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1. Introduction

Notre Dame Learning is committed to accompanying you as you prepare your courses to be resilient to disruptions, large or small, and more flexible in general. We will work with you as you develop plans and make adjustments to your courses to make them ready to respond to a variety of circumstances, while maintaining the quality of the student learning experience. We have created resources to support you as you plan and implement strategies that will allow you to quickly adapt between in-person teaching and:

- **dual-mode** (some in-person students and some remote students)
- **remote instruction** (to in-person and possibly some remote students), or
- **fully online instruction** (includes synchronous and asynchronous remote components)

1.1 Pathways to resilient teaching materials

We have created multiple pathways to the same resilient teaching support materials so that you can access them in a way that is most effective for you. In each of the pathways, we offer a consistent set of evidence-based concepts and strategies that are focused on the design and implementation of inclusive, student-centered learning experiences.

ND Learning’s pathways to preparation for resilient teaching are:

- **Kaneb Center Workshop Series** (live, interactive sessions with ND Learning experts)
- **Resilient Teaching Playbook** (concise and primarily textual format with links to other resources to more detailed information)
- **Resilient Teaching Website** (formerly instructionalcontinuity.nd.edu)
- **Resilient Teaching mini-course** (a self-paced and carefully structured path to preparation, hosted in Sakai).

In this Resilient Teaching Playbook, you will find the key components needed to prepare for resilience and success whether you are teaching in dual-mode, online, as a remote instructor, or fully in-person. Our goal is for this resource to provide a concise and primarily textual handbook with links to other resources with more detailed information.
1.2 The resilience template

To be ready for resilient fall teaching, we suggest that all instructors should address the following prompts, which comprise the Teaching Resilience Plan Template, for each of their classes:

- List your learning goals for your students:
- Briefly describe your assessment plan:
- Briefly describe your plan to engage students during scheduled class meetings:
  - How will you accommodate remote students during an in-person class meeting?
  - Briefly describe any alterations or additions to the above if you are off-campus but able to teach:
  - Briefly describe any alterations or additions to the above if everyone is remote:
  - What support will you need in order to learn or execute the above techniques?
  - What technology or tools will you need to have access to at home in order to execute the above techniques?
- Briefly describe how you will engage students outside of scheduled class meeting times:
  - In what modality will you hold office hours?
  - Have you worked with your academic unit leader to establish a contingency plan if you are incapacitated?

This playbook, along with the workshop series, Resilient Teaching Website, and Resilient Teaching Mini-course, will help you think through how to best answer these questions for your courses.

1.3 Inclusion and equity

We already mentioned the importance of creating equitable learning experiences for students attending in-person and those attending via Zoom. We also recommend considering your teaching practices to ensure that the learning experience overall is equitable regardless of student background.

With the addition of technology and digital materials in many courses, this is a great time to think about Universal Design for Learning. We suggest you read over Sara Bea Accessibility Services’ document on creating accessible digital materials. By incorporating their suggestions as you develop resources, you will make your materials more accessible and effective for all students.
Students with different backgrounds and levels of preparation can often struggle to succeed because of lack of familiarity with the hidden curriculum of higher education. Some relatively simple ways to create a more inclusive and equitable learning experience for all of your students were highlighted in How to Make your Teaching More Inclusive (Sathy and Hogan).

- Build clear, overt structure into your syllabus, assignments, tests, and pedagogy. Doing so is beneficial to all students.
- Find a way to be comfortable with silence. One way is to provide structured time for thinking, as outlined in the Write-Pair-Share activity.
- Connect with your students through course content. Ask yourself:
  - Why should students care?
  - How can I communicate that to them?
- Connect with your students on a personal level.
  - Sharing appropriate information about yourself
  - Use their names (ask them - don't assume the one on your roster is what they would like to be called).

Another way you can provide structure is to adopt the Transparent Assignment Design methodology and clearly communicate the purpose, task, and criteria for success for your assignments. Such structure and transparency have been shown to be helpful for all students while closing the achievement gap and persistence gap for first generation, low socioeconomic status, and non-white students.

Since you are engaged in rethinking your course design, you also have an opportunity to, as Fr. Jenkins invited us, create “an ever more inclusive community committed to combating racism.” One concrete step you can take is to evaluate your course readings and other materials to see if they are representative of the breadth of the identities of scholars in the field. This is often a challenging task since it may require eliminating some material that is a long standing part of your course. That said, it is one way to make your course more inclusive, since it provides an opportunity for a broader range of students to see their identities represented in the course material, while helping all students see the value of contributions of a broader array of scholars.
Finally, the course design and teaching strategies described throughout this playbook (from adding multiple milestones to assessments, to intentional use of active learning elements, to thoughtful use of media) are meant to improve the course experience for all students, but many are especially helpful for students from disadvantaged backgrounds or who have historically been marginalized in higher education settings.

1.4 Intellectual Property and Privacy Considerations

This section discusses a number of common questions about intellectual property, student privacy, and academic freedom that emerge when instructors design hybrid or online courses, or when instructors use class recording technologies as part of a “dual-mode” course. We address broad principles and provide detailed guidance on how to design and teach courses that enhance learning by protecting the privacy of the classroom and ensuring the appropriate use of learning materials and other forms of intellectual property.

The interactions within a course (among students and between instructors and students) create an intellectual community meant to cultivate effective learning. That community is presumptively private; the opportunity to learn without surveillance and discuss without fear of repercussion is essential. However, the network architecture of the internet is optimized for easy sharing; motivated users can find a way to copy and share what they want to share. All instructors should implement privacy-protective measures in their courses in order to maintain environments in which fearless inquiry and effective learning can unfold.

