# What are the Types of Engineering?

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# Aerospace Engineering

• “Aerospace” is the combination of aeronautics and space; it refers to flight within and outside of Earth’s atmosphere.

• Design, build, and test machines.

• Mainly focused on flying machines

• Develop aircraft (planes & jets) and spacecraft (satellites, rockets, & space shuttles), and even undersea vehicles like submarines.

**Offered at UCF, UF, Embry-Riddle**

# Mechanical Engineering

•Focuses on the transfer of energy or mass in a dynamic system.

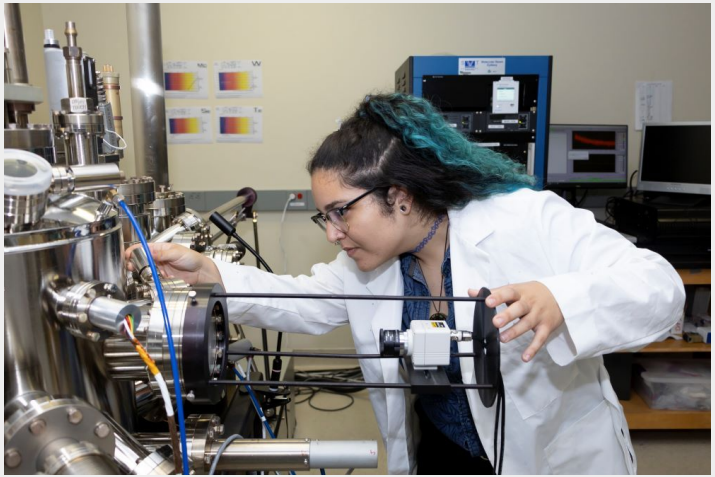
• Generally designs any system that contains moving parts or motion

• Power generation and transfer (power plants, engines, & transmissions).

• Transportation (cars, airplanes, submarines, & roller coasters).

• Machine Design (embedded systems, controls, part design)

**Offered at UF, USF, UCF**

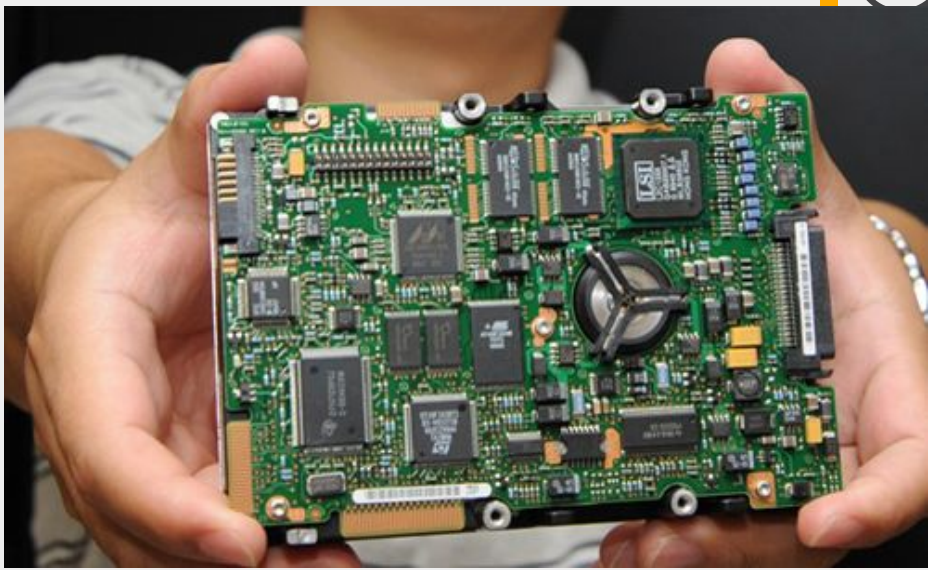


# Computer Engineering

• Uses all aspects of computer systems; these engineers must understand both software and hardware systems.

• Often work in group settings that research and develop new computer technology.

• The products of this industry are integrated into numerous parts of our lives from the development of cell phones or mobile ordering from Chick-Fil-A.



