Dyson School of Design Engineering

DE 2   Electronics 2 DRAW week Laboratory Oral Examination Guidelines

Peter Cheung, version 2.4

Assessment of Lab 1 to Lab 3 will be in the form of a 15-minute oral examination for each student with one of four assessors on Thursday 13 Feb 9.00 to 12.30, or 14.00 to 15.30. All orals will be conducted in person in Level 3 Studio, the Dyson Building. If you are unable to attend the Lab Oral at the appointed time, please find someone willing to swap with you and inform me via email. A schedule for the examination is shown below. **This is a formal assessment, and you are REQUIRED to be present at the allotted time**.

The purpose of the Oral examination is to establish how much you have learned in respect to the learning outcomes of these Lab Sessions. Questions will be asked which aim to establish your level of engagement and understanding, and how well you have conducted the experiments including the effective use of your logbook. Your logbook MUST BE available during the oral examination, so that you can refer to its contents. Bring your laptop with you and have the logbook ready for the Assessor to read through quickly.   Please arrive at assessment location at least 5 minutes before your allotted time and wait quietly outside until you are called. (Do not lotter around the assessment station.)

The learning outcomes for each Lab are summarized below. It is helpful if you consider to what extend you have understood with respect to this list of learning outcomes.

Lab 1: Matlab basics

Learn to use basic Matlab features, e.g. plotting graphs; understanding of the time domain and frequency domain views of signals.

Lab 2: Signal Processing with PyBench & Matlab

How Pybench board communicate with Matlab programming environment; generation and capture of signals on the board; spectral domain analysis of sound captured by microphone; effect of under sampling and its consequence; interpretation of results returned by the fft(.) function in Matlab; frequency resolutions of spectrum; strength of harmonic components for periodic signals such as square waves and triangular waves; manipulation of sound files stored as .WAV files on a computer; signal segmentation using instantaneous energy; beat extraction of musical sound.

Lab 3: System Characterization and Transfer Function

DC response of a non-linear system; understand of system modeling in mathematics (in s-domain); meaning of transfer functions; how to obtain frequency response from the transfer function of a "black-box" system; step-response of a system; using Matlab to do the above; difference between the measured and predicted frequency response of the bulb board.

DESE50002 Electronics 2 - DRAW week lab oral schedule - Thursday 13 Feb 2025

Title	Surname	First Name	Time	Examiner
Mr	Wei	Bill	09.00 - 09.15	Assessor 1
Miss	Gheel	Hannah	09.00 - 09.15	Assessor 2
Miss	Chourbaji	Judy	09.00 - 09.15	Assessor 3
Miss	Yang	Nancy	09.00 - 09.15	Assessor 4
Miss	Karzazi	Zaynab	09.15 - 09.30	Assessor 1
Miss	Gustave	Amelia	09.15 - 09.30	Assessor 2
Mr	Vale	Jacob	09.15 - 09.30	Assessor 3
Mr	Crowder	Harrisen	09.15 - 09.30	Assessor 4
Mr	Zhang	Ke	09.30 - 09.45	Assessor 1
			09.30 - 09.45	Assessor 2
Miss	Ozmerter	Ilayda	09.30 - 09.45	Assessor 3
Miss	Grankin	Phoebe	09.30 - 09.45	Assessor 4
Miss	Simpson	Naomi	10.00 - 10.15	Assessor 1
Miss	Gan	Zitong	10.00 - 10.15	Assessor 2
Miss	O'Hara	Alexis	10.00 - 10.15	Assessor 3
Mr	Dong	Yuanxi	10.00 - 10.15	Assessor 4
Miss	Ng	Felicia	10.15 - 10.30	Assessor 1
Mr	Ye	Steven	10.15 - 10.30	Assessor 2
Mr	Zhou	Yipeng	10.15 - 10.30	Assessor 3
Mr	Dinkci	Can	10.15 - 10.30	Assessor 4
Miss	Zhao	Hanxiu	10.45 - 11.00	Assessor 1
Miss	Li	Xiaoyun	10.45 - 11.00	Assessor 2
Mr	Tidmarsh	Will	10.45 - 11.00	Assessor 3
Mr	Md	Tahmid	10.45 - 11.00	Assessor 4
Miss	Silver	Anna	11.00 - 11.15	Assessor 1
Mr	Bindloss	George	11.00 - 11.15	Assessor 2
Mr	Hayretci	Erim	11.00 - 11.15	Assessor 3
Ms	Luk	Sze Yuen	11.00 - 11.15	Assessor 4
Mr	Posirisuk	Meepooh	11.15 - 11.30	Assessor 1
Miss	Elley	Brooke	11.15 - 11.30	Assessor 2
Mr	de Noronha	Vasco	11.15 - 11.30	Assessor 3
Miss	Es-serghyny	Salma	11.15 - 11.30	Assessor 4
Mr	Liu	Lijiangke	11.30 - 11.45	Assessor 1
Miss	Jirapongtra	Meni	11.30 - 11.45	Assessor 2
Mr	Xia	Feifan	11.30 - 11.45	Assessor 3
Miss	Cheung	Krystal	11.30 - 11.45	Assessor 4
Mr	Sheikholesl	Davin	11.45 - 12.00	Assessor 1
Mr	Warriner	Harry	11.45 - 12.00	Assessor 2
Mr	Su	Yuyang	11.45 - 12.00	Assessor 3
Miss	He	Shixian	11.45 - 12.00	Assessor 4
Mr	Kathirgama	Aadhavan	12.00 - 12.15	Assessor 1
Mr	Surtees	Ben	12.00 - 12.15	Assessor 2
Mr	Zhao	Yizhuo	12.00 - 12.15	Assessor 3
Mr	Karolia	Ismaeel	12.00 - 12.15	Assessor 4
Miss	Gao	Chang	12.15 - 12.30	Assessor 1
Miss	Wang	Junyi	12.15 - 12.30	Assessor 2
Mr	Alsop	Joseph	12.15 - 12.30	Assessor 3
Miss	Ganesan	Jasmi	12.15 - 12.30	Assessor 4
Mr	Chua	Ean	12.30 - 12.45	Assessor 1
Mr	Zhou	Jiangchuan	12.30 - 12.45	Assessor 2

