LAPtek Pty Ltd

www.laptek.com.au

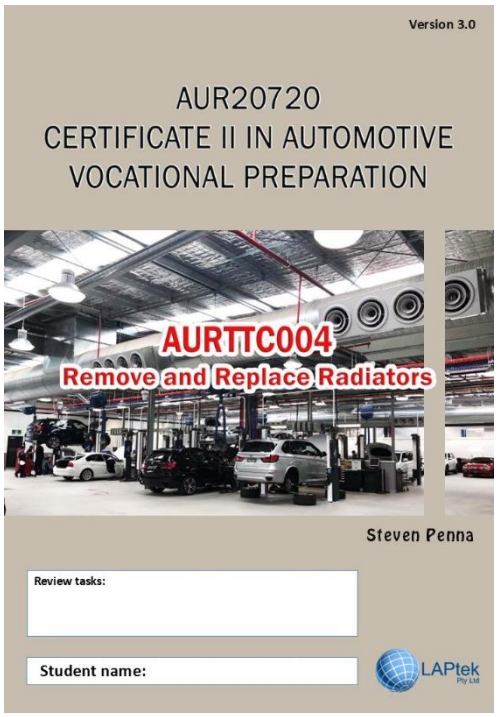
WHO WE ARE

LAPtek was established in 1998 to meet the needs of students and people interested in learning about vehicle repairs/service and the automotive industry. Since then, LAPtek has expanded its portfolio to include Building and Construction, Systems Engineering, Microelectronics and Design Creativity and Technology.

The company centres on desktop publishing and the production of student workbooks for TAFE, schools, colleges and the automotive and building industry.

We aim to provide student workbooks that:

- Teaches a student to think, not what to think.
- Engages the student in both practical and theoretical tasks.
- Is in context to the topic being covered.
- Provides the student with the opportunity to become an independent learner.
- Are self-paced or teacher centred, or a combination of both.



The workbooks require a minimal number of references and resources, this reduces the cost of delivering the course.

The workbooks are designed for students use only and will become a valuable resource to them for referencing later.

Presented by: STEVEN PENNA

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Book code	Book description
SYSTEMS ENGINEERING UNITS 1 TO 4	
SE19-