Intellectual Property Considerations

The elements of an individual course and the course as a whole are normally the intellectual property of the creator and not the University. The intellectual property in a course may include the following: identified learning goals; ideas and sequencing; methods and approaches overall and day-to-day; learning materials created by the instructor; assignments, assessments, and projects created by the instructor; other tangible work products created by the instructor to enable students to achieve the learning purpose of the course. Many courses use intellectual property created by others (e.g. a textbook, online videos) or collaboratively. Some courses use collaboratively developed or departmentally-authored course designs. Instructors may have questions about intellectual property specific to dual-mode teaching, creating learning materials, and the like.
For detailed answers to common questions about IP and educational materials, please refer to this page on the Resilient Teaching Website. A sample statement for your syllabus, on the use of learning materials, is included below.

**Use of Course Materials**

“Course materials (videos, assignments, problem sets, etc) are for use in this course only. You may not upload them to external sites, share with students outside of this course, or post them for public commentary without my permission. Please discuss with me in advance if you have any questions about this policy.”

**Privacy Considerations**

Your class is an intellectual community created and sustained by and for you and your students. The “classroom” includes the online environment (the Sakai Learning Management System) and any interactions or engagements facilitated by technology. Please take special care to protect the privacy of this community from unintentional harms as well as external interference. In the course of their teaching, instructors enjoy significant academic freedom, as for instance in the choice of materials, instructional methods and approaches, style of expression and the like. Courses are subject to University and College/School approvals as well as accreditation and compliance requirements (e.g., federally mandated contact time per credit hour or discipline-specific requirements).

Students have substantial rights and expectations of privacy in their interactions with peers and their instructor, including but not limited to the discussion of sensitive subjects in live class meetings and online discussions. Individual interactions with instructors (e.g. in office hours, or discussing academic performance) must remain private and are included within students’ FERPA protections. Sharing or providing access to class interactions and events increases the possibility that students or instructors will be the target of external harassment, trolling, and other forms of unwelcome exposure. Such harassment is especially likely to be directed at women and People of Color.

*Building privacy-protective features into any Notre Dame course, regardless of modality, will help to cultivate an open and effective learning environment.*
Privacy-Protective Steps for All Instructors

Instructors should follow the steps below to enhance the privacy of the classroom when using learning technologies as part of a course design.

1. **Provide a clear privacy practices statement on your syllabus.** Include a written statement on your syllabus that outlines what students can and can’t expect, how they may share information about class discussions, topics, and how they should treat the contributions of other students. See end of this section for a sample and more details.

2. **Use University-provided technologies to host course materials and facilitate asynchronous discussions.** Host your course in the Sakai LMS and make sure any video materials are posted within Panopto for maximum control.

3. **Live class recordings should only be made with Zoom and only be hosted in Panopto.** Zoom recordings will be posted into your Panopto folder automatically. To find out more about setting up and using Panopto, [begin here](#).

4. Panopto prevents downloading course videos by default. **Do not permit downloading of live class recordings**, except in mitigating circumstances and by individual request only.

5. Encourage remote students participating in a live class via Zoom to use headphones/headsets whenever possible to avoid broadcasting discussions. Encourage students to review their physical surroundings in advance of live class meetings and use virtual backgrounds if they prefer, to remain on camera during class meetings, and to maintain appropriate levels of engagement during the meeting.

6. Avoid posting any learning materials you do not want to be shared (syllabi, assignments, video, files and documents, etc.) on public websites or social media platforms.

7. Follow this [advice on the secure use of Zoom](#) for class meetings, office hours or other online interactions.

8. Absolutely **DO NOT post or share any student-created materials or videos or images portraying students** (e.g., screen captures of Zoom meetings) to public websites or on social media platforms for any reason.
Recording Live Classes (including sensitive subjects)

The classroom is a privileged space that should be shielded from external view in order to preserve the strongest possible conditions for intellectual discovery and collaborative learning. The potential unauthorized sharing of live classroom recordings raises significant privacy concerns. Students and instructors may feel hesitant about recording live discussions, especially when they know recordings will be posted later. On the other hand, many students value the opportunity to review live class recordings as study aids or in the event of an unplanned absence. Colleges, Schools, or Departments may have more specific guidance.

As a resilience strategy we encourage all instructors to record live class meetings when pedagogically appropriate. Recorded class meetings provide valuable continuity for students who experience unplanned absences; class recordings may be used to provide all students with useful study materials for later review. One of the most critical steps instructors can take to enhance privacy in their courses (dual-mode, hybrid, or online) is to develop shared privacy norms with their students--an understanding of their obligations and responsibilities to peers, their instructor, and the course community as a whole.

When instructors provide a clear privacy statement on the syllabus, use learning technologies as intended to mitigate the risk of unplanned disclosure, and develop common behavioral norms as part of the course community, students and instructors should feel confident in the privacy of their in-class discussions of personal, sensitive, and controversial topics.

Adding Privacy Statements to a Syllabus

A course-specific statement should reflect your overall course design, learning goals and subject matter; it should clearly include the kinds of actions students may and may not take. A written privacy statement is the foundation of privacy-protective behavioral norms within a course community.
SAMPLE PRIVACY STATEMENT

Course materials (videos, assignments, problem sets, etc.) are for use in this course only. You may not upload them to external sites, share with any person outside of this course, or post them for public commentary without my written permission.

We are recording class meetings to support remote students and to provide everyone in the class with useful study aids. These recordings will be available for review through Sakai. The University strictly prohibits anyone from duplicating, downloading, or sharing live class recordings with anyone outside of this course, for any reason.

See a longer sample here, and note these critical elements of a privacy statement:

- how students may use and share learning materials you created for the class (e.g., pre-recorded lectures, case studies, problem sets, etc.), within the University and outside of it;
- how students may share information about other student perspectives, including on controversial and sensitive topics, especially with those outside of the course.
- when and why live class recordings are made and how students may access and use them.
- A prohibition on sharing live in-class recordings, student work products (e.g., posts on a discussion board, written work) or communications outside the course community, except by permission.
- Reminders that students and instructors may be exposed to unwelcome attention, external harassment, and other intrusive conduct as a result of even well-intentioned sharing of learning materials; that the intentional sharing of learning materials or private information with external groups or individuals represents a breach of trust and may be considered a violation of the applicable Honor Code; that the deliberate sharing of private images, communications, learning materials or other depictions of students or instructors for the purpose of inviting external commentary, ridicule, or embarrassment is an especially egregious violation of trust and University policy that will lead to severe sanctions.
Reaffirmation that our classrooms are communities built on trust, and that our learning and teaching relies upon a shared sense of respect, integrity, and common purpose.