Title	Surname	First Name	Time	Examiner
Miss	Mahesh	Diya	14.00 - 14.15	Assessor 1
Ms	Galal	Sara	14.00 - 14.15	Assessor 2
Mr	Kremer	Leo	14.00 - 14.15	Assessor 3
Miss	Ahmed	Safiyya	14.00 - 14.15	Assessor 4
Mr	Cheng	Chik Hin	14.15 - 14.30	Assessor 1
Mr	Zhang	Haoxiang	14.15 - 14.30	Assessor 2
Mr	Ibrahim	Omar	14.15 - 14.30	Assessor 3
Ms	Chen	Shiyun	14.15 - 14.30	Assessor 4
Miss	Shi	Helen	14.30 - 14.45	Assessor 1
Miss	Su	Yuhan	14.30 - 14.45	Assessor 2
Miss	Garoosi	Neeka	14.30 - 14.45	Assessor 3
Mr	Laird	Dylan	14.30 - 14.45	Assessor 4
Miss	Neill	Claudia	14.45 - 15.00	Assessor 1
Mr	Guillon	Matteo	14.45 - 15.00	Assessor 2
Mr	Appleyard	Sebastian	14.45 - 15.00	Assessor 3
Mr	Wu	James	14.45 - 15.00	Assessor 4
Mr	Ismail	Mustafa	15.00 - 15.15	Assessor 1
Mr	Merchant	Alex	15.00 - 15.15	Assessor 2
Mr	Viswanath	Rishi	15.00 - 15.15	Assessor 3
Mr	Abe	Yemi	15.00 - 15.15	Assessor 4
Miss	Jackson	Lucy	15.15 - 15.30	Assessor 1
Ms	Broer	Leah	15.15 - 15.30	Assessor 2
Mr	Ize-Iyamu	Andrew	15.15 - 15.30	Assessor 3
Miss	Hu	Coco	15.15 - 15.30	Assessor 4
Mr	Wang	Bohan	15.30 - 15.45	Assessor 1
Mr	Swabel	Calev	15.30 - 15.45	Assessor 2
Mr	Wang	Hanqiang	15.30 - 15.45	Assessor 3
Miss	Lo	Charlotte	15.30 - 15.45	Assessor 4
Miss	Zhou	Maggie	16.00 - 16.15	Assessor 1
Mr	Shi	Steven	16.00 - 16.15	Assessor 2
Mr	Hu	Robert	16.00 - 16.15	Assessor 3
Miss	Nanthagur	Harshana	16.00 - 16.15	Assessor 4
Mr	Goel	Devansh	16.15 - 16.30	Assessor 1
Mr	Midgley	Archie	16.15 - 16.30	Assessor 2
Mr	Zhang	Carsten	16.15 - 16.30	Assessor 3
Mr	Height	Thomas	16.15 - 16.30	Assessor 4
Mr	Liu	Ziheng	16.30 - 16.45	Assessor 1
Miss	Gao	Sihan	16.30 - 16.45	Assessor 2
Mr	Han	Harry	16.30 - 16.45	Assessor 3
Miss	Sheehan	Stephanie	16.30 - 16.45	Assessor 4
Mr	McEvoy	Louis	16.45 - 17.00	Assessor 1
Miss	Ibrahim	Selin	16.45 - 17.00	Assessor 2
Mr	Wordswort	Matthew	16.45 - 17.00	Assessor 3
Miss	Kulenthrar	Baargavi	16.45 - 17.00	Assessor 4
Mr	Meng	Tingxiang	17.00 - 17.15	Assessor 1
Mr	Ortiz	Alain	17.00 - 17.15	Assessor 2
Ms	Cheong	Ni Co	17.00 - 17.15	Assessor 3
Mr	Zheng	Bozhong	17.00 - 17.15	Assessor 4
Miss	Merican	Lara	17.15 - 17.30	Assessor 1
Mr	Huang	Yincan	17.15 - 17.30	Assessor 2

Imperial College London

Name of Student:

Names of Assessors: Time: AM/PM

GRADE:

Performance on the Lab Experiments (put an 'X' on the scale)

1.   Logbook Quality and Effectiveness

Highly effective	Effective	OK	Weak	Poor

2.   Ability to answer questions from the logbook

Excellent	Good	OK	Poor	Very poor

3.   Engagement & effort in completing Lab 1 to 3

Fully engaged Strong evidence	Good engagement Good evidence	Acceptable Engagement	Below expected Engagement	V. poor Engagement

Understanding and Learning Outcomes

4.   Explanation on theories behind experiments

Excellent	Good	OK	Poor	Very poor

5.   Examiner's opinion on candidate's depth of understanding in general

Broad & deep	Good	Average	Less than average	Poor

FEEDBACK TO STUDENT: