Remote GTA Preparation:

the Good, the Bad, and the Ugly

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Scan for GTA prep materials & research

Physics GTA Preparation

- Physics GTA Preparation at Georgia Tech: one credit hour, pass/fail, required course for first-time GTAs.

  - The **3P Framework**: a comprehensive GTA prep program needs to have full integration of **Pedagogy** (the methodology of teaching), **Physics** (content and PCK), and **Professional Development** (transferable skills usable outside the classroom)

- **Course Goals:**

  - produce GTAs who are motivated and effective teachers
  - help GTAs develop transferable professional skills they can use outside the classroom
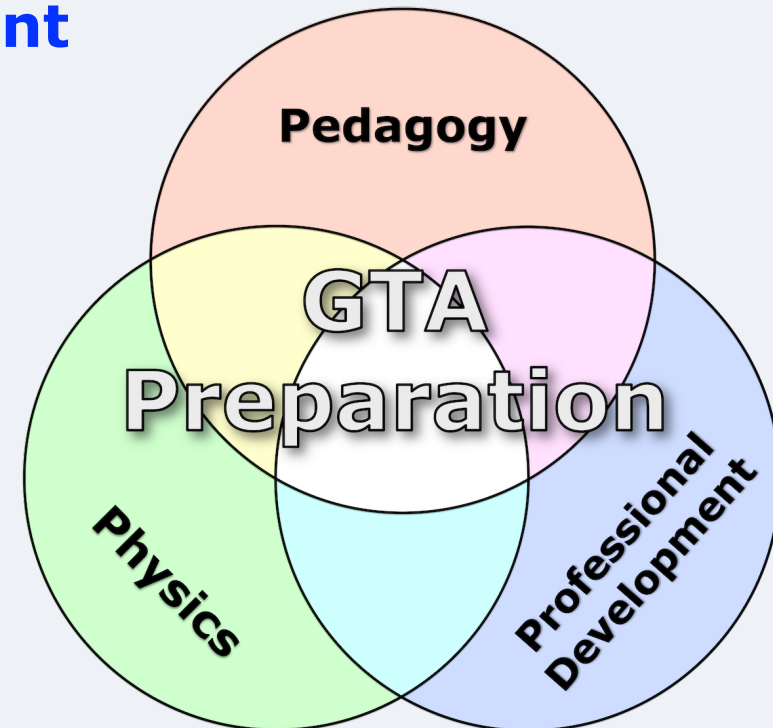
Course Structure

- Orientation
  (before GTA duties begin)

- Follow-Up Meetings
  (during Fall semester)

- Out-of-Class Activities

Introductions & GT Policies
GTA duties, responsibilities…

Teaching Physics
active learning, expert/novice, problem solving…

Classroom Management
preparing for what might happen,
motivating students

Lab Simulation & Microteaching
activities for practicing teaching in a lab or
problem-solving session, giving and
receiving feedback

Course Structure

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  (before GTA duties begin)

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Grading
rubrics, strategies, practice

Midterm Evals & Time Management
receiving feedback from students, managing time

Teaching Videos
watching and critiquing videos of past GTAs teaching

Teaching and Research
transferable skills, academic vs non-academic jobs

Concluding Remarks
semester wrap-up

Course Structure

- Orientation
(before GTA duties begin)

- Follow-Up Meetings
(during Fall semester)

- Out-of-Class Activities

Classroom Observations
twice per semester, option to video record

Workload Surveys
weekly accounting of hours spent on GTA duties

Peer Mentoring
meetings with senior grad students to discuss everything from academic requirements to career options

But then everything changed when the coronavirus attacked...

