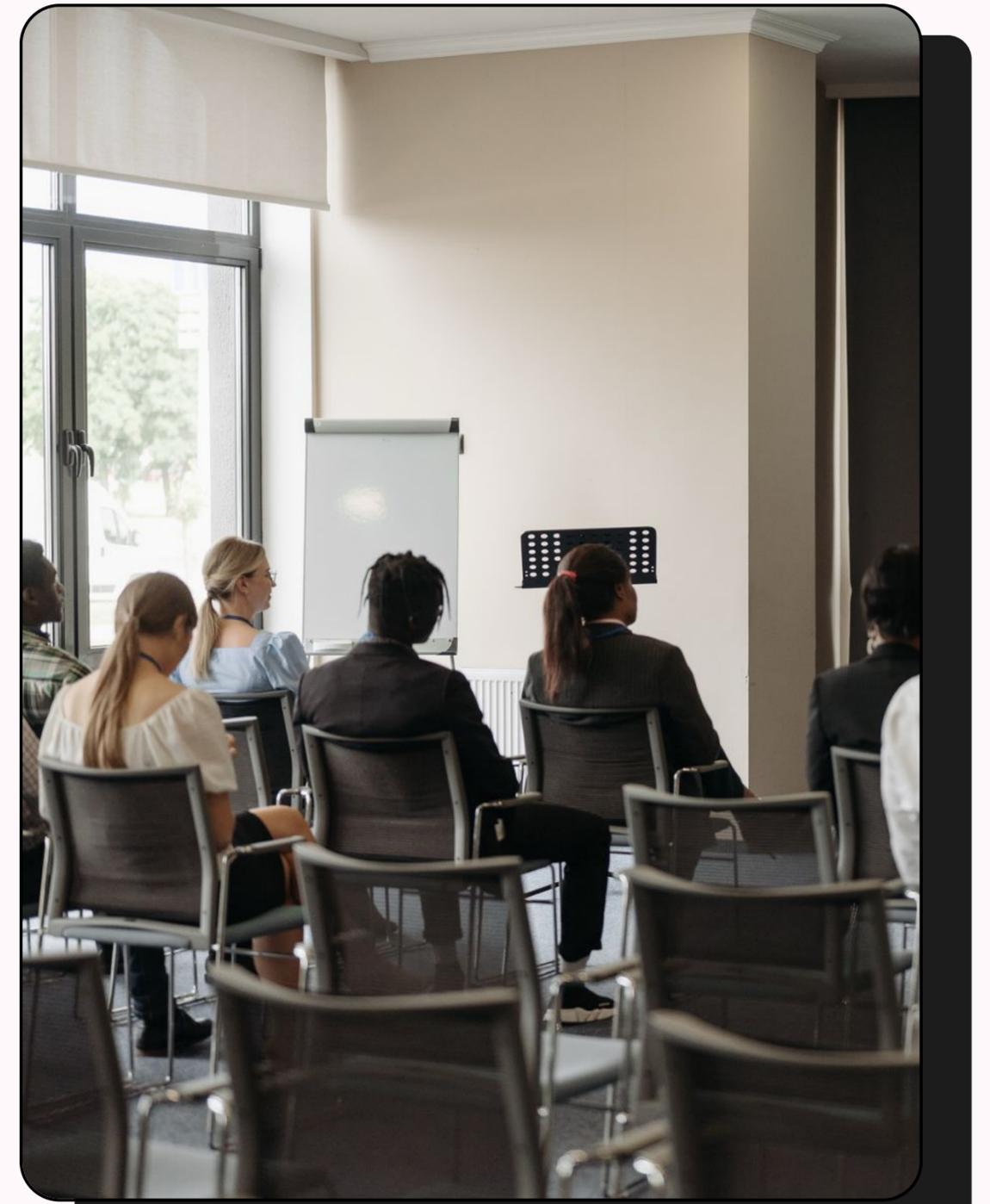




STEM MENTORSHIP MATTERS

What are the Types of Engineering and How to Apply

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



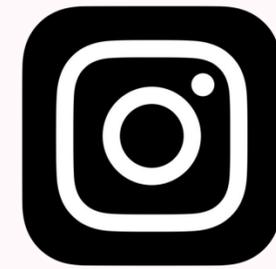
Join the Platform