**Offered at UF, USF, UCF**

# Electrical Engineering

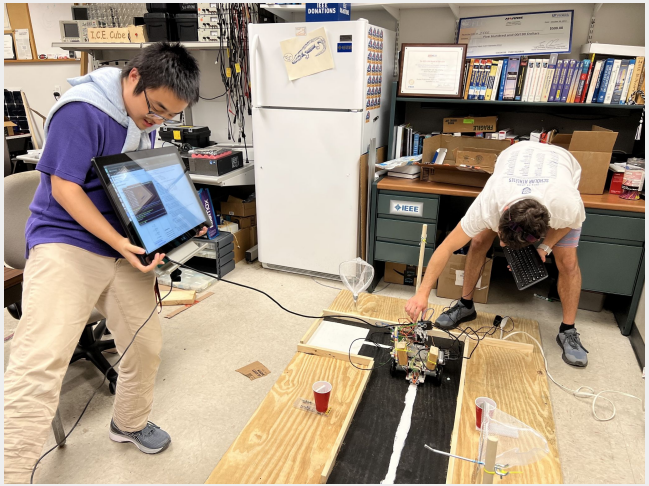
- Involves gathering, storing, and transportation of information along with the distribution and storing of energy.

- These engineers have a crucial role in helping our technology-dependent society operate.

- Electrical engineers develop and affect the production of electrical or electronic systems.

- It features many sub-disciplines like communication, control, and power systems.

**Offered at UF, USF, UCF**



# Software Engineering

• The maintenance, operation, and development of software.

• Applies principles of computer science, mathematics, management, and engineering knowledge to make systems.

• Work in numerous sectors from designing software for medical devices, making programs to generate animation in films, or even create and market their own software.

• Concentrated on providing a solution to a problem, then after analysis devising the answer with code.

• Career opportunities are bountiful and very promising.

**Offered at UF, USF, UCF**

# Engineering Physics

- Blend of “engineering” and “physics” but includes math and space science.

- Concentrated largely on research and development and has a focus on experimentation and hands-on learning.

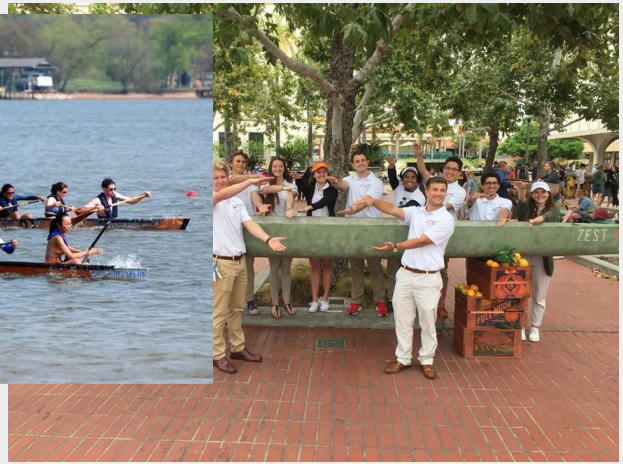
- The field is closely related to aerospace engineering.

**Offered at UF, USF, UCF**

# Civil Engineering

- Maintain and design systems in water management, transportation, construction, pollution mitigation.

- Employment opportunities are great with positions in the government, military, or private sector and many choose to start their own companies.



**Offered at UF, USF, UCF, Embry-Riddle**

# Chemical Engineering

It focuses on designing and operating processes to transform raw materials into valuable products safely, efficiently, and sustainably.

