus partners to ensure consistency and to eliminate duplication of efforts.
  - **Messaging:** Approved messages related to public health and safety. Messaging will be tailored to specific audiences, for example:
    - What you can do each day to help prevent spread of the virus
    - How to safely physically distance
    - How and what to clean at your desk/in your dorm
    - Encouraging others to do their part
    - Importance of the daily health attestation

- **Signage on campus:** Consistent use of university-level signage in all Cornell building. Current set is available for download here: <https://covid.cornell.edu/resources/graphics/>
  - **Signage off campus:** Local landlords have expressed interest in placing signage throughout their properties and would welcome having Cornell provide it to them.
  - **Social media:** Students are most active on social media. Recommend utilizing Twitter and Instagram stories as well as catchy TikTok videos and Memes as the primary social media vehicles for this public health campaign.
- **Leadership messages:** This will include top-line messages from President Pollack to the Cornell community; VP Lombardi to all students, and so on. It will also include more granular messages from deans to their college community; HR to supervisors; and so on.
  - **Existing vehicles:** In addition to leadership messages, all campus partners should use standing communications vehicles – weekly messages, newsletters, websites – to include public health information.
  - **Virtual town hall meetings:** Continued and expanded use of virtual town hall meetings to discuss safe reopening strategies and expectations for behavior of each audience.
  - **Student organizations:** Engage student groups, clubs, and Greek organizations to disseminate health guidelines among their membership in a way that emphasizes the “behavioral norm” aspects of this campaign.
  - **Community partners and local media:** The office of Community Relations and Media Relations has standing relationships with key community leaders, organizations and media outlets. As more decisions are made about fall reopening, it will be important to keep these groups updated so they are aware of our plans and safety measures.
  - **Event training for organization leaders.** Provide leaders with education about how to hold lower-risk social events and challenge those who attempt to hold high-risk events (e.g., large, unregulated gatherings).



## Appendix 18: Evidence Synthesis Service Team

### **Explanation of literature search processes for COVID-19 high-priority questions**

**Prepared by Kate Ghezzi-Kopel, Health Sciences and Evidence Synthesis Librarian, Mann Library, [kwg37@cornell.edu](mailto:kwg37@cornell.edu)**

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#### **Additional assistance from Mann Librarians:**

Keith Jenkins, Sarah Kennedy, Matthew Kibbee, Sarah J. Wright

From June 1st through June 9th, 2020, the [Cornell University Library Evidence Synthesis Service Team](#) and librarians from Mann Library performed a series of rapid, ad-hoc assessments of the existing scientific literature and data sources pertaining to four, high-priority research questions regarding COVID-19 and public safety. Due to time constraints, we did not follow gold-standard systematic review methodology as stated in [PRISMA](#) guidelines for these reviews. Instead, and to enhance the transparency and reproducibility of our search strategies and article selection processes, we made literature review [protocols available on the Open Science Framework](#) that detail our approach to each of the four research questions.

Our findings to date are available as citation lists in this [public Zotero shared library](#), organized in folders by research question. To review them in Zotero, select the appropriate subfolder, and then the abstract and full citation information will appear on the right-hand sidebar. We were liberal in our selection of plausible articles for these citation lists, and we welcome your feedback on how to best broaden or narrow our selection criteria for future iterations of these literature searches. We are happy to retrieve full-text PDFs for any of these citations if you wish to examine them in more detail. We can also readily suggest tools for assessing the quality and risk of bias of individual studies.

We will provide the COVID Response Committee with the necessary information from the most recent literature searches to assist in decision-making efforts.