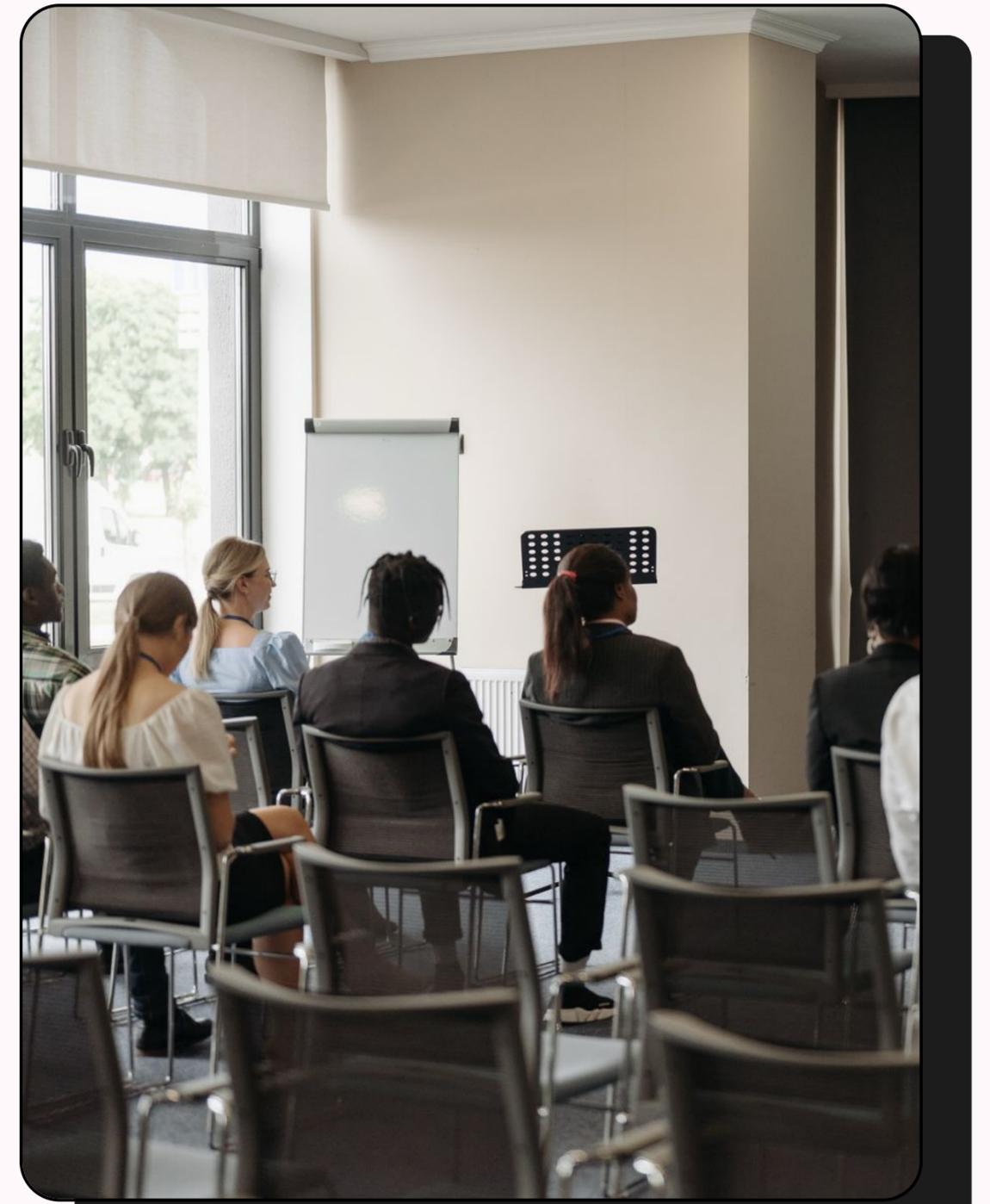SM² STEM Mentorship Matters

STEM MENTORSHIP MATTERS

What are the Types of Engineering and How to Apply

Time: 12:15 pm - 1:00 pm Date: September 18th 2025

Join the Platform

Students: Join our Discord community for news, digital workshops, project ideas, and
scholarship opportunities.

Workshops & Events: Dates and links will be shared on Discord and through your school
if they're a STEM Mentorship Matters partner.

Mentorship Groups: Inside Discord, you'll find channels for different mentorship tracks
—engineering, technology, medicine, and more.
You'll be able to connect directly with mentors who share your interests.