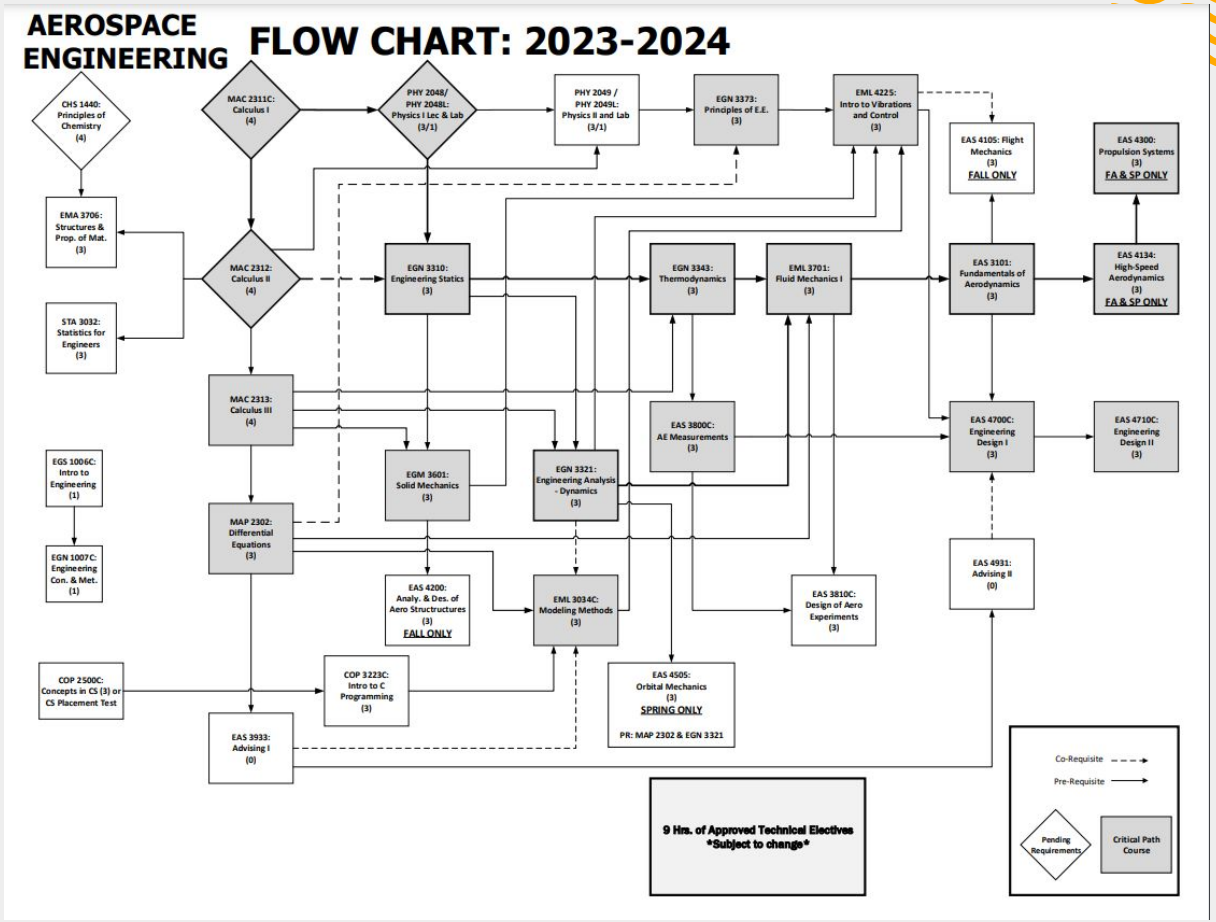
Expanding chemical reactions from the lab to large-scale industrial production.

Ensuring processes are safe for workers and have minimal environmental impact.

Improving processes to minimize energy use and reduce waste.

