Guiding Principles behind this advice:

1. We recognize that faculty are time constrained so we have tried to keep this guidance simple, concrete, and actionable.
2. For the same reason, in offering these tips we have favored curation and having a point of view over being comprehensive or merely aggregating materials that are publicly available.
3. We have tried to offer guidance that faculty can implement by themselves, rather than relying on additional resources. Of course, we also list resources for faculty to be able to turn to in case additional help or input is desired.

As teachers, there are three core questions that we often consider in our everyday teaching:

- **Content**: What are the core concepts or ideas that we want our students to learn in a particular class, module, and course?
- **Pedagogy**: What is the most effective way that we can get our students to engage with the material to understand these concepts and maximize learning? In particular, how should students engage with the material (a) before the class (asynchronously); (b) during class (synchronously); and (c) after class (asynchronously)?
- **Assessment**: How can we assess their understanding of the material most effectively?

These same questions are central to online teaching. The key difference is that the online medium precludes certain forms of interactions that can occur in-person, while also creating opportunities for new ways to interact (vis-à-vis the traditional classroom). Teaching effectively online requires keeping these differences in mind and making certain adjustments, mostly to pedagogy and assessment. We highlight some of the most relevant considerations in what follows.

**Tips:**

**Pedagogy: Asynchronous and Synchronous**

1. **Reconsider your course’s asynchronous-synchronous mix.**
   a. Moving your course online may require changing the mix of synchronous and asynchronous materials from the residential offering.

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1 This document represents the views of the VPAL Academic Planning Group, comprising Bharat Anand (VPAL and HBS), Amanda Claybaugh (FAS), Barbara Cockrill (HMS), Glenn Cohen (HLS), Suzanne Cooper (HKS), Erin Driver-Linn (HSPH), Johanna Gutlerner (HMS), Janet Gyatso (HDS), Niall Kirkwood (GSD), Anne Margulies (HUIT), Eric Mazur (SEAS), Rahul Mehrotra (GSD), Matt Miller (HGSE), Meredith Quinn (Radcliffe), Jan Rivkin (HBS), Teddy Svoronos (HKS), Dustin Tingley (VPAL and FAS), as well as the input of Rebecca Nesson (FAS), Andrew Rawson, Casey Roehrig, and Zofia Gajdos (all VPAL).
b. The reason is that online is a “lean forward” medium - as a result, online teaching ought to take advantage of interactivity with the students. Put simply, long lectures do not work as well in online teaching, either in synchronous sessions or asynchronous materials.

c. The change required will depend on the teaching modality you typically employ for your residential course. For example, if you use case studies as the basis for a discussion in class, you may need to create no new asynchronous materials. However, if you rely primarily on lectures in class, you can convert (and chunk up) a fair amount of this material to asynchronous content and, accordingly, adjust the nature of your interaction with students during the live sessions.

2. **Asynchronous ≠ Video.**
   a. Moving lectures online neither implies nor requires creating high quality videos (of the kind often ascribed to “HarvardX-style courses”).
   b. Videos by themselves don’t make for effective learning experiences. Indeed, they are merely one format amongst many – polls, reflections, text, articles, discussion, simulations, graphics - that you can use to create effective learning experiences. Utilizing a variety of formats can help make your course materials more engaging and help your students stay focused.
   c. **Asynchronous activities can**, and should, **be interactive** too. More important than the distinction between video and text for content delivery are the opportunities you provide for students to check their understanding, integrate their learning, and reflect.

3. **Focus on the principles of effective pedagogy** rather than the particular medium (video, simulation, text etc) in order to create effective learning experiences.
   a. Principles of pedagogy that are effective for online teaching are similar to ones that are effective in the residential classroom.
   b. These principles apply not only to synchronous teaching but also, importantly, to **asynchronous content creation**.
   c. **Effective teaching sparks curiosity, allows for discovery, and illustrates generalizability.**

   Keep these principles in mind when designing your asynchronous materials too. Some concrete suggestions:

   i. **Provoke** the students to get them to engage on a particular topic rather than relying on “show and tell” – by introducing a problem that they have to address, a decision they have to make, or a question that stimulates their interest;
   ii. Have your students **participate in discovery** of the key ideas and concepts through **active learning** rather than passive listening;
   iii. Get your students to appreciate the bigger picture of why and how the particular learning concept **generalizes** beyond the particular application.

d. This simple approach of “Provoke, Discover, and Generalize” can find expression in different ways for different fields\(^2\) but the core ideas generalize.

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\(^2\) For example, in the sciences one might reframe this as “Elicit, Confront, Resolve.”
e. Your asynchronous materials can complement your live sessions in important ways – for example, you can use a pre-class poll to both determine the aggregate sentiment of the class and track the responses of individual students which you can then use to anchor the discussion in the live class (and also create more intentional calling patterns there). You can engage with your students in asynchronous ways too – for example, through online discussions or feedback via surveys.

   a. As a corollary to (3): Spend more time grounding your course in good pedagogy than using every technology, or mastering every online tool or feature, at your disposal.
   b. Familiarizing yourself with a handful of important features of Zoom and Canvas can take you a long way. Another reason to keep things simple is that each new technology creates an additional burden on both teaching staff and students.
   c. Think first about what you’re trying to accomplish and what capabilities you need to deliver an effective online experience; then see whether it can be done with existing tools before adding new ones.