Follow us: Stay inspired on Instagram, LinkedIn, and TikTok
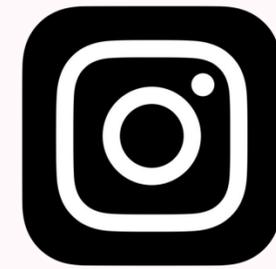
EXAMPLE OF ENGINEERING FLOWCHART
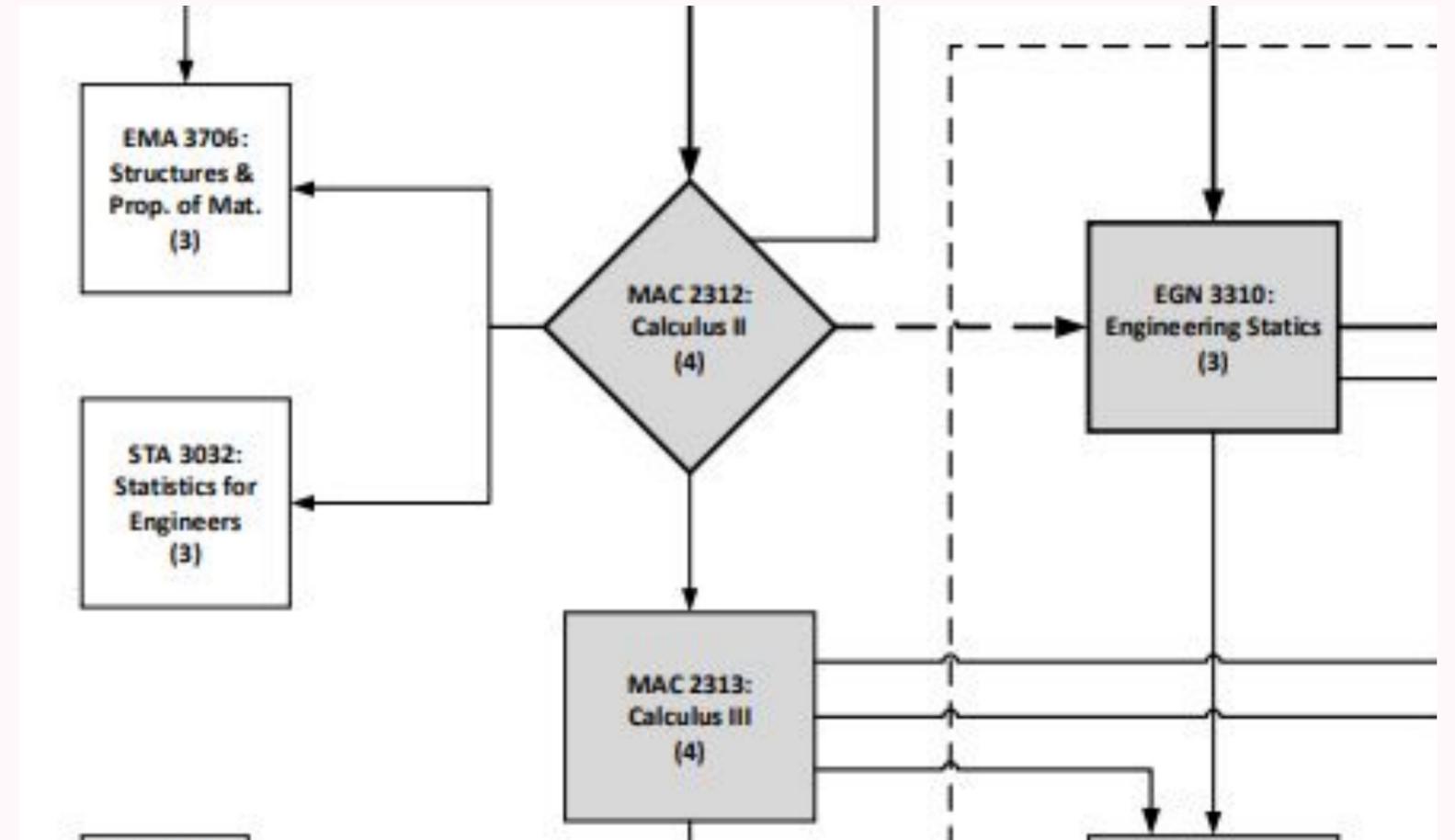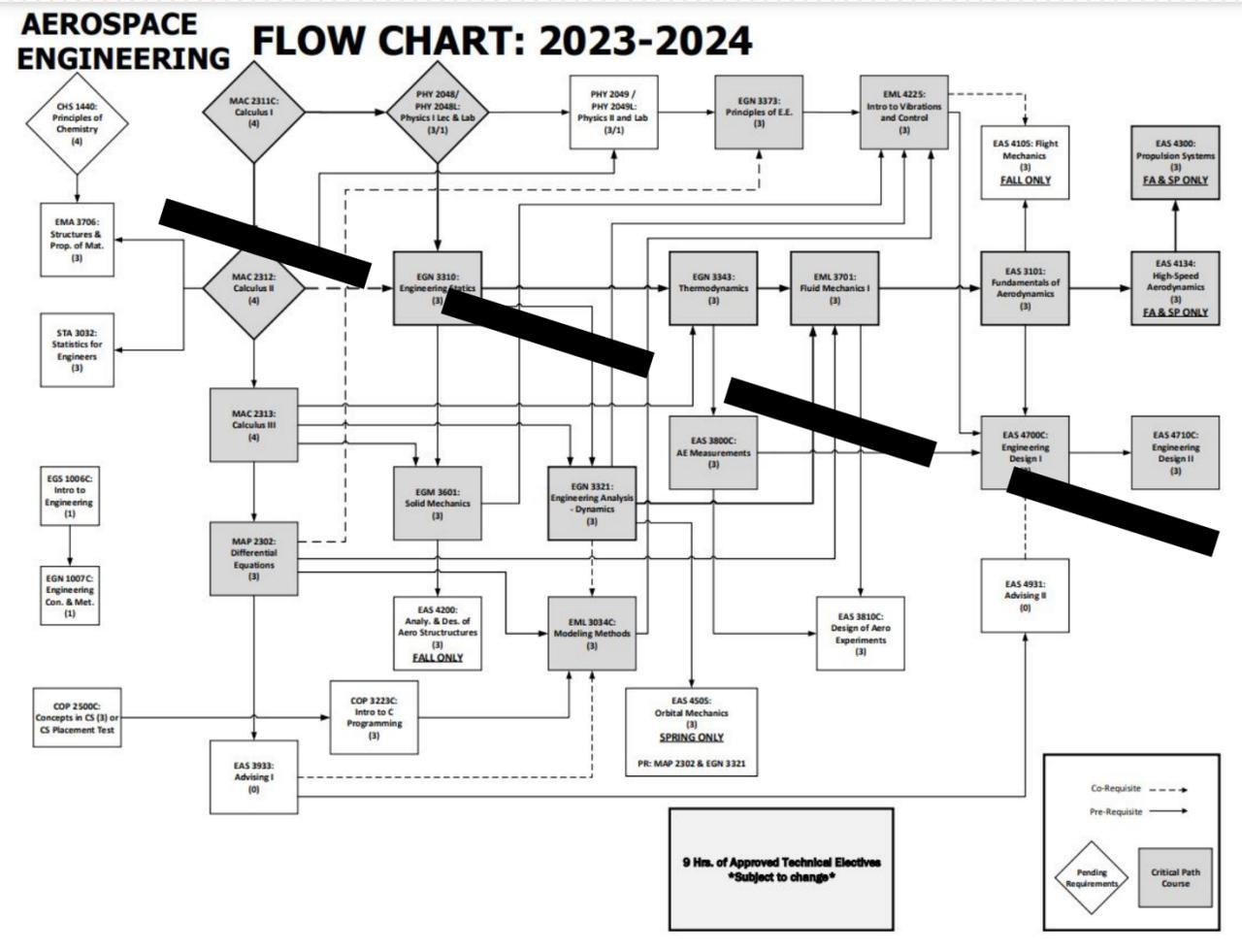
Aerospace, Mechanical & Engineering Physics


