

**Communication Protocols and Internet Architectures**  
**Harvard University**  
**CSCI S-40, Week 3, July 9, 2018**  
**Weekly Course Logistics and Information**

## **Course Information and Logistics**

- **Midterm Exam and Final Exam:** The midterm is next Thursday July 19th and the Final Exam is on Tuesday August 7th. **It is important that you review all of the details about the exams described below.** Please contact the instructor if you have any questions.
- **Weekly Section Meetings and Midterm Review:** Students are required to attend a section meeting each week, either online or on-campus. There is one on-campus section meeting each week, plus two online section meetings (using the Zoom webconference software.) The on-campus section meeting is on Tuesday evenings and it will be held in room L01 at 53 Church Street starting at 7:30PM. This on-campus meeting will include streaming video and a chat room for students who are not on campus. The online section meetings will be on Thursday evening at 9PM EST and Saturday morning at 10AM EST. **This week's section meetings will include a midterm review.** More details are below.
- **Office Hours but no section meeting next Tuesday the 17th:** We will hold online office hours next Tuesday evening the 17th starting at 7:30, instead of an on-campus section meeting. The office hours will be held in the same classroom where the weekly section meeting is held. We will use Zoom for this meeting, so please attend either on-campus or online. (The Zoom room will be in addition to the normal streaming video and the recorded video from the meeting will be posted on Wednesday.)
- **Homework:** The second homework is due today, July 9th. Homework #3 is being assigned today and it is due at 1PM (Boston time) next Monday July 16th. Homework must be submitted using the Submit Homework feature on the course website. **It is very important that you submit homework #3 when it is due** since the solutions will be posted on Tuesday; this will ensure that you have time to review the solutions before the midterm exam on the 19th.
- **Two lecture videos are being posted this week, the third week of the term.**
- **Online Office hours:** We will hold online office hours this Wednesday the 11th between 11AM and noon, next Tuesday evening at 7:30PM, and Wednesday the 18th between 11AM and noon. We will use the same Zoom webconference tool we use for the online sections for online office hours. See the section below for information on Zoom.
- **Please submit a One-Minute Wrap-Up at the end of each lecture using the online form posted in the weekly module.** This form is anonymous.
- Note that we will be reading background and tutorial information made available by vendors and other sources. This is not intended as an endorsement by Harvard or the instructor of any specific vendor, product, service or site.

## **Weekly Reading Assignments**

- The reading assignments for lectures 7 through 9 have been posted on the course website. (Note that lecture 9 will be posted in week 4, but we recommend that you complete the reading assignment before you watch the lecture.)

## Midterm Exam Information (Thursday July 19, 2018)

- **Midterm Material:** The midterm exam will cover the material (readings, handouts, etc.) presented up through and including the topics discussed in lecture 8. This includes the material covered in homework assignments #1, #2, and #3. The midterm exam is an open-book, open-notes exam, but you cannot use any online search engines to search for answers. The only website that you can use for reference is the IETF website.
- **Exam Format:** The midterm exam and the final exam will include a number of True/False, multiple choice and matching questions. In addition to these types of questions, the exams will include a number of essay questions. The midterm exam will use the Canvas Quiz Tool and it will be available via the course website.
- **Practice Exam:** We have posted a short practice exam with a few essay questions on the course website. We have also included the solutions, and both files are posted towards the top of the Modules section. The essay questions are comparable to what you might see on the midterm or final exam. (The topics covered in this practice exam might, or might not, be on the actual exam.)
- **Midterm Schedule:** The online midterm exam is on Thursday July 19, 2018 and it will be available via the QUIZ section on the course website. You will need to login to the course website to see the exam. The exam is two hours long (and a timer can be seen within the Quiz tool once you start the exam.) The exam will be available to you between 12:01 AM and 11:55 PM (Boston time) on that date, but we strongly recommend that you login and start the exam before 9:30 PM so that you have the full two hours to take it.
- **No Online Search:** As noted about, you cannot use any online search engines during the exam, and we may use a tool such as TurnItIn if we think that an answer on your exam is a cut/paste via a Google search. The teaching staff and the University take the issue of Academic Honesty and Integrity very seriously.
- **Exam Can Only be Taken Once:** It will not be possible to pause the exam: once you start it, you will have two hours to complete it. Also, you should only click the SUBMIT button once; the exam will not be available to you after you click SUBMIT.
- The exam has 50 points and your exam score and the exam answers will be available to you via the course website once the exam is grade. We expect the it will take about a week to grade the exam.