The most critical measure to establish a private learning environment within your course is to develop clear standards, communicate those often, use the technology intentionally, and cultivate a course community in which students and their instructors share a commitment to fearless inquiry free from external intrusion.

Chapter Bibliography


2. Re/Designing for Equitable Resilience in Fall 2020

The first stage of preparing for resilience is to step back and take a broad view of your course as a whole. This section will help you to revisit your learning goals, your assessment strategies, your course rhythm, and the resources and media you use in light of the current situational factors. Investing this time now in rethinking these major course design choices will set you up for success as you continue to plan for and teach your course.
2.1 Situational Factors

This diagram comes from L. Dee Fink’s work (2013), and is especially useful for our current circumstances. It shows how situational factors undergird all of our course design choices. In normal times, these situational factors include things like your student population, the location of your course in the larger curriculum, and the length of your semester. Now, though, we must add new factors: the need to be ready to transition between different modalities, the reality that some of your students will be remote for some or all of the semester, and the need to create as equitable of a class as possible for students who may be having vastly different experiences of the COVID-19 crisis.

We suggest that, as you embark on a reconsideration of your course design, you take a few moments to take a clear-eyed view of these situational factors as well as any others that may be specific to your course. These may impact your choices about learning goals, and should certainly inform the ways you assess your students and the activities you use day to day in your classes. Below, we consider those aspects of course redesign in greater depth.

2.2 Learning Goals

Once you understand the situational factors surrounding your course, the next step in course design or redesign is to establish clear student learning goals (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010; Felder & Brent, 2016; Fink, 2013; Wiggins & McTighe 2005). If you’re new to learning goals, a good place to start is by asking yourself “How do I want my students to be different as a result of taking this course?” Thoughtful answers to this question form the foundation of your learning goals. As you continue to refine them, remember that effective learning goals should be:

- **Student-centered**: Starting with the stem “Upon successful completion of this course, you will be able to...” typically sets you up to write a goal that will focus on student learning rather than on your teaching.
- **Concrete and specific**: Articulating as clearly as possible the skills or knowledge you’d like students to obtain will make your course design easier and help students understand what’s expected of them. See bit.ly/b-verbs for a helpful list of concrete and specific verbs you might consider.
- **Measurable**: Your goals should form the basis of your assessments throughout the semester, and as such, should typically be something that can be meaningfully measured.
● **Attainable**: Make sure that your goals are feasible for an average student in your course, given the course level and current situational factors.

The unique circumstances this fall may necessitate a reconsideration of some of your goals. We recommend that you spend some time revisiting your existing goals, and ask yourself whether they fit the above criteria given the current situational factors. In particular, will the goals be attainable and measurable in a dual mode classroom, or if you have to switch to fully remote teaching?

**EXAMPLE**

*In a class on La Telenovela (a genre of Latin American soap opera), a major goal in a standard semester is that students will “Write, produce, plan, direct, shoot, act in, and edit a mini telenovela” as a whole class project. Given the realities of social distancing and masking, and the possibility of shifting to fully remote work, however, that goal was revised for 2020 to become “Write a mini telenovela (as a whole class project) and a 1200 to 1500 word individual paper that explores the genre through an intellectual or industry lens.”*

**2.3 Assessment Planning**

After establishing learning goals, the second step in the course design process is to determine acceptable evidence that will demonstrate student progress toward each learning goal (Wiggins & McTighe, 2005). Since you will most likely have some remote students in your class, you’ll need to rethink your traditional exam structures (Mateo & Sangrà, 2007). We suggest that, when possible, you create alternative assessments that are accessible and fair for all remote and in-person students by following these 3 steps:

**STEP 1**: Rethink the format, number, and weight of assessments you use. In place of a timed and proctored final examination, shift to an alternative assessment like a term paper, project, take-home test, oral examination, research proposal, or other assessment type. Scheduling more frequent, small, low stakes assessments in place of a single, large, high-stakes assessment is both helpful for learning and particularly useful for resilience in the face of potential disruption.
• Consider, when applicable, these three overall alternative assessment re-design principles:
  o shifting assessment from lower levels (remember & understand) of Bloom’s Taxonomy toward upper levels (apply, analyze, evaluate, and create) of Bloom’s Taxonomy
  o redesigning questions (where feasible) from right-or-wrong multiple-choice questions to open-ended prompts that ask students to apply their knowledge by focusing on process, performance, or a product. This has the added benefit of making it harder to find answers via Google search.
  o allowing partial credit when possible.

**STEP 2:** Develop assessment administration/submission protocols that will be accessible and fair for both in-person and remote students.

• When possible, develop assignments/assessments with multiple milestones (e.g. a topic proposal and an outline for a final paper) that keep students on track and reduce the likelihood of academic dishonesty.

• Be clear about your expectations.
  o Is an exam open book/open notes?
  o Do you expect a project to be done independently, or are students encouraged or allowed to collaborate?
  o Tell students explicitly whether they can use external resources like Chegg, and point out the pitfalls of that approach.
  o Remind the students of the honor code, tell them if you’ll be using a tool like Turnitin or Sakai to check for originality, and use the conversation as an aid to help them learn about citations, excessive quotations, and more. Then, trust them.

• Be clear about the timing.
  o Synchronous & time-limited exams make it slightly more difficult to cheat.
  o Time-limited exams with a rolling window may be more accommodating of student lives and time zones. This would be especially valuable in the case of an unplanned disruption.
  o Take-home exams may be more equitable for all students.

