UW School of Medicine
Instructional Design Recommendations

As curriculum renewal is rolled out across our six regional sites, we have noticed the need for guidelines to facilitate quality learning by the students related to resources they are expected to review. With multiple faculty developing content in the new curriculum, there is great potential for different instructional design methods used by each content creator to become a distraction and impede a positive learning outcome for the students. To facilitate the development of cohesive curricular content, we suggest the following guidelines:

Required Out of Class Materials: There are different ways to create out-of-class materials; these include using a single source for out-of-class learning and utilizing multiple resources.

- **Multiple Resource Recommendations:** While faculty can chose to have multiple resources, such as assigning a section of a chapter and listening to a narrated PowerPoint, the use of multiple sources should be approached with caution. Be clear about the instructional purpose for each assignment, and how the materials relate to one another. It is difficult for students to prepare for a class session if it involves 3 Powerpoints, a syllabus chapter and 2 videos (we have heard this loud and clear from our students). Any assigned out-of-class resources provided by the instructors need to be assigned with the goal that a majority of students can accomplish the tasks in a timely fashion. If multiple equivalent resources are presented as a way of accommodating different learning styles, it should be clearly stated to students that they can choose one or the other.

  The recommendation is that for every hour students spend in class, their time to complete out-of-class learning materials should not exceed 1.5 hours (total 5-6 hours per day). When a combination of learning resources is being used, we encourage faculty to limit the learning resources per session to no more than two resources. It's important to estimate the amount of time students will need to spend on each assignment. Sharing those estimates with students can show them you're considering their time, and allow them the opportunity for feedback on the accuracy of the time allotted.

- **Single Resource Recommendations:** Multiple media tools are utilized for required out-of-class assignments. The following is not intended to be comprehensive, but rather to serve as a guide for common forms:

  1. **PowerPoint:** Keep Powerpoints simple and non-dense. They are often best used for summary information, recapping key concepts/themes described and discussed elsewhere.

  2. **Book or Syllabus Reading Assignment:** The recommendation is 10 or fewer pages of textbook reading per class hour. If students are reading scientific text, it is expected they will read approximately 100 words per minute. The average textbook will have between 500 and 1000 words per page. All required text reading should be associated with learning objectives that accompany the reading assignment. If parts of the assigned reading are not related to learning objectives, the faculty should inform the students that those sections are not required and are not tied to learning objectives.

3. **Research Articles Reading Assignment:** Typically the amount of time necessary to read and comprehend the contents of a research article exceeds the time necessary for textbook reading. Having students read research articles can be a valuable way to stimulate an active learning session in class. Generally one research article per day is appropriately challenging yet still allows students to understand all parts of the article in preparation for class discussion. Faculty who provide a learning objective to guide the research reading assignment may find that students will be less likely to get stuck on the unimportant parts.

4. **Videos:** Alloting 1.5 to 2 times the length of the video (depending on overall length and density of information) allows students time to review sections of the video, take notes, and pause as needed. Students often prefer a copy of the drawing or slide deck that a video is based on for note-taking purposes. Segment long videos into multiple pieces of media or index them using Mediasite. This allows students to more easily find specific portions for review or clarity on a muddy point.

Required in-class materials and methods:

- **Lectures:** Lectures that have 2-3 strategic pause points for active learning (about 2 min each) can improve both short- and long-term retention. Keep in mind that Powerpoints are designed to support a narrative that is given with the spoken word and may not function well as stand-alone or to accompany written text alone. Keep Powerpoints as simple and non-dense as possible and when possible, include a narrative component.

    - Remember that students don't need to know material at a PhD scientist level.
    - Retention is limited in large group settings and efforts should be made to streamline.

- **Active classroom learning:** The students value large group lecture and discussion followed by small group breakouts followed by large-group review and discussion, offering clarifications and recapping key points the students should recall. Completion of IRATS should be followed by review of the answers and associated materials.

  Lynne Robins (lynner@uw.edu) and her team are available for consultation on active learning techniques. Joe Benfield, the instructional designer in Academic Learning Technologies, can help with creating materials, planning class sessions, and organizing course content(joeben@uw.edu). Please do not hesitate to call on them both. Also please recall our online library of module resources at (http://clime.washington.edu)

Resources:

http://www.cod.edu/people/faculty/staeck/student_class_preparation_hours.htm

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