

CAS Remote Instruction Plan, by Course Type

General Considerations for All Course Types

New York State Department of Education requirements (from NYSED site)

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General Considerations for All Course Types

Useful Links

- Main CAS Academic Continuity Landing Page
- <u>Steps to Ensure CAS Academic Continuity</u> (We ask that you fill out <u>this form</u> as soon as possible.
- CAS Academic Continuity FAQs and Email Templates
- CAS Remote Instruction Plan, by course type
- CAS Faculty Guide for Academic Continuity
- Hardware purchasing (check with department first)
- CAS Remote Assessment Guide

These are minimal expectations, and specific depts/programs may have more focused expectations due to the discipline.

Updated (03/18/20): Faculty should offer at least 2 synchronous or asynchronous hours of group interaction or highly interactive exchange per week for the class. Because we are now in the scenario of students being dispersed across time zones, the most important factors are to continue to deliver content and engage students. See <u>CAS Academic Continuity FAQs and Email Templates</u> for more information.

Maintain academic progress



• Keep in mind the instructional contact hours that students receive in your face-to-face course, as well as the time for supplemental activities. Here are some examples articulated by the CAS Technology-Enhanced Education Committee.

Instructional time examples	Supplemental time
 Live or recorded lectures + interactive discussions Faculty-mediated discussion/forum Asynchronous, interactive modules Student breakout groups that reconvene with faculty member Chats Polling and clicker activity Required office hours or asynchronous consultations Monorited assessments 	 Reading course presentations / other materials Participation in NYU Classes discussions Doing research Writing papers or other assignments Completing all other assignments (e.g. projects)

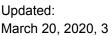
- Some adaptation will be necessary, but with limits. Please notify students of any changes to syllabi, including eliminated assignments. Refer to our <u>FAQs page</u> for specific questions.
- Record assessment results, continue to offer high-stakes scheduled assessments and share information with students. Let us know (<u>cas-academic-continuity@nyu.edu</u>) if you need any assessment infrastructure as soon as possible. Refer to our <u>FAQs page</u> and <u>assessment guide</u> for specific questions.
- Provide access to content that is digitally accessible. For using existing resources, we encourage you to work with our colleagues at NYU Libraries and use <u>open educational resources</u>. For custom content, you can <u>create video and other multimedia through NYU-supported tools</u>. There may also be content creation services available for select cases.
- Keep department leadership updated. Instructors may want to have a department administrator or colleague added to an NYU Classes site.

Encourage student engagement

- Maintain regular communication & feedback to students
- Offer some real-time engagement with students, along with office hours

New York State Department of Education requirements (from NYSED site)

Regardless of the delivery method or the particular learning activities employed, the amount of learning time in any college course should meet the requirements of Commissioner's Regulation



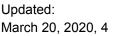


Section 50.1 (o), a total of 45 hours for one semester credit (in conventional classroom education this breaks down into 15 hours of instruction plus 30 hours of student work/study out of class.).

Seminars

Please <u>fill out our planning form</u> as soon as possible. Seminars typically meet for one, 2.5 hour block per week in person. You have flexibility on how you achieve this time, but here are possible ways to approximate the weekly instructional time required. There tends to be direct mappings between in person and remote activities used in seminars.