• Communicate these expectations clearly to your students.
STEP 3: Choose which technology would serve your assessment goals. It is helpful to plan a low or no-stakes practice opportunity for students to use and be comfortable with a platform before an actual high stakes exam or presentation. Consult with the OIT’s Teaching and Learning Technologies (TLT) group to figure out which tool and feature best fits you and your students.

*Note: The three most popular (and supported) campus assessment technologies are:*

- **Sakai** (specifically the Assignments/TurnItIn, Honor Code Pledge, Test & Quizzes tools)
- **Gradescope** (especially the auto grader and rubrics)
- **Zoom** (try private chat as a system for questions to the instructor during an exam)

Interested in learning more? See alternative exam examples from Notre Dame faculty.

2.4 Rethinking Rhythm/Moving First Exposure

After learning goals and major assessments are in place, your next step in course design is to create detailed plans for how and when students will learn new information and complete the smaller assignments and activities (Walvoord & Anderson, 2009). Each step should clearly contribute to development of the knowledge, skills, and dispositions that will prepare students for success on high-stakes assessments.

When planning the steps to successful completion of major assignments and assessments, we encourage you to adopt an interactive approach that engages students both in and out of class. In the table below, we divide the aspects of the learning process into:

- **First exposure** - Students encounter information for the first time, e.g. by reading a text, listening to a lecture, watching a video, etc.
- **Response** - Instructor or peers provide feedback that advances thinking and the development of knowledge, skills, and dispositions related to the topic.
The interactive method, as outlined in the table above,

- moves some portion of first exposure to course materials and processing to the students’ own time prior to the class session.
  - You can accomplish this by assigning readings, viewing of recorded mini-lectures, etc.; followed by a prep assignment in which students answer a question that requires them to apply the knowledge to begin to solve a problem, explain a relationship, compare and contrast competing ideas, etc.
  - Students turn in this prep work prior to class, and it serves as both accountability and a starting point for in-class activities designed to extend and deepen students’ thinking.

  - Since students have had a chance to organize their thoughts before class, you can begin the activity by calling on specific students to share the prep work that they have done.
  - Remember to inform students that this will be the method so that they aren’t surprised when you call on them.
  - Be sure to engage all students over time.

  - Activities that build on the prep work allow you to provide feedback to the entire class at the same time.
  - You should be overt about this goal so that students are motivated to take notes and advance their thinking as a result of participation.
  - Since students will be sharing their ideas in class, you don’t necessarily need to grade the prep work beforehand (though some instructors like to review submissions prior to class for insight into student thinking).

- To keep the grading of these frequent low-stakes assignments manageable, we suggest that you grade using a credit or no-credit system.
- This is much faster than even 3 categories
- Since they are low stakes (e.g. 1% of students’ final grade), there is no need to be overly concerned about differentiating between the best and good enough.
- There usually is no need to provide detailed individual feedback, since you have made it clear that the feedback is happening during the activity in class.

Examples:
- A history instructor asks their students to read two primary sources that are not in complete agreement. Students are asked to write 100 to 200 words making the case for the validity of one of the sources over the other for a specific point.
- A biology instructor has students read the text to learn new terminology and basic concepts, and has students complete a short, timed, online quiz prior to class.

2.5 Active Learning & Group Work

A growing body of research shows that active and interactive learning, when executed well, increases student engagement, learning gains, and retention (Freeman et al., 2014; Knight & Wood, 2005; Prince, 2004; Theobold et al., 2020). A large metaanalysis of controlled studies in STEM fields showed that students in classes that incorporated active learning performed better on exams and were less likely to fail their courses (Freeman et al., 2014). Such improvements are striking in a normal semester, and become even more crucial in the face of disruption and increased distraction - student feedback on the spring 2020 semester suggests that students had an even harder time focusing in long Zoom-based lectures (whether recorded or delivered synchronously) compared to in person lectures, and particularly appreciated their professors making remote class sessions interactive.

We provide specific active learning ideas in the “Day to Day Teaching” chapter, and here focus on the planning process. To incorporate active and interactive elements into your classes, think about your preparation process as “experience planning.” Ask yourself, “how can I create engaging learning experiences during this class session that allow my students to actively engage and practice the goals of my course?” For each class meeting, it is helpful to focus on a few micro class objectives that map to your macro course learning goals. Then determine which active learning strategies would best create experiences to have students interact, practice, and apply their knowledge and skills informally. This should provide scaffolding and formative practice that prepares students for larger summative assessments.
later in the course. Next, remembering the situational factors you thought about previously, decide which technology (chat, a collaborative Google Doc, a poll, etc) would best facilitate your active learning strategies. When you introduce an activity, tell students its purpose, their task, and your specific expectations. Lastly, leave time after the activity to have students deliberately reflect on their takeaways from the learning experience.

### 2.6 Creating and Integrating Media, Worked Examples, Screencasts

The creation and implementation of carefully designed media, such as [screencasts](#) and worked examples, can go a long way to support student learning (Guo et. al. 2014, Brame 2015). Research suggests that worked examples are among the most effective forms of media. Among the benefits of using media as part of an asynchronous learning experience are:

- Efficient use of in-class time for higher-level application, with first exposure to concepts happening before class;
- Students can review key ideas and presentations as often as needed, including for review and later integration;
- Students benefit from captions and transcripts; research suggests that the combination of reading and hearing increases retention and command, including for students whose first language is not English.

#### Media Modalities:

While asynchronous content can take many different forms, this playbook will focus on two of the modalities faculty ask us about most commonly: screencasts and worked examples.

- **Recorded Lectures/Screencasts** - These short videos allow for several combinations of visual and audio content from multiple sources including webcams, computer desktops, and microphones.

  **Perks of Recorded Lectures/Screencasts:**
  - Instructor presence (especially on video) aids in the feeling of connection and continuity to the broader class experience.