Aerospace Engineering

- Combines aeronautics and space exploration.
- Design, build, and test aircraft, rockets, satellites, and even submarines.
- Focuses on flight within and beyond Earth's atmosphere.

Mechanical Engineering

- Centers on energy transfer and motion.
- Designs machines, engines, power plants, and transportation systems.
- Key areas: power generation, machine design, embedded systems, and controls.

Engineering Physics

- Blend of physics, math, and engineering.
- Strong focus on research, experimentation, and hands-on learning.
- Closely connected to aerospace and high-tech development.
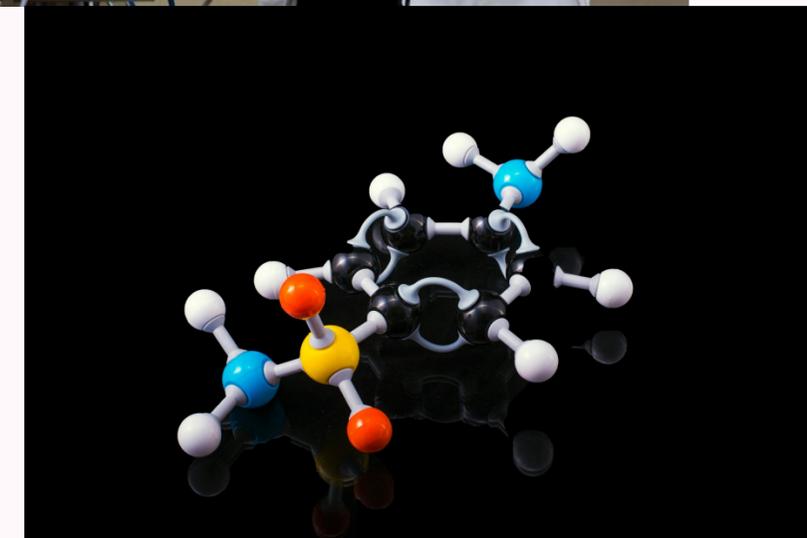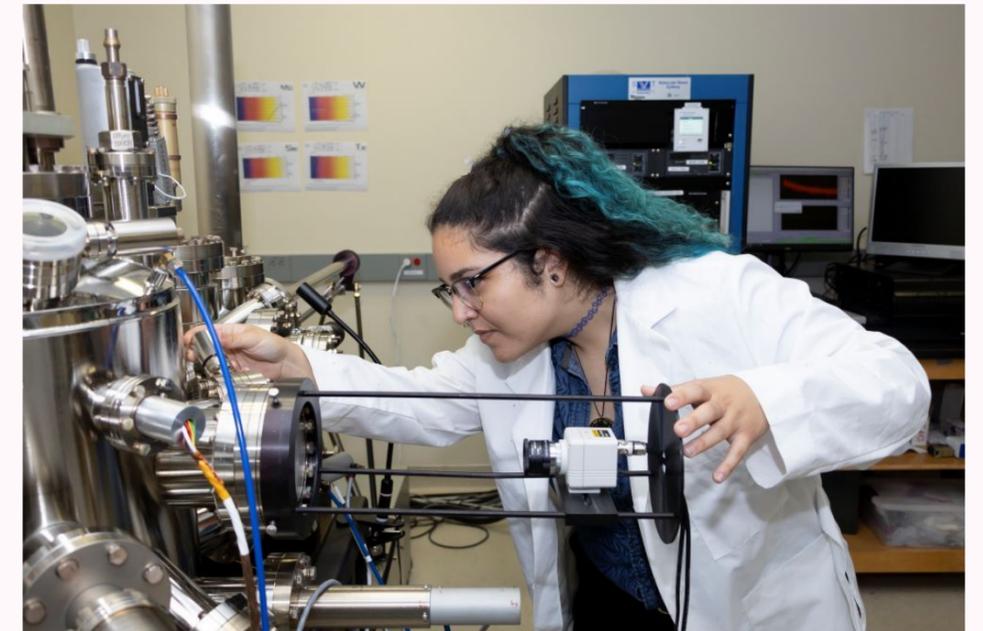
# Computing & Electrical Disciplines

Computer Engineering

- Integrates hardware and software knowledge.
- Develops new computer technologies in collaborative teams.
- Impacts daily life through innovations like smartphones and digital services.

Electrical Engineering

- Focuses on energy systems and information transfer.
- Designs and develops electrical/electronic systems for modern technology.
- Subfields: communication, control systems, and power systems.

Software Engineering

- Applies computer science, math, and engineering principles.
- Builds and maintains software for industries such as medicine, animation, and business.
- Solves problems by analyzing needs and coding tailored solutions
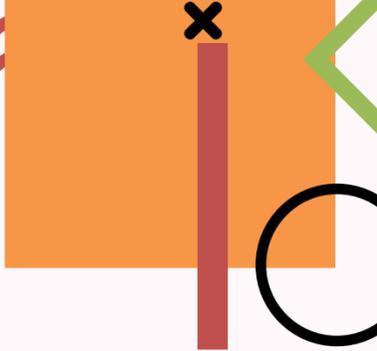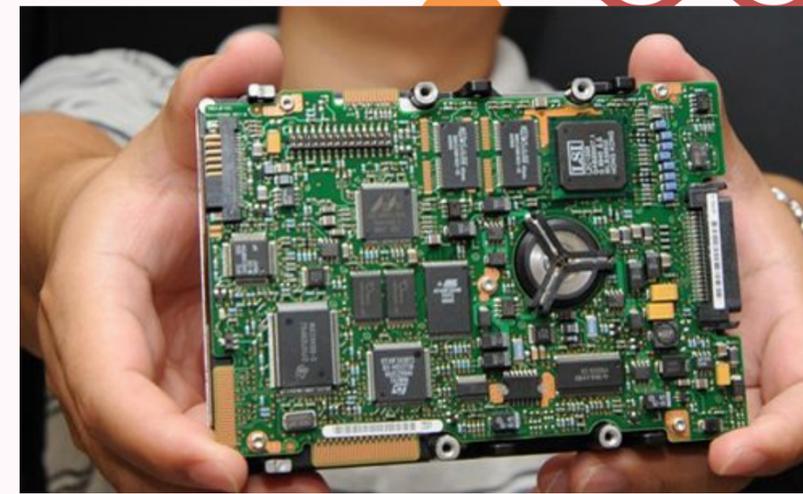
Civil, Material & Chemical Engineering

Civil Engineering

- Designs and maintains infrastructure in water management, transportation, and construction.
- Plays a role in environmental protection and pollution control.
- Offers career paths in government, military, private sector, or entrepreneurship.