## Final Exam Information (Tuesday, August 7, 2018)

- The Final Exam is a closed book three-hour long exam. The exam will cover all of the material from the term, including the material from before the midterm exam.
- **The Final Exam will be held on campus on Tuesday evening August 7<sup>th</sup> starting at 6:30PM.** (The exam room will be assigned by the Registrar in a few weeks.) If you live in the New England area you must take the exam on campus at this time. If you live outside New England you must arrange for a proctor to give you the exam in your area.
- **If you live outside New England you must arrange for a proctor to give you the Final Exam on August 7<sup>th</sup>.** You can find information on arranging a proctored exam in the Academic Policy and Exam section of the School website at the following link:  
<https://www.summer.harvard.edu/resources-policies/exams>  
You are responsible for finding a proctor in your area and you **need to submit the proctored exam request form by Monday July 30<sup>th</sup>**. The proctored exam form is

available via DCE Online Services at:

<http://www.summer.harvard.edu/login>

- **The exam will be available for your proctor to download from the Online Services website between 12:01AM and 11:59PM EST on Tuesday the 7<sup>th</sup> and you must take the exam with your proctor during this same time period.** (Note that the exam will not be available via the course website.) All of these times are EST in Boston and you therefore need to correlate this timeframe to the location where you live. This is especially true if you live in Europe, Africa or Asia. Please note that the proctor system is offline between 1AM and 2:30AM EST for system maintenance and your proctor will not be able to download the exam during this 90 minute period.
- Contact the Academic Services Office (part of the Registrar's Office) if you have any questions about finding a proctor. They can be reached at [distance\\_exams@hudce.harvard.edu](mailto:distance_exams@hudce.harvard.edu) or call (617) 495-0977. They have a lot of experience with distance exams. Please remember that you are responsible for finding a proctor in your area and that the Summer School must have all of your proctor information (via the online form) **no later than July 30th.**
- **Exam Format:** The final exam will have the same format as the midterm exam. The exam will include a number of True/False, multiple choice and matching questions. In addition to these types of questions, the exam will include a number of essay questions. The practice exam questions that are posted for the midterm are also applicable to the Final Exam.

## Weekly Section Meetings

- The **on-campus section meetings** are held on Tuesday evenings in room L01 at 53 Church Street starting at 7:30pm. The live video of the section will be available via the Lecture Video link on the navigation bar of the website and we will be using a chat room called Backchannel Chat so that online students can ask questions. The link for our chat room is:  
<http://backchannelchat.com/chat/vla21>

Please note that this chat room is not managed by Harvard, does not require a login and is not private. Therefore, do not include any personal or private information in your conversations. Also note that you must login to the course website in order to see the links for the video and chat room. The recorded video from this on-campus section will be posted on Wednesday

- The **online section meetings** are held on Thursday evenings at 9PM EST and on Saturday mornings at 10AM EST. We are using an online collaboration tool called Zoom for these online meetings. Zoom is a web conferencing tool used for many different courses here at Harvard, and it is comparable to WebEx or Google Hangouts. The online section meetings will not be recorded.

You can join your online section meeting in a number of different ways. If you are using a laptop or desktop computer then you should use the link below to join the meeting.

<https://harvard-dce.zoom.us/j/5092853098>

If you're using Zoom on a mobile device then you will need to install the Zoom app. Once you have done that you join your meeting by entering ID # 5092853098. Please note that you do not need to sign up for a separate Zoom account to join the online meeting.

Zoom supports Windows and Mac OSX using common browsers, such as Firefox, Chrome and Safari, plus many different tablets and mobile devices. You will need to install and run a Zoom browser plug-in if you are using your computer, or you will need to install the Zoom app if you are using a mobile device. Please make sure to test your audio and video

configuration before you use the system for the first time. You can find more specific technical information on system requirement here:

<https://support.zoom.us/hc/en-us/articles/201362023-System-Requirements-for-PC-and-Mac>

You should use a headset with a microphone in order to improve the quality of your audio, and you should always mute your audio if you are not speaking. As you will learn in this class, the network performance of wireless Ethernet (IEEE 802.11 or Wi-Fi) and cellular service is much worse than wired Ethernet and this means that the quality of your video and audio might not be very good if you use a wireless connection. This is especially true if you are using a Wi-Fi connection at a coffee shop. As we will discuss later this term, the most important parameters that are used to measure network performance are packet error rate, network delay, and network jitter.