  **Examples:**
  - [Software Demonstration for class](#)
  - [Annotated screencast](#)
- **Worked Examples/Pencasts** - These tutorial-style walkthroughs are often created using a document camera or a “Virtual Whiteboard” on an iPad and stylus.

**Perks of Worked Examples/Pencasts:**
- Observing your process of problem-solving offers insight that goes beyond a static answer.
- Visual cues and audio narration clarify the reasoning behind each step.
- Explanations are synchronized with relevant diagrams/steps.
- Learning a specific process especially benefits from self-paced, personalized learning.

**Examples:**
- [How to write Chinese characters](#) - document camera
- [Differential equation](#) - iPad Pencast

Before creating instructional video, screencasts, or worked examples/pencasts, pause to think about how the media will be used to enhance your teaching and align with learning objectives.

To help you prioritize and plan, start with the following questions:
- Which topics and ideas can be covered successfully outside of class?
- Of those lessons, what media modality makes the most sense?
  - E.g. if live writing is important choose pencast, if you are presenting existing material from your computer choose screencast.
- Does it already exist or will it need to be created?

**Media Planning:**

When setting out to create media, taking the time to carefully plan and develop material before beginning production will save you lots of re-recording time and editing headaches. Oftentimes, individual screencasts can be scripted through slide-based presentations, however, if you’re starting from content developed for longer face-to-face lectures, take a few moments to prepare your content specifically for video.

**1. Slide Aspect Ratio:**

If your slides will appear on screen, they need to be saved as 16:9 ratio. To save your deck in this format:
- In Microsoft Powerpoint, click File → Page Setup, and select On-Screen Show (16:9).
2. Don’t embed media:

If during your face-to-face teaching you show videos as part of your lecture and would like to do the same in your screencast or pencast, don’t embed those materials inside of the content you record. Instead, link to those videos outside of your own media. You can ask students to watch the outside videos prior to, afterwards, or between content you’ve produced.

3. Cognitive overload:

When preparing your slideware for video, be careful not to overload the slides with too much information; particularly text. Use a new slide rather than trying to cram extra information onto a slide. Less is more.

Media Recording:

While there are many tools available for producing screencasts and worked examples, the Office of Information Technologies currently supports Zoom and Panopto. Please refer to these collections of articles to learn more about using Zoom or Panopto to create and share your lessons, as well as others found in the Knowledge Base when looking for answers to your technology questions.

Things to think about:

- **Chunking** - Are you able to separate your lecture into distinct ideas? By creating a series of shorter videos that contain complete single ideas, students will be able to better access the content when reviewing material at a later date.

- **Length** - Learning media is most effective when the videos don’t go longer than seven minutes. Keep this length in mind when chunking your content.

- **Evergreen** - Is this content something that you plan to use in future semesters? By eliminating references to time such as “have a great fall break,” or references to lesson sequencing like “as you saw in the previous video,” the material you create will be more easily reusable.

- **Activities** - After viewing the lesson, what will the students do with the information? Structuring low-stakes assignments around video lessons is an easy way to incentivize students to watch.
- **Provide multiple representations** - Are you able to provide the content in multiple forms? Try sharing transcripts and slide decks alongside the video. This is a good opportunity to incorporate principles of [Universal Design](#) that will benefit all of your students.

### Chapter Bibliography

#### Introduction


#### Course Design


#### Assessment Planning


#### Active Learning


#### Creating and Integrating Media


3. Day to Day Teaching

Your day to day teaching is likely to be more complex this fall. While teaching in-person classes, you will probably have one or more students attending remotely for at least some portion of the semester. In this module, we offer strategies for effectively and equitably engaging all students in your courses, while building teaching practices that will facilitate smooth transitions between different modes of teaching. We start by considering inclusion and equity, then offer concrete strategies to actively engage both in-person and remote students, with special considerations for dual mode, remote instructor, and fully remote teaching, and finally provide strategies for holding office hours and communicating with students.

3.1 Actively engaging all students during class meetings

We have discussed above how active and interactive elements improve student learning and enhance equity. Here we provide some concrete suggestions for how to incorporate active learning in ways that smoothly transition between the dual-mode, remote instructor, or fully remote context. While distancing, masking, and remote students certainly all add to the challenges of making class sessions interactive, many activities are possible with a bit of planning and the right tools.

Sample Active Learning Elements for the Resilient Classroom

The following activities can all be managed in the dual mode, remote instructor, or fully remote classroom. Aim to incorporate a few of these (or others!) that look effective and manageable into each class period.

- **Opening question** - using polleverywhere.com (or Zoom chat in a fully remote class), ask students to share a brief answer to a question that will help them get to know each other and/or surface their thoughts or experiences with a class-relevant issue.

- **Collaborative editing in Google Suite** (If in a building with upgraded wifi) - ask pairs or small groups of students to collaborate on a document, spreadsheet, or slide. For example, have each group edit a Google slide to put events in order; color-code a list, create a flow chart, or sort words into categories. Note that the OIT does not recommend relying on all students accessing websites simultaneously in buildings without upgraded wifi.
● **Yes/no voting** - use colored index cards or sticky notes for in-person students, or the Zoom yes/no feature for remote students, to quickly poll the course on a binary question. For example, in-room students hold up a green sticky note to vote yes while remote students use the green “yes” vote.

● **Ungraded quiz** - Post a sample quiz question or problem for students to solve. You may have them self-grade and assess whether they need to study more, and/or have them submit the answers (e.g., using Google forms), so that you can also get a sense of students’ progress.

● **Backchannel chat** - Some instructors like to give students a chance to pose and answer questions about the class in a “backchannel” like Zoom chat or the Sakai chat forum. This may be most useful if you have a TA who can serve as a chat moderator and address questions with accurate information.

● **Polling** - Have students vote or answer a multiple choice question. Tools like polleverywhere.com or Google forms allow you to instantly show a graph of results so that everyone can see the distribution of responses.

