JHU Return to Campus Instructional Guidance

Updated October 1, 2020

Table of Contents

JOHNS HOPKINS
UNIVERSITY

Introduction and Executive Summary

This document provides general guidelines for instructional activities at Johns Hopkins University in the context of COVID-19 planning. These guidelines are based on detailed recommendations and analysis from the 2020 Academic Programs Continuity Workgroup, composed of faculty, academic staff, and support staff from across the university and led by Stephen Gange, professor and executive vice provost for academic affairs. These guidelines were reviewed by workgroup members, the Student Advisory Committee, and other faculty and student groups, as well as leadership from across the schools. They were further revised with input from the community after being shared in draft form and discussed in a town hall in June 2020 as well as brought into alignment with Return to Campus Guidelines revised in August.

Johns Hopkins University's plan for the resumption of on-campus activities is structured in phases, with planning for 'essential only' (Phase 0), low-density (Phase 1) and medium-density (Phase 2) activities prior to a return to near-normal conditions. This document provides general guidelines for instructional activities at Johns Hopkins University during these phases which include:

- **Essential-only**: No in-person instruction is envisioned as on-campus activities are minimal and access to campus facilities limited to essential personnel only.
- **Low-density activities**: In general, most instruction is envisioned using remote/online modalities. There may be some instances during this phase when schools, with approval of the dean's and provost's offices, may grant permission to convene small groups of students (10 or fewer counting the instructor) for in-person activities, particularly those that are not amenable to remote/online modality.
- **Medium-density activities**: Instruction in this phase will utilize mixed-modality: a combination of in-person, remote/online, and hybrid modalities with remote/online continuing to be an option for all courses offered to the extent possible. Fitting classrooms to meet physical distancing requirements will significantly reduce the number of seats available for in-person instruction. Further, some instructors and students will not be able to return to campus due to their personal circumstances (such as high-risk status, travel disruptions, illness, or periods of self-isolation as a result of COVID-19 exposure). Therefore, to the greatest extent possible, programs and instructors should plan for these disrupted conditions and facilitate courses and other activities that are essential for students to continue their academic progress.

The standards and expectations for teaching will be determined by each school individually. For example, schools may ask instructors to use campus studios for remote instructional purposes.

The guidance offered here is meant to integrate seamlessly with other university guidance, divisional planning efforts, and critical cross-cutting university functions to safely support full resumption of instruction on campus. Accordingly, this document should be read in conjunction with the Return to Campus Guidance, which contains guidelines about such topics as maintaining an inclusive workplace, altered staffing and scheduling plans, significantly augmented cleaning protocols, required physical distancing, and universal face coverings. The application of these guidelines as they relate to instruction is discussed herein.

The principles laid out here will form the basis for operations at all domestic (e.g., Homewood, East Baltimore, Peabody, Carey, DC) and international (e.g., Bologna, Nanjing) campus locations. In all cases, actual operations will reflect local guidance and conditions. **This document is subject to alteration based on developing circumstances, changed or increased understanding of the virus, and governmental and public health guidance.**

Guiding Principles

The development of these guidelines is based on the following principles, which complement the overall guiding principles articulated by university leadership earlier in May:

- Our highest priority is to put health and safety first. We will implement physical distancing and the use of face coverings in the controllable environments of our instructional spaces. We will pay special attention to the needs of vulnerable populations, making accommodations and adjustments where warranted. And we will ensure that online or remote instruction is an option for as many courses as possible until COVID-19 disruptions end.
- We are committed to upholding our high standards of excellence in instruction and student satisfaction. These standards will apply to all the forms that our instruction may take, including in-person, virtual, and hybrid modalities. Instructors will be provided with appropriate tools and support and will be expected to deliver high-quality courses using pedagogical approaches and modalities that are appropriate for their learning objectives and the operational phase.
- We will provide inclusive and equitable solutions. Faculty, students, and academic staff will be integral to shaping and implementing our instructional plans. We will undertake efforts to deliver classes and other activities in all operational phases. In addition to planning for a return of on-campus instruction, we will aim to make as many activities as possible virtually accessible to accommodate students and faculty who cannot be physically present for health and safety or other reasons. We will look for ways to improve support for our students with disabilities and provide equitable access to the university's programs and services regardless of modality.
- We will adopt an evidence-based risk management approach to the COVID-19 challenge, and our decisions will be guided by state and local public leaders and health experts. We will abide by federal, state, and local restrictions and the most current OSHA, CDC, and related government guidance.

Planning for Instruction in Different Phases

Johns Hopkins University's plan for the resumption of on-campus activities is structured in phases, with a resumption of low- (Phase 1), medium- (Phase 2), and high-density (Phase 3) activities. The decision to initiate operations within these phases will be consistent with both state and local restrictions and our own public health experts' assessment of the COVID-19 pandemic and the complexities inherent in protecting the health and safety of our students, faculty, and staff.

While our phasing seeks to align with the State of Maryland's approach, the alignment is not automatic, and there may be many times when the university cannot, for public health, safety, and/or operational reasons, be in the same phase as the state, just as not all counties in the state may be in the same phase at the same time. It may also occur that different campuses are in different phases. We will approach the scale-up thoughtfully, allowing for expansion and adjustments when they make sense. If public health conditions worsen, either locally or regionally, a return to earlier phases may be required.

Given that instruction is a core activity of the university, **schools should prepare to deliver instruction in every operational phase to allow students to continue to make academic progress**, recognizing that there are constraints within each operational phase:

- **Essential Activities Only**: No in-person instruction is envisioned in this phase where on- campus activities are minimal and access to campus facilities limited to essential personnel only. All formal course instruction in this phase should be completed using remote/online modalities.
- **Low-density activities**: In general, most instruction is envisioned using remote/online modalities. There may be some instances during this phase when schools, with approval of the Provost's Office, may grant permission to convene small groups of students (10 or fewer counting the instructor) for

in-person activities, particularly those that are not amenable to remote/online modality. Enforcing distancing while on-campus and taking other precautions as described below will be essential during this phase.

- **Medium-density activities**: Instruction in this phase is envisioned to include a combination of in-person, remote/online, and hybrid modalities with remote/online continuing to be an option for all courses offered to the extent possible. Fitting classrooms to meet physical distancing requirements will significantly reduce the number of seats available for in-person instruction. Further, some instructors and students will not be able to return to campus due to their personal circumstances (such as high-risk status, travel disruptions, illness, or periods of self-isolation as a result of COVID-19 exposure). Therefore, to the greatest extent possible, programs and instructors should plan for these disrupted conditions and facilitate courses and other activities that are essential for students to continue their academic progress.
- **High-density activities**: During this phase, we envision physical distancing and potentially other requirements may be relaxed with an expectation of a return to "near-normal" in-person instructional activities.

