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Converting an In-Person Course to an Online Course

- **Streamlined best practices** for online course design
- **Course Models** for common types of courses
- **Mapping of course elements** to online tools and methods

March 26, 2020

Find this info and suggestions for converting any component of your in-person course online at http://teach.caltech.edu

Considerations for Converting Your Course

1. Focus on high priorities for learning

   What are your main goals for student learning?

2. Pick and practice with tools (keep it simple)

   Your teaching goals determine your tools (e.g. pre-recording lectures, tablet whiteboards, online forums or Q&A)

3. Be as organized and structured as possible, and ensure you have regular communication with students

   Students perform best when they know what's expected of them and how to be successful / perform well on their assessments.

4. Be flexible and let go of perfection

   Students will need more flexibility - record everything and post for students to view later.

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Course Models

Model 1: Small to medium courses; mostly lecture/discussion and homework/exams

- **Class time:** Zoom videoconferencing for either live, recorded lectures (allowing for Q&A/discussion and posting) or pre-recorded.
- **Assignment distribution:** posted in Moodle and/or emailed to students.
- **Assignment submission:** via Moodle, Gradescope, or email.
- **Office hours and individual meetings:** in Zoom.
- **Online discussion:** Moodle discussion forum for assigned student discussions, and/or to document answers to student questions.

Model 2: Medium to large courses; mostly lecture and homework/exams or courses with demos/lab elements

- **Class time:** Zoom videoconferencing is used to pre-record some or all lectures, demonstrations, and/or lab experiments conducted by instructors/TAs.
  - Students watch videos and then:
    (a) live discussion/problem solving together or with TAs/instructors
    (b) individual or collaborative assignments, and/or online discussions
  - record and share any live sessions (consider: time zones, internet connectivity)
- **Assignments, office hours, and discussion forums** are structured as in Model 1.

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Technology Infrastructure and Workflows

Online classroom components

- Class website
- Live lecture sessions and recordings
- Lecture recording distribution
- Student collaboration
- Problem sets and grading

**** Tools implemented require access.caltech credentials**

MOODLE

Learning Management System (LMS)

COURSE HUB

- Announcements
- Problem Sets
- Discussion Boards
- Chat
- Grading
- Links to videos + Zoom meetings

ZOOM

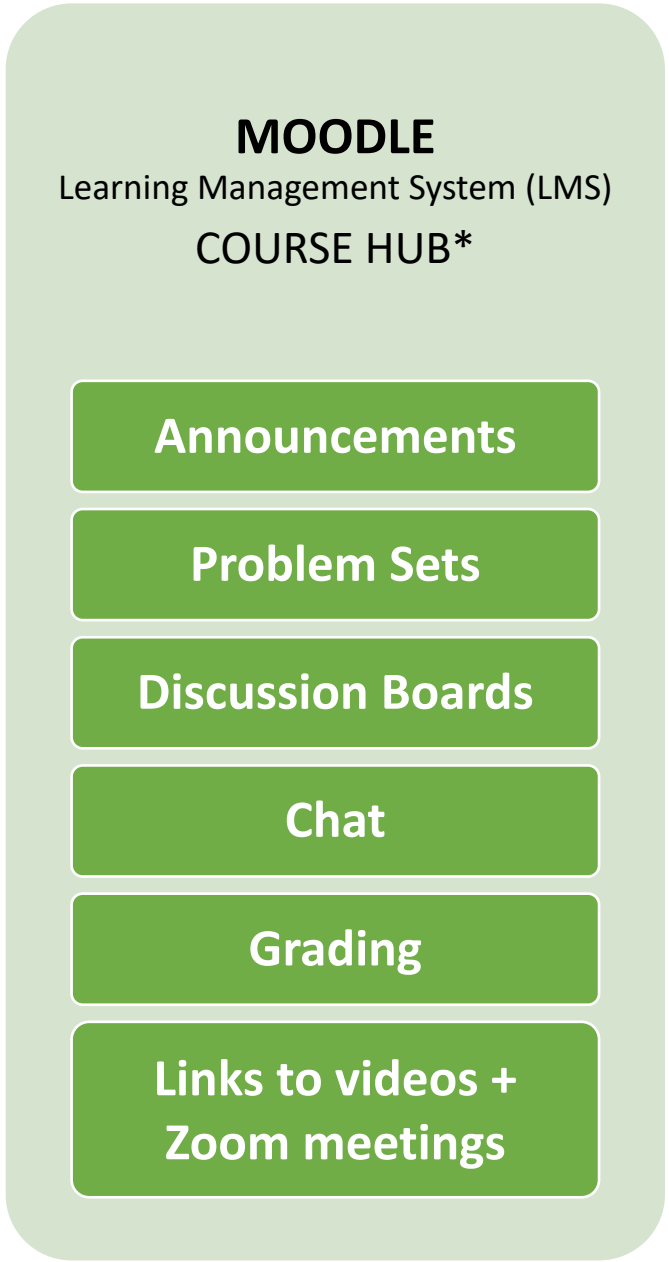
- Live Synchronous Teaching
- Pre-recorded Asynchronous Teaching

