**ELE 437: HYBRID CIRCUIT DESIGN (elective)**

**Credit:** 3 hours.

**Catalog Description:** Lecture/laboratory course covering thick film processing techniques as they apply to the design and fabrication of miniature electronic circuits. Topics include minimum design rules, design of electronic components, artwork generation, screen preparation, screen printing, drying and firing profiles, and trimming.

**Prerequisites:** ELE 360.

**Textbooks(s) and/or Other Required Materials:** *Hybrid Circuit Design and Manufacture* by Roydn D. Jones, Marcel Dekker Inc.

**Topics Covered:**
- Minimum design rules
- Design of electronic components
- Artwork generation
- Screen preparation
- Screen printing
- Drying and firing profiles
- Trimming

**Class/Laboratory Schedule:**
- Lecture: 2.5 hours/week
- Lab: none

**Course Objectives and Relationship to Program Outcomes:**

1. The student will develop the fundamental principles of hybrid technology (A,B,E,F,I).
2. Students will learn the terminology and current practices in the application of hybrid technology (A,B,C,D,E,F,H,I).
4. Students will manufacture a hybrid of their own design (D,F,G,H,K).

**Coverage (and level) of ABET Outcomes:** A (3), B (3), C (3), D (2), E (2), F (1), G (2), H (3), I (2), J (2) and K (3).

**Contribution of Course to meeting the Professional Component:**

- Engineering Topics: 100%

**Date:** June 2004.