

IEEE 2008 P-BASICS²
Region 5 Student Design Competition
(Rules Version Date: August 3, 2007)

General Information

The Circuit Design Competition will be in the undergraduate laboratories in Flarsheim Hall Rooms 346, 372 and 374 of the Computer Science Electrical Engineering Department of the University of Missouri-Kansas City on Saturday April 19, 2008. The Contest begins in the morning and ends in the afternoon. The laboratories are located about one mile from the conference hotel. Transportation to and from the conference hotel and a box lunch will be provided.

Only undergraduate IEEE Student Members who are registered for the Conference can participate. Each team consists of two students from the same Student Branch and only one team per student branch is allowed.

The design problem will be a mixture of digital and analog design. No assembly language or higher level computer language will be required. The design problem will be supplied to each team at the beginning of the competition. In addition, each team will be provided with a lab notebook, a sack of parts and data sheets for the parts. Laboratory test equipment and connectors will be supplied. The students will need to provide calculators, paper, pencils, pens, rulers, and templates. No notebook computers are permitted.

Registration

Please send an e-mail to Mr. Kevin P. Kirkpatrick at KPKirkpatrick@umkc.edu to register.

Please include in the e-mail:

- IEEE Student Branch School
- Student Branch Counselor (name, e-mail address and telephone)
- Two students on the design team (names, e-mail addresses and year [Freshmen, Sophomore, Junior or Senior])
- Any special dietary requirements

Please register by March 20, 2008

Registration will be on a first come, first served basis.

Detailed Information

- Each team will work independently on its project. No access to the Internet is permitted. Each team receives a sack of parts. No other parts are allowed.
- Each team develops a preliminary paper and pencil design in the laboratory notebook. The design should include schematic and logic diagrams as required and a set of specifications. Each team should bring the preliminary design to the judges for approval before continuing the project. The judges' approval does not imply that the design is correct. The judges may talk and ask questions of team members during the design and construction process.
- The deadline for completing the project is 3:00 p.m.
- The demonstration to the judges will be from 3:00 p.m. to 4:00 p.m. Teams which finish before 3:00 p.m. may demonstrate their projects to the judges early. Both team members may be asked to answer questions about the project.
- Laboratory notebooks will be turned in by 4:00 p.m. The laboratory notebook is considered the report on the project. Neatness, details and organization will be important factors in judging. The notebook needs to include:
 - Title page
 - Team Number
 - Title of the Project
 - Date
 - Do not include the team members names or their school
 - Analysis of specifications and design computations
 - Circuit schematics, logic diagrams and timing diagrams as needed
 - Test results used to verify performance to specifications
 - Cost analysis
 - Discussion and conclusions
- Judges will not be current faculty, staff or students of any school.

General Judging Policies

Three factors will be used to score the performance of each team.

- Documentation: the laboratory notebook will be judged on its correctness and completeness.
- Meeting the specifications: the closeness of the teams results to the initial specifications requirements as demonstrated to the judges and indicated in the laboratory notebook. This is the most important factor.
- Quality: the economy and "cleanness" of the design. The most subjective of the three factors.