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

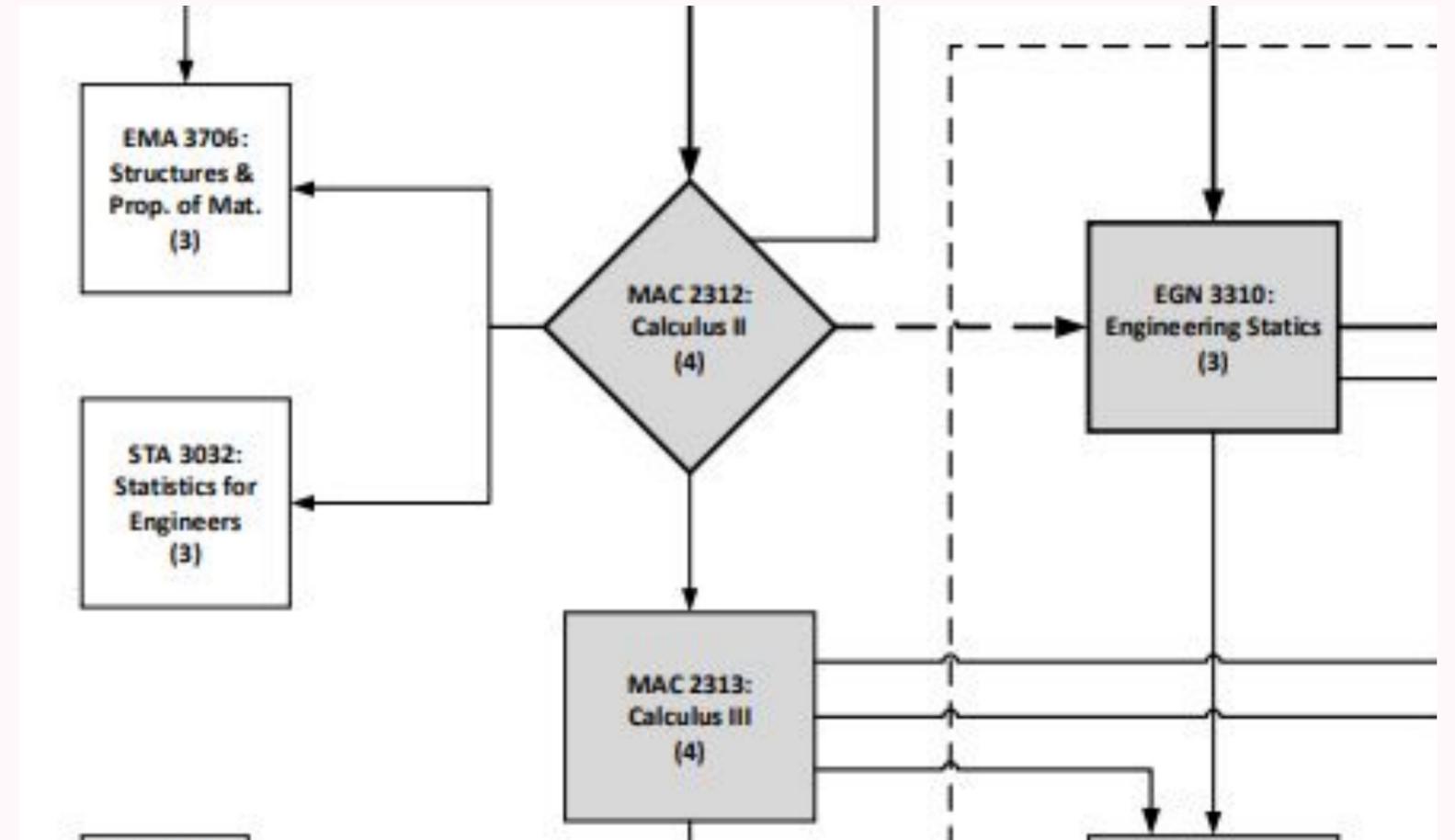
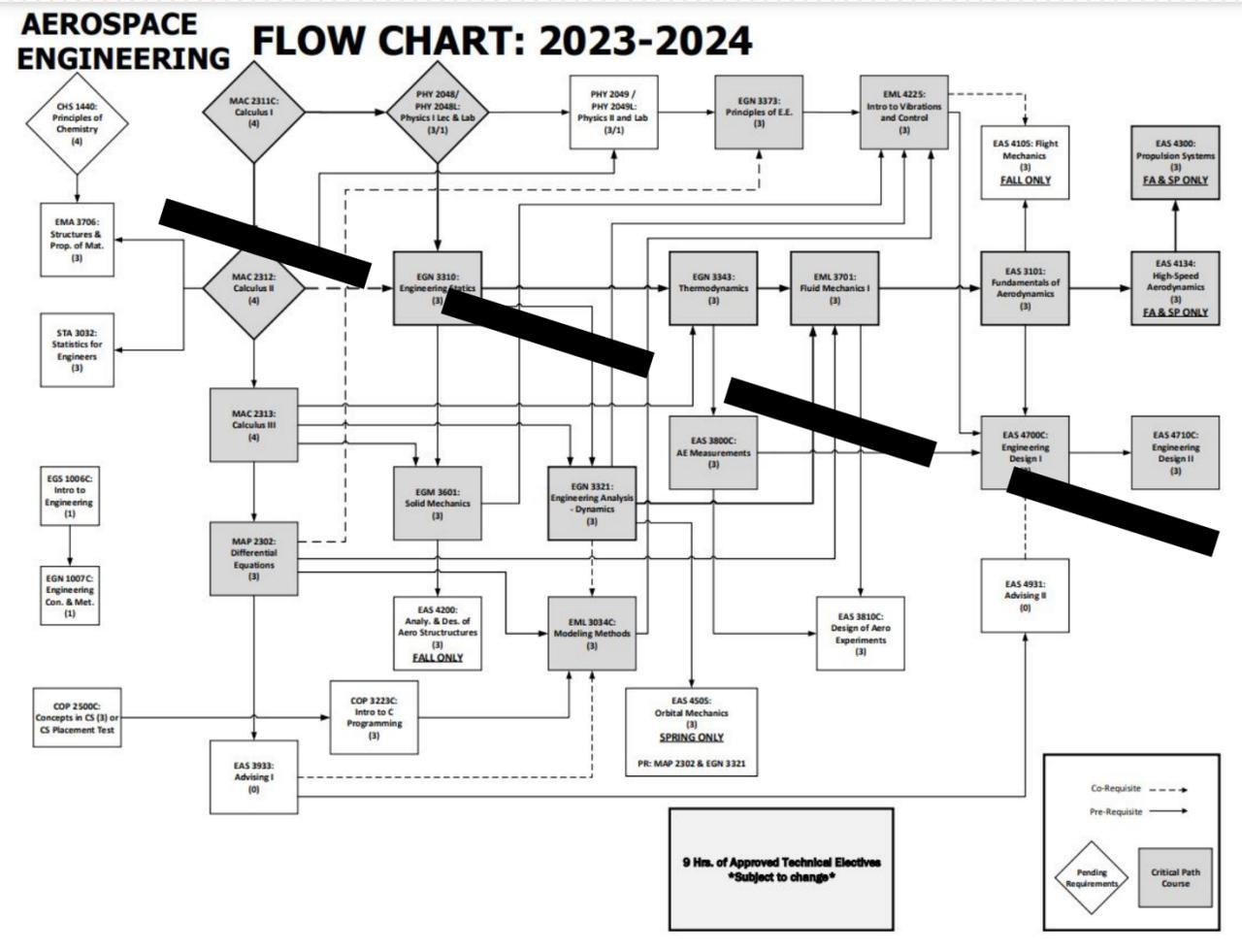
Workshops & Events: Dates and links will be shared on Discord and through your school if they're a STEM Mentorship Matters partner.