● **Small group/Breakout room discussions** - Have students discuss a clear prompt or complete a specific activity in pairs or small groups. Classroom testing suggests that groups of 2 or 3 students in a distanced, masked classroom are able to converse with each other, though larger groups may struggle. For remote students, use the Zoom breakout room feature.

● **Pause for individual writing** - Sometimes known as the Minute Paper, this chance for students to reflect and write down their thoughts about a question or a topic allows them to develop a clearer answer, deepen their learning, and/or prepare for discussion.

● **Write/Pair/Share** - Combining the previous two steps can be especially fruitful. When posing a question to the class, first give every student time to think and write about it individually. Then ask them to pair or group up to discuss and hone what they’ve written. After that, students will be primed to participate in meaningful whole-class discussion. As a bonus, this activity is highly adaptable in time and format.

For any of these elements, be sure that you clearly communicate your goals and expectations for your students ahead of time, to maximize the impact of the activity and minimize student confusion.
3.2 Dual-mode: Engaging remote students during in-person meetings

You will likely have, for some or all of the semester, at least some remote students in your course. While Notre Dame is outfitting many classrooms with equipment to facilitate this, it will add an additional factor for the instructor to manage in the classroom. To be ready to make the most of the new dual-mode technology and to see what this looks like, we suggest that you attend a demonstration and, if possible, try a dry run with the equipment in your classroom ahead of time. With practice, planning, and well chosen strategies and tools, it will be possible to engage both the remote and in-person students in your courses.

You will need to be intentional about fostering that engagement for remote students during dual-mode classes. In addition to the active learning elements described above, there are several ways that you can engage and empower those students throughout a class session:

- Make sure you can see the monitor with the gallery of remote students. This will make it possible for you to notice if someone is motioning to get your attention.
- Glance at the participants panel regularly to see if a remote student has clicked the “raise hand” button.
- If you are using Zoom chat as a backchannel, check the chat box regularly to see if anyone has posted a question.
- Some classes will have Classroom Assistants (CAs) or TAs who will help with the above tasks.
- Pay attention to which thing you are sharing to the Zoom audience:
  - This includes selecting the proper source. Do you want them to see a shared presentation or web site, the document camera, another connected device, or the view from the camera in the back of the room?
  - When sharing your screen, be sure to select “Share computer audio” if you want remote students to hear the sound associated with a video or audio file you are playing.
  - For the camera, be sure to select the best camera shot for the situation:
    - Close up to focus on the writing surface and the front of the room.
    - Medium to include the writing surface and lectern.
    - Wide to get an overall sense of the room.
● Actively engage the remote students by calling on them when appropriate, ensuring they are broken into groups or paired with an in class student for group activities, etc.

● Empower the remote student to initiate engagement by
  o using Zoom chat
    ■ If this is too overwhelming for you and you don’t have a CA or TA, consider having students serve a rotating “Zoom chat liaison” role.
  o raising their hand on screen or in the participants window
    ■ With a large class, the participants’ window has the advantage that a student who raises their hand is brought to the top of the list.
    ■ If multiple students raise their hand, a queue is formed in the order that the hands were raised.
  o unmuting and saying “Professor?” or something similar to engage in discussion or ask a question.

For an overview of technologies for dual mode, see this knowledge base article.

3.3 Teaching Fully Online

While some instructors with accommodations will teach remotely for the full semester (and should check out a more in-depth discussion of the theory and practice of Online Teaching), everyone needs to be prepared for a quick transition to fully online teaching. A few key things to remember if that happens:

● You should still aim to hold a substantial portion of your class synchronously, even if it moves to Zoom. This means that you should plan to meet during your scheduled course time. Do not add mandatory synchronous class activities outside of your scheduled class meeting time.

● We know from student feedback that students especially value interaction with their professors and classmates during remote instruction, and that they have a harder time focusing on extended lectures via Zoom. Be sure that your remote synchronous instruction is interactive and engaging!

  o Zoom offers many tools to support interactive learning. Make use of breakout rooms, the chat feature, yes/no voting, and more to best support student learning (and see section 3.8 for more ideas).
o Give clear instructions and expectations before sending students to Zoom breakout rooms - what activity should they be completing? How long will they have? Are there any specific steps they need to remember?

● In remote instruction, it takes extra effort to establish an approachable instructor presence. You’ll want to be in frequent communication, and consider video messages if you have a longer than usual gap between Zoom sessions so that students maintain a feeling of connection.

For intentional, clear communication, consider setting a weekly communication plan such as a weekly roundup email - see the section on student communication for more.

3.4 Teaching as a remote instructor

It is important to plan for a scenario in which you have an unplanned need to teach some portion of your class remotely. To prepare for this contingency, you will need to answer some questions:

● Do you have the necessary equipment to connect via Zoom to the classroom?
  o If not, we suggest that you start assembling it now as a backup. Critical equipment includes a reliable internet connection, a computer with webcam. A quiet, well-lit room and a headset are recommended but not essential.

● Is there any reason your students will need to meet in person, such as access to essential equipment or materials, while you are teaching remotely?
  o Unless your course requires access to physical facilities, shared materials or equipment, you should move your course to a fully online format while you are unable to teach in person. See the “Teaching Fully Online” section for some strategies or read more about the [theory and practice of online teaching](#).
  o If your course does need access to shared materials, facilities or equipment:
    ● Do you have a TA or classroom assistant? If so, they will be able to help you conduct the class by:
      □ Connecting the classroom computer to the Zoom session
      □ Using a second device to provide you a view of the students in the room
Letting you know about questions in the room
Collecting assigned work (though if possible, we suggest that in this case your students scan their work and submit via Sakai, Google Drive, or other mechanisms).

If you don’t have a classroom assistant, think about how you can work with your students to have them provide similar services to those outlined above.