- 1. Sketch out whether or not you would need to significantly change or eliminate any content or graded assignments. You can download this <u>spreadsheet template</u> if useful.
 - a. During the previous step, <u>identify any needs for content creation</u> and share with the department. Do you need to create a quick video on a lecture topic or demo? Do you need to create a presentation and then have voice over to explain slides? Do you need to create a "feedback" video or PDF which outlines commonly missed problems/misunderstood concepts? The <u>Remote Instruction</u> <u>quide</u> from NYU IT and the <u>FAS Office of Ed Tech quides</u> will be useful to you.
 - b. Identify how you will incorporate synchronous (real-time) or highly interactive asynchronous elements in your course. Holding a 2.5 hour seminar remotely may not be ideal, so you may want to have a shortened real-time session (or asynchronous equivalent) and then create multimedia materials around some of the lecture content. This will also give students time to reflect on material. You can also leverage breakouts. The table listed above shows what would count as instructional time.
 - c. Alert students of possible changes to the syllabus.
- 2. In the event of a remote instruction scenario, alert all students right away of changes to the syllabus.
- 3. Decide on weekly format (assumes regular office hours).
 - a. One possibility is:
 - One extended 90-minute real-time discussion session with student break out groups. These sessions can be recorded for students to watch asynchronously, along with reflective prompts. Alternatively, there can be a series of faculty and student interactions that promote reflection and idea exchange (online discussions; reflective prompts).
 - Several mini recorded lectures, totalling 30 minutes.
 - Assigned primary and secondary readings and homework.
 - Short reading checks based on the reading assignment, automatically graded within NYU Classes.
 - Response paper, based on readings and mini lectures.
 - Group-based discussion board activity, with two rounds of reading/response.
 - b. Another possibility is:



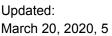


- Pre-discussion forum activity
- One extended online discussion session with student break out groups.
- Post-discussion forum activity
- Several mini recorded lectures, totalling 30 minutes.
- Assigned primary and secondary readings and homework.
- Short reading checks based on the reading assignment, automatically graded within NYU Classes.
- 4. Identify any assessment changes/needs. (CAS Remote Assessment Guide)

Language and Writing Courses

Please <u>fill out our planning form</u> as soon as possible. Language courses can meet for three, four, or five 75-minute sessions per week, depending on the intensity and type of language instruction. Writing is typically taught for two, 75-minute sessions per week. You have flexibility on how you achieve this time, but here are possible ways to approximate the weekly instructional time required.

- 1. Sketch out whether or not you would need to significantly change or eliminate any content or graded assignments. You can download this <u>spreadsheet template</u> if useful.
 - a. During the previous step, <u>identify any needs for content creation</u> and share with the department. Do you need to create a quick video on a lecture topic or demo? Do you need to create a presentation and then have voice over to explain slides? Do you need to create a "feedback" video or PDF which outlines commonly missed problems/misunderstood concepts? The <u>Remote Instruction guide</u> from NYU IT and the <u>FAS Office of Ed Tech guides</u> will be useful to you.
 - b. Identify how you will incorporate synchronous (real-time) or highly interactive asynchronous elements in your course. You will likely continue to offer two, synchronous sessions for part of the scheduled time in order to promote student reflection on material. We would recommend identifying some lecture material to convert to multimedia which students would consult before class. The table listed above shows what would count as instructional time.
 - c. Alert students of possible changes to the syllabus.
- 2. In the event of a remote instruction scenario, alert all students right away of changes to the syllabus.
- 3. Decide on weekly format (assumes regular office hours).
 - a. One possibility is:
 - Normal 75-minute real-time sessions, with regular student breakout sessions. These sessions can be recorded for students to watch asynchronously, along with reflective prompts. Alternatively, there can be a series of faculty and student interactions that promote reflection and idea exchange (online discussions; reflective prompts).





 Assigned textbook reading and homework. Leverage existing robust multimedia content for commonly taught languages. Less-commonly taught languages may have access to an internal pool of resources.

- Short learning checks/quizzes based on the weekly topic.
- b. Another possibility is:
 - 50-minute real-time sessions, with student breakout group work interwoven. These sessions can be recorded for students to watch asynchronously, along with reflective prompts. Alternatively, there can be a series of faculty and student interactions that promote reflection and idea exchange (online discussions; reflective prompts).
 - Required office hours appointment for student
 - Several mini recorded presentations/pdf lecture materials, totalling 20 minutes.
 - Assigned textbook reading and homework. Leverage existing robust multimedia content for commonly taught languages. Less-commonly taught languages may have access to an internal pool of resources.
 - Short learning checks/quizzes or reading checks, automatically graded within NYU Classes.
 - Group-based discussion and writing activity, with two rounds of reading/response.
- 4. Identify any assessment changes/needs. (CAS Remote Assessment Guide)

Lectures

Please <u>fill out our planning form</u> as soon as possible. Lectures typically meet for two, 75-minutes sessions per week in person. A lecture may or may not have a recitation attached. You have flexibility on how you achieve this time, but here are possible ways to approximate the weekly instructional time required (see next section for recitation information).

