

Getting Ready For Y1 A Level Electronics

Y1 A Level Electronics	Logic and Ohm's Law	Summer 2025
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We are delighted you have chosen to study A Level Electronics at Worthing College.

Instructions: This pack will help you make the best possible start to studying this subject.

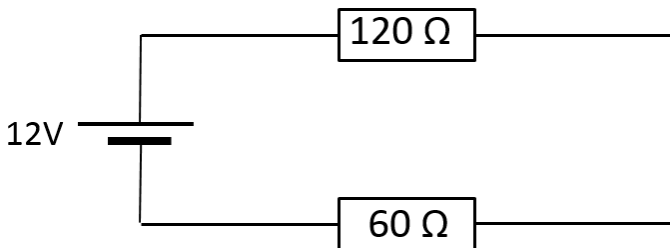
The four tasks in this pack:

- should take you **about 4 hours to complete** in total.
- should be handed into your teacher when teaching starts – **from Monday 8th September** – with your name on it for assessment.
- are available on the internet – follow the links in the document.

If you need help: The tasks are designed to get a bit more difficult as you work through them as they are preparing you for studying at a higher level and to become an effective independent learner. You should try to get as far as you can working on your own but if you do need help, please email us at c.stabler@worthing.ac.uk, telling us which task you are working on and what help you need. Help is available throughout the summer holidays.

GOOD LUCK!

Skills Focus for this Getting Ready for Pack			
• Research sources of information • Quality of written communication • Clarity of mathematical communication – how well you show your workings and lay out your work.		• Applying logic to solve problems • Drawing circuit diagrams • Accuracy of numerical calculations.	
Logic and Ohm's Law			
Target Grade	Type of task	Task	Deadline
All	Getting Prepared	Organisation is the first step to success in Electronics. Make sure you have the following things when you start in September: • Ring binder with dividers • Scientific calculator • Pens, pencils, a ruler and an eraser • Downloaded copy of the course ebook (see below) Electronics at A level is an interesting course that combines theory and practical activities. For you to do well it is imperative that you keep on top of your work. It is expected that in addition to 4.5 hours of electronics lessons each week you will need to do at least a further 4 hours of independent study either at college or at home. This will no doubt increase significantly closer to the exams. Your electronics course does not have a text book but an ebook is available from the exam board's website. Download it here: Resource (eduqas.co.uk) Useful facts and fun on electronics can be found here: rOmV4 - Home (reviseomatic.org). Finally, a good YouTube channel with useful tutorials is here:	Week beginning 8th September 2025

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Logic and Ohm's Law																																							
Target Grade	Type of task	Task	Deadline																																				
All	Research	0.1 Read the chapter on 'Core concepts' in the ebook (link above). Make notes and answer the questions at the end of each chapter. 0.2 Research the following key terms, and explain in your own words what they mean. You should include diagrams and examples in your answers. - Operational amplifier, - NAND gate logic, - flip-flop, - Boolean algebra, - The E24 series of preferred resistor values.	Week beginning 8th September 2025																																				
All	Research	0.3 Digital electronic circuits are often used to generate sequences. You might be asked to design and build a circuit that could control two sets of traffic lights at a crossroads. We can assume that the set of lights controlling ROAD 1 is RED 1, AMBER 1 and GREEN 1 and controlling ROAD 2 we have RED 2, AMBER 2 and GREEN 2. By observing your nearest traffic light junction, complete the sequence in the table below. <table><tr><th colspan="3">ROAD 1</th><th colspan="3">ROAD 2</th></tr><tr><th>RED1</th><th>AMBER1</th><th>GREEN1</th><th>RED2</th><th>AMBER2</th><th>GREEN2</th></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	ROAD 1			ROAD 2			RED1	AMBER1	GREEN1	RED2	AMBER2	GREEN2	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	ON	OFF													Week beginning 8th September 2025
ROAD 1			ROAD 2																																				
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High Grades	Calculations	0.4  Q1 Redraw the circuit above showing how you would (a) measure the current through the 60Ω resistor and (b) the potential difference across the 120Ω resistor. Q2 If the total resistance in the circuit is the sum of both resistors, use Ohm's law to calculate the current flowing in the circuit. Q3 A voltmeter across the 120Ω resistor would measure 8V. What is the voltage across the 60Ω resistor? Explain your answer. Q4 The 60Ω resistor is replaced by an LDR. Redraw the circuit diagram and explain what happens to the current in the circuit if light intensity increases. How does the voltage across the 120Ω resistor change?	Week beginning 8th September 2025																																				

Work Placement Week

All students are required to participate in a **compulsory** week-long work placement. It is recommended that the placement chosen is either relevant to your course, or relevant to what your future career aspirations are.

Work placement form submission deadline

All L2 and L3 students studying on triple or double courses will be given their work placement week dates by their course leaders when they start in September. The deadline to submit your placement forms are as follows:	Date of work placement week	Deadline for returning completed form
	Dec-25	24th October 2025
	January / February 2026	24th October 2025
	March / April 2026	19th December 2025
	May / June 2026	13th February 2026
All students studying 2 or more single subjects will have the option of either carrying out their work placement during: • February half term • Easter holidays • May half term • 22nd – 26th June 2026 The deadline to submit your placement forms are as follows:	Date of work placement week	Deadline for returning completed form
	February half term (16th - 20th February)	Friday 24th October 2025
	Easter holidays (27th March - 13th April)	Friday 19th December 2025
	May half term (26th - 29th May)	Friday 13th February 2026
	22nd – 26th June	Friday 1st May 2026