Peer Learning and Guest Experts
5. Take advantage of interactivity and peer learning – the key features of the online medium.
   a. Rather than trying to replicate the residential format, think “digital-first”: Faculty often get frustrated when they try to recreate what they do residually in the online format. Instead, it may be more useful to recognize what is unique about online learning formats so that you can create new or different experiences. A related preoccupation is whether online is “better” or “worse” than residential. This, in our view, is an unproductive dichotomy: in certain respects the online medium isn’t nearly as good as the residential classroom, in other dimensions it can be better by offering new and different features.
   b. The main advantage of the online medium, in our view, has less to do with its ability to reach large audiences (the scale or “hub-to-spokes” benefit often ascribed to online teaching, for example), and more to do with the opportunities for
      i. New forms of interactive learning experiences (particularly, student-to-faculty interactions or “spoke-to-hub”);
      ii. Peer-to-peer communication (student-to-student, or “spoke-to-spoke”); and
      iii. Flexibility for students in controlling their schedules and the time they spend with different course elements.

Conversely, if you are not creating interactive or/and peer-to-peer learning experiences (group, team work) you will not be taking advantage of what’s powerful about online learning.

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3 As faculty colleagues in the spring semester observed, this list of advantages includes breakout rooms, the chat function, “no back row”, collaborative online workspaces, share screen, tracking of “raise your hand” responses, and everyone being only “one click away”, as some examples.
6. You can **create student peer communities** at the level of both an activity and the course.
   a. Effective learning comes not only from effective transfer of knowledge, but from the **intellectual community** that students are a part of – study groups, project work, office hours, sections, or serendipitous hallway conversations. Relatedly, learning is most effective when students can engage not only with the material, but with each other – which requires trust, familiarity, and the **social community** of peers.
   b. Think of your online course not only in terms of how you can deliver content to your students but how you can create an intellectual community (this is what students often feel is missing the most in online courses relative to the residential experience). Review your course activities to look for ways that the activities can bring students together with each other in peer groups. Group projects are a simple and effective way to do this, and can be formative (ungraded).
   c. Design individual peer learning activities with particular care and thought to issues of inclusion and equity. For example, leaving peer activities unstructured can have the unintended consequence of some students feeling isolated. Make sure that all students are engaged with peers in some activities by assigning them to work in specific groups rather than leaving them to self-assort, and creating study groups more intentionally so that certain groups of students aren’t left out.  

7. **Experts are one click away**: you can rely more easily on outside experts both when creating asynchronous and synchronous learning experiences for your students.
   a. Everyone is **one click away** – consider ways to create opportunities for your students to benefit from the resulting possibilities.
   b. Experts can **complement** your own wisdom and knowledge in helpful ways for the students.
   c. Inviting guests to your course can also be a way to **increase diversity** and promote inclusion. Seeking out experts with varied backgrounds can expose your students to new ideas and more diverse experiences and viewpoints.
   d. Here again, interactivity is important - your role in moderating conversations with the speakers, or between the speakers and your students, will be central. Avoid lecture formats.

**Assessments, Colleagues, and Reusable Materials**

8. **Assessments can be learning** experiences too.
   a. Assessments don’t need to focus solely on the ability to remember or understand.

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4 For example, in STEM courses women and underrepresented minority students are often passed over in study groups.

5 As one notable example, the Economics 10 course at Harvard College expanded its list of guest speakers during the remote spring semester to include: a former Chair of the Federal Reserve System, two former Secretaries of the Treasury, two former Chief Economists at the IMF, one former Chair of the Council of Economic Advisers, and one former Chief Economist at the Treasury Department. As the lead faculty noted, “out-of-town participation would have been impossible without Zoom.”
b. Have a mix of (relatively frequent) low-stakes and high-stakes assessments. Zero-stakes or low-stakes assessments can give teaching staff good indicators of student comprehension and engagement and be a less stressful way for students to gauge their own learning.

9. Lean on your faculty peers.
   a. Collectively, the rest of the Harvard faculty are the single best resource to draw upon for advice on any question you might have about your teaching. And, share your experiences, learnings, or content assets with others. As one faculty member recently noted, “the online teaching experience has created a community of teachers across Harvard, not just a community of scholars.”
   b. One advantage of Zoom is that it’s never been easier to get your colleagues to “visit your class” in case you’d like to benefit from their input.6

10. Consider content reusability (beyond the fall).
   a. Nearly every university and school around the world is engaged in remote teaching of some kind this coming semester/year. As you create asynchronous materials, consider the potential for other teachers to (re)use your materials in their courses, as well as the possibilities for others to benefit from these learning materials (including lifelong learners, professional training, Harvard alumni, etc). This may reap dividends (not just monetary!) into the future.

Bearing these principles of pedagogy and community in mind, you may find certain tools, technologies, and platforms useful, particularly as they relate to asynchronous content creation. We’ve kept this guidance simple so that it is not a distraction. The advice is guided by the question, “What are the minimally sufficient tools you need to have to create terrific learning experiences?”

Finally, please do send any feedback you may have on this document. We will continuously curate it in order to try to make your experience with online teaching less overwhelming.

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6 There are other people across the University who are also available for advice — the various Teaching and Learning Centers (TLCs), and a set of SWAT teams from VPAL and the TLCs who are available for consultative advice to individual faculty teaching courses designated as “large” by the Schools.