In their planning efforts, schools should be working with their faculty and academic staff to determine, for each phase, what will be taught and in what modality; in which locations instruction will be delivered; and how programs may need to be modified. **Importantly, schools should assess how required courses and activities of a program will continue for those who are unable to attend an activity in-person even if in a modified (e.g., remote/online) form, including those potentially in different time zone**s. Schools should also continue to review and consider their leave of absence and other policies to provide flexibility for those in unique circumstances.

A summary of activities during each phase is shown on page 5:

	Essential activities only No on-campus instruction **Phase 0**	**Low density** Minimal on-campus instructional activity **Phase 1**	**Medium density** Some on-campus instruction **Phase 2A/2B**	**Near 100% density** Return to full instruction **Phase 3**
Course Instruction	None on-campus; all instruction remote/online	Most instruction remote/online; limited in-person gatherings (fewer than 10 people) with strict distancing and other measures.	Mixed-modality instruction occurs with remote/online options, strict distancing, and other measures. Programs should plan for disrupted conditions for faculty and students.	A return to near-normal instruction
Building access	Highly limited	Limited, with possible shift work; swipe access with apps to monitor density	Wider access with apps to monitor density	Open access
Occupancy of shared offices	No	No	Yes, with appropriate distancing and other measures	Yes
Density of classrooms	Not applicable: no in-class instruction	Very limited (fewer than 10 people) and with approval of Provost's and Dean's offices	A 7.5 ft. diameter (6 ft. distance + 1.5 ft.) distance for each student (approx. 38 sq. ft per student)	Near full capacity
Hygiene – as per CDC guidelines	Strict distancing, required face covering, frequent hand washing	Strict distancing, required face covering, frequent hand washing	Strict distancing, required face covering, frequent hand washing	A return to near-normal operations

Preparation for Instruction with Online and Mixed Modalities

The standards and expectations for teaching will be determined by each school individually. For example, schools may ask faculty and TAs to use campus studios for remote instructional purposes. Even when on-campus instruction begins to resume, all schools will continue to see significant use of remote/online teaching and learning for the following reasons:

- With the implementation of physical distancing on-campus, our classroom capacity will drastically reduce the number of available seats;
- Some affiliates may not return to campus for in-person instruction or will be prevented from attending in-person classes by factors outside their control (e.g., travel and visa restrictions, personal or family illness, and unexpected childcare needs); and
- Preparations must be made for the possibility that we might regress to more restrictive public health phases anytime during the academic year, and on short notice.

Common teaching strategies that instructors may employ will vary from course to course but are likely to include:

- Pre-recording instructional content for asynchronous delivery;
- Teaching remote students synchronously;
- Teaching class in-person with a mix of students attending either remotely or in-person; or
- Teaching class remotely with students attending either remotely or in person (possibly with a remote instructor with on-campus assistance).

All school teaching and learning staff should prepare a scalable plan for supporting faculty who may need to adapt to new teaching modalities.

Some graduate students may have extra capacity to support course development efforts because their research work may be limited. Supplementing university resources like the http://keepteaching.jhu.edu website, schools should continue to offer workshops and individualized training in addition to augmenting their local websites and resource guides for faculty and students.

Courses should be designed so that all enrolled students receive an equal opportunity to master course learning objectives regardless of modality. Importantly, students from one modality should not be disadvantaged relative to students attending in another modality (e.g., students attending remote/online because of self-isolation vs. students attending class in-person). Particular challenges may occur when providing instruction to students who are attending both in-person and remotely/online as illustrated in the table below. Some activities, engagement strategies, and assessments may be amenable to some modalities and not others. For some courses, it may be appropriate to provide separate, modified, or alternative activities that achieve the same learning objective or assessment. Instructors should prepare for how to handle these scenarios and discuss with their program directors whether separate sections (in-person and remote/online) should be developed or other adjustments made to ensure an equitable student experience.

	All students In-person	Mix of students in-person/online	All students online
Content Delivery	Faculty presents live in class interspersed with active-learning exercises.	Faculty presents in class and streams live to students online interspersed with active-learning exercises. Students in distant time zones watch at night.	Faculty records multiple, short presentations (~5-9 min/topic) streamed to students on-demand.
Student Engagement *Example: Problem-Solving Activity*	Small groups of students self-organize into roles to solve problems on paper or whiteboard. Faculty walks through room to support groups and observe work.	Small groups of students self-organize into roles based on location to solve problems. Each in-person team uses a device to connect with remote students and broadcast work written on whiteboard or paper. Faculty walks through room to support groups and observe work.	Recorded lecture modules interspersed with knowledge check quizzes completed by individual students – auto graded or reviewed by faculty/TAs.
Assessment *Example: Mini-research project with GSS dataset*	Students meet on campus to analyze dataset and write report. Group organizes work through OneDrive and MS Teams.	Students meet on campus and Zoom to analyze dataset and write report. Group organizes work through OneDrive and MS Teams.	Students meet on Zoom to analyze dataset and write report. Group organizes work through OneDrive and MS Teams.

Resources for Online and Mixed Modality

Several resources are outlined in the Appendices of this document:

- The Online Resources Working Group developed a set of recommendations in the attached Standards and Recommendations for Classroom and Studio Technology Investments report (**Appendix A**). This report includes a table of different technology options for conducting remote/online instruction for the above scenarios. Faculty and instructional staff should work with their IT/multimedia/facilities staff and school/department leadership to make an assessment of the technology that is currently available for different delivery modalities and assess the need for immediate investments to expand/improve this technology. The university and schools are jointly exploring creating specially designed spaces outfitted with improved technology that ensure a high-quality remote experience and increase flexibility for faculty who are unable to resume in-person instruction.
- The University Council on Learning Assessment (UCLA) developed a set of best practices in student learning assessment when teaching remotely or online. These are presented in **Appendix B**.
- In response to faculty concerns, the Online Resources Working Group worked with the General Counsel's office to develop a set of guidelines for recording with Zoom. These are presented in **Appendix C**.

