

# Moving Rapidly to All On-line Instruction

Department of Mechanical Engineering

Iowa State University

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All statements in this presentation are subject to change at short notice  
as the situation develops.

# Slowing the spread of COVID-19

## **Classroom Instruction:**

- All 3 Regents Universities, including Iowa State will go to all on-line instruction for 2 weeks following Spring Break: **Monday, March 23 – Friday, April 3.**
- Students are encouraged not to return to ISU immediately after spring break.
- Dorms and food services will stay open at some level.
- Employees can continue to come to campus, as usual.

# Moving Rapidly to all on-line Instruction

- **Two weeks of on-line:** plan to record your lectures between March 23 and April 3.
- **Lecture recording studio** will be set up in **Black 2025 (TA office)**. Can schedule Nick Fetty to video for you: <https://www.signupgenius.com/go/9040849A8A929A7FF2-course>
- **Lecture capture from home:** We are gathering approaches for DIY lecture capture since some people may need to produce lectures from home:
  - Tripod
  - Laptop camera or cellphone
  - whiteboard or sheet of paper
  - Camtasia
- **Posting of lectures** can be thorough many methods: Canvas, YouTube, etc.
- **CELT** has a rich set of on-line resources
- **Cris Schwartz' examples** of simple, low tech lecture/whiteboard capture:
  - <https://youtu.be/TrvtrOKkRDE>
  - <https://youtu.be/MRCcuY2IV1I>

# Suggestions for success

- Don't aim for highly produced videos. **Simple is good.**
- **Low tech** methods may be more reliable than fancy tools.
- **Low resolution** may be desirable since some student will be viewing them from internet challenged locations.
- **It is useful to familiarize yourself & your students with multiple options** for lectures or office hours -- in case one fails.
- You only need to stay one lecture ahead of your students.
- Pre-recorded lectures w/ scheduled live streaming Q&A periods may be easier to manage than live streaming of lectures.
- You are encouraged to do “dry runs” in the few remaining classes this week, for example:
  - Try a on-line lecture,
  - In class, walk your students through the use of tools such as Zoom (or whatever group meeting tool you choose) to make sure they can connect.

# Challenges: experiential learning components

- Hands-on learning in teaching labs
  - MINE teaching Laboratories: Fluids, Controls, etc.
  - Shared ME/IMSE Manufacturing labs on Black 1st floor: casting, welding, etc.
- Design Studio Courses: ME 270 and Capstone
- Use of special software (CAD, HVAC)

# Taking our Teaching Laboratories on-line

- Taylor, John H. and Jim D. are working on taking most labs in the Mine on-line. (Video using equipment in use, plus datasets to analyze).
- Jim S. and Wyman are considering what parts of the manufacturing labs can be meaningfully delivered on-line. (Can we reschedule some of the hands-on activities to later in the semester?)
- ME 160, ME 170, HVAC, etc: Nate and COE are looking into increased remote access to machines with special software (VDI Virtual Desktop, VPN, Chrome Remote Desktop ...)

# Sophomore and Senior Design

- No fabrication – physical models of any kind will not be considered in grading – because we don't want to students to feel:
  - They must come to campus and work in the shop to get a good grade,
  - Others with access to outside machine shops have an unfair advantage over those with no access.
- Focus on analysis only in design classes.
- Teams should meet on-line only.
- Boyd Labs, Design Studio Rooms, ME computer labs will be closed to students.
- Design show – wait and see.

# A Few Resources

- COE page on COVID-19: <https://www.engineering.iastate.edu/covid-19/>
- Nick will set up ME quick reference page on COVID-19 resources: ME specific policies, and links to other sites.
- CELT Website: <https://www.celt.iastate.edu/teaching/preparing-to-teach/course-continuity/>
- Campus cancellations and closures page: <https://web.iastate.edu/safety/updates/covid19/cancellations>
- Student FAQ's: <https://web.iastate.edu/safety/updates/covid19/studentfaq>
- Campus Safety page: <https://web.iastate.edu/safety/updates/covid19>



# Student Employees

- Graduate RAs and TAs will continue to be paid.
- **RAs** can continue to do work in research labs, but are encouraged to keep 6' between themselves and co-workers.
- **TAs** will be expected to continue supporting classes, but grading assignments and holding normal office hours will be done on-line.
- **Undergraduate hourly workers** can continue to work if their duties allow (although this may change).