

Generic Unit Year 12

Teaching Sequence	Learning Intentions	Criteria for Evaluation	Assessment Strategy
<p>Introduction to Year 12 and expectations</p> <ul style="list-style-type: none"> ▪ NCEA overview. ▪ Presentation of evidence-expectations ▪ Year 11-13 technology-pathways ▪ Assessment policies/procedures/formative/summative ▪ Timelines-unit overview/programme/deadlines. ▪ 	<p><i>Students understand:</i></p> <ul style="list-style-type: none"> ▪ How achievement/unit standards (<i>teacher to insert</i>) will be used to assess them in technology, ▪ importance of timelines and deadlines, assessment procedures and ▪ expectations of homework and extra work out of class. 	<p><i>Students meet deadlines over the course duration</i></p>	<p>Ongoing teacher/student interaction</p>
<ul style="list-style-type: none"> ▪ How Year 12 scaffolds up from Year 11 ▪ Expectation of student <u>best work</u> and <u>quality</u> outcomes at this level. ▪ 	<p><i>Students understand:</i></p> <ul style="list-style-type: none"> ▪ Links between Year 11 and Year 12 ▪ Expectations at Year 12. 	<p><i>Students demonstrate that they can identify changes in key steps of the technology process.</i></p>	
<p>Introduction to the Context (teacher given) and possible issues</p> <ul style="list-style-type: none"> ▪ Class brainstorms possible issues ▪ Individual students identify a possible issue. ▪ Exploration of issue and the location in which the issue resides ▪ Identify possible key and wider stakeholders and criteria which would make them suitable. ▪ Teacher confirms suitability of stakeholders. 	<p><i>Students can:</i></p> <ul style="list-style-type: none"> ▪ Identify issue ▪ Identify those who have an interest in the issue. ▪ Research the main implications of the environment/location. ▪ how the stakeholders and environment will influence a developing solution 	<ul style="list-style-type: none"> ▪ <i>Students research and identify the problem to be resolved.</i> ▪ <i>Students use strategy e.g. pros and cons to ensure that selected issue is rigorous enough to allow students to provide evidence for the selected achievement standards</i> <p><i>Key and wider stakeholders have an interest in the issue are easily accessible and can give constructive feedback.</i></p>	<p>Student explains choice of issue to the teacher</p>
<p>Skill development</p> <ul style="list-style-type: none"> ▪ Graphical communication skills with examples. ▪ Discuss examples of timelines/GANTT charts etc. ▪ Develop planning-timeline with key milestones. 	<p><i>Students understand that:</i></p> <ul style="list-style-type: none"> ▪ Timing is an important aspect of managing a project and is a dynamic process. ▪ Not meeting deadlines has a number of consequences 	<p><i>Students:</i></p> <ul style="list-style-type: none"> ▪ <i>develop timeline – incorporates all milestones to meet given deadline</i> ▪ <i>Students use their time plan.</i> 	<p>Gantt chart or other selected planning tool</p>

<p>Practising Technologists (either two technologists or two outcomes from one technologists related to their practice)</p> <ul style="list-style-type: none"> Preparation for industry visits. Industry visits and or speakers and/or case studies. Document key steps in practice and the knowledge that underpins the practice and why. 	<p><i>Students can:</i> Students interact with technologist. Recognise/analyse key steps in technologist practice. Show how the technologist's practice influences the students' own practice.</p>	<p><i>Students:</i></p> <ul style="list-style-type: none"> Develop questions Record answers <p>Analyse information for inclusion/exclusion into own practice.</p>	<p>Student submits report. (AS 90371)</p>
<p>Planning</p> <ul style="list-style-type: none"> Discuss and show examples of planning tools. Discuss the value and purpose of planning and the organisation of resources prior to key stages refer back to practising technologist. Explains key information that needs to be evidenced. 	<p><i>Students can</i> Select from a range of planning tools. Understand that planning is dynamic and responsive to key questions What is the next step? Why? Who do you need to talk to? Where? When? What resources do you need to organise? How? Source all information.</p>	<p><i>Student planning clearly communicates next steps and why.</i></p>	<p>Regular student/teacher conferencing.</p>
<ul style="list-style-type: none"> Start to identify initial key factors(all important considerations that are identified as a result of research to date) in order to establish a need(s). Conceptual statement 	<p><i>Students can</i> develop an conceptual statement that reflects stakeholder needs/desires and location constraints</p>	<p><i>Students conceptual statement addresses stakeholder needs/desires/constraints/regulations and location needs.</i></p>	<p>Initial Brief</p>
<p><i>Knowledge and skill development</i></p> <ul style="list-style-type: none"> Discuss means of researching and communicating conceptual ideas: e.g internet search, magazines, existing solutions, drawings, quick models, notes. Sourcing relevant information Students conduct own research and produces concepts for discussion with stakeholders. Refine brief and specifications 	<p><i>Students can:</i></p> <ul style="list-style-type: none"> Select means of researching and recording ideas and justifies decision. Communicate ideas to stakeholders. Reflect on findings to refine brief and establish some specifications 	<ul style="list-style-type: none"> Students' conceptual ideas are informed by research. Conceptual ideas are presented to the stakeholder in a way that clearly communicates the idea. Brief is refined as a result of understandings to date. 	<p>Student/teacher conferencing.</p>