Beyond Instruction: Maintaining the Academic Community

In addition to ensuring that instruction will continue during COVID-19 disruptions, faculty and academic staff should work together and with their students to ensure the local academic community remains strong. This includes establishing opportunities for connections outside of the classroom, including those between students, and between faculty and students. To prepare for different phases, remote/online and hybrid options should be strongly considered for activities including:

- Continuing seminars and special events;
- Applied practice activities that bring students into short-term projects;
- Individual and group mentoring and professional development sessions;
- Participation in student-led groups and activities;
- Student research opportunities in collaboration with faculty to the extent possible remotely (on-campus resumption of undergraduate research is currently being examined); and
- Connecting with alumni from around the world and with experts in your chosen area of study

Schools should evaluate all services and supports normally provided to students to ensure they can continue. This includes academic advising, tutoring and writing support, career planning and life design, health and wellness counseling, library resources, information technology support, and other student services support.

Instructor Accommodations and Adjustments

Consistent with our guiding principles, the health and safety of our faculty, students, teaching assistants, and academic staff who support instruction is our primary consideration. We recognize the intense challenges members of our community face during this time, particularly those who have greater vulnerability from COVID-19 than others. Current CDC guidance for elevated risk from COVID-19 identifies those at high-risk for severe illness as those who are age 65 years and older and people of all ages with underlying medical conditions, particularly if not well controlled.

Individuals meeting these criteria may request reasonable accommodations through established procedures. Faculty, staff, and postdoctoral fellows should be informed about how to access the accommodations process on the OIE website, at accessibility.jhu.edu, by phone (410-516-8075), or by email (oie@jhu.edu or OIEdisability@jhu.edu). Graduate student instructors should contact the Student Disability Services Coordinator at their respective school to begin the process. In addition, as always, anyone with a documented disability or who needs a religious accommodation, pregnancy, or nursing parent adjustment may pursue accommodations as well.

Individuals who do not fall within these guidelines for a "vulnerable person" may also have concerns about returning to campus or have other considerations that are a consequence of COVID-19, such as household members who may be at higher risk or unexpected disruption in childcare. Due to their individual circumstances, instructional faculty and staff (including graduate students involved in course delivery) should discuss their concerns and needs with their department/program chair and/or with their departmental or divisional human resources manager to determine whether adjustments to their work environment may be made to address those needs. It is important that these discussions and any adjustments be planned as early as possible before the beginning of instruction.

Additional details on accommodations and adjustments are located in the Return to Campus Guidance.

Student Accommodations and Adjustments

We also recognize the intense challenges that students face during this time. Students with conditions as per the aforementioned CDC guidance are eligible for, and may request, reasonable accommodations through established procedures. Students should contact the Student Disability Services Coordinator at their respective school to begin the process.

It will be essential for schools to be in close communication with students as changes in programs and courses are made. A number of students may face economic hardships or life situations that impact their ability to fully participate in their academic program. Student health and well-being resources, such as those found at wellness.jhu.edu, should be broadly promoted. Policies and procedures for deferral and

leave of absence should be reviewed to evaluate whether some liberalization of policy or streamlining in procedures may be necessary in light of the current challenging environment.

Further, students and trainees who may be vulnerable to learner mistreatment and/or physical coercion under any circumstances may face greater risk or repercussions during a disrupted environment. Program directors will need to carefully monitor and mitigate these risks and reinforce mechanisms for students to communicate their concerns and challenges with advisors, academic staff, and vice deans. Some students and trainees may choose not to resume their usual activities for some period of time due to COVID-19 disruptions. If they feel they are being subjected to coercion (e.g., a pressure to return to a laboratory when the student would prefer to take a leave of absence), there should be a clear way for them, or active bystanders, to respond and report to higher authorities.

International Student Considerations

International students face a number of unique challenges. Disruptions in travel and uncertainty in obtaining visas may interfere with plans to return to campus. Participation in remote/online courses may be difficult because of differences in time zones. To help these students, schools should review and think creatively about options that will allow students to remain enrolled, even while remote and in another country or region.

Compliance of JHU's online education offerings have obligations under U.S. law through export control and economic sanctions. These laws and regulations include restrictions on JHU's ability to provide services, including online education, in certain countries and to certain persons. In this regard, instructors and academic staff should make reasonable efforts to ascertain if:

A student, regardless of citizenship, is expected to receive online instruction while residing in any of the following "comprehensively sanctioned countries": Cuba, Iran, North Korea, Syria, Sudan (Darfur region only), or Ukraine (Crimea region only).

- A student who is a citizen of a comprehensively sanctioned country holds a non-immigrant visa (F-1, J-1, etc.) and is expected to receive online instruction while outside the United States (i.e., in any country).
- Any foreign student who does not hold a non-immigrant visa, who is a citizen of a comprehensively sanctioned country or of a targeted-sanction country, is expected to receive online instruction from any location (including the United States).
- A student's access to an online course from another country has been blocked.

If these scenarios apply, or an instructor has questions, they should be directed to contact JHU's Export Control & Facility Security Office (ECO@jhu.edu).

Some countries ordinarily will require that JHU register as a provider of online services to those within their borders and/or to pay taxes on income derived from such services. Due to the pandemic, some countries have relaxed these and other requirements. Please note that another country's decision to relax their local laws does not alter JHU's obligation to comply with US laws, including export controls and economic sanctions. Questions about how any particular country's laws might apply should be directed to the JHU Office of General Counsel.

Health and Safety in the Learning Environment

The resumption of on-campus instructional activities will require modifications to the environment for the protection of faculty, students, and staff. Certain learners, particularly health care personnel (including medical and nursing students, clinical residents and fellows) and Peabody performance students may have special situations that will be guided by procedures and policies specific to their division or program.

Reduced Campus, Building, and Classroom Density

For the first several phases of campus re-opening, there will be limitations in the use of facilities while on campus. It is likely that people will be advised to be on campus for only the time periods necessary to accomplish required on-campus work. As on-campus activity resumes, schools will be responsible for informing faculty, TAs, students, and others about expectations and procedures to maintain low density (e.g. by using dedicated signage about physical distancing requirements as provided by their facilities staff). To accommodate classroom capacity, schools may need to consider expanding the class schedule to offer classes during extended hours, evenings, and/or on weekends or breaking larger classes into smaller sections.

Throughout the various phases, schools may determine that instructors and teaching assistants may need to access campus facilities to deliver or facilitate online/remote course instruction. This may be to record experiments using specialized equipment, to record asynchronous lectures in studios or technologically enhanced classrooms, or to have sufficient broadband access for synchronous delivery. The university and the schools are exploring how to offer access to on-campus technology and specially designed spaces that allow for even greater distancing and high-quality instruction.

Daily Health Check

As detailed in the Return to Campus Guide, the university is requiring all students, faculty, and staff who are on campus to satisfy daily health check requirements by using the Prodensity App. This short questionnaire will ask specific questions to assess a user's actual symptoms and/or exposure risks. Answers will yield a status to a Campus Pass, which will be used to grant/deny campus access. The Campus Pass expires after 12 hours. People may not report to campus unless they have a green Campus Pass.

Testing and Contact Tracing

Any JHU affiliate who feels ill or is concerned about exposure is encouraged to call the Johns Hopkins COVID-19 Call Center at 833-546-7546, seven days a week, between 7 a.m. and 7 p.m. Callers to JHCCC who are ill or are concerned they may be infected with SARS-CoV-2 will be asked a series of questions regarding their symptoms and possible exposure to others who have COVID-19. **For those individuals who meet the criteria set by the Johns Hopkins Infection Control Team in collaboration with Occupational Health, the JHCCC will arrange an appointment for a COVID-19 test. The caller will be made aware of JH testing sites that may be most convenient to them and will be given instructions regarding quarantine before a test can be secured**. The criteria for testing are updated on a regular basis, and the most current criteria will be used when there is an assessment over the phone.

Face Covering and Engineered Barriers

Face coverings are a vital public health measure that helps protect others by reducing exposure to droplets in the event someone is unknowingly infected with COVID-19. Details for the types and proper use of face coverings are found in the Return to Campus Guide. Face coverings may be brought from home, but **schools will also make coverings available to faculty, students, staff, and trainees.**

In an instructional setting, the expectation is that face coverings should be worn at all times unless

inside a single-occupancy office. This includes instructors, students, teaching assistants, visitors, and any support personnel. Students without face coverings, or those who do not comply with the rules around face coverings, will not be able to participate in on-campus classroom activities.

If an instructor is in a studio/streaming classroom alone then a face covering could be removed. This would be consistent with our 'alone in office' exception (and intent). However, if others are in the room, then a face covering still needs to be used. The >6ft distance should be maintained regardless and is additive, not exchangeable, with face covering measures.

We recognize that lecturing with a face covering is not an ideal experience for either the instructor or class. However, it is important to do because of the opportunity for droplets to spread infection even in a pre-symptomatic phase. We are currently investigating alternatives and supplements to face coverings including:

- Non-cloth masks, such as ClearMask. These are a possible solution when needed to provide accommodations to students with sensory disabilities.
- Face shields. Face shields are permitted and may be required as a complement but not substitution to face coverings. JHU affiliates do not need to wear goggles or face shields as part of general activity on campus.

Physical Distancing in the Classroom

When the university is in a phase that allows partial or full in-person classes to resume, classes will resume with reduced classroom capacity to implement a minimum of 6 ft. distancing between students as well as between the instructor and students. The standard to be applied is a 7.5 ft. diameter (6 ft. distance between the students + 1.5 ft. for student's body) to provide approximately 38 sq. ft. per student. Facilities and HSE staff have conducted an initial classroom-by-classroom analysis applying these distancing requirements across the university (examples illustrated in Appendix D).

Classrooms need to be prepared for distancing. Facilities staff will mark permissible locations for students to sit in classrooms to reinforce space separations as well as to ensure distance from an instructor. Unneeded furniture should be removed when possible and remaining furniture rearranged to ensure distancing up to 6 feet apart.

Entrance and exit from classrooms will be managed to prevent crowding around doorways at the beginning and end of classes. Facilities staff will work with schools to implement measures to avoid bottlenecks at key entry and exit points to buildings containing multiple classes that begin and end at the same time.

If academic activity precludes physical distancing, specific engineering and/or administrative controls must be established and approved by HSE. This may include, for example, the use of plexiglass barriers in accordance with CDC recommendation where 6 ft. distance cannot be maintained.

Cleaning and Disinfecting

Schools should support healthy hygiene behaviors by providing (where feasible) adequate supplies, including soap, hand sanitizer containing at least 60 percent alcohol, paper towels, tissues, disinfectant wipes, cloth face coverings (as feasible), and no- touch/foot pedal trash cans.

Instructors and students will be asked to wipe down their spaces to help prevent infection. Custodial service will provide sufficient supply of wipes and cleaning products so that users (students/instructors) can wipe their seats/workstations after every class/section.

If instructors or students within a class test positive for COVID-19, relevant space(s) may be closed for some period of time, and the school may attempt to increase ventilation/open windows in the affected

space(s) if possible. Cleaning protocols should follow those found in the Return to Campus Guide.

Other cleaning guidelines relevant for instructional spaces include:

- Routine cleaning procedures in all spaces including daily cleaning of high contact touch points, chairs, tables, knobs, A/V remotes.
- Coordinated timing around scheduled use where practical, providing cleaning supplies for users, and having appropriate products for common areas and high touch points.
- Floor cleaning and trash removal: Custodial service will dust mop and spot mop and remove trash as needed (daily).
- Ventilation in instructional and transit spaces, particularly smaller enclosed spaces, will be assessed on a room-by-room basis.
- Instructional laboratories may have a high turnover of students than research labs. General cleaning and disinfection will be coordinated between custodial services, lab instructors and HSE for specific cleaning needs. Instructional lab cleaning will be performed using a 'community approach' with all occupants participating. High tactile shared contact points inside the lab such as work handles, sink & handles, specialized equipment, etc. will be cleaned by lab staff (instructor/TAs) before and after each class/section. Individual workspaces will be wiped down by students themselves before and after class. As other cleaning needs arise within the lab, instructors will consult with HSE and custodial service of support.

Compliance

Every member of our community is empowered to request compliance with guidelines set forth here and in other university communications. As noted in the Return to Campus Guide, those who encounter non-compliance with guidelines, may notify the university through:

- Healthy Safety and Environment (HSE) at HSEinfo@jhmi.edu or 410-955-5918 (JHM) or 410-516-8798 (Homewood)
- The JHU Hotline available online at Speak2US or by phone at 844-SPEAK2US (844-773- 2528)

APPENDIX A
Online Resources Working Group Report: Standards and Recommendations for Classroom and Studio Technology Investments

Overview

Each phase outlined in Johns Hopkins' framework for resuming on-campus activity requires some remote teaching and learning. We can also assume that personal reasons (e.g., healthcare concerns, travel restrictions) will prevent some instructors and students from attending in-person classes. Further, we should prepare for the possibility that we might regress to more restrictive social distancing phases during the semester.

