

**Rose-Hulman Institute of Technology**  
**Department of Electrical & Computer Engineering**

**Course Specification: ECE-361**  
**Engineering Practice**

**Catalog Description**

**ECE 361 Engineering Practice    1R-3L-2C    F, W**  
**Pre: ECE 200**

Creativity, project design specifications, team roles, effective conduct of team meetings, written and oral communication skills, professionalism, project management, and completion of team project(s).

**Goals**

1. Students shall demonstrate an awareness of the importance of creativity in engineering and demonstrate an understanding of how to combat blocks to creativity.
2. Students shall demonstrate an understanding of the process of defining specifications and expressing them through a project design specification (PDS).
3. Students shall demonstrate an understanding of the roles of a team member as well as how to conduct team meetings.
4. Students shall demonstrate an understanding of the goals of written and oral communication and how to effectively implement them.
5. Students shall demonstrate an awareness of how professionalism impacts their career and how to maintain professional standards in their work.
6. Students shall demonstrate an understanding of the process and goals of basic project management.
7. Students shall demonstrate the ability to integrate the above mentioned course goals in the successful completion of course project(s).

**Objectives**

After successfully completing this course the student should be able to:

1. Identify blocks to creativity and apply that knowledge to overcome stumbling blocks,
2. Conduct and participate in team meetings and prepare agendas, minutes, and memos,
3. Make team decisions to solve open-ended problems,
4. Organize and manage a project toward successful milestone completions,
5. Present their work both orally and in writing,
6. Demonstrate an understanding of ethical behavior in the profession of engineering and practice this behavior throughout the course, and
7. Prepare and carry out a personal Professional Development Plan.

**Linkages**

ECE Department Goals for Undergraduate Education (Adopted September 29, 1999)

Each Electrical and Computer Engineering graduate shall:

- Goal H1: have demonstrated a facility for independent learning.
- Goal H2: be prepared for continued professional development.
- Goal H3: demonstrate an ability to communicate effectively in oral, written, graphical, and visual forms.
- Goal H4: posses an understanding of how contemporary issues shape and are shaped by mathematics, science, and engineering.
- Goal H5: be able to understand the role of the professional in the global society and to understand diverse cultural and humanistic conditions.
- Goal T1: have completed a general engineering science core by the beginning of the junior year, and shall have completed a discipline-specific technical core.
- Goal T2: have demonstrated the effective use of the contemporary tools of the engineering profession such as computers, data analysis and management, instrumentation and experimentation, and human and information resources.
- Goal D1: have participated in team design experiences in which the client is distinct from the faculty supervisor(s).
- Goal D2: have demonstrated the ability to communicate technical material effectively in writing, in one-on-one meetings, and in group presentations.

Objective/ ECE Goal	1	2	3	4	5	6	7
H1	●						
H2						●	●
H3		●			●		
H4							
H5						●	
T1							
T2							
D1			●	●			
D2		●			●		