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

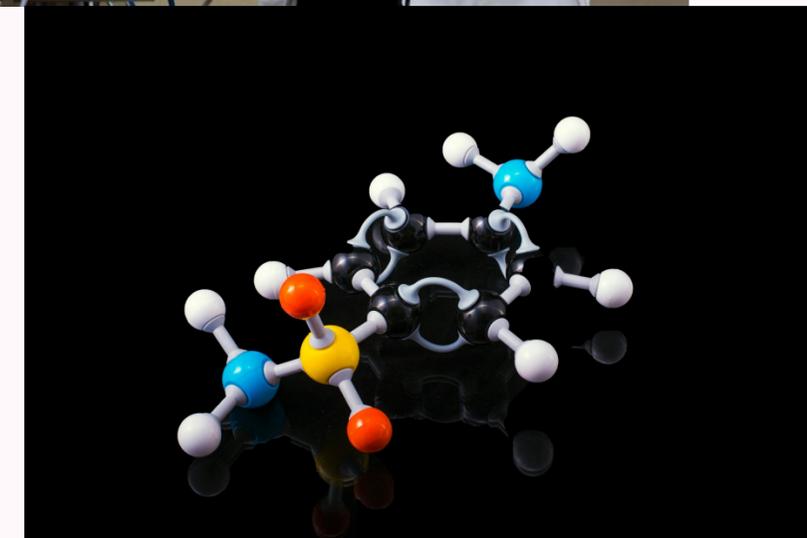
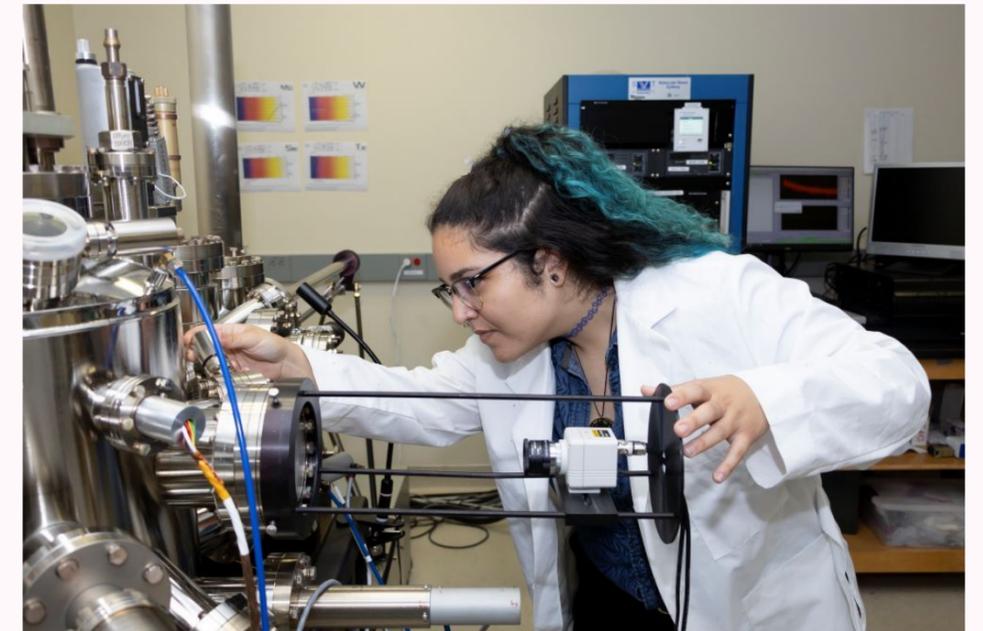
- Combines aeronautics and space exploration.
- Design, build, and test aircraft, rockets, satellites, and even submarines.
- Focuses on flight within and beyond Earth's atmosphere.