Chemical Engineering

- Transforms raw materials into useful products on a large scale.
- Ensures processes are efficient, safe, and environmentally responsible.
- Focuses on reducing waste, minimizing energy use, and developing sustainable solutions.

Materials Engineering

- Studies the properties and performance of metals, ceramics, polymers, and composites.
- Designs and develops new materials for aerospace, automotive, medical, and electronic applications.
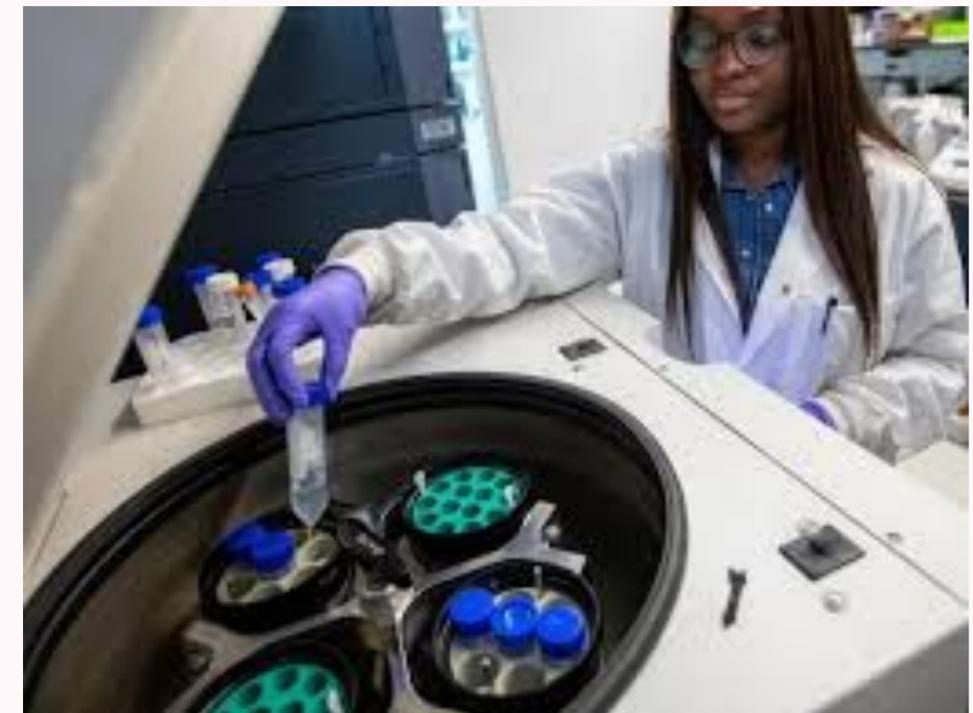
