

# DUAL DEGREE IN ENGINEERING, B.S.

Credits: 122

## Dual-Degree in Engineering Concentrations:

- Biology (<http://catalog.cau.edu/undergraduate/programs-study/arts-sciences/natural-sciences-mathematics/dual-degree-engineering-program/dual-degree-engineering-bs/biology/>)
- Chemistry (<http://catalog.cau.edu/undergraduate/programs-study/arts-sciences/natural-sciences-mathematics/dual-degree-engineering-program/dual-degree-engineering-bs/chemistry/>)
- Computer Science (<http://catalog.cau.edu/undergraduate/programs-study/arts-sciences/natural-sciences-mathematics/dual-degree-engineering-program/dual-degree-engineering-bs/computer-science/>)
- Mathematics (<http://catalog.cau.edu/undergraduate/programs-study/arts-sciences/natural-sciences-mathematics/dual-degree-engineering-program/dual-degree-engineering-bs/mathematics/>)
- Physics (<http://catalog.cau.edu/undergraduate/programs-study/arts-sciences/natural-sciences-mathematics/dual-degree-engineering-program/dual-degree-engineering-bs/physics/>)

## Program Description

The Dual Degree Engineering Program (DDEP) offers students a pre-engineering interdisciplinary and multidisciplinary curriculum with a strong background in the physical sciences and mathematics, proficiency in oral and written communications, and a thorough foundation in fundamental engineering principles.

During their matriculation in the Dual Degree Engineering Program (DDEP), students attend Clark Atlanta University for approximately three (3) years and then transfer to the participating engineering institution for two (2) years of additional study in residency status. Following a five-year period of study, students are awarded two (2) degrees: a Bachelor of Science Degree from Clark Atlanta University and a Bachelor of Engineering Degree from the participating engineering institution. In some cases, students may be awarded a graduate degree from the participating engineering institution.

## Admissions Requirements

Applicants must meet all the admissions requirements of Clark Atlanta University as published in this Catalog. Students intending to matriculate in any of the DDEP designated STEM fields should contact the DDEP Coordinator in the School of Arts and Sciences for specific pre-engineering program requirements and further advisement.

## Transfer Process

Each participating engineering institutions has documented admissions guidelines that complies with Accreditation Board for Engineering and Technology, Inc. (ABET) standards. These guidelines can be obtained during academic advisement sessions. A general guideline for admission is that the student maintains a cumulative and Math/Science grade point average of 3.0 or higher to ensure acceptance into the partnering institutions. The student should apply for transfer to the engineering institution about 6 to 9 months prior to his/her intended date of transfer. The transfer forms are handled through both the CAU DDEP office and the AUC DDEP office.

Students are encouraged to seek advisement prior to submitting any forms to the transfer institution. In some instances, application fees may be

waived. CAU student should have major verification forms completed by their respective department advisor and the DDEP advisor prior to transfer. These forms will be forwarded to the Office of the University Registrar by the advisor with CAU student transcript and the partner institution student transcript from the AUC DDEP office by the deadlines printed on the yearly calendar for graduation.

## Student Learning Outcomes

Graduates of the Dual Degree Engineering Program (DDEP) will be able to:

1. Apply knowledge of mathematics, science and engineering to analyze and interpret data.
2. Design and conduct experiments in multi-disciplinary team project.
3. Identify components and formulate processes to design systems.
4. Communicate effectively in oral and written formats the impact of engineering solutions in a global and societal context.
5. Identify and use modern engineering tools, techniques, and skills to solve engineering problems.

## Degree Requirements

In addition to the General Degree Requirements as published in this Catalog, students pursuing the Dual Degree Engineering Program must also complete the following requirements at CAU:

1. General Education Core Curriculum requirements
2. Pre-engineering courses
3. Courses for the chosen science major
4. Engineering major at the participating engineering institution

Students are strongly encouraged to meet with their advisor at a minimum of one session per semester. To ensure students are adequately informed, attending academic advisement sessions are essential and critical to timely transition to the partner engineering institution. Upon completion of all requirements at both institutions, the student is simultaneously awarded a Bachelor of Science degree from CAU and a Bachelor of Engineering from participating engineering institution.

## Graduation Requirements

A DDEP student is eligible to graduate when he/she has completed all the required DDEP courses and fulfilled the graduation requirements for both CAU and the host engineering institution.

A DDEP student in residence at participating engineering institution must provide to the CAU DDEP Coordinator a copy of a current transcript at the end of each semester. During the spring semester prior to the year of anticipated graduation, the DDEP student must apply for graduation from CAU and is responsible for arranging for an official transcript to be forwarded from the participating engineering institution to the CAU Office of the University Registrar no later than the beginning of the spring semester of the anticipated year of graduation. CAU DDEP students majoring in designated Science fields must complete all requirements of the major and submit an Application for Graduation form to the Office of the University Registrar to participate in the University's Annual Commencement activities.

Code	Title	Hours
<b>Required Courses</b>		
CEGR 101	Introduction to Engineering	3
CEGR 101L	Intro to Engineering Lab	0

CEGR 102	Intro to Engineering Design <sup>1</sup>	2
CEGR 110	Engineering Graphics	3
CEGR 110L	Engineering Graphics Lab	0
CEGR 201	Electrical Circuit Analysis <sup>1</sup>	3
CEGR 201L	Electrical Circuit Anal Lab <sup>1</sup>	1
CEGR 211	Engineering Statics	3
CEGR 311	Engineering Dynamics	3
<b>Total Hours</b>		<b>18</b>

<sup>1</sup> Courses required for specific majors.

## Minors: Mathematics

Code	Title	Hours
CMAT 111	Calculus I	4
CMAT 112	Calculus II	4
CMAT 211	Calculus III	4
CMAT 212	Differential Equations	3
CMAT 214	Linear Algebra	3
<b>Total Hours</b>		<b>18</b>

(Available for DDEP-Physics, DDEP-Computer Science, DDEP-Biology, and DDEP-Chemistry)