


Engineering



Advice for Year 11 and 12 students learning from home

The Queensland Curriculum and Assessment Authority (QCAA) understands that the COVID-19 pandemic has changed the way many senior students are accessing their learning.

We've prepared some suggestions to help you with your studies.

Resources to support preparing for assessment

Assessment type	Suggestions to support learning from home
Project (folio) (IA1) 	<ul style="list-style-type: none">• Review the Internal assessment 1 (IA1) section of the subject report that can be found on the Teaching tab on the Engineering subject page. Focus on the samples of effective practices.• Review the sample Project (folio) (IA1) on the Assessment tab on the Engineering subject page.• Consult with your teacher about the subject matter knowledge and skills required to respond to the task.• Continue documenting the application of the problem-solving process for your project (folio) (Part A) and Summary report (Part B).• Ensure you have clearly identified the task requirements.• Use online or other forms of research to explore and document your understanding of the problem.• Develop and refine your predicted prototype solution.• Generate and record performance data. Where appropriate, test, simulate or hypothesise your data.• Evaluate and refine your knowledge, ideas and predicted prototype solution.• Justify recommendations for enhancements. <p>Suggested resources to support understanding of the subject matter:</p> <ul style="list-style-type: none">• civil structures — about civil bridge engineering www.aboutcivil.org/bridges.html• problem-solving process resources<ul style="list-style-type: none">– Engineering (General, Qld) Writing Success Criteria www.youtube.com/watch?v=mJg60lqrPJU– Engineering (Qld, General) Basic Materials Testing www.youtube.com/watch?v=TqdKwnTAXaI• drawing and structural testing software — Autodesk www.autodesk.com/education/free-software/featured.

Assessment type	Suggestions to support learning from home
Examination (IA2) 	<ul style="list-style-type: none"> Review the Internal assessment 2 (IA2) section of the subject report that can be found on the Teaching tab on the Engineering subject page. Focus on the points about effective practices. Review the sample Examination (IA2) on the Assessment tab on the Engineering subject page. Consult with your teacher about the subject matter knowledge and skills required to respond to the task. <p>Suggested resources to support understanding of the subject matter:</p> <ul style="list-style-type: none"> 3.4 — Example 1: Method of joints www.youtube.com/watch?v=IUCD9jezwyQ 3.5 — Method of Sections www.youtube.com/watch?v=biQiUEZTCaM beam resources <ul style="list-style-type: none"> 6.1 — Introduction to Beams www.youtube.com/watch?v=5-G7BFkxmG8 6.3 — Deriving internal forces at a point in a beam www.youtube.com/watch?v=1LFzZ-a0e_0 6.4 Shear Force Diagrams (SFDs) www.youtube.com/watch?v=5IJ9r7Lda-g 6.5 — Bending Moment Diagrams (BMDs) www.youtube.com/watch?v=sv8jN_RFjSs Stress-strain resource https://mathalino.com/reviewer/mechanics-and-strength-of-materials/stress-strain-diagram UNSW School of Materials Science and Engineering, 'Types of corrosion' www.materials.unsw.edu.au/study-us/high-school-students-and-teachers/online-tutorials/corrosion/types-corrosion Life cycle resource www.level.org.nz/material-use/life-cycle-assessment.
Project (folio) (IA3)	<ul style="list-style-type: none"> Review the IA3 sample task and response that can be found on the Assessment tab on the Engineering subject page. Consult with your teacher about the subject matter knowledge and skills required to respond to the task. Continue documenting the development of an engineered solution (folio) (Part A) and Summary report (Part B). Ensure you have clearly identified the task requirements.
External assessment (EA) 	<ul style="list-style-type: none"> Review past papers and the sample external assessment that can be found on the Assessment tab on the Engineering subject page. Review the External assessment section of the subject report that can be found on the Teaching tab on the Engineering subject page. Focus on <ul style="list-style-type: none"> examples of effective student responses and practices practices to strengthen, including recommendations to consider when preparing for external assessment.

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