G Suite for Education GOOGLE DRIVE

- Store Files
- Stream Video

GRADESCOPE

- Grading
- Problem Sets



Class Website

Status of Moodle

- All Spring 2020 courses have been created
- All Faculty, Instructors, and TAs have been assigned to their course
- All are pre-populated with a quick-start guide and a template for course structure and organization

*Many faculty will create their own website, but keep in mind… FERPA compliance, copyright issues, public access, etc.

ZOOM

Synchronous/Live Teaching & Office Hours

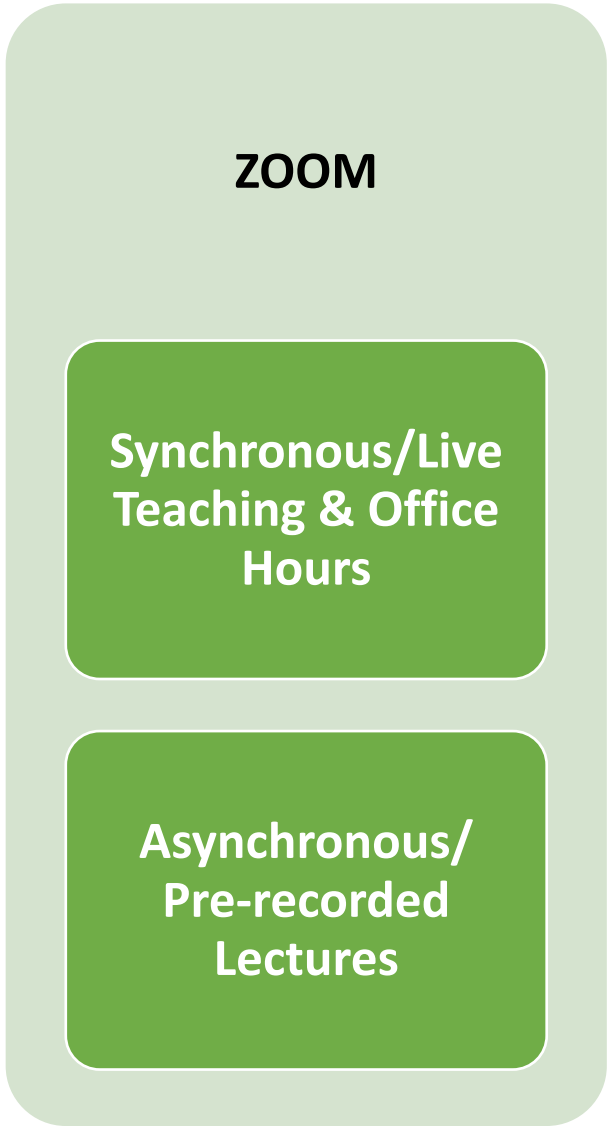
Asynchronous/ Pre-recorded Lectures

SYNCHRONOUS
Teaching & Office Hours

- audio + video
- screensharing (PPT,+)
- digital whiteboard
- chat
- link sharing
- recording
- Student Collaboration: Google Hangouts Meet

