

## A.S. ENGINEERING SCIENCE

DEPARTMENT: Physical Sciences

**TOTAL CREDITS: 66-70**

### Requirements for Matriculants

#### COLLEGE REQUIREMENTS

- Successful completion of CUNY Tests in Reading and Writing and the COMPASS Math Skills Test with passing examination scores, unless otherwise exempt, or developmental courses may be required.
- One (1) Writing Intensive course in any discipline from any category below is required. Participation in a Learning Community that includes ENG 1200 or 2400 also satisfies this requirement.
- Two (2) Civic Engagement experiences—satisfied by CE-Certified or CE-Component courses or approved outside activity. See *Graduation Requirements* in this catalog.

#### CUNY CORE:

Courses approved at the time of this catalog's publication for CUNY Flexible Core, Groups A-D, are listed in the *General Education: CUNY Pathways* section on page 43, and identified in the Course section, beginning on page 99.

#### REQUIRED CORE

|  |           |
|--|-----------|
| ENG 1200.....  | 3 credits |
| ENG 2400.....  | 3         |
| Mathematical & Quantitative Reasoning .....                  | 4         |
| <i>MAT 1500<sup>+</sup> or MAT 1600</i>                      |           |
| Life and Physical Sciences: <i>General Chemistry I</i> ..... | 4         |
| <i>CHM 1100 or CHM 1200 or PHY 1300 or PHY 1400</i>          |           |

#### FLEXIBLE CORE ♦

One course from each Group A – E plus an additional course from Group E. **No more than two courses in the same discipline.**

- A. World Cultures and Global Issues
- B. U.S. Experience in its Diversity
- C. Creative Expression
- D. Individual and Society
- E. Scientific World

*MAT 1500<sup>+</sup> or MAT 1600 or CS 1200<sup>+</sup> or CHM 1100  
or CHM 1200 or PHY 1300 or PHY 1400  
(if not taken for Required Core)*

**Plus** another course selected from Group E list above  
(if not taken for Required or Flexible Core)

#### DEGREE REQUIREMENTS §

**If not taken for the CUNY Required Core or Flexible Core, the following are required:**

|  |            |
|--|------------|
| Calculus I and II and III (MAT 1500 and MAT 1600<br>and MAT 2100) <sup>+</sup> ..... | 12 credits |
| Differential Equations (MAT 5500) <sup>+</sup> .....                                 | 3          |
| Linear Algebra (MAT 5600) <sup>+</sup> .....   | 4          |
| Introduction to Computing (CS 1200) <sup>+</sup> .....                               | 4          |
| General Chemistry I and II (CHM 1100 and CHM 1200) .....                             | 8          |
| Advanced General Physics I and II (PHY 1300<br>and PHY 1400) .....                   | 8          |
| Engineering Design (EGR 2100).....   | 3          |
| Introduction to Electrical Engineering (EGR 2200) .....                              | 3          |
| Introduction to Engineering Thermodynamics (EGR 2300)...                             | 3          |

+ COMPASS scores of 35 on Part I, 55 on Part II, 60 on Part III and 51 on Part V or pre-requisite courses required.

♦ This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

§ Consultation with the Department Advisor is required.