	Rubric for E344 (2020) Assignment 2		
	Total marks		40
	Gates (non-negionable)		
1	Report signed and author details completed	Y/N	
2	Social contract signed by the author	Y/N	
3	Git repo with clear activity shown and attributable to the author	Y/N	
4	Page limit adhered to	Y/N	
	Documentation skills		10
1	Writing style (grammar, punctuation)	1	
2	Spelling	1	
3	Figures look professional	1	
4	Text and numbers in figures (and plots) are clearly legible	1	
5	Traces in plots have descriptive names that can be linked to the circuit diagram	1	
6	Input and output signals in figures (plots) are linked	1	
7	Signals in plots are zoomed in and/or out sufficiently to show what needs to be shown	1	
8	Lessons learnt coherently communicated	1	
9	All figures and tables have captions and are referenced in the text	1	
10	Sources cited and correctly referenced	1	
	Design skills		15
1	Syst: System diagram with high level detail explaining how system will hang together and which parts captured in this report.	2	
2	Syst: Mention reamining current margin and what it means in context of this report.	1	
3	Filtering: Analysed heart beat signal using FFT to establsish frequencies. Made logical conclusion about which frequencies are noise and which signal.	2	
10	Filtering: From analysis, designed with calculations appropriate active LPF and HPF (or BPF) with appropriate cutoff frequencies	2	
	Op-amps: Considered common-mode voltages, VIN_max, VIN_min, VIN_diff for all op-amps.	2	
17	Thresholding: Developed appropriate thresholding for beat detection, considering the allowable spec deviations	2	
	Pulsed output: Designed (calculations) for pulse duration over whole heart beat range	2	
19	Syst: Calculated an expected calibration constant for the analogue transducer	1	
20	Syst: Calculted Total current of circuit (with fair assumptions where needed) and remaining current for the rest of the circuit	1	
	Evaluation, assessment, analysis		15
1	Power supply: Measured current draw and compared with linear reguator available current and current spec	2	
2	Filter: Measured filter performance using frequence response.	3	
3	Conditioning: Simulated to demonstrably measure full input range and output full output range	4	
4	Thresholding: Measured thresholding for beat detection, considering the allowable spec deviations	3	
5	Pulsed output: Measured for heartbeat range meets pulse duration spec.	2	
5	Transducer: Measured analogue output ranges and response time.	1	