How to Apply to College
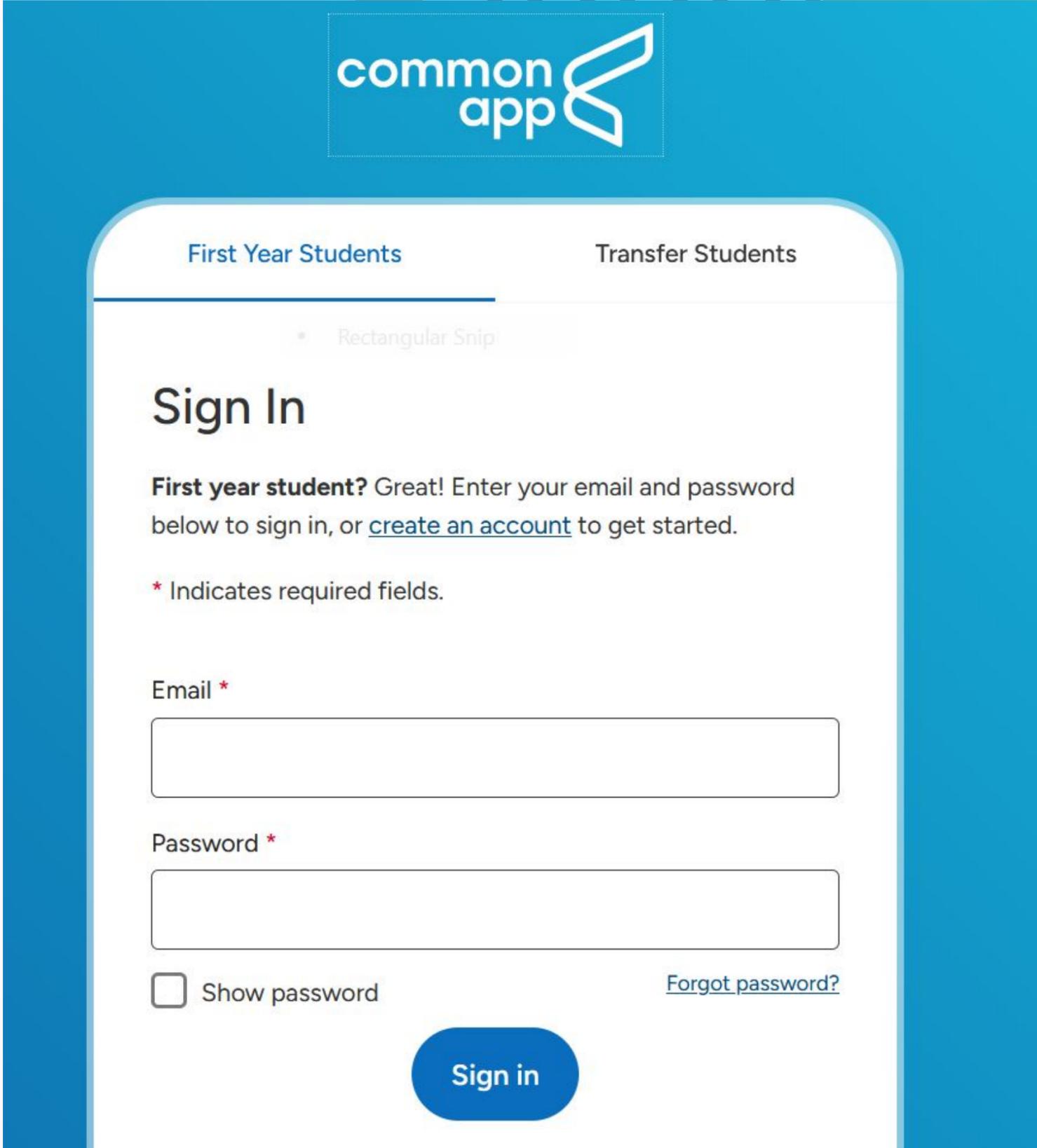
https://www.commonapp.org/
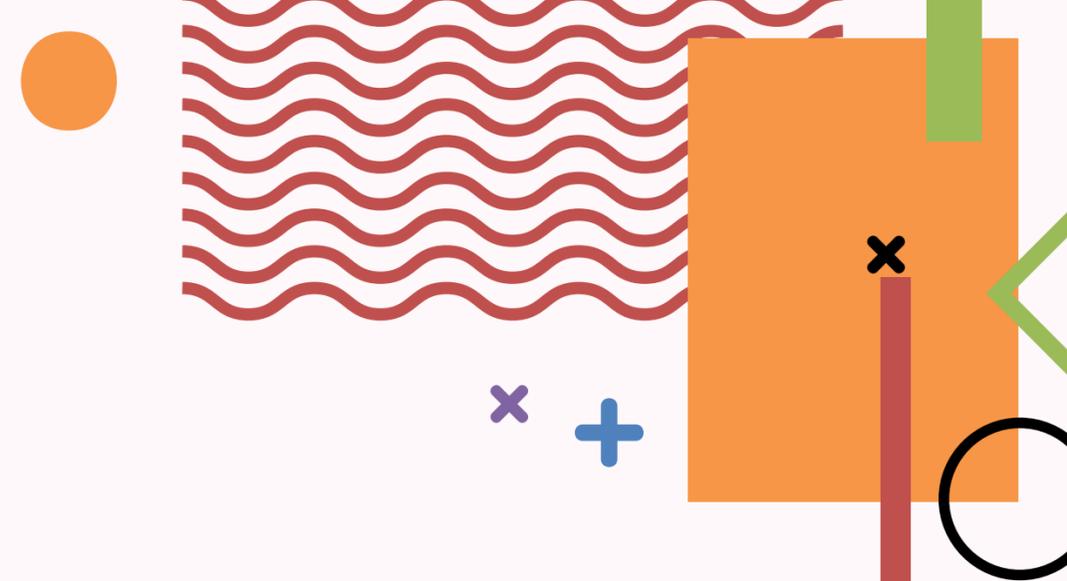
- **Apply to Multiple Colleges/Universities**: Use one application for several schools at once!
- **Organized Application Process**: Keep everything related to your college applications neatly organized.
- **Widely Accepted**: Most major schools accept the **Common Application**!
- **Maximize Scholarship Opportunities**: More applications mean more chances for scholarships!

