

Dual Degree Engineering Program

Program Description

The Dual Degree Engineering Program (DDEP) provides the opportunity for students to obtain both a liberal arts degree from Spelman College and an engineering degree from one of our participating engineering schools. A student pursuing a degree through the DDEP normally completes three academic years at Spelman College and two academic years at a participating engineering institution. The participating engineering institutions are Auburn University, Clarkston University, Columbia University, Dartmouth College, Georgia Institute of Technology, Indiana University – Purdue University Indianapolis, Missouri University of Science and Technology, North Carolina A&T State University, Rensselaer Polytechnic Institute, Rochester Institute of Technology, University of Alabama at Huntsville, University of Florida, University of Michigan, and University of Notre Dame

Program Requirements

The Dual Degree Engineering student will complete the following courses during her three academic years at Spelman College:

- Introduction to Engineering
- Engineering Graphics
- Calculus I, II, III
- Differential Equations
- Linear Algebra
- General Chemistry I, II*
- Physics I, II, III*
- Computer Programming I (C++)
- Economics (Micro or Macro)

*Additional courses may be required by the partnering institution depending upon the engineering major selected.

The DDEP student has a choice of

1. completing a major at Spelman College in either Chemistry, Physics, Computer and Informational Science, or Mathematics and an engineering major at the engineering institution. In this case, the student will receive a Bachelor of Science degree from Spelman College with a major in the designated field/DDEP as well as a Bachelor's degree from the engineering institution.
2. completing a Bachelor's degree at the engineering school without declaring a major at Spelman College. In this case, the student will receive a BS from Spelman college with a major in General Science along with the Bachelor's degree from the engineering institution.

The DDEP student can major in any engineering discipline offered by the engineering schools. Disciplines offered include

- Aerospace / Aeronautical Engineering
- Biomedical Bio mechanical Engineering
- Ceramic / Materials Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Environmental Engineering
- Industrial and Systems Engineering
- Mechanical Engineering
- Nuclear Engineering
- Textiles Engineering

Course Descriptions

ERG 101 – INTRODUCTION TO ENGINEERING (2)

This course is an introduction to the discipline of engineering. The topics include summaries of the various fields of engineering, the professional engineering licensing process, intellectual property, the engineering method and design process. Several group and individual design projects will be assigned to allow hands on experience with the engineering method of design.

ERG 102 – ENGINEERING GRAPHICS (3)

This course is an introduction to engineering communication using computer aided design (CAD) software. The focus is on using CAD software to design and model 2-D and 3-D objects. The students also learn to use 3-D presentation software to add materials, lighting and animation to their designs. The topics discussed include: orthographic views, dimensioning, solid modeling, lighting theory, color theory, and material mapping.

Graduation Requirements

A Dual Degree Engineering student is eligible to graduate when she has

1. completed the required courses for the DDEP.
2. fulfilled the graduation requirements for Spelman College.
3. fulfilled the graduation requirements for the engineering institution.

A DDEP student who is in residence at an engineering institution must provide a copy of her engineering institution's transcript at the end of each term to the Spelman Coordinator of the DDEP. She must apply for graduation from Spelman College and she is responsible for having an official transcript sent from the engineering school to the Office of the Registrar at Spelman College no later than one month prior to the expected graduation date.