ASYNCHRONOUS
Pre-record Lectures

- audio + video
- screensharing (PPT,+)
- digital whiteboard
- software solutions



Live Lecture Sessions and Recordings

Status of Zoom

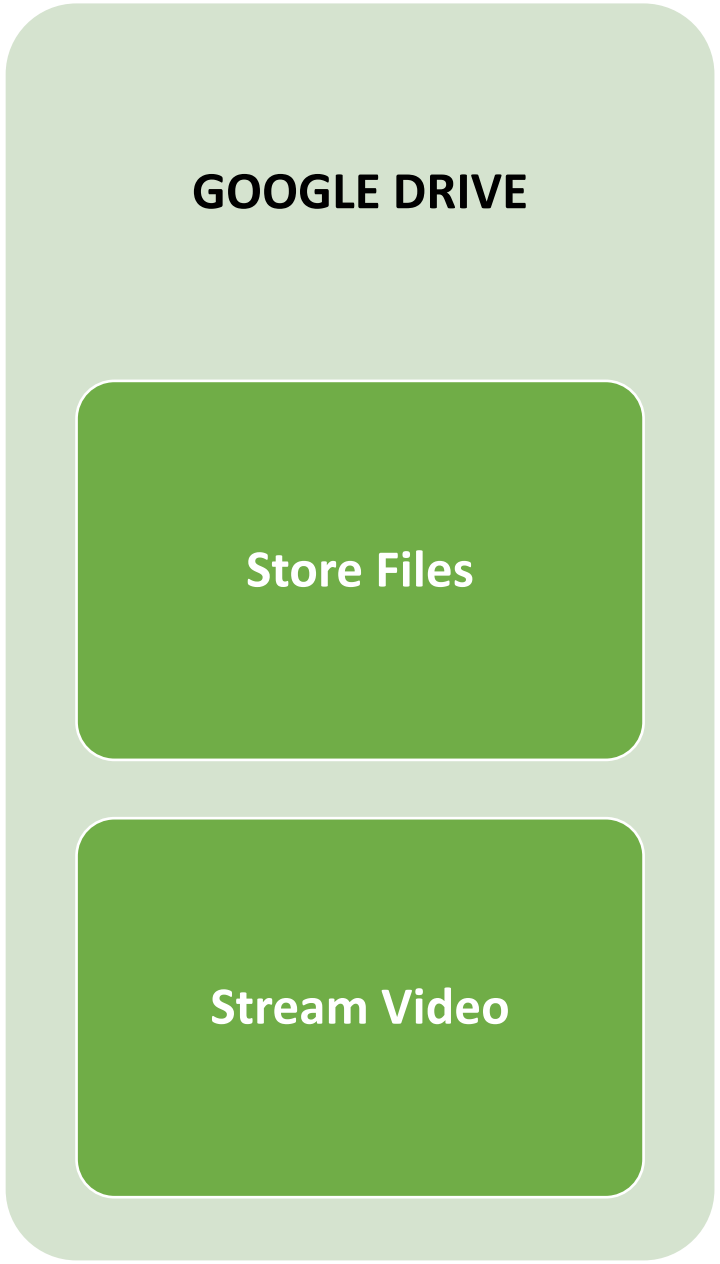
All Faculty and TAs have a Pro License

- Unlimited session time, <300 participants
- Used for live and pre-recorded lectures

Save Locally or in Zoom Cloud

- Zoom Cloud is back to reasonable processing time
- Ensures a solution for limited network

Can restrict to access.Caltech for FERPA compliance and to mitigate “Zoombombing”



Lecture Recording Distribution

Status of Google Drive

- 5TB/file unlimited storage
- Dynamic video streaming platform, same as YouTube
- Can be configured to only allow “caltech.edu” to access
- Individual and group share permissions and download options

access.caltech restricted links available for course websites

Other solutions: Zoom Cloud (up to 60 days) and Box (not a video platform) can also be used as a repository.