Therefore, we need to equip instructors with the facilities to provide content and engage students either in-person or online.

In keeping with the guiding principles articulated by university leadership, the Online Resources Working Group developed the following standards and recommendations for classroom and student technology investments to ensure instructors can teach students on campus and remotely.

Scenarios

The following are common teaching strategies that instructors are likely to employ this fall.

- Pre-recording instructional content for asynchronous delivery, studio or classroom
- Teaching remote students synchronously, studio or classroom
- Teaching class in-person with a mix of students attending either remotely or in-person, classroom
- Teaching class remotely with students attending either remotely or in person, classroom

Working Group Recommendations

Leverage Internal Expertise and Capacity

- Each division should consult with its respective teaching and learning centers, multimedia units, and facilities departments in making decisions to ensure they leverage local expertise, existing infrastructure, and prepare for ongoing support.

Systems and Infrastructure

- Divisions should make every effort to leverage existing infrastructure.
- To the extent possible, divisions should choose technology solutions that work with existing hardware and applications, including Zoom and MS Teams for synchronous instructions and Panopto for recording of asynchronously delivered materials.
- New implementations such as Cisco WebEx, Google Meet, and GoToMeeting may generate confusion and technical obstacles for instructors and students.

Facilities

- Acoustics are important to consider — minimize cross-over noise from adjacent rooms. Use sound baffling to minimize echoes.
- Consider how to regulate access to space to secure equipment.
- Employ reservation systems to minimize conflicting requests.

Training

- Preparing instructors, teaching assistants, and students to use systems in instructional spaces is paramount. Divisions should plan training programs for instructors and TAs and begin deploying them as soon as possible.
- Time spent troubleshooting technology because someone cannot see, hear, or share their screen is instructional time lost.
- Use a common set of tools across classrooms to minimize the need for training on different systems.

Support

- Professional technical support is crucial to the successful use of tech-enabled instructional spaces.
- Divisions should plan for a ratio of 3 classes to 1 technician in order to provide adequate support to the instructors, teaching assistants, and students.
- Telephone-based support should be considered.

Instructional Spaces and Studios

- When resource and space constraints force schools to choose between instructional spaces and studio facilities, outfitting of instructional spaces to facilitate remote participation by instructors and students should take priority over outfitting studio facilities.
- Well-outfitted instructional spaces are flexible and can be used for in-person and hybrid synchronous instruction and discussion as well as recording of instructional content for asynchronous delivery.
- Studio spaces are valuable assets and most divisions will certainly need more facilities, especially those divisions with fully online programs; however, they are not especially flexible and are not useful for in-person and hybrid instruction.
- Although there are exceptions (see Vanderbilt's One-Button Studio), most studio spaces require one or more dedicated technicians on hand to operate.
- Tech-enabled classrooms typically require a more modest classroom to technician ratio for support (typically 3:1).
- Prioritizing classrooms also allows for customization on the basis of room size and use.

Hardware

- Superior audio quality should be the top priority. It is essential that instructors and students connecting remotely to a classroom be able to hear and be heard by everyone in the room.
- Ceiling-mounted array microphone systems are the gold standard, however, for smaller rooms consider an omni-directional mic that can capture students and the instructor to save costs. For individual recording, lavalier mics should be used.
- Controlling natural light can be difficult, so blinds should be used in classrooms with windows. Light stands should be used to highlight the presenter if the recording is focused on an individual or specific area. If possible, use a three-point lighting setup.
    1. The key light is the main source to light the speaker(s).
    2. The fill light counteracts the heavy shadow created by the key light. It should also be in front, but on the other side from the key lights, and a bit farther away from the model.
    3. The backlight creates space between the speaker(s) and the background. By casting a rim of light around the silhouette.

- Cameras: In classrooms, cameras should not interfere with student-faculty discussions. Consider if multiple cameras or 360 degree cameras are needed to capture students and instructors. These devices should track the speaker in the room. For studio spaces, multiple cameras can provide a variety of recording angles, but this isn't a high priority if the instructor is displaying other content.
- Displays: The diagonal of the display should not be less than 1/3 the distance to the furthest student who will be viewing it. Use multiple displays if needed. Displays should allow for multiple inputs (e.g., HDMI, VGA) and be clearly labeled. Touch screens are nice, but not necessary for most classrooms.

Cost

- There are many factors that affect the cost of outfitting an instructional space, including existing configuration, size, equipment, etc.
- A recent state-of-the-art implementation in Hackerman 320 cost the Whiting School of Engineering approximately $72,000. This room may serve as a model for others that require a full state-of-the-art overhaul.
- More modest fixed installation options range in cost from $25,000 to $35,000.
- Mobile cart options range in cost from $7,500 to $10,000.

Quality

The table on the next page describes different technology options, based on quality and cost, for delivering instruction in different scenarios.

Scenario	Basic	Enhanced	Best of Class
Pre-recording instructional content for asynchronous delivery	Faculty recording in self-service studio or classroom. (Center for Educational Resources studio)	Faculty recording in a small conference room or classroom studio with 1-2 cameras, green screen, basic lighting. Staff-supported with post-production editing support. (Examples: SPH Center for Teaching and Learning; SOM Office of Online Education)	Studio with sound proofing, green screens, JVC 4k camera & tripod, a zoom H6 for digital audio, full lighting array. Attached editing/production suite with staff support. (Examples: SPH Multimedia Studio; School of Education Columbia Studio; Tricaster use at AAP and Public Health)
Teaching remote students synchronously	Zoom synchronous sessions from home with webcam and headset microphone	Zoom sessions from tech-enabled classrooms and conference rooms using installed equipment.	Zoom sessions from fully outfitted studio with technical support
Teaching in-person class with some students attending remotely	Owl 360 degree Webcam with Zoom - Or - Standard classroom with lecture record capabilities (Example: Homewood - Mudd 26)	Virtual Live classroom (Example: Hackerman 320) - Or - Mobile A/V cart (used by KSAS IT)	Dedicated studio classroom with lighting array,production suite, multiple cameras. (Example: https://pm.umd.edu/about/umd/distance-learning-classrooms/)
Teaching class remotely with students attending either remotely or in person	Zoom broadcast sessions (home or office) with remote streaming and classroom displays.	Studio broadcasts with remote streaming and classroom displays.	N/A

Regarding the different classroom and studio models listed in the previous table, the following chart characterizes these options not only by cost, but time to implement, usability, and required support. As noted in the recommendations usability and support are critical variables to consider when choosing the technology infrastructure. It was produced as part of a planning exercise conducted by Nathan Graham and others from the Whiting School of Engineering.

Approach	Build Time	Cost	Usability/ Reliability	Required Support	Quality	Delivery Scenario
Classroom Retrofit for Dual Delivery Mode (in-person/ online sync)	High	Very High	Complex/ Fragile	Heavy Long-Term Support	Medium	Teaching in-person class with some students attending remote
Classroom Mobile Cart	Low	Medium	Complex/ Fragile	Heavy Long-Term Support	Low / Medium	Teaching in-person class with some students attending remote
Studio	Medium	High	Simple/ Fragile	Medium Long-Term Support	Medium / Very Good	-Teaching remote students synchronously -Pre-recorded asynchronous content
DIY Studio Rooms	Low	Medium	Simple/ Fragile	Light Long-Term Support	Good	-Teaching remote students synchronously -Pre-recorded asynchronous content
DIY Recording Kits	Low	Low	Moderate / Moderate	Light Long-Term Support	Medium	Teaching in-person class with some students attending remote
Home Studio	Very Low	Very Low	Simple/ Moderate	Light Long-Term Support	Medium	-Teaching remote students synchronously -Pre-recorded asynchronous content

APPENDIX B: Best Practices in Student Learning Assessment for Online/Remote Instruction

Assessment Options and Alternatives

Alternative assessments depend on what the instructor is trying to measure or evaluate.

1. Skills
2. Knowledge
3. Analysis and evaluation of content
4. Creativity in synthesizing and critiquing concepts
5. Competencies
6. Lab work
7. Experiential learning
8. Simulations

Credit Bearing and Onsite Courses		
Onsite Assessments	**Online Assessment Suggestions**	**Technology**
Formative Assessments- Knowledge checks, Discussions, in class activities, presentations, Short quizzes	1. Test understanding - Create short frequent: a. quizzes b. polls 2. Create formative assessments to drive learning, such as: a. performance b. presentations c. interactive activities 3. Self-assessments through: a. reflection papers b. portfolio reflections 4. Student led discussion sessions: a. synchronous b. asynchronous	1. Test understanding: a. Use quiz option in LMS for knowledge checks b. Use poll option during synchronous sessions 2. Students create a. Performance videos uploaded to Voicethread, Youtube… b. short presentations in PowerPoint, VoiceThread, Prezi, etc…. c. Interactive activities: mind mapping tools, Apster, Metta, ThingLink…. 3. Reflections can be added in the LMS or a portfolio tool such as VoiceThread, Edublogs, or one available at JHU. 4. Lead conversations in: a. synchronous sessions: through ZOOM, or any other videoconferencing tool b. asynchronous sessions through the LMS discussion Board, Pretzl, Piaza, VoiceThread or any other Discussion Board tool
Summative Assessments Exams and Tests	1. Short Paper or final paper 2. Project, Digital Posters, Presentations 3. Case Study 4. Performance 5. Digital Portfolio 6. Exams built online: a. Open Book – timed b. Randomized questions c. Randomized questions from a large pool d. Use multiple versions of an exam e. Randomized choices of answer f. Proctored exams	1. Word documents, WordPress, Padlet, Prezi 2. Project, Presentations and Digital Posters could be created in WordPress, Padlet, Prezi, PowerPoint, VoiceThread, Slack, ASANA etc… 3. Case Study – Zotero, MindMapple, Paperity 4. Performance - Use VoiceThread, Ponapto, Youtube or Vimeo to upload or create videos 5. Exams Built into the: a. LMS or AMS, Respondus Lockdown browser b. Plagiarism detecting software: SafeAssign, TurnItIn, iThenticate
Large Class Exams	1. Use Peer Grading/ Peer assessments 2. Use Creative TA grading	1. Blackboard/ Course Plus Grading systems. 2. Gradescope

Lab and Design Course Assessments		
Onsite Assessments	**Online Assessment Suggestions**	**Technology**
Lab work	1. Use virtual labs to replicate the assessment task and assess student performance 2. Use simulations and ask the students to evaluate or analyze 3. Help students create a. presentations or b. performances	1. Check Labster for guidance 2. Catalogue or repository of simulations, assessments can be created in LMS, AMS, or uploaded as narrative and reflections, using PADLET, VoiceThread, 3. Using available technology or open source technology a. Presentations can be accomplished using Panopto, VoiceThread, Zoom, Prezi, etc. b. Performances can be uploaded to Youtube or vimeo or the LMS using either recordings from a mobile device or recording directly in Panopto or Zoom etc…
Problem solving tasks	1. Give students options to create projects they have designed, using mind mapping tools or other technologies that prompt them to use creative approaches to their projects 2. Provide students with raw data and ask them to analyze it	1. Mind Mapping Tools such as Bubbles, Mindmeister, Vengage 2. SPSS, STATA, R, inVivo, Excel, etc….
Teamwork in problem-based learning	1. Create spaces using technology to connect and create group projects	1. Technology: Slack, Padlet, WordPress etc.

Experiential Learning Course Assessments		
Onsite Assessments	**Online Assessment Suggestions**	**Technology**
Problem solving activity	1. Replicate activity within the LMS or other environment	1. LMS Team space 2. VoiceThread 3. Social media space, Facebook
Reflective journals	1. Create a reflection space in the LMS or other space	1. Reflection could be created in the a. LMS portfolio b. LMS Team Space c. Portfolio Tool outside the LMS
Presentations / Reports	1. Presentations created available technology and uploaded to a platform of their choice 2. Reports can be created using available tools and uploaded to LMS or available platform	1. Presentations can be uploaded to Youtube, Vimeo, LMS and created using: a. PowerPoint b. VoiceThread c. Panopto d. Etc… 2. Reports can be created using: a. WordPress b. Padlet c. Word d. PowerPoint etc…
Formative assessments	1. To gauge progress and learning instructors can create activities and performances to assess learning and improve instruction a. Performances b. Small assessments c. Presentations d. Activities e. Discussions	1. Exam and knowledge check tool in LMS a. Quiz and Exam tools in LMS b. Team space in LMS c. Videos using VoiceThread d. Discussions using Discussion board in LMS, Pretzl, Piaza etc…
Teamwork	1. Create Team spaces online to facilitate team activities a. Creating projects b. Collaborating on papers c. Creating presentations and performances	1. Team spaces can be facilitated in the LMS, in TEAMS, WordPress, Facebook etc…. Team can use the following to create their projects a. Publishing tool b. Presentation tools
Peer group evaluations	1. Students can evaluate each others' work in the LMS. Feedback could be private through the Team space or on the discussion board	1. Use LMS Team space or Discussion Board.

Assessment Challenges Online and Proposed Solutions

Credit Bearing Online Courses Assessment Challenges	
Assessment Challenges	**Proposed Solutions**
Academic Integrity - Cheating is easier and hard to detect online	• Timed and open-book exams • Randomized questions from a large pool • Use multiple versions of an exam • Randomized choices of answer • Plagiarism detecting software – • Ask questions that cannot be gathered from Internet searches, questions that require opinions and analysis of content presented – Critical thinking, Synthesizing, analyzing • Assessment that are performance based that require the students to present to the class • Ask students to sign a document indicating that they will uphold academic integrity as they take each assessment • Proctored exams or lockdown browsers
Large Classes - Exam in a large class is a challenge	• One solution is having student grading each other (peer grading/peer assessment) • Creative use of TAs in grading • Use Gradescope
Need to purposefully create interactions between students	• Group projects • Peer reviewed work • Student-led discussions

Credit Bearing Online Courses Assessment Challenges (continued)	
Assessment Challenges	**Proposed Solutions**
Need to purposefully create interactions between instructor and students - Frequent assessment for and of learning	• Short frequent assessments to test knowledge and stay connected – • Extensive, meaningful, timely and personalized feedback on all assessments • Use of office hours to create a dialogue with students and gauge their learning • Summary – muddiest point • Response to emails in a timely manner as well as quality of the message • Respectful interactions, demonstrate concern for their progress and provide meaningful feedback for improvement • Encourage active learning – higher order learning
Students need more structure online	• Short frequent assessments to test knowledge to help them focus and stay on task – not helpful for synthesis and analysis • Pre-test as a diagnostic measure to assess student knowledge and tailor instruction to their needs • Break up large papers and projects into smaller deliverable milestones that will culminate into a final delivery of the assignment • Guide participations and discussions, it will encourage students to participate often and stay on task – keep weight to a minimum as it is not assessment but part of engagement • Post weekly announcement summarizing how they are doing and give them an anchor on where they are in the learning process
Performance assessment requires use of effective technology	• Help students create presentations or performance using available technology or open source technology • Create spaces using technology to connect and create group projects, • Give students options to create projects using mind mapping tools or other technologies that prompt them to use creative approaches to their projects
Student expectations differ from f2f to online, they require more visual and interactive presentations online	• Add visuals to your assessments • Make assessments interactive • Generate tests that require: a. creating images and b. identifying parts of images related to content c. filling in answers based on hot spots on an image
Students with accommodations – Need for print copies	• Mail copies to their space • Ensure they have access to printers

<table>
<tr><th colspan="2">Lab and Design Course Assessments</th></tr>
<tr><th>Assessment Challenges</th><th>Proposed Solutions</th></tr>
<tr><td>Hands-on Instruction: Students need to develop kinesthetic skills using tools, a task and assessment that are harder to replicate in the online environment</td><td rowspan="3">• Use Virtual labs to replicate the assessment task and assess student performance
• Use simulation from open education resources and ask students to analyze processes, outcomes, research design etc.
• Help students create presentations or performance using available technology or open source technology
• Create spaces using technology to connect and create group projects
• Give students options to create projects using mind mapping tools or other technologies that prompt them to use creative approaches to their projects
• Provide students with raw data and ask them to analyze it</td></tr>
<tr><td>Inquiry-based Instruction: Students are provided with materials and information but are given the freedom to design the experiment. Can be replicated and assessed online with some adjustments</td></tr>
<tr><td>Discovery-process Instruction: Students are directed to solve a problem or come up with hypotheses to meet the stated outcome. Can be assessed online with adjustments</td></tr>
<tr><td>Problem-based Learning: Requires students to engage in teamwork and are dependent on others on the team to solve the problem. Can be assessed online with adjustments</td><td>• Help students create presentations or performance using available technology or open source technology
• Create spaces using technology to connect and create group projects
• Give students options to create projects using mind mapping tools or other technologies that prompt them to use creative approaches to their projects</td></tr>
</table>

Experiential Learning Course Assessments	
Assessment Challenges	**Proposed Solutions**
Outcomes of experiential learning can be varied and unpredictable	• Give students the freedom to choose how their work will be evaluated. They can be part of creating the grading rubric • Ask students to create a reflective journal to document reflections on their experiences • Have students create a digital portfolio to showcase the best of their work • Students can create presentations and reports using available technology • Students can self-evaluate and reflect on their experiences and performance • Formative assessments in the form of short quizzes where students can evaluate their improvement and weaknesses • Instructor assesses the students learning orally, using a videoconferencing tool. • Ask students to develop a project using lessons learned: Project could be individual or in teams • Peer group evaluation of the student's work
Students may choose to solve a problem differently	
Experiences and learning from the same event may differ between students	
Process and Product are both important - Each may require separate learning outcomes and criteria	

Assessment Types Using Bloom's Taxonomy

Bloom's Taxonomy	Question Type	Assessment Type
Remembering	Knowledge Question	• They are asked to define or recall information a. Quiz b. Exam
Understanding	Comprehension Question	• They are asked to explain concepts a. Paper b. Exam c. Quiz
Applying	Application Question	• They are asked to explain and apply knowledge a. Paper b. Exam (open ended questions) c. Project d. Case Study
Analyzing	Analysis Question	• They are asked to compare and contrast concepts and situations a. Paper b. Exam (open ended questions) c. Project d. Case Study
Evaluating	Synthesis Question	• They are asked to create artifacts that could have addressed the situation a. Paper b. Project c. Case Study d. Presentation e. Performance
Creating	Evaluation Question	• They are asked to evaluate concepts and their effect on the larger situation a. Paper b. Project c. Case Study d. Presentation e. Performance

APPENDIX C: Guidelines for Zoom Recordings

Zoom is a third-party product that JHU makes available for instructors to use for synchronous video sessions with their students. Instructors can record these sessions for a wide variety of pedagogically valid reasons, but the choice to record a session is a decision made by the instructor. Likewise, the choice to identifiably participate in a recorded session is a decision made by the student.

Like other course content created as part of university activities, these recordings are subject to the Johns Hopkins Intellectual Property Policy. Zoom recordings should be treated as subject to federal student privacy law (FERPA) and the Johns Hopkins University FERPA Policy if students are personally identifiable in the recordings. Please contact your divisional Registrar with any questions.

Zoom is not the recommended tool for creating pre-recorded lectures that can be shared with students. Instead, Panopto and Kaltura are tools with more options and flexibility for creating asynchronous content. Consult your divisional teaching and learning specialists to see what tools are supported locally.

If an instructor chooses to record Zoom sessions in which students' participation may be captured, they should do so in accordance with the following guidelines to minimize recording identifiable student participation as required by FERPA policy:

- Use the following Zoom settings. To adjust settings, go to your Zoom account in your browser (JHU Zoom Help - https://uis.jhu.edu/zoom/).
  - Disable the "record gallery view" option and enable the "record active speaker with shared screen" option in order to only record those who speak during the session. Students can choose to not show their video if they do not want it captured when they speak.
  - Disable the option for "display of participants' names in the recording." Names will still be viewable to participants during the meeting, but will not be included in the recording.
  - Enable the "require password to access shared cloud recordings" option.
- Students may opt-out from identification in the recording by muting their audio, not enabling video, and not typing in the chat window. In these cases, students should still be considered in attendance and not penalized in any way, and instructors should work with students to determine an alternate method of participation.
- Notify students beforehand that Zoom sessions will be recorded – i.e. in the course syllabus. Similarly notify students beforehand that they may opt-out from identification in the recording by muting their audio, not enabling video, and not typing into the chat window. Remind students at the beginning of the class (either orally or using a slide) that the session will be recorded, and their options for opting-out of identification in the recording. In addition, all participants will automatically be notified of and be prompted to consent to the recording in Zoom.
- Instructors should not insist upon student participation that reveals identifying information during the session.
- Consider offering to pause the recording when students participate to avoid capturing their audio and video. For instructors who desire to make recordings available to other classes/cohorts, avoiding capture of student audio and video during class participation will allow the instructor to share the recording without first obtaining student consent prior to sharing a class recording. (See additional information below.)
- If an instructor insists upon participation that reveals identifying information during class (either by audio, video, or chat), then the session should not be recorded.
- Delete recordings of identifiable student participation, including complementary files (e.g. transcript, chat logs) and Zoom recordings hosted on other platforms (e.g. Panopto, Kaltura), as soon as your obligations to your students allow. Deletion by 120 days after the last day of the course is recommended unless the recording is subject to a litigation hold as directed by the Office of the Vice President and General Counsel. Until it is deleted, any recording of identifiable student participation

should be treated as a student record subject to FERPA.

- Disable the "local recording" option. For most instructors, recordings should be kept in the cloud and not downloaded to a local computer. Instructors with accounts that reside on https://jhjhm.zoom.us are subject to HIPAA restrictions; typically, these are faculty/staff who have appointments in SOM, JHHS or affiliates. For these instructors, cloud-based recording is disabled. Graduate student instructors also cannot record to the cloud. These instructors can enable local recording and share via a HIPAA-compliant resource (e.g., OneDrive) if required or using a University video management service (e.g., Panopto, Kaltura).
- Access to class recordings must be limited to students in the class for educational review purposes. Faculty should include a statement on the syllabus or communicate in an equivalent method to all students in the class, "Class meetings recorded by the instructor may be shared with students in the class for instructional purposes related to this class. Students are not permitted to copy or share the recording with others." For any disclosure beyond the class or for other purposes, identifiable student information must be removed or students who are identifiable must provide written consent prior to disclosure.

Using Zoom in Courses Discussing Politically Sensitive Topics With Students in Vulnerable Locations

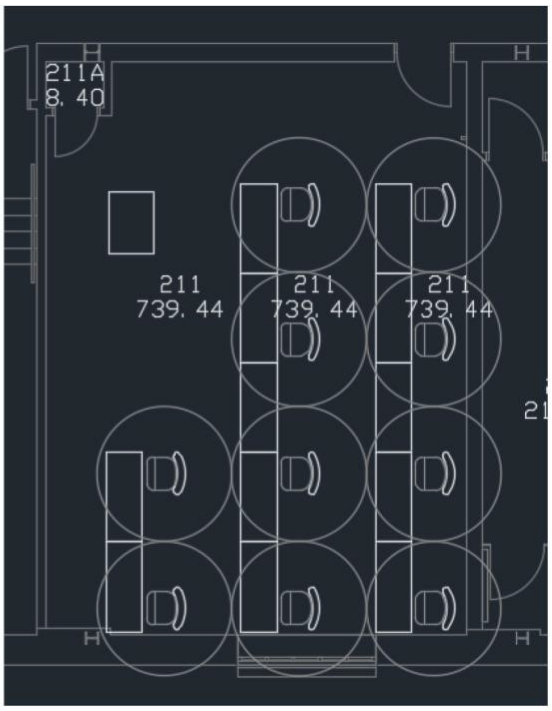
It is also important to be mindful of students taking courses in countries where academic freedom and freedom of expression are restricted by the government. Classes which engage in critical discussions of authoritarian states might pose a risk to students through surveillance or censorship. Zoom is increasing its encryption of live sessions to address these concerns; however, no technical solution can eliminate risk. Below are recommendations to minimize risk for students in courses discussing politically sensitive content.

- Consult with students about their concerns engaging in conversations or sharing course work subject to surveillance. Provide accommodations as appropriate.
- Do not record and share course conversations with students in or from vulnerable locations. Tell other students to not record and share conversations with their peers.
- Allow students to anonymously participate in discussions without identifying themselves or turning on their video.
- Consider alternative ways for students to share their ideas, such as scheduling separate office hours to discuss course content or using alternative, encrypted communication channels like Signal.

For more information on this topic, please consult the Association for Asian Studies Statement Regarding Remote Teaching, Online Scholarship, Safety, and Academic Freedom.

APPENDIX D: Examples of Classroom Capacity Assessment

Lecture - Hodson 211
Max. Cap. = 30
7'-6" Spacing Cap. = 10
(33% of Max. Cap.)
73.9 SF/Seat



Lecture - Hodson 213
Max. Cap. = 63
7'-6" Spacing Cap. = 14
(22% of Max. Cap.)
100.5 SF/Seat