Remote Proctoring
for Cisco NetAcad Final Exams

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About Me…

My name is Marlene Craik, and I teach at Minnesota State Community and Technical College (a.k.a. MState).

The college became a Cisco Networking Academy in 2001. I was hired in July of 2001 to integrate the Cisco CCNA courses into the existing degrees. I am currently lead faculty and advisor for the Online Information Technology AAS degree. I have taught the Cisco CCNA courses in both hybrid and fully online formats for many years.

I hold a Bachelor of Science in Computer Information Systems and a Master of Business Administration. Prior to coming to MState, I was employed in industry as a Network Administrator. I have worked for both federal and county governments as well as the private sector.

Overview of Remote Proctoring Methodology

- I have remotely proctored the final exam for NetAcad courses for many years, and my objective has remained the same: To ensure the integrity and effectiveness of each student's exam taking experience.

- I use video cameras and video conferencing technology (such as Cisco Webex) to observe and communicating with the students as though I was in the same room with them.

- My average class size is around 24 students, which I divide into 2 groups of 12 for more effective visual monitoring.

- I select two evenings when I give the exam, and I assign each group a date.

I post the schedule with dates and times of the exams for the groups along with test information

Monday, May 4th 6:30 PM	Tuesday, May 5th 6:30 PM
Student1	Student9
Student2	Student10
Student3	Student11
Student4	Student12
Student5	Student13
Student6	Student14
Student7	Student15
Student8	Student16

Exam Information:
- **Hyperlink: Video conferencing meeting room**
- **External camera requirement (see following slides)**
- **Students must also have a headset with a microphone**

Students are to purchase or borrow an external USB camera. Here are a couple for under $20.

(It is a requirement for my online class, so my students would already have such a camera.)

Web Cam with Microphone, Clip-on 360 Degree USB 12 Megapixel HD Webcam Web Camera with Microphone for Computer Laptop Desktop for YouTube Video Broadcasting(Black+Silver)

Computer Webcam Desktop PC Web Cam Camera with Mic Laptop 16 Megapixel USB 2.0 Webcam … (Black+Red)

Please be sure the camera has a minimum of a 6-foot USB cord.

The integrated camera must be disabled

- If the computer has an integrated camera, and the video conferencing technology does not allow selection of the external camera, then the integrated camera must need to be disabled.

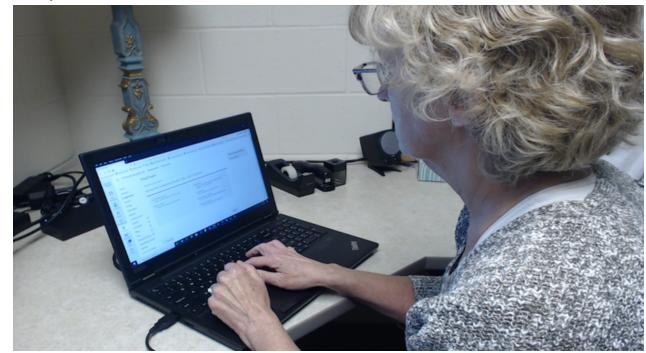**How to disable your Integrated Web Cam in Windows 10**

- Right click Start Button

- Select Device Manager

- Once Device Manager opens, scroll down to Cameras (or Imaging Devices) and expand it.

- Right Click on Integrated Camera (or WebCam) and choose Disable.

- This will allow you to use your external camera.

- When you are done with the exam, go back into Device Manager and enable the Camera

A second laptop may be used in place of the external camera

- Due to impact of COVID-19 during this spring semester, external cameras were sometimes out of stock from retailers, so I had some students use a spare laptop or smartphone with an integrated camera.

- The camera must be positioned so that it will display the computer used for testing.

- The headset with the microphone will be connected to the laptop with the camera.
  - You don't want both computers connected to the audio and you will get microphone feedback.

Guidelines for Exam Taker

- Only one monitor is allowed.

- No other browser tabs opened or applications running in background.

- No notes are allowed.

- Students must have a microphone, so I can speak to them as needed.

- Students must have an external USB camera plugged into their computer. (Not the integrated camera in the computer screen.)

- The camera must be positioned behind the student and off to the side, so I can see the student, their screen, and their workspace. I help them adjust the camera's position and angle as needed.

On the day of the exam

- Students join the video conferencing meeting 15-30 minutes early (around 6:00 to 6:15pm) to test their cameras, headsets, and microphones.

- I begin the exam promptly at 6:30pm by activating it within the Learning Management System.

Best Practices

- I turn off my camera so that the students cannot see what I am doing. I want them to believe that I am constantly monitoring them.

- Due to additional cost, I typically don't record the video conferencing sessions. I have found that both the camera's positioning and the students not being able to see my video act as an effective deterrent against any form of cheating.

- I have the students send a message in the Chat area when they are done with the exam.

- I have the students take the NetAcad Course Feedback prior to activating the final exam, so it does not get missed.

- I ask the students to mute their microphones (or I manually mute them) before beginning the exam, so they don't distract others.

Best Practices

- I have an external monitor connected to my laptop to which I move the video conferencing application to display the camera views of the students.

- On my laptop's screen, I have the Cisco NetAcad course gradebook open to check each student's exam score as soon as they have sent me a chat message that they are finished.
  - You will need refresh the webpage to see the updated score.
  - I also have the gradebook open for my college's system, so I can record the score of the final exam for the student right away.

- I confirm that a student's exam score is in the NetAcad course gradebook before I give them the go-ahead to logoff the video conferencing session.

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