Create an Account at CommonApp

Create Your CommonApp Account: To apply as a first-year student, start by creating an account on the Common App website.

Use a Reliable Email Address: Make sure to use an email address you will always have access to for important updates and communications (Not your school email).

Fill Out Your CommonApp Profile

Estimated Time Commitment: Expect to spend about **3-5 hours total** on your application (excluding essay writing).

Provide Comprehensive Information: You'll be able to include details about your education, test scores (SAT, ACT, etc…), extracurricular activities, work experience, volunteering, and writing samples.

Start Early: Aim to finish your application as early as possible to avoid last-minute stress and ensure you have time to review everything thoroughly!

Add Colleges and Universities to Your Application List

Use the "College Search" Tab: Use this feature to discover schools that match your interests and add them to your list

Add Your Top Choices: Include as many colleges and universities as you think you might want to attend.

Consider These Options: Many schools, including **UCF, USF, UF, UNF, Santa Fe College**, and **Valencia College** are available on the Common Application!
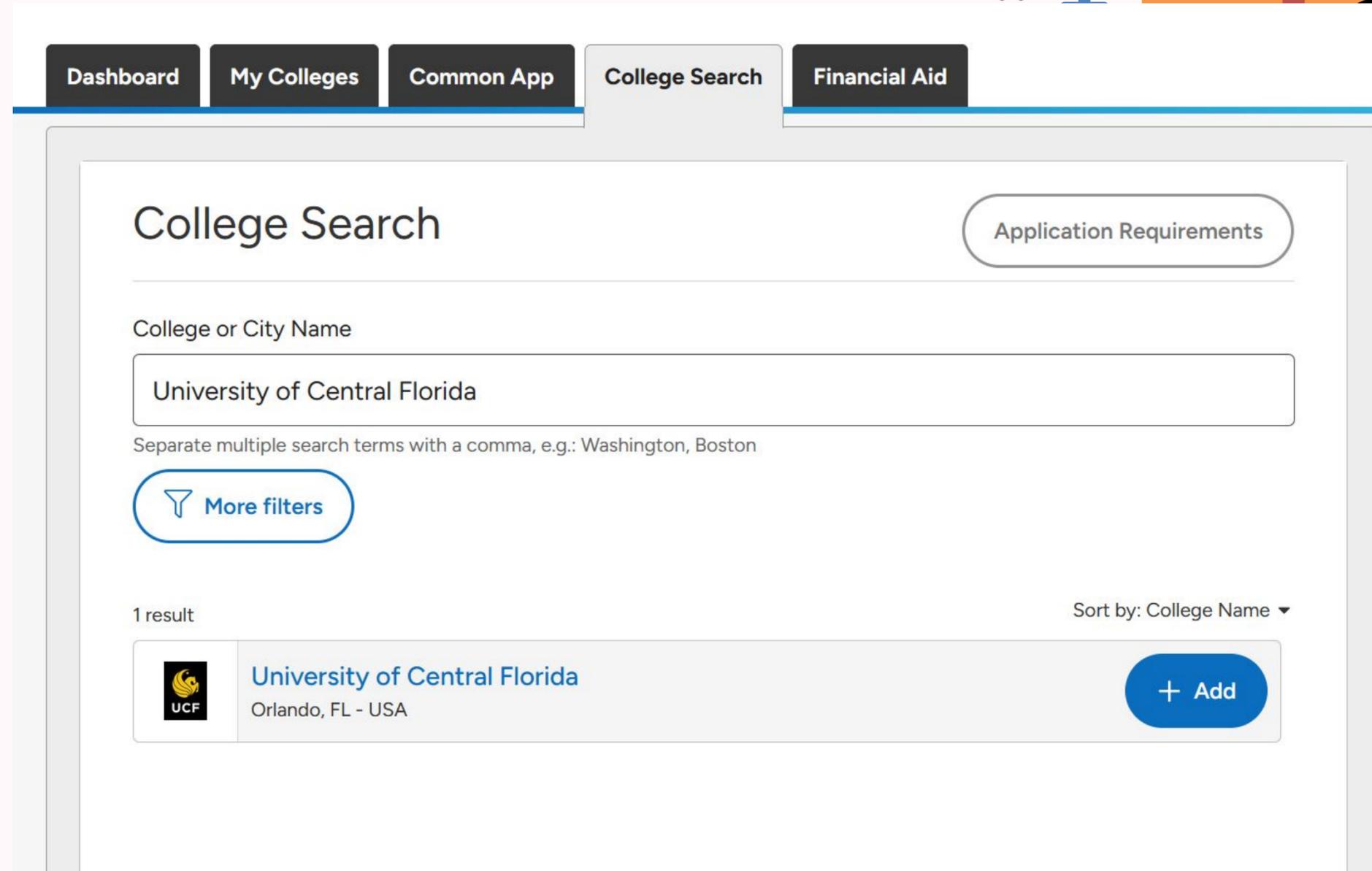
Answer Specific Questions for the College/University