- 1. Sketch out whether or not you would need to significantly change or eliminate any content or graded assignments. You can download this <u>spreadsheet template</u> if useful.
 - a. During the previous step, <u>identify any needs for content creation</u> and share with the department. Do you need to create a quick video on a lecture topic or demo? Do you need to create a presentation and then have voice over to explain slides? Do you need to create a "feedback" video or PDF which outlines commonly missed problems/misunderstood concepts? The <u>Remote Instruction guide</u> from NYU IT and the <u>FAS Office of Ed Tech guides</u> will be useful to you. There is also this UTexas report with recommendations for <u>large lecture courses</u>.
 - b. Identify how you will incorporate synchronous (real-time) or highly interactive asynchronous elements in your course. You will likely continue to offer two, synchronous sessions for part of the scheduled time in order to promote student

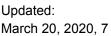


reflection on material. We would recommend identifying some lecture material to convert to multimedia which students would consult before class. The table listed above shows what would count as instructional time

- c. Alert students of possible changes to the syllabus.
- 2. In the event of a remote instruction scenario, alert all students right away of changes to the syllabus.
- 3. Decide on weekly format (assumes regular office hours).
 - a. One possibility is:
 - Two 50-minute real-time discussions and mini lecture sessions with learning checks (any moment for student reflection). These sessions can be recorded for students to watch asynchronously, along with reflective prompts. Alternatively, there can be a series of faculty and student interactions that promote reflection and idea exchange (online discussions; reflective prompts).
 - Several mini recorded lectures/presentations, totalling 50 minutes.
 - Assigned primary and secondary readings.
 - Short reading checks based on the reading assignment, automatically graded within NYU Classes.
 - Short response paper, based on readings and mini lectures.
 - Group-based discussion board activity, with two rounds of reading/response / Required group-based tutoring session
 - b. Another possibility is:
 - Two 75-minute real-time discussions/mini lectures with student breakout group work interwoven. These sessions can be recorded for students to watch asynchronously, along with reflective prompts. Alternatively, there can be a series of faculty and student interactions that promote reflection and idea exchange (online discussions; reflective prompts).
 - Several mini recorded presentations/pdf lecture materials, totalling 30 minutes.
 - Assigned primary and secondary readings.
 - Short reading checks based on the reading assignment, automatically graded within NYU Classes.
 - Short response paper, based on readings and mini lectures.
- 4. Identify any assessment changes/needs. (CAS Remote Assessment Guide)

Recitations

Recitations typically meet for one, 75 minute session per week in person. You have flexibility on how you achieve this time, but here are possible ways to approximate the weekly instructional time required. Options include:





- Offering one structured synchronous, interactive discussion session via Zoom. These sessions can be recorded for students to watch asynchronously, along with reflective prompts. Alternatively, there can be a series of recitation leaders and student interactions that promote reflection and idea exchange (online discussions; reflective prompts).
- Sharing review points beforehand as a short presentation, and offering a video-based q and a session around topics
- Assigning practice problems beforehand, and offering a live chat around solutions
- Sending students discussion points to complete before a session, and then have students groups share out responses discussing strategies during the live or asynchronous session

You can download this spreadsheet template if useful.

Laboratories and Associated Lectures & Recitations

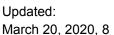
General Considerations

Labs range in time (50 minutes once per week; two, 75-minute weekly sessions; one multi-hour time block) and may include computational lab and/or bench lab work. You have flexibility on how you achieve this time, but here are possible ways to approximate the weekly instructional time required

For 50 minute computational labs, see the Recitation section for ideas.

Bench lab science is more complicated to replicate due to its physical space, equipment, and materials requirements. Here is the plan to address bench lab science work during a remote instruction period. Stanford has <u>some lab-specific tips</u>, and below we outline a recommended immediate action plan based on best practices and feedback from peer institutions who have incorporated different techniques:

- 1. Identify immediate opportunities to accelerate or combine elements of upcoming labs to offer now
 - a. Faculty should work with their DUS and team to identify which remaining hands-on lab elements can be offered earlier than planned, perhaps combining with an upcoming in-person lab (while classes are still meeting in person and if students already have the requisite knowledge)
 - b. Faculty should sketch out implementation of these immediately deliverable changed labs and notify students as soon as possible
- 2. Sketch out whether or not you would need to significantly change or eliminate any remaining content or labs. You can download this <u>spreadsheet template</u> if useful.





3. Identify content needs

- a. Are there acceptable existing assets that would be useful to incorporate? LET US KNOW IF THERE IS ANYTHING THAT YOU NEED TO PURCHASE
 - i. General: <u>JoVe videos of laboratory techniques</u>; <u>MERLOT</u> simulations; PhET simulations (<u>phet.colorado.edu</u>)
 - ii. OER Resources
- b. Begin creating videos of essential lab techniques
- 4. Replicate later experiments and prepare and document any final results (ex. Outputted data; microscope slides; final chemical solutions/formulae, etc.) / Can also use student-collected data/results from previous semesters
- 5. Restructure remaining labs to account for instructor-provided (rather than student-collected) data

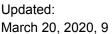
Implementation Ideas/Recommendations from the field

General

- 1. Make sure to retain the maximum amount of opportunities for data analysis and experimental design as possible. This could be individual or group activities. Have a synthesizing activity afterwards.
- 2. Get ahead of experiments right away with the lab staff and have data that the students can manipulate and analyze online
- 3. Provide students with data so that they can complete lab reports and assess how well they have picked up key concepts through lab exams
- 4. Do not replace class time with additional assignments. Use the extra time to offer more targeted feedback (and maybe work in a revision stage)
- 5. Get creative about how to utilize lost lab time. One could add an additional remote lecture, or explicitly connect lecture and lab, or chunk standing lecture into mini lectures that are interspersed with individual or group problem solving.

Introductory Courses

- 1. Be specific about what is being cut/eliminated and which future courses could address this topic
- 2. Use videos to introduce bench science techniques and other concepts, and issue short quizzes to reinforce key aspects
- 3. Sample lab
 - Student watches relevant JoVE video to illustrate the techniques the students would have been performing in lab (e.g., SDS-PAGE) OR students work with a <u>simulation</u> to intuit a possible effect
 - b. Students are provide essential content related to steps of the experiment, for example





- i. Students are provided with data generated by students in a previous semester OR
- ii. Students are provided with key results that they would have produced (ex. images of pre-made slides that they would have made) OR
- iii. Description of distillation of chemical solution at key stages OR
- iv. Scaffolding around a Physics simulation
- c. Student have a synthesizing experience: lab report and/or lab exam and/or group discussion about lab.
- d. Could leverage TA participation to lead mini sections for an in depth debrief or exploration of topics.

Advanced /Project Labs (Tricky since this may involve group work and unknown outcomes)

- Use data from similar projects from previous years so that students can complete steps.
- Convert any practical components into theoretical assignments (ex. One could not execute the CRISPR technique though one could transform a molecular cloning assignment into a theoretical flowchart).

Examples of possible face-to-face / online equivalencies

(Proposed by the CAS Technology-Enhanced Education Committee)

Activity	Instructional time
Case studies (with faculty oversight)	1 case study with activities = 90 minutes instruction
Faculty-mediated discussion/forum	300+ words = 30 minutes instruction
Faculty-mediated group projects (faculty receiving periodic updates and providing guidance to group)	60-120 minutes, depending on faculty involvement and assignments
Presentations	300+ words = 30 minutes instruction
Online assessments	1 hour test = 1 hour instruction
Online lectures	1 hour = 1 hour instruction
Required office hours	30 minutes = 30 minutes instruction
Synchronous field trip (evaluated by faculty)	1 hour = 1 hour instruction
Synchronous web conference	1 hour = 1 hour instruction

