**Tech Session at TIMES Summer 2016 Workshop**

***Overview***

This brief handout is information for the instructor so they are aware of the data collection process that their undergraduate students will be undergoing for the TIMES grant in the Fall 2016 semester. Each content area (Differential Equations, Linear Algebra, and Abstract Algebra) has their own graduate research assistant (GRA) responsible for each undergraduate research assistant (URA). Your student, the URA, can and should contact their respective GRA for technical and/or data collection support.

***GRA info***

Differential Equations Nick Fortune NCSU [ncfortun@ncsu.edu](mailto:ncfortun@ncsu.edu)

Linear Algebra Muhammad Haider FSU [mqh14@my.fsu.edu](mailto:mqh14@my.fsu.edu)

Abstract Algebra Rachel Keller VT [rakeller@vt.edu](mailto:rakeller@vt.edu)

***Details***

* Filming
  + On selected days of filming your URA will film the entire class from a vantage point that includes the whole room while not filming non-consenting students. Additionally, the URA must zoom in and out appropriately to ensure what is written on the board, overhead, projector, etc., is accurately and clearly documented for data collection.
* Data
  + Data security
    - The URA must ensure that videos are deleted off the iPad after being uploaded to Google Drive (this includes the Recently Deleted folder on the iPad)
    - Any time student assessment or work is uploaded your URA must ensure that all names are blacked out.
  + Types of data collection uploaded to Google Drive
    - Consent forms
      * The instructor disseminates and collects the consent forms and then gives them to the URA who then uploads them to Google Drive for the GRA
      * Names are **not** blacked out on the consent form!
    - Video of selected classes
    - Shots of student work
    - Student assessment - need coordination with instructor
    - Syllabus - need coordination with instructor
    - Homework assignments - need coordination with instructor
    - Handouts - need coordination with instructor
  + Video data upload
    - To go from iPad to Mac, use the program *Image Capture* to go from iPad to Mac then upload from the Mac to Google Drive and ensure video is deleted off of computer
    - Last year we ran into **an issue with uploading from iPad to PC**. To overcome this issue, if your URA uses a PC, we suggest they break up the video when filming into ~6 segments. Then it becomes possible to get the video from iPad to computer then computer to Google Drive
* iPad
  + After the study is over the iPad is yours to keep
  + However, in the meantime please keep in mind that when plugging the iPad into the computer it will try to take all your or your URA’s pictures! Therefore, URA should make sure that their iCloud account is not synced on the iPad
  + It is up to you if you want to hold on to the iPad during the study and only give it to the URA for filming and uploading days or if you want to just have the URA hold on to it for the duration of the semester
  + Apps
    - Google Hangouts
    - Google Drive
  + The space capacity of the iPad is 32GB, however, after the stock apps, software, and additional required apps, there tends to be between 24GB and 28GB. And the video of a full class takes up a lot! Therefore, video must be uploaded to Google Drive and removed from the iPad before another class can be filmed.
* Google Drive
  + All housed at NCSU
  + Emails and passwords
    - Each instructor/URA has an email and password from NCSU
      * Do not use personal accounts
* Other
  + URA can grade assignments (instructors’ choice)
* Questions?