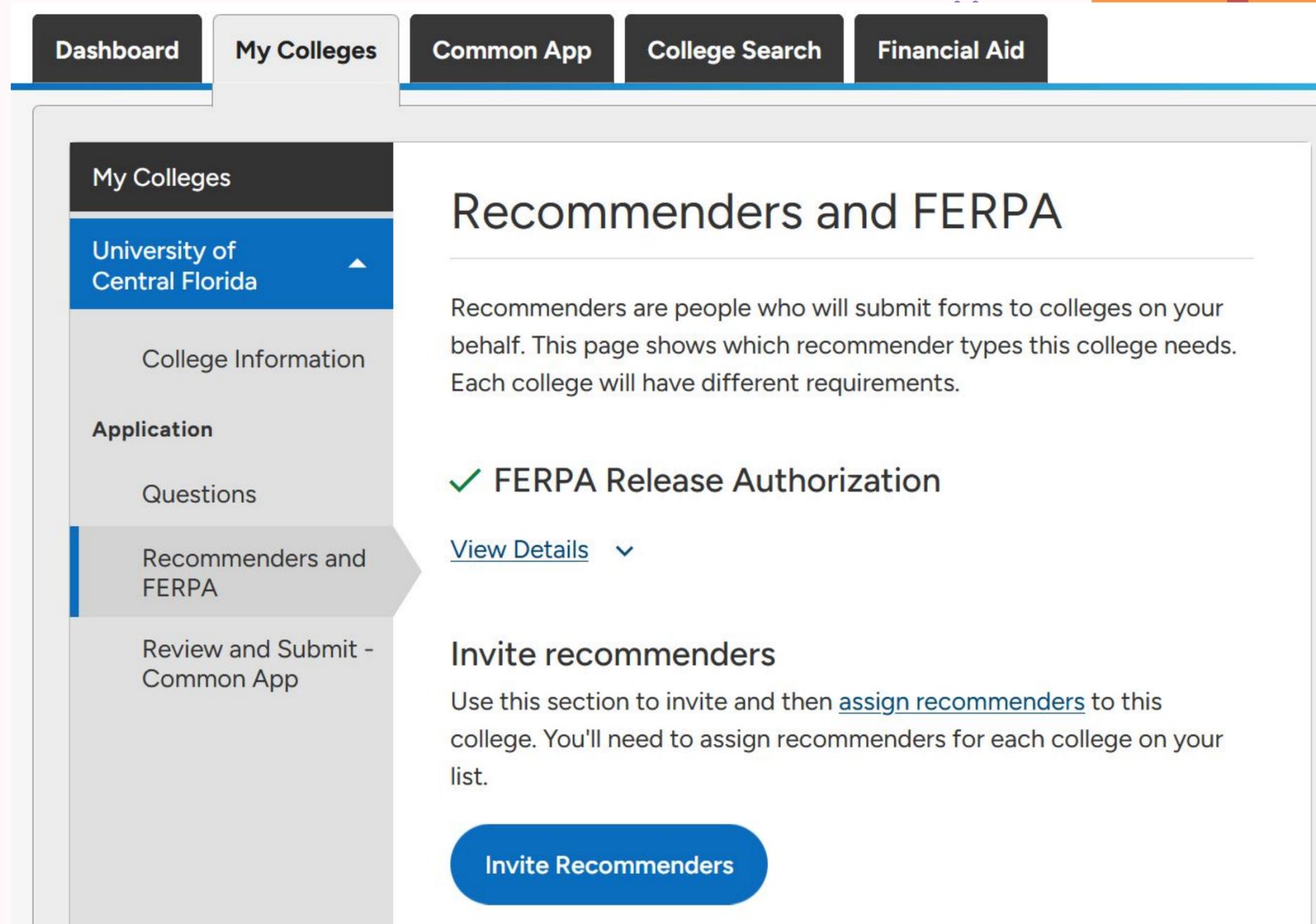**Complete the "My Colleges" Section**: Under this tab, answer questions specific to each school you're applying to.

Keep It Concise: This section typically takes about **10-20 minutes per school**, but make sure to give extra time for favorite schools.

Add Recommenders and Submit Your Application

Add Recommenders: Depending on the school's requirements, you can invite guidance counselors, teachers, advisors, and others to provide letters of recommendation and references.

Plan Ahead: Complete your application early to give your recommenders ample time to write references and recommendation letters.

Get in touch

JOIN OUR DISCORD!

Discord.gg/q5ABMVkZ

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SOCIAL MEDIA

StemMentorshipMatters.com