- Fall 2020: all classes (lectures and labs) delivered remotely

- I attempted to keep the GTA prep curriculum as close as possible to the Before Times, with an added emphasis on remote instruction
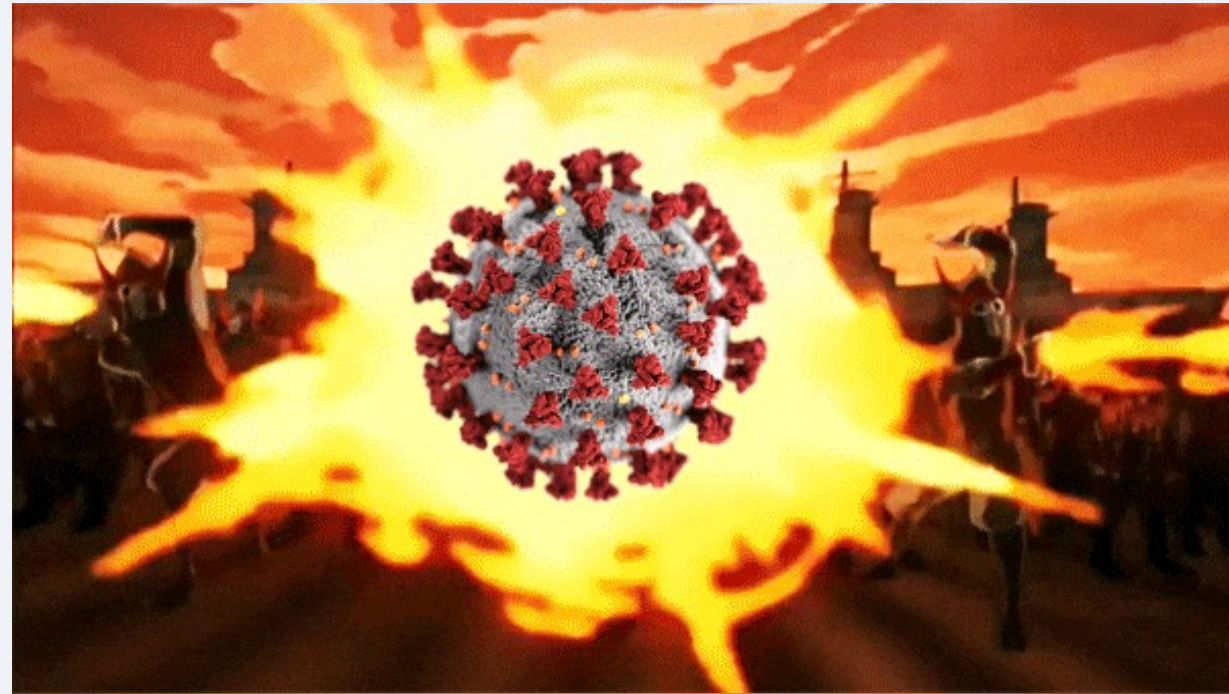
(with apologies to "Avatar the Last Airbender" and the Wikipedia page for coronavirus)

Fall 2020

- Main course structure (Orientation, Follow-Up Meetings, Out-of-Class Activities) remained the same

- Orientation and Follow-Up Meetings delivered through BlueJeans (Georgia Tech doesn't use Zoom)

- I asked GTAs to keep their cameras on during Orientation so we could all "meet" each other (in the Follow-Ups, 2/3 turned off their cameras)

- Breakout rooms were used for small group activities (with GTAs randomly assigned – group members always changed)

- All class materials delivered through Canvas LMS
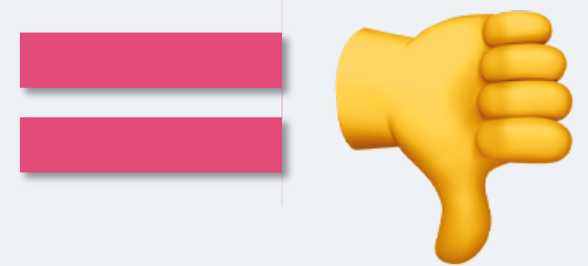
- Things went…. ok…

The Good

- First-time GTAs still received preparation before teaching, and received continuous support throughout a very difficult semester

- Microteaching via breakout rooms went very well!