<p><i>Knowledge and Skill Development</i></p> <ul style="list-style-type: none"> Students are introduced to a range of knowledge and skills which are context specific at this level. 	<p>Students develop a 'bank' of appropriate skills for the material(s) they are likely to use</p>	<p><i>Students:</i> <i>Trial a range of techniques.</i></p>	<p>Record findings of all investigations Teacher discusses results with student.</p>
<p><i>Knowledge development</i></p> <p>Codes of Practices and ethical considerations for product development. This includes: material measuring, marking out, cutting and joining, combining methods; modelling methods; properties of commonly used materials including their limitations and possibilities; use of tools and machinery when manufacturing products.</p>	<p>Students know the relevant codes of practice for product development Recognise the codes of practice used by practising technologists</p>	<p><i>Students:</i> <i>understand the codes of practice that are important to their own practice</i></p>	
<p><i>Skill Development:</i></p> <p>Demonstrate how modelling techniques are used to test ideas.</p> <ul style="list-style-type: none"> Concept development including: ongoing planning and brief refinement, knowledge development and materials properties and uses. Sketching to communicate ideas The importance of regular communication with stakeholders. <p>Communicate regularly with key and wider stakeholders</p>	<p>Students can:</p> <ul style="list-style-type: none"> Test and trial key ideas for inclusion/exclusion Plan for each step including resources Develop brief as decisions are made Justify key decisions as in material choice Seek appropriate feedback from stakeholders 	<p><i>Students:</i> <i>record key steps in developing their prototype in order to communicate with stakeholders and gain feedback</i></p>	<p>Model, Photographs and or sketches show development process and the developing brief reflects the key decisions made</p>
<ul style="list-style-type: none"> Gives examples of finalised/ prioritised key factors Provides opportunity for ongoing refinement of brief and development of conceptual design into a final design informed by planning. Production of working drawings. Final Brief and Specifications 	<p><i>Students can:</i> Prioritise and Justify key factors Use planning to inform the development of their final design</p>	<p><i>Students use:</i></p> <ul style="list-style-type: none"> <i>Ongoing planning is used to inform design development</i> <i>Working drawing is a true representation of product to be manufactured.</i> 	<p>Planning documentation Working drawing checked for accuracy</p>

<ul style="list-style-type: none"> ▪ Model of Concept or One Off solution-assembly. 	<p><i>Students can:</i> Assemble and test to demonstrate their design features potential or actual fitness for purpose (to stakeholders and intended location)</p>	<p><i>Students demonstrate potential and fitness for purpose.</i></p>	<p>submits Conceptual Design or One Off solution and written justifications</p>
<ul style="list-style-type: none"> ▪ Confirmed Final Brief and Specifications 			<p>Final Brief and Specification</p>
<ul style="list-style-type: none"> • Conceptual Design or One off solution Evaluation (in situ) with stakeholder and in intended location. • Discuss ‘future viability’ of the conceptual design or suitability of the one off solution 	<p>Students can demonstrate that their outcome is fit for purpose with its intended location</p>	<p><i>AS 90343, 90350, 90371, 90372</i> <i>See assessment schedule</i> <i>Students can develop an outcome and the final evaluation shows that it is fit for purpose.</i></p>	<p>Test evidence and evaluation of outcome being used in situ, including stakeholder feedback.</p>