**Offered at UF, USF, UCF, FSU**

# EXAMPLE OF ENGINEERING FLOWCHART



# How to Apply to College

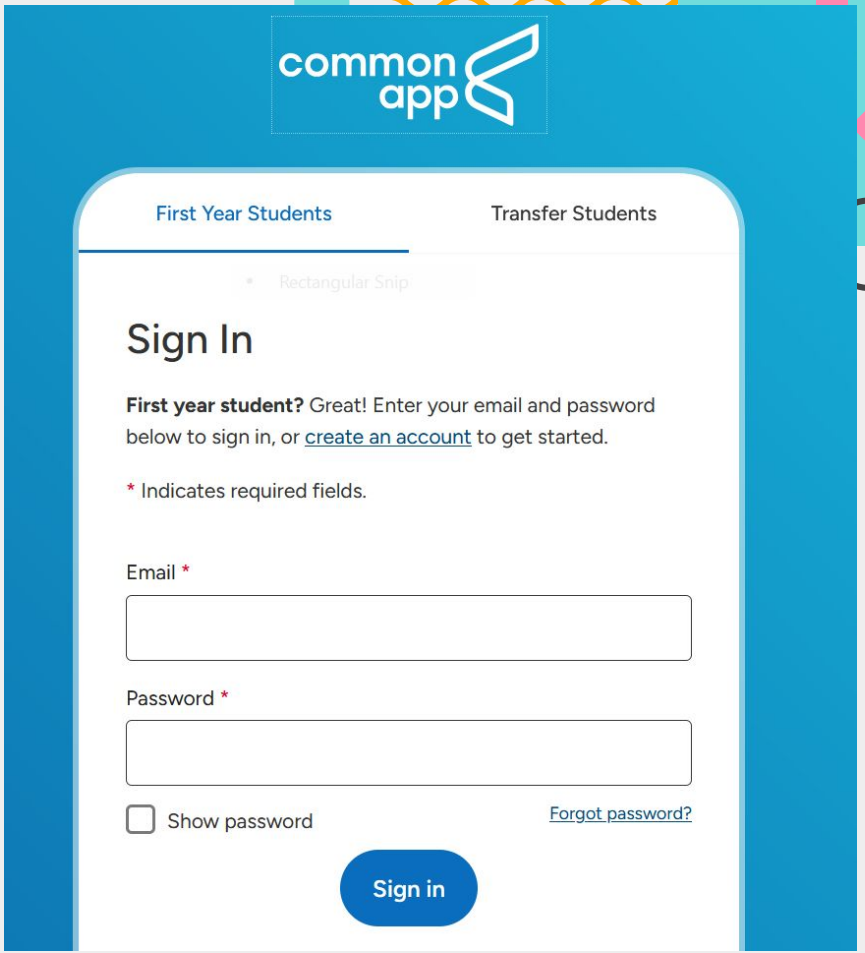
https://www.commonapp.org/

- **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).

