This course follows an unusual format, which is described in this brief handbook.

1. **Laboratory on printed circuit board design** – This runs for two afternoons per week for the first two weeks of the first semester and is essentially a training course on OrCAD. It focuses mostly on its applications for PCB design but also includes revision on basic circuit analysis and simulation using PSpice. It is assessed by ‘milestones’ as you go along and no further submission is required.

2. **Lectures on mixed signal systems** – These run once per week throughout the second semester. A comprehensive handout will be issued at the start. The material is examined in the May diet.

3. **Project** – This takes place in the second semester and is broken into three phases:
   - Preliminary investigation – one afternoon per week for the first two weeks of the second semester.
   - Complete schematic design – no timetabled sessions.
   - Overall design and construction – two afternoons per week for two weeks near the end of the second semester.

The project is carried out in teams of typically four students and detailed briefing notes will be issued at the start. It is assessed through three team reports, the final product, individual laboratory notebooks and a short confidential report on the performance of the team.

Please ensure that you have the following two items for every laboratory or you will be sent away to buy them.

- A bound, A4 laboratory notebook for making notes, recording results and storing printouts. Loose-leaf refill pads are not acceptable.
- University printer credits so that you can print circuits, layouts and the results of simulations. Printouts should be attached firmly into your laboratory book.