

**RARITAN VALLEY COMMUNITY COLLEGE
ACADEMIC COURSE OUTLINE**

ENGR 105 – Foundations of Engineering Success

I. Basic Course Information

A. Course Number and Title: ENGR 105 – Foundations of Engineering Success

B. New or Modified Course: Modified Course

C. Date of Proposal: Semester: Fall Year: 2022

D. Effective Term: Fall 2021

E. Sponsoring Department: Science and Engineering

F. Semester Credit Hours: 1

G. Weekly Contact Hours: 2	Lecture: 2
	Laboratory: 0
	Out of class student work per week: 4

H. Prerequisites/Corequisites: None

I. Laboratory Fees: None

J. Name and Telephone Number or E-Mail Address of Department Chair and Divisional Dean at time of approval: Dr. Edward Carr, Edward.Carr@raritanval.edu; Dr. Sarah Imbriglio, Sarah.Imbriglio@raritanval.edu

II. Catalog Description

Prerequisites/Corequisites: None

The course is designed to help students to develop skills such as: communication, time management, group work. Lectures are supported by videos and guest speakers to expose students to different engineering disciplines and functions. Students will be introduced to all campus resources and services.

III. Statement of Course Need

- A. It is a standard course in the first semester of all engineering programs designed to improve retention and lower attrition. It is needed to ensure the credibility and transfer articulations of the engineering program.
- B. This course has no lab component.
- C. This course generally transfers as a freshman requirement of engineering programs.

IV. Place of Course in College Curriculum

- A. Free Elective
- B. This course meets a program requirement for the Engineering Science AS degree.
- C. To see course transferability: a) for New Jersey schools, go to the NJ Transfer website, www.njtransfer.org; b) for all other colleges and universities, go to the individual websites

V. Outline of Course Content

- A. Keys to success in engineering study.
- B. The engineering profession.
- C. Rewards and opportunities of an engineering career.
- D. The teaching/learning process and how to make the most of how you are taught.
- E. Making the learning process work for you.
- F. Personal growth and development
- G. Orientation to engineering education.
- H. Case Study in Engineering - guest speakers from engineering firms and/or documentary videos in engineering applications.

VI. General Education and Course Learning Outcomes

A. General Education Learning Outcomes:

At the completion of the course, students will be able to:

1. Demonstrate understanding of the profession of engineering through research and communication. (GE-NJ 1, IL)
2. Define engineering. (GE-NJ 1)
3. Prepare a final report on becoming a professional engineering students. (GE-NJ 1, IL)

B. Course Learning Outcomes:

At the completion of the course, students will be able to:

1. Demonstrate knowledge of the services and resources available at RVCC that support student success and/or promote professional growth.
2. Demonstrate knowledge of some of the engineering professional societies.

C. Assessment Instruments

The following assessment methods may be used:

1. Essays
2. Quizzes
3. Projects
4. Reports
5. Group Projects

VII. Grade Determinants

Factors that may enter into the determination of the final grade

- A. Essays
- B. Quizzes
- C. Presentation
- D. Final report

Primary formats, modes, and methods for teaching and learning that may be used in the course:

- A. lecture/discussion
- B. small-group work
- C. guest speakers
- D. student oral presentation
- E. student collaboration
- F. independent study

VIII. Texts and Materials

The following types of course materials will be used.

- A. Suggested textbook: “Studying Engineering: A Road Map to a Rewarding Career”, Raymond B. Landis, Discovery Press, Latest Edition.
- B. Videos
- C. Web sources
- D. Guest speakers

Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.

IX. Resources

No other type of resources are needed

X. Honors Options

Not applicable.