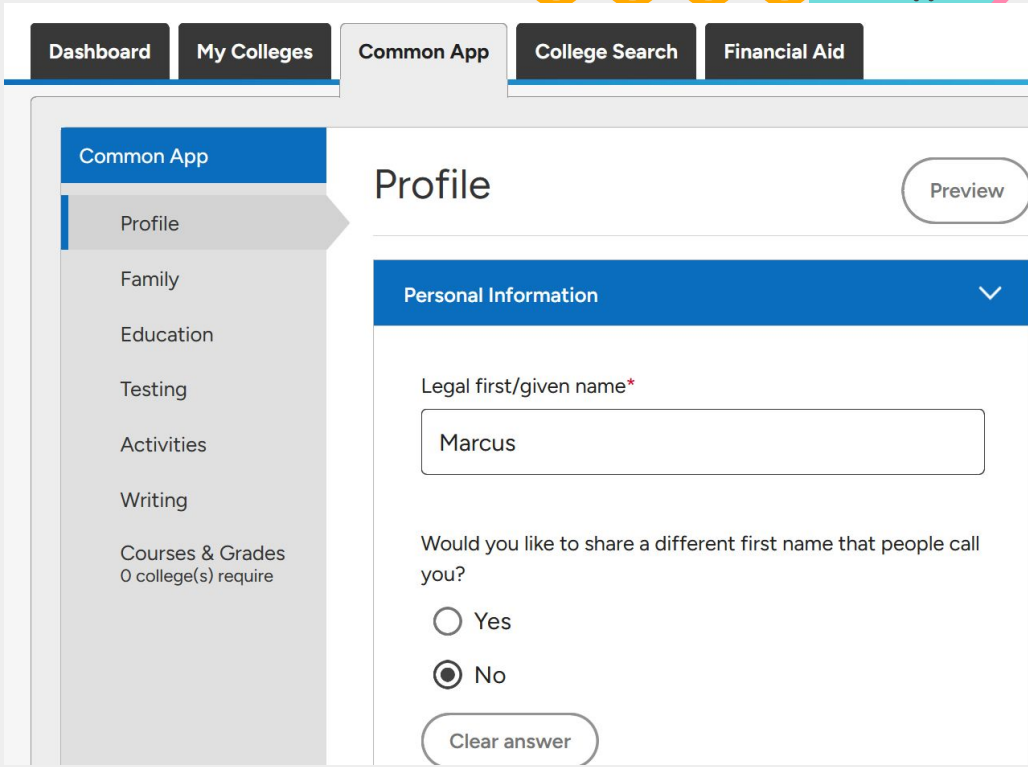


# Fill Out Your CommonApp Profile

**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!

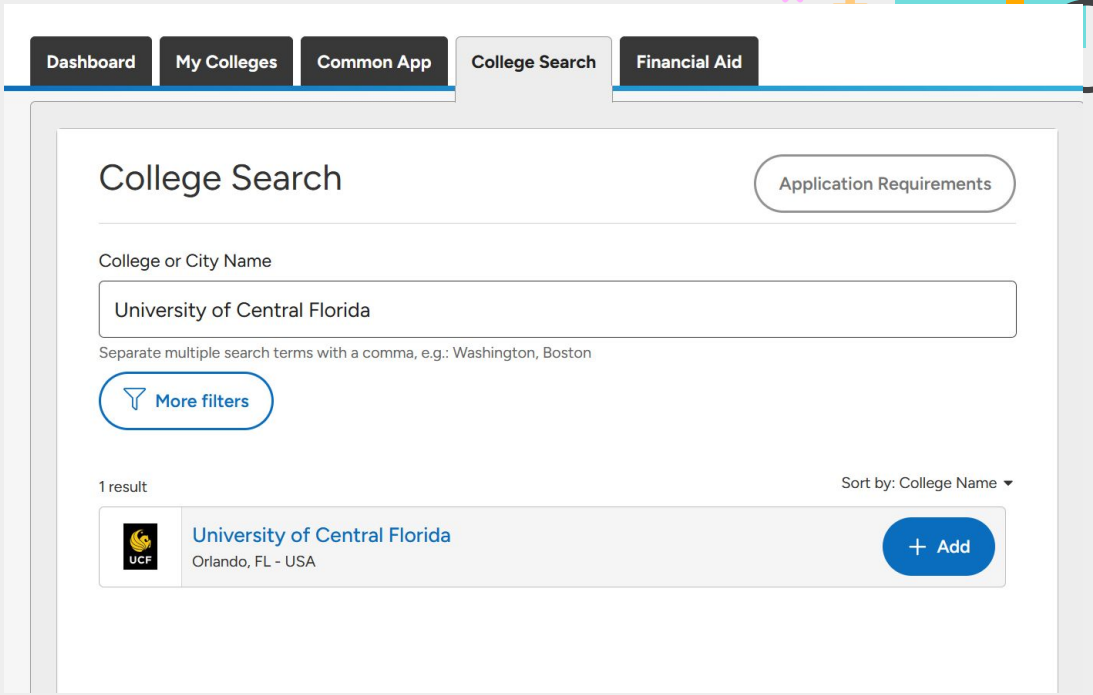


# Add Colleges and Universities to Your Application List

**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.

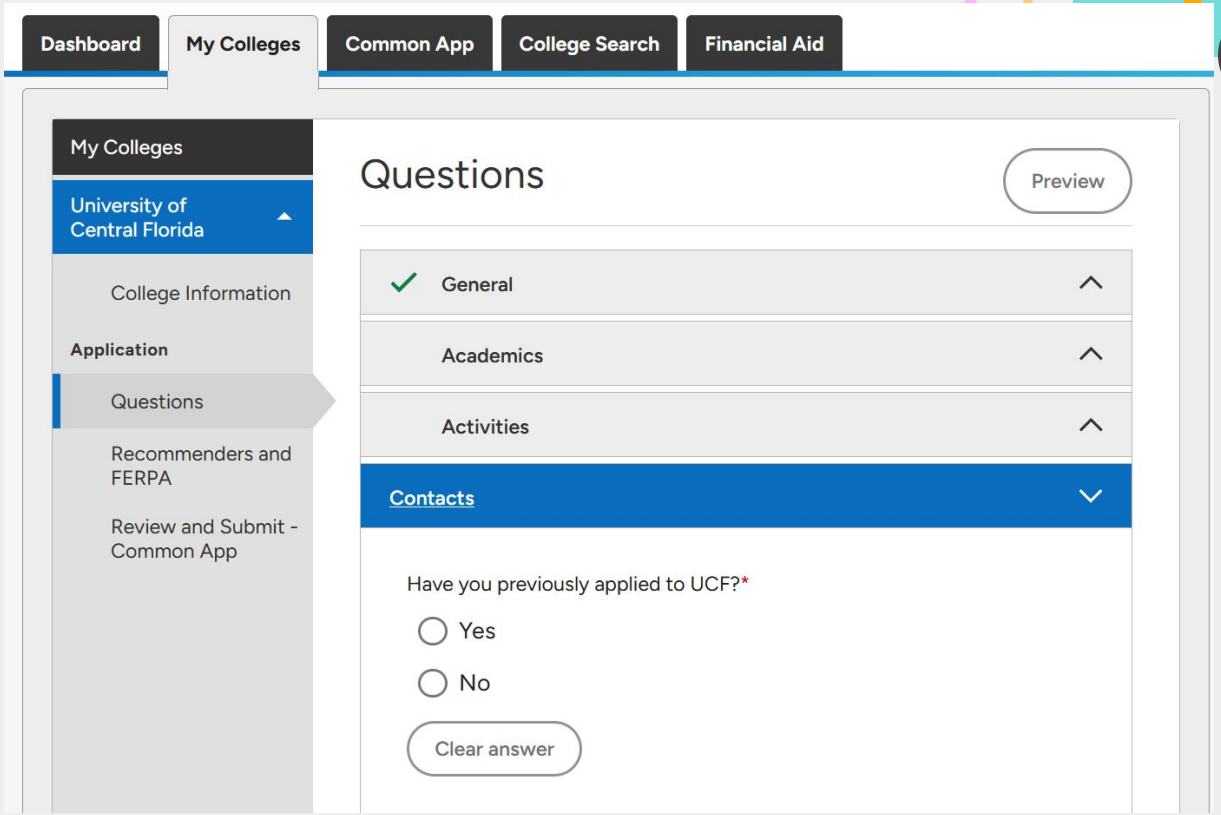
**Consider These Options**: Many schools, including **UCF, USF, UF, UNF, Santa Fe College**, and **Valencia College** are available on the Common Application!