3.5 Virtual Office Hours

One important component of resilient teaching is to design and use systems that will work in different situations. Offering virtual office hours is a great way to connect with both on-campus and remote students. In the event that courses are disrupted, the established virtual office hours will seamlessly transition. Students appreciate them, too - after the spring 2020 semester, ND students specifically requested the continued/increased use of Zoom office hours in regular instruction.

Communicating Expectations

It is very important that you clearly communicate the expectations and logistics of your virtual office hours. Tell students when you are holding office hours, how you will facilitate the meetings, what platform you will use, and why students should attend them. You can include this information in your syllabus, and/or by posting directions in Sakai. Including this information on the Sakai landing page is a great way to make the process simple to find.

Things to Consider in Setting Up Virtual Office Hours:

- The dates /times/location should be clearly communicated to the students.
- You may want to hold distinct virtual office hours for different courses.
- Student Privacy is important to consider. Keep private conversations in private Zoom rooms.
- When possible, consider selecting times that best meet the needs of your students.
- The focus and type (see below) of the session should be specified to the students.
Types of Virtual Office Hours

**Individually Scheduled Virtual Office Hour Meeting:** For this option, a student signs up for a time slot to meet individually with the faculty member. For scheduling these meetings, consider tools like [Google Calendar Appointment Slots](https://support.google.com/calendar/answer/39939) or [Calendly](https://calendly.com). Maintain privacy during back-to-back meetings by using the Zoom Waiting Room.

**Drop-In Virtual Office Hours:** In this option, students can freely join a video meeting during a specified time to ask questions and speak with you. Students may remain in the room as others join and ask their questions.

**TA Supported Office Hours:** For larger courses, it might be helpful to offer a session with the assistance of TAs. This can allow for TAs to use the Breakout Room feature of Zoom to meet with individuals or a small group to go over a specific question or process.

**Group Office Hours:** This option can be used if you anticipate hearing a lot of the same type of questions, which is fairly common before a test or big assignment. At the beginning of the group office hour session, make sure you have set clear expectations and format for the session, as you would for a normal class meeting.

**Asynchronous Virtual Office Hours:** For students unable to attend live office hours, solicit questions through a [discussion forum in Sakai](https://sakai.nd.edu). Instructors or TAs can offer timely responses in writing, or even record responses in video or audio formats. Though this might take more effort, a study from Li, Finley, Pitts, and Guo (2011) shows that this form is often preferred by students. Asynchronous methods (e.g., discussion forums) also offer archival features, making it possible for all students to benefit from conversations between faculty and students. A few tips on using this asynchronous approach:

- Communicate clearly with students about what they can expect in terms of response time - will you respond every evening around 9pm? Within 24 hours of posting?
- When using a Sakai Forum, be sure to [turn on the “watch” setting](https://sakai.nd.edu/) so that you receive a notification when a student posts a question.
- Provide a clear description of the purpose of the discussion forum. You may wish to designate a particular focus for each thread. For example, a forum specifically on “Homework Questions,” “Article Questions,” or “Course logistics,” as a means to guide the conversation.
3.6 Student Communication

Regular communication is critical to effective learning, especially in dual-mode courses and in the event of significant disruption. Important announcements and reminders need to be shared between the instructor and all students. This requires an intentional effort to connect with students - both on-campus and, especially, remote students. One recommendation is to send out regular communications to students in a robust and easily archived way. For example, if you plan to send a weekly roundup email every Thursday evening, this helps you be accountable for regular communication and gives students an additional sense of structure.

Items that can be helpful to include in a regularly scheduled message:

- A brief review / preview of the content covered during class
- Upcoming deadlines or events (exams, project milestones, an especially long reading assignment, etc.)
- Items that connect the course content to real-world applications
- Details regarding the class meeting locations (include a Zoom link if relevant) and time
- Reminders regarding office hours
- Include a personal connection to the students. Indicators of empathy, shared experiences in class, and/or light-hearted insights can help to strengthen instructor presence in the course.

Technology options:

- **Email.** Use the auto-generated listserv (available via Online Photo) to send a message out to all class participants.

- **Sakai Announcement.** Use the announcement tool to send and archive messages to students. If using this, be sure to select the option to send the message out via email. Students will then have access via two methods: ND email and Sakai.

- **Additional third-party apps** may also be used to communicate with students. Please note: If an app is not supported by OIT, there is no university support available should you encounter issues. Be sure that all students have access. Please avoid assigning paid applications or online platforms that duplicate University-supported services. Email and Sakai Announcements are the preferred methods of communication.
3.7 Creating Community

In the current disruption and uncertainty, creating community within a course will be more important - and potentially more challenging - than ever. Facilitating classroom community will require thoughtful planning and a concerted effort on the part of the instructor.

A few specific, attainable strategies we suggest are:

- **To establish a connection between instructor and student**
  - Collect information about your students, starting on the first day, by asking students to turn in a paper or a Google form including things like:
    - Preferred name, pronouns
    - Major
    - Previous coursework in the area
    - “Is there anything else you’d like me to know about you, or about your circumstances this fall?” (An open-ended question gives them a chance to disclose any particularly challenging circumstances if they wish.)
    - You may also ask for a “Fun fact” to begin to build further personal connections.
  - Share something about yourself: We’re not suggesting that you spend the first week of class sharing your life story, but students often appreciate having a window into their instructor as a human being.
    - One way to do this is create a short video where you introduce the course and share some relevant things about yourself. Short videos like this also have the advantage of letting students see you speak without a mask on.
  - Consider requiring students to visit office hours or meet with you one-on-one or in small groups (perhaps via Zoom) near the beginning of the semester, in order to get to know students and break down barriers to interaction.

- **To establish a connection among students**
  - Post an “Opening question” on a shared screen or chalkboard for students to answer as they arrive to class (in the chat or using Poll Everywhere), and then read their classmates’ answers, to help them get to know each other.
- Encourage students to be sure they have names and contact information for at least two classmates by the end of the first week.

- Make sure that your first day of class includes some interaction in pairs or small groups. This both sets an interactive tone for your class and allows students to connect with each other from day one.