The Bad

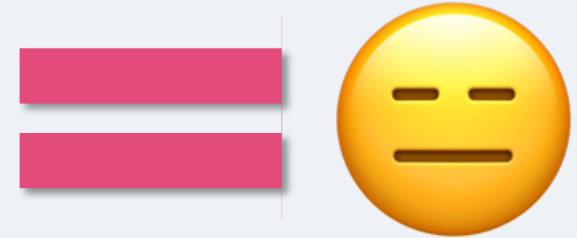- Can't keep an eye on all the groups during small group activities

The Bad

- All the fun hands-on things had to be done via online forms or spreadsheets
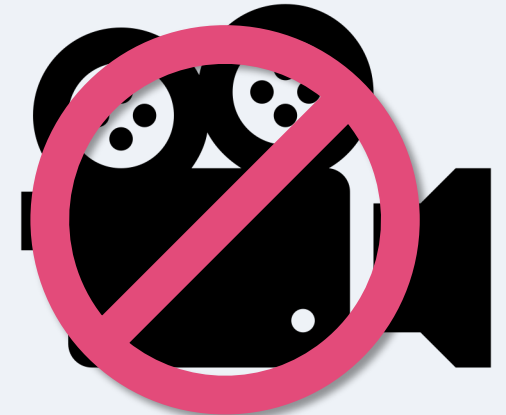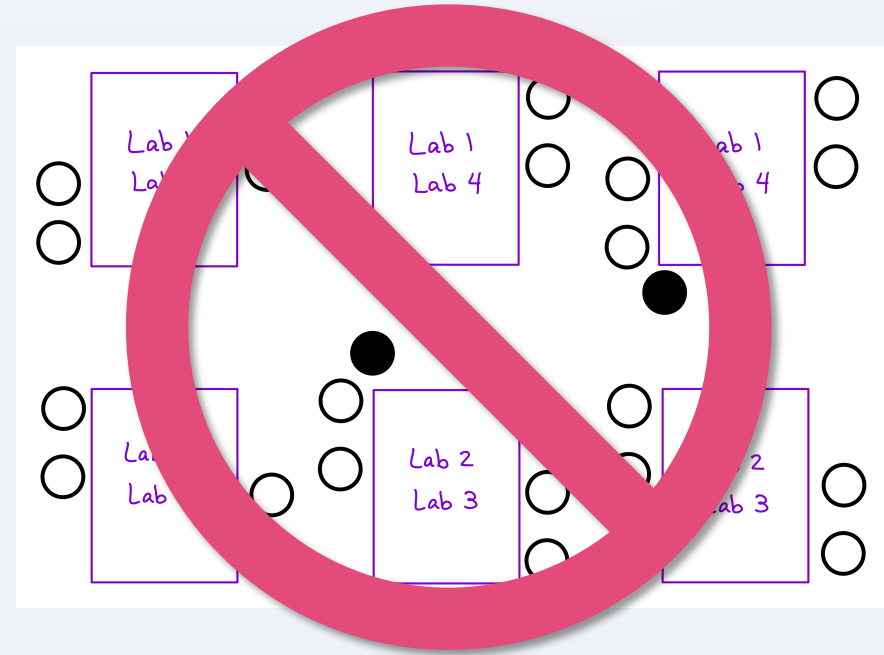

	Monday
1 - Angular Momentum	Albert E.
2 - Energy Graphs	Richard F.
3 - Friction	Vera R.
4 - Collisions	Jocelyn B.B.
5 - Faraday's Law	Edwin H.
6 - Gauss's Law	Lise M.
7 - Circuits	Marie C.
8 - Electric Field	Werner H.

The Ugly

- No Lab Simulation
  - Impossible to do safely
- No Classroom Observations
  - Logistics and timing issues
- No sense of cohort
  - Everyone's just a box on a screen

To summarize...

- GTA preparation CAN be done remotely, though adjustments are needed
  - In my experience, nothing < remote < in-person

- GTAs appreciate interaction and engagement!

- If GTAs will be teaching remotely, then GTA preparation needs to include technical details on HOW to teach remotely (independent of content)

- **TO DO:** incorporate Fall 2020 into program assessment data and analysis, for quantitative comparison between in-person and remote GTA prep

Questions? Comments? Email me! ealicea@gatech.edu