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

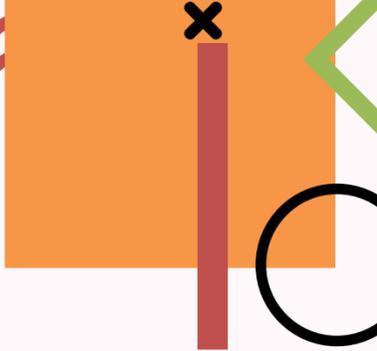
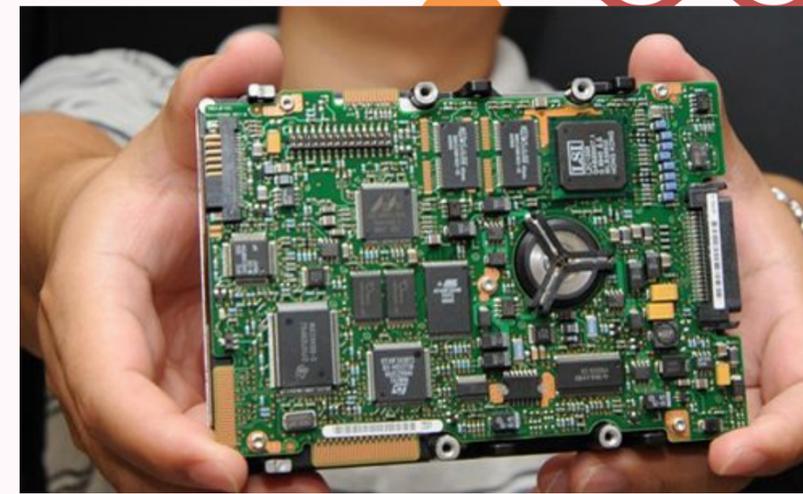
- Integrates hardware and software knowledge.
- Develops new computer technologies in collaborative teams.
- Impacts daily life through innovations like smartphones and digital services.

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

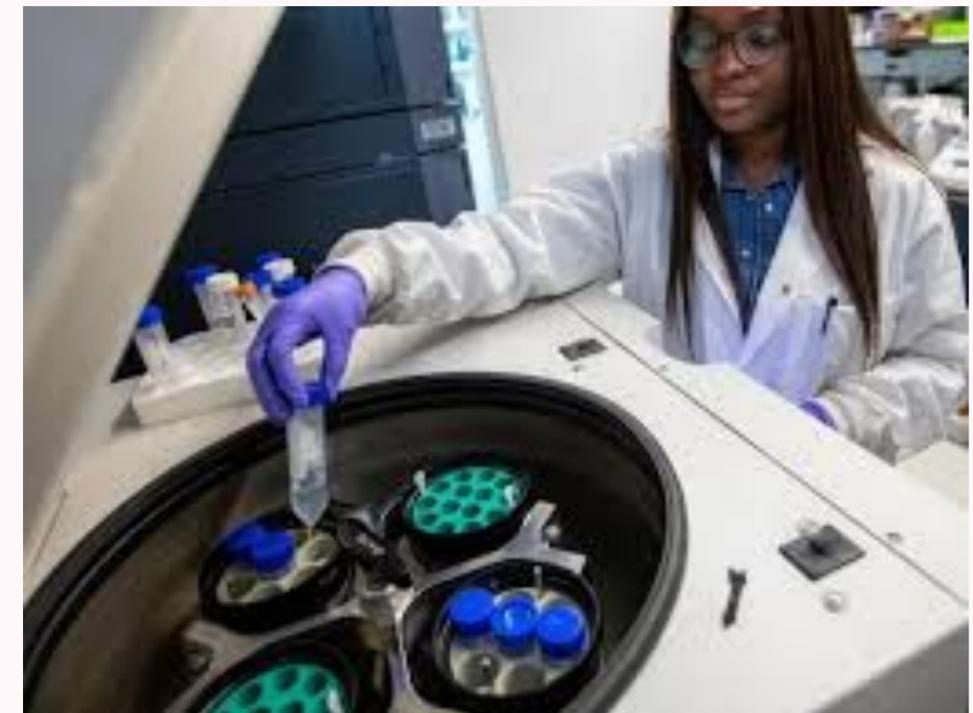
- Designs and maintains infrastructure in water management, transportation, and construction.
- Plays a role in environmental protection and pollution control.
- Offers career paths in government, military, private sector, or entrepreneurship.