- Consider forming required small study groups of three or four students to cultivate collaboration and interaction among students. Study groups or teams can prepare collaborative work outside of class; for remote students, these study groups can provide needed interaction with peers. Consider asking students to record and share their study group meetings with you to show their learning process, document their work or begin a conversation.

### 3.8 Asynchronous and Synchronous Strategies

#### Using asynchronous content effectively

Whether you are teaching in dual-mode, as a remote instructor, or in a fully remote context, you’ll need to carefully plan for what your students will do outside of scheduled class meetings. If you’ve shifted the rhythm of your course as suggested above and plan to use class meeting time primarily for interactive elements, then out-of-class time may be well spent on asynchronous content that offers first exposure to class concepts.

#### What is asynchronous content?

Asynchronous content is consumed by students at a time, place, and pace of their choosing. It does not require learners’ presence in the same place (physical or virtual) at the same time. Asynchronous content may be text, audio, video, or simulation - whatever format best meets the instructional need. The popular misconception that it has to be videos of you lecturing is false.

#### How much asynchronous material should I use?

As there is no hard and fast rule on this, we encourage you to use your best judgment. Note that Notre Dame classes should primarily hold synchronous class meetings during the scheduled class time. On occasions when you do choose to replace a face-to-face class session with asynchronous content, we encourage you to plan a set of content and activities for the students that will take roughly the same amount
of time to complete (it is also acceptable if asynchronous materials take somewhat less time -- e.g. 60 minutes of asynchronous content replacing a 75-minute class session -- due to the lack of introductory / closing activities). The type and amount of homework you assign between class sessions should not change due to modality. (To get a sense of time needed for students to use asynchronous content, the Course Workload calculator offered by Rice University provides a useful means of generating a rough estimate).

**Types of asynchronous materials:**

- **Text-based:** Books, articles, case studies
- **Image-based:** Powerpoint slide decks (annotated using speaker notes), figures, graphs, images
- **Video-based:** Recorded video lectures (screencasts), links to external videos (YouTube, TED Talks, documentaries available online), recorded Zoom calls with guest speakers, white board recordings
- **Discussion-based:** Discussion forums in Sakai, collaboration via Google Suite

**Things to remember:**

- Give students clear explanations of your expectations for how they use asynchronous materials.
- Use a descriptive, systematic file naming system to aid in organization.
- Consider attaching a small, low-stakes assignment to your asynchronous materials - e.g. “After watching the video, reflect in 200-300 words on its connections with the paper we read last week. Do you think the video’s speaker would agree with the paper’s position on immigration?”
- While asynchronous material can be shared in a variety of ways, we recommend using Sakai as the main repository for storing course materials.

**Using Zoom for Effective Synchronous Teaching**

One of the key technologies for classes with some or all remote students is Zoom. While Zoom can be used as a as a lecture capture tool for creating asynchronous videos (see above, or “Creating & Integrating Media, Worked Examples, & Screencasts”), it is best known as a video conferencing tool for synchronous interaction.
The table below offers an overview of some Zoom features that may be useful in your synchronous class meetings. We encourage you to experiment with some of these techniques, but take it slow and don’t try to use all the features at once.

<table>
<thead>
<tr>
<th>Zoom feature</th>
<th>Sample classroom use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoom room</td>
<td>Class sessions, tutorials, virtual office hours, semi-proctoring exams</td>
</tr>
<tr>
<td>Breakout rooms</td>
<td>Small group discussions</td>
</tr>
<tr>
<td>Recording</td>
<td>Recording class sessions for absent students or as study aids</td>
</tr>
<tr>
<td>Screenshare</td>
<td>Sharing slides, websites, or images</td>
</tr>
<tr>
<td>Whiteboard</td>
<td>Chalk talks, demonstrations</td>
</tr>
<tr>
<td>Chat</td>
<td>Backchannel discussion, opening question, support during exams</td>
</tr>
<tr>
<td>Yes/No voting</td>
<td>Polls with two options</td>
</tr>
<tr>
<td>Thumbs up/down</td>
<td>Audience check-ins</td>
</tr>
</tbody>
</table>

**Things to remember when using Zoom**

- At the start of the course, privately survey students to make sure they have sufficient internet bandwidth and minimum computer system requirements (including webcam and microphone) to participate in remote Zoom sessions. If they do not, the Office of Student Enrichment can work with students to ensure they can access that equipment.

- Be sure to check with OIT and the Knowledge Base for Zoom how-to tutorials, tips on setting customization, security/privacy recommendations, and updates.

**Chapter Bibliography**


**Office Hours**

4. Additional Resources

4.1 Bibliography of Trusted Sources

Trusted sources for general pedagogy advice:


External sources for further resilient teaching advice:

- What we learned from student feedback in Spring 2020
- Derek Bruff’s blog
- Duke flexible teaching site
- APLU: Delivering High-Quality Instruction Playbook
4.2 Creative Learning Media

Leading media innovation within Notre Dame Learning’s Office of Digital Learning is the Creative Media Team, an in-house production studio of industry seasoned artists and film-makers compelled to enhance the student learning experience through the creation of high-end, pedagogical media. In addition to the production of traditional learning media, the Creative Media team rethinks the importance of the role that storytelling plays in crafting engaging learning experiences. Our work ranges from stand-alone one-off videos to course-wide series, engaged scholarship documentaries, virtual reality, 3D animation & motion graphics, and international on-site work. In addition to hands-on production, we help to define creative and visual treatments that deepen and enrich the student learning experience. Whether or not you’re looking to collaborate with our team to produce media or own your own, we can help. Our Reel

4.3 Credits (Authorship)

Notre Dame Learning’s Fall Teaching Resilience materials (Playbook, website, and mini-course) were authored by Kristi Rudenga, Judy Lewandowski, Kevin Barry, Elliott Visconsi, Alex Ambrose, and KC Frye.

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