**ACE MENTOR LIST OF MAJORS FOR SCHOLARSHIP RECIPIENTS**

**1. Architecture**

Architecture is both the process and the product of planning, designing, and constructing buildings or other structures. Architectural works, in the material form of buildings, are often perceived as cultural symbols and as works of art.

**2. Architectural Engineering**

Architectural engineering, also known as building engineering or architecture engineering, is an engineering discipline that deals with the technological aspects and multi-disciplinary approach to planning, design, construction and operation of buildings, such as analysis and integrated design of environmental systems (energy conservation, HVAC, plumbing, lighting, fire protection, acoustics, vertical and horizontal transportation, electrical power systems), structural systems, behavior and properties of building components and materials, and construction management.

**3. Civil Engineering**

Civil engineering is a [professional engineering](https://en.wikipedia.org/wiki/Regulation_and_licensure_in_engineering) discipline that deals with the design, construction, and maintenance of the physical and naturally built environment, including public works such as roads, bridges, canals, dams, airports, sewerage systems, pipelines, structural components of buildings, and railways.

**4. Construction Management**

Construction management is a professional service that provides a project's owner(s) with effective management of the project's schedule, cost, quality, safety, scope, and function.

**5. Construction Trades (vocational)**

• Electrician, HVAC, Plumbing, etc.

**6. Construction Technology**

Construction Technology is on the forefront of creating new applications and tools that are changing how the construction industry designs, plans and executes its projects. These advanced software and construction-focused hardware will help shape the industry for decades. *• Must have focus on one of the ACE disciplines*

**7. Electrical Engineering**

Electrical engineering is an engineering discipline concerned with the study, design and application of equipment, devices and systems which use electricity, electronics, and electromagnetism.

**8. Environmental Engineering**

Environmental engineering is a professional engineering discipline and takes from broad scientific topics like chemistry, biology, ecology, geology, hydraulics, hydrology, microbiology, and mathematics to create solution that will protect and also improve the health of living organisms and improve the quality of the environment. *• Must have focus on one of the ACE disciplines*

**9. Geotechnical Engineering**

Geotechnical engineering is a specialization within civil engineering that involves

investigating and understanding what is beneath the ground's surface. Geotechnical engineers figure out the impact that geological formations may have on construction projects.

**10. Interior Design**

Interior design is the art and science of enhancing the interior of a building to achieve a healthier and more aesthetically pleasing environment for the people using the space.

**11. Landscape Architecture**

Landscape architecture includes site analysis, site inventory, [site planning](https://en.wikipedia.org/wiki/Site_plan), land planning, planting design, grading, storm water management, sustainable design, construction specification and ensuring that all plans meet the current building codes and local and federal ordinances.

**12. Mechanical Engineering**

Mechanical engineering is an [engineering](https://en.wikipedia.org/wiki/Engineering) branch that combines [engineering physics](https://en.wikipedia.org/wiki/Engineering_physics) and [mathematics](https://en.wikipedia.org/wiki/Engineering_mathematics) principles with [materials science](https://en.wikipedia.org/wiki/Materials_science) to [design](https://en.wikipedia.org/wiki/Design), analyze, manufacture, and maintain [mechanical systems](https://en.wikipedia.org/wiki/Mechanical_system). ***only in the construction industry***.

**13. Structural Engineering**

Structural engineering is a sub-discipline of [civil engineering](https://en.wikipedia.org/wiki/Civil_engineering) in which [structural engineers](https://en.wikipedia.org/wiki/Structural_engineer) are trained to design the 'bones and muscles' that create the form and shape of man-made structures.

**14. Urban Planning**

Urban planning, also known as regional planning, town planning, city planning, or rural planning, is a technical and political process that is focused on the development and design of land use and the built environment, including air, water, and the infrastructure passing into and out of urban areas.