SYNCHRONOUS

Zoom + Google Hangouts Meet

- audio + video
- screensharing (PPT,+)
- chat
- link sharing
- digital whiteboard*

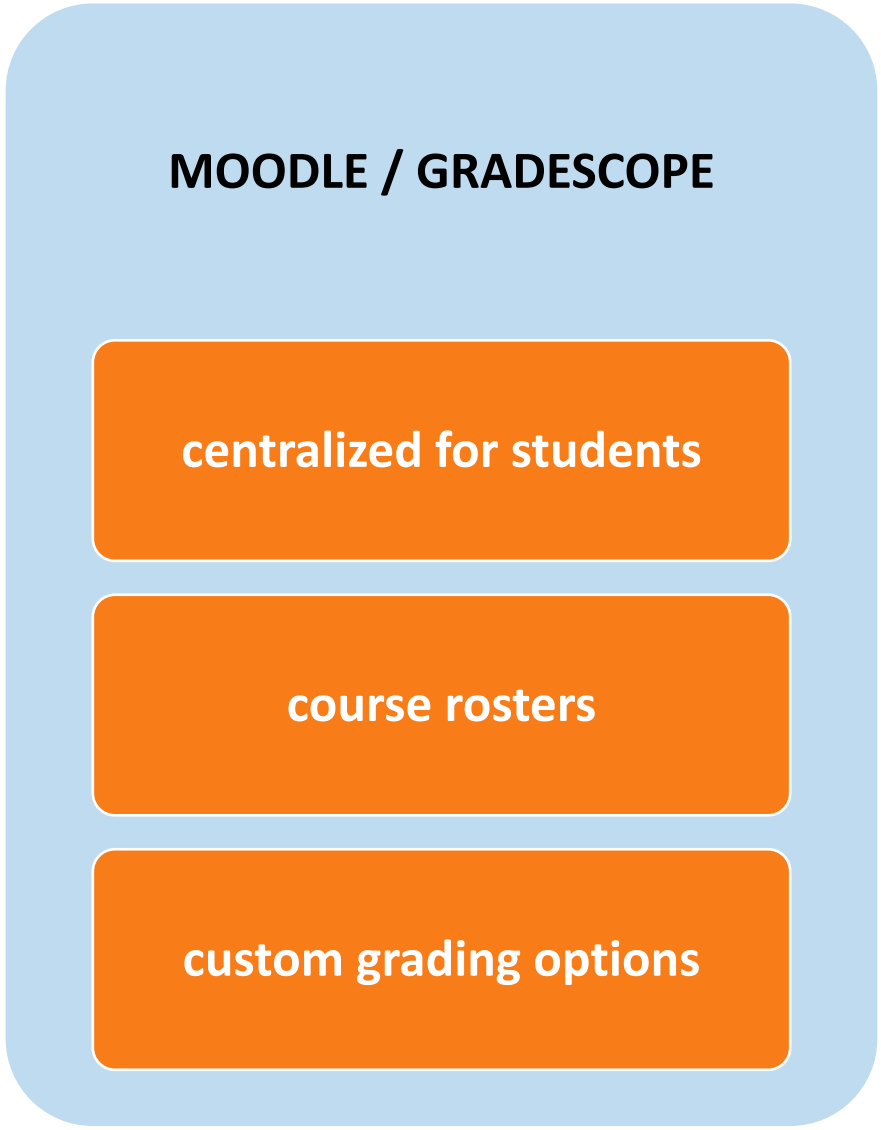
Student Collaboration

Zoom*

- Basic license (unlimited 1:1, 40 mins up to 100)
- Breakout Rooms during Live Lecture

Google Hangouts Meet

- Unlimited time
- Invite other students to collaborate
  - Private chat
  - Virtual chat rooms
  - Impromptu and scheduled