# 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.

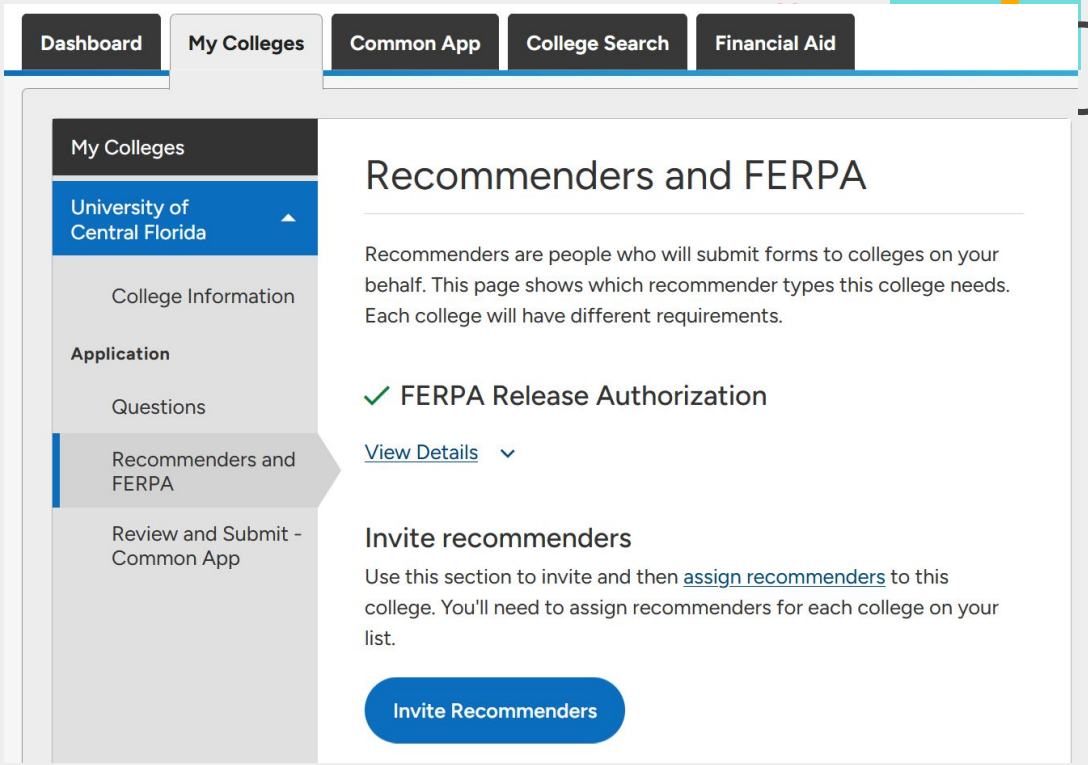
**Keep It Concise**: This section typically takes about **10-20 minutes per school**, but make sure to give extra time for favorite schools.



# 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.



# Thanks!

Do you have any questions?
Reach out to us via email!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