

101CDE 2018/19 Academic Year, Semester 2 Coursework

Scope of the Coursework

This coursework covers the analog contents of 101CDE, which includes basic semiconductor, PN junction, BJT and FET concepts. The course work will also encourage students to use simulation (Multisim) software to verify concepts and theoretical analysis.

Marking Scheme

Regular Sections:

There are three regular sections:

- 1). PN junction basic and applications: 30 marks in total ($mark_{sec1}$)
- 2). BJT basic and DC/AC analysis: 35 marks in total ($mark_{sec2}$)
- 3). FET basic and DC/AC analysis: 35 marks in total ($mark_{sec3}$)

Boost Scheme:

Besides the above three sections, this coursework gives a chance for students to boost the mark by $x\%$. The mark boost scheme are here:

- 1). 0%: if the student does not show, or very limit effort on simulation
- 2). 5%: if the student build a circuit for simulation
- 3). 7.5%: if the student shows the simulations result of either B-E characteristics or C-E characteristics
- 4). 10%: if the student show the simulation results of both B-E and C-E characteristics
- 5). 15%: if the student show the simulation results of amplifying a small AC signal from B-E side to C-E side. (The comparison between simulated voltage gain and theatrical calculation is required. Frequency response characteristic is not needed)

The Multisim materials can be found from the link below:

Moodle 101CDE 1819JANMAY → Assessment (Coursework & Exam) → Multisim Simulation Materials
<https://cumoodle.coventry.ac.uk/mod/folder/view.php?id=2043708>

Total Mark:

The total of the coursework will be:

$$mark_{total} = (mark_{sec1} + mark_{sec2} + mark_{sec3}) \cdot (1 + x\%)$$

If the $mark_{total} > 100$ after the calculation, **we only take 100 as maximum for this coursework.**

Submission Instruction

On the **cover page** of every submission, please include **Name** and **SID**.

The submission must include: **Online Submission** and **Paper-based Hand In**

1. **Online Submission (00:00:00, 6th Mar 2019, UK time):** Submit via Turnitin system before the deadline. (A tip for Turnitin: please sure there are at least 20 words in your submission document, even it is PDF. Do not use the pure scanned picture. Otherwise, Turnitin will not recognise it as a submission.)
2. **Paper-based Hand-in (9~11am 7th Mar 2019, during lecture):** You are also asked to hand in a printed paper-based version. The printed version should be exactly the same as the version you submit to Turnitin. In the paper based submission please download the "Cover Page" from <https://cumoodle.coventry.ac.uk/mod/assign/view.php?id=1980059> , and bind at the first page.