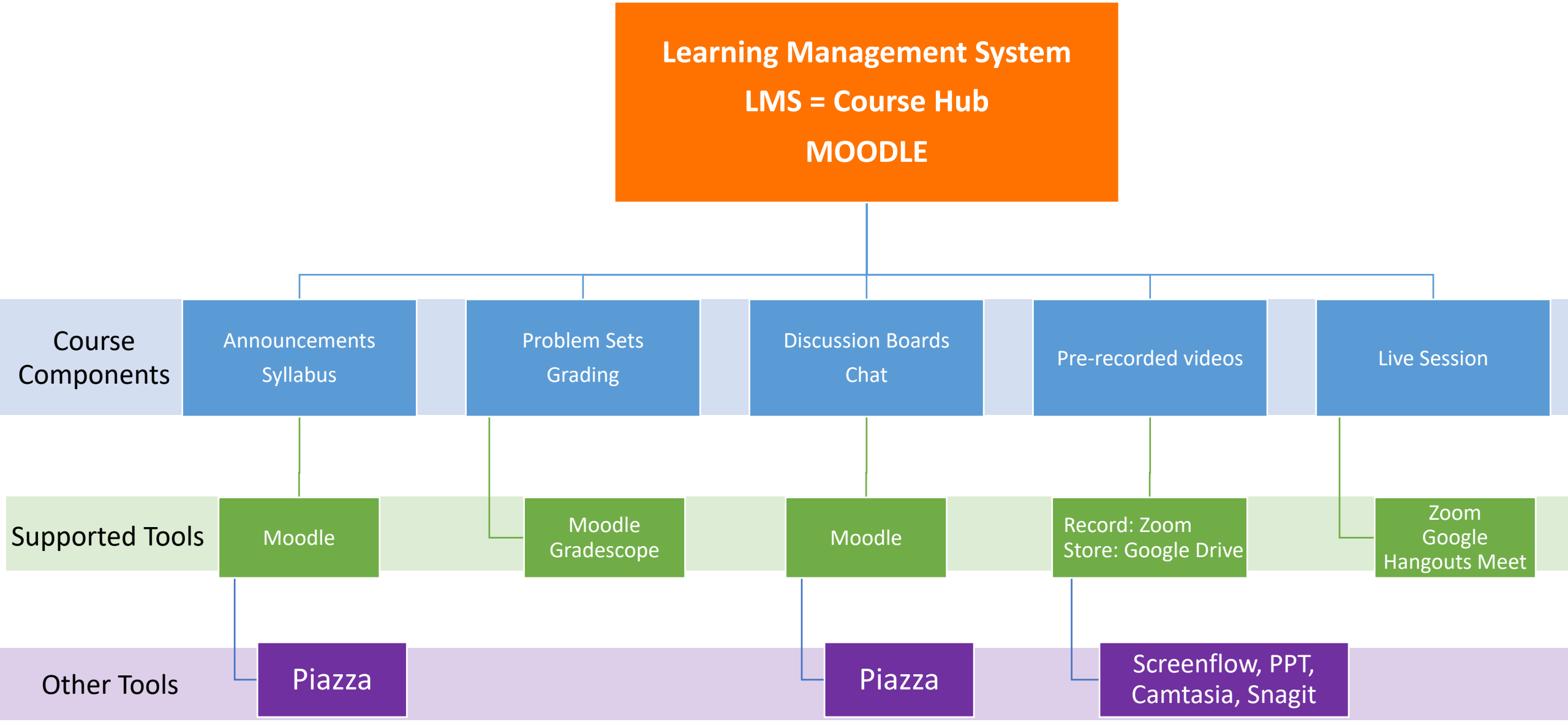
Problem Sets & Grading

Benefits:

- Students see and submit all assignments in one location
- Easy to add courses and rosters
- Bulk and manual import capabilities
- Secure and FERPA compliant two-way communication about student work and grades

Gradescope

- Streamlined grading and feedback for problem sets and coding assignments
- Provides useful metrics on student learning


Learning Management System
LMS = Course Hub
MOODLE
Course Components
Announcements
Syllabus
Problem Sets
Grading
Discussion Boards
Chat
Pre-recorded videos
Live Session
Supported Tools
Moodle
Moodle
Gradescope
Moodle
Record: Zoom
Store: Google Drive
Zoom
Google
Hangouts Meet
Other Tools
Piazza
Piazza
Screenflow, PPT,
Camtasia, Snagit

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More Information and Support

- Teaching Continuity Website: http://teach.caltech.edu
- Center for Teaching, Learning & Outreach: ctlo@caltech.edu
- Academic Media Technologies: amt@caltech.edu
- IMSS: https://www.imss.caltech.edu/get-support