Chemical Engineering

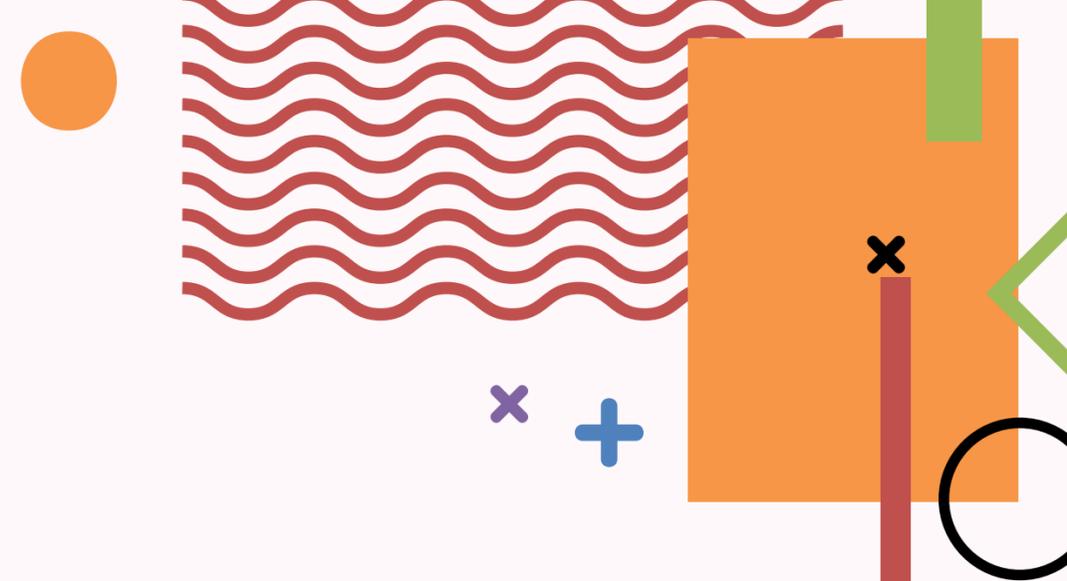
- Transforms raw materials into useful products on a large scale.
- Ensures processes are efficient, safe, and environmentally responsible.
- Focuses on reducing waste, minimizing energy use, and developing sustainable solutions.

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



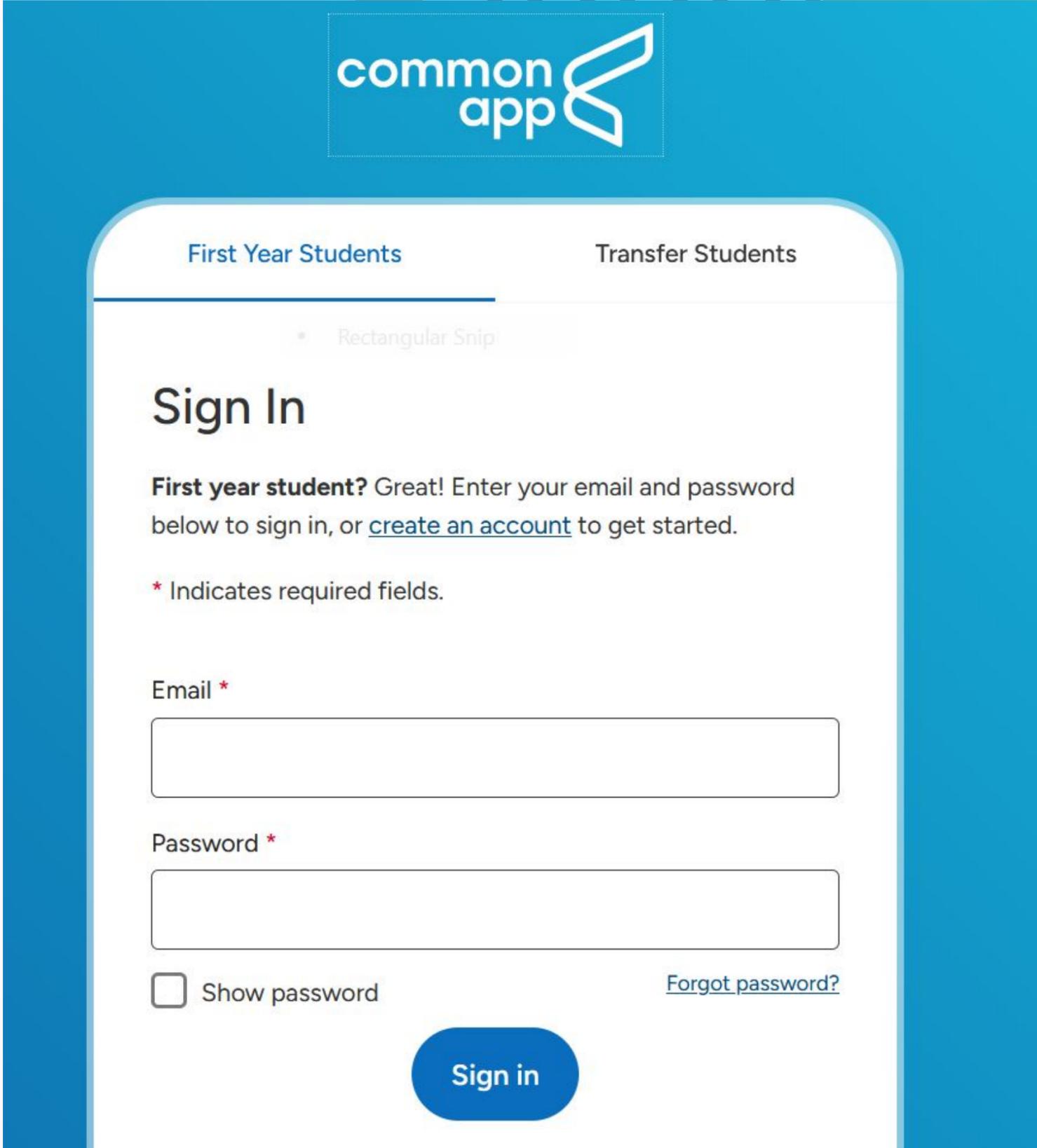
<https://www.commonapp.org/>

- **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).



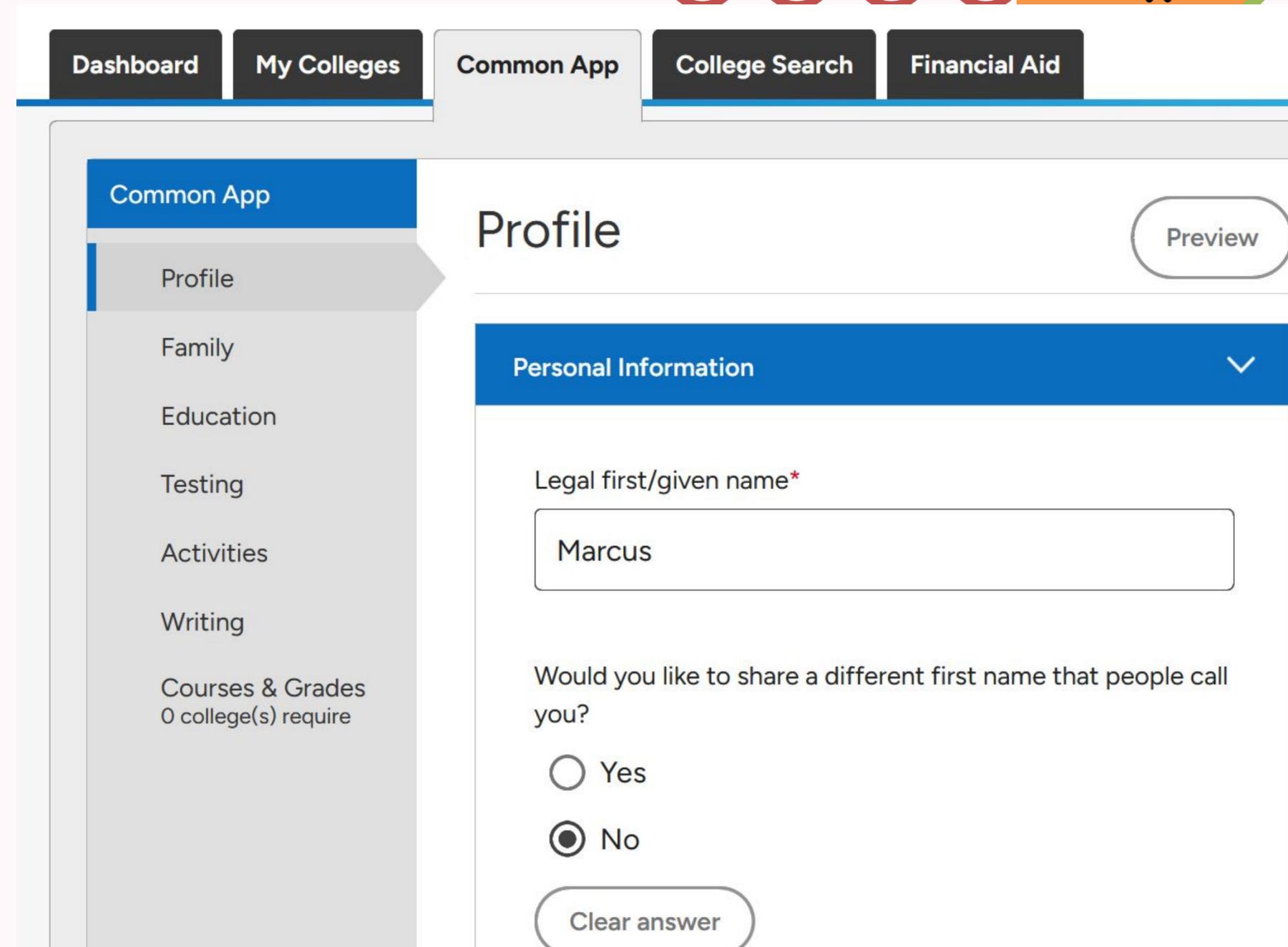
The image shows a screenshot of the Common App website's sign-in page. At the top right, the "common app" logo is displayed. Below the logo, there are two tabs: "First Year Students" (which is selected) and "Transfer Students". A "Rectangular Snip" watermark is visible in the upper left of the sign-in area. The main heading is "Sign In". Below this, a message reads: "First year student? Great! Enter your email and password below to sign in, or [create an account](#) to get started." A note states: "* Indicates required fields." There are two input fields: "Email *" and "Password *". Below the password field is a checkbox labeled "Show password" and a link for "Forgot password?". A blue "Sign in" button is located at the bottom center of the form.

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!



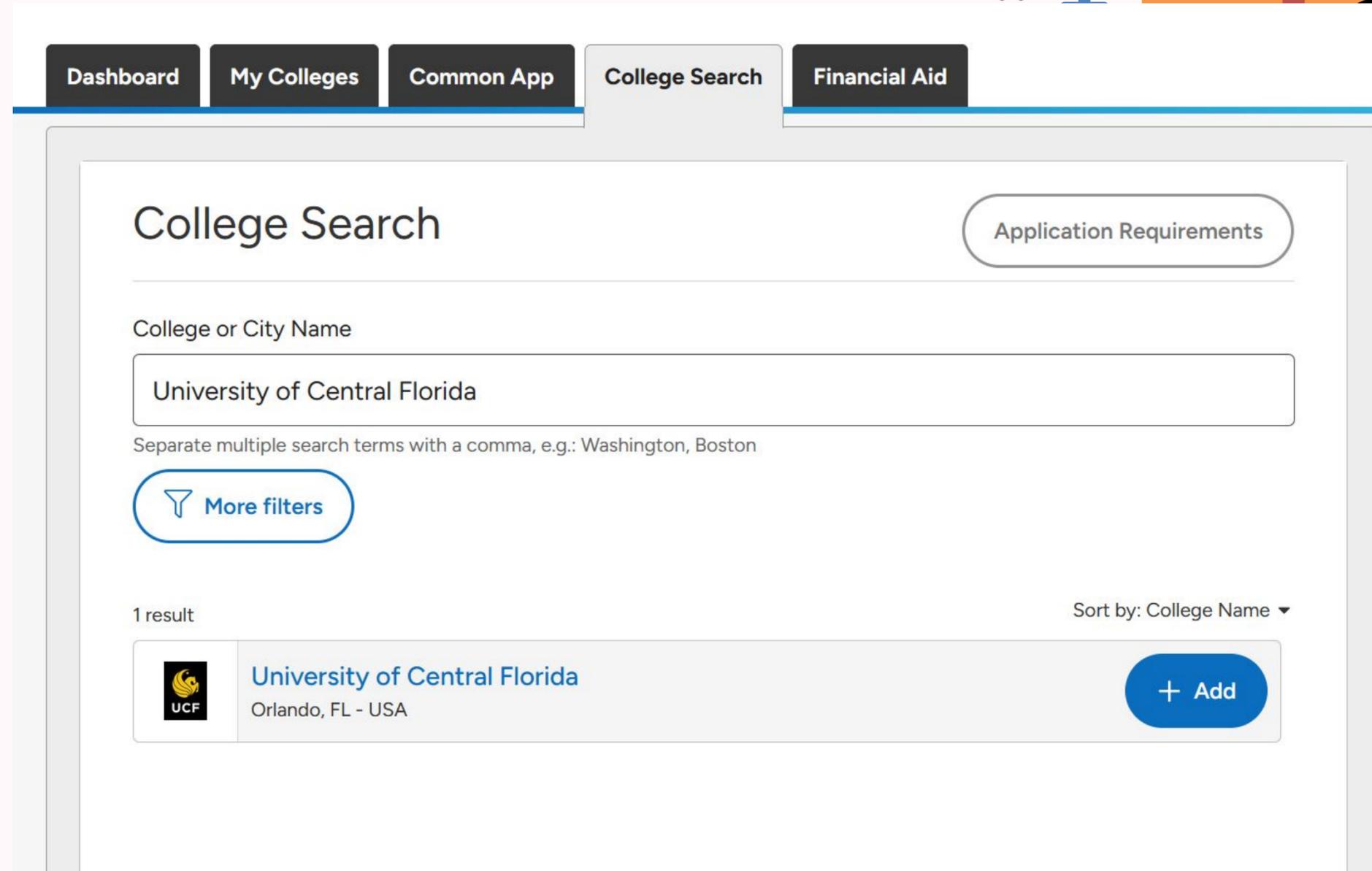
The screenshot shows the CommonApp interface. At the top, there are navigation tabs: Dashboard, My Colleges, Common App (selected), College Search, and Financial Aid. Below the tabs is a sidebar menu with options: Common App, Profile (selected), Family, Education, Testing, Activities, Writing, and Courses & Grades (0 college(s) require). The main content area is titled 'Profile' and has a 'Preview' button. Underneath is a section for 'Personal Information' with a dropdown arrow. The form includes a text input for 'Legal first/given name*' containing 'Marcus'. Below that is a question: 'Would you like to share a different first name that people call you?' with radio buttons for 'Yes' and 'No' (selected). A 'Clear answer' button is at the bottom.

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!



The screenshot displays the 'College Search' tab within a navigation menu that includes 'Dashboard', 'My Colleges', 'Common App', 'College Search', and 'Financial Aid'. The search interface features a search bar with the text 'University of Central Florida' and a 'More filters' button. Below the search bar, it indicates '1 result' and shows a card for the 'University of Central Florida' located in 'Orlando, FL - USA', with a '+ Add' button to the right. A 'Sort by: College Name' dropdown is also visible. The background of the slide includes decorative elements like a red wavy pattern, an orange square with a white 'x', and a green arrow.

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.

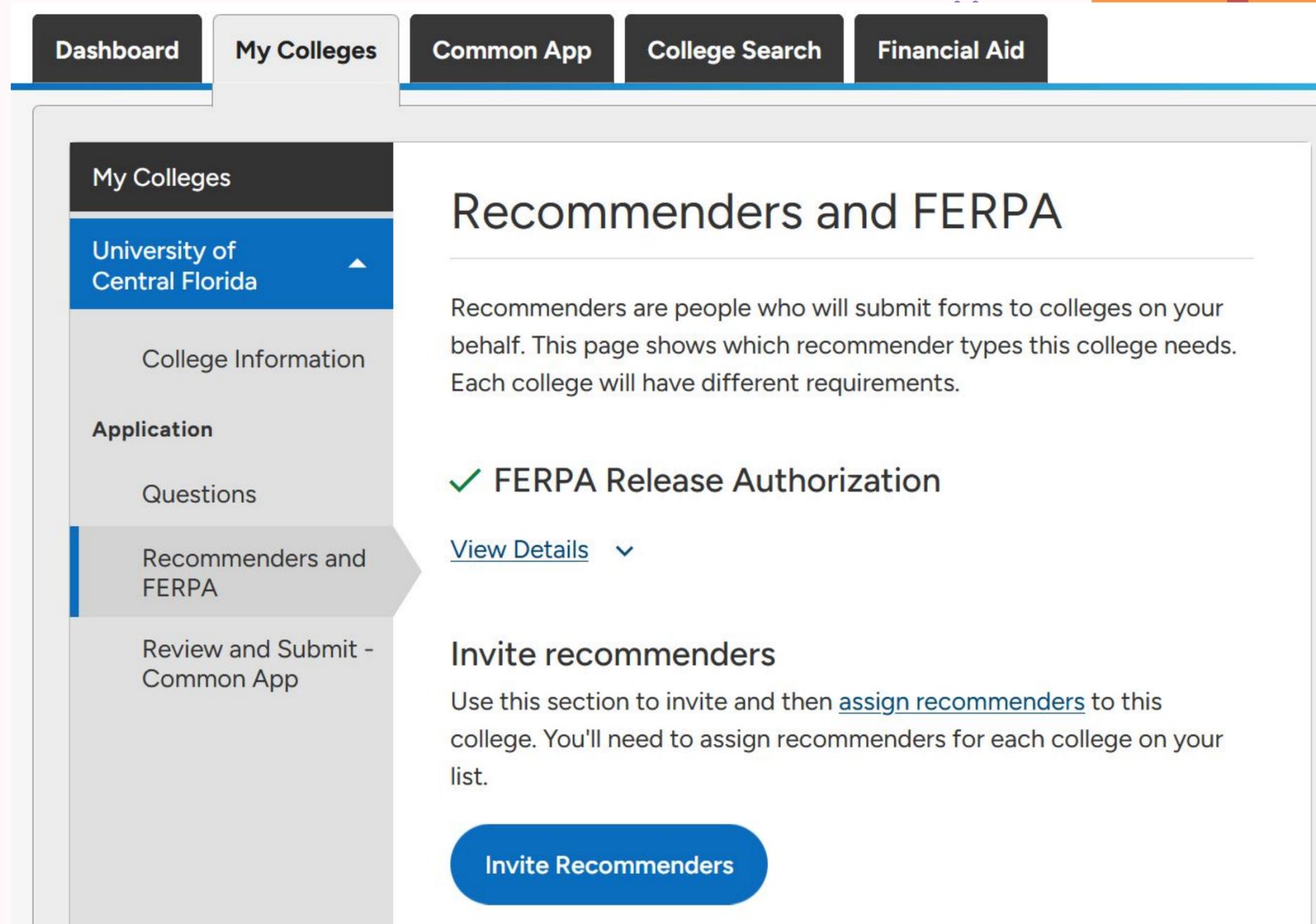
Keep It Concise: This section typically takes about **10-20 minutes per school**, but make sure to give extra time for favorite schools.

The screenshot shows a web interface with a top navigation bar containing tabs: Dashboard, My Colleges, Common App, College Search, and Financial Aid. The 'My Colleges' tab is active. Below it, a sidebar lists sections for 'My Colleges' (University of Central Florida), 'College Information', 'Application' (Questions, Recommenders and FERPA, Review and Submit - Common App), and 'Contacts'. The main content area is titled 'Questions' and includes a 'Preview' button. A list of question categories is shown: General (checked), Academics, Activities, and Contacts (selected). The 'Contacts' section displays the question: 'Have you previously applied to UCF?*' with radio buttons for 'Yes' and 'No', and a 'Clear answer' button.

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.



The screenshot shows a web application interface with a top navigation bar containing 'Dashboard', 'My Colleges', 'Common App', 'College Search', and 'Financial Aid'. The 'My Colleges' tab is active, and a dropdown menu is open, showing 'University of Central Florida' selected, with options for 'College Information', 'Application', 'Questions', 'Recommenders and FERPA' (highlighted), and 'Review and Submit - Common App'. The main content area is titled 'Recommenders and FERPA' and includes the following text: 'Recommenders are people who will submit forms to colleges on your behalf. This page shows which recommender types this college needs. Each college will have different requirements.' Below this is a green checkmark icon followed by 'FERPA Release Authorization' and a 'View Details' link with a dropdown arrow. The section is titled 'Invite recommenders' and contains the text: 'Use this section to invite and then [assign recommenders](#) to this college. You'll need to assign recommenders for each college on your list.' At the bottom of the section is a blue button labeled 'Invite Recommenders'.

Get in touch

JOIN OUR DISCORD!

[Discord.gg/q5ABMVkZ](https://discord.gg/q5ABMVkZ)

EMAILS

huerta3@usf.edu

ibw@usf.edu

ma430215@ucf.edu

SOCIAL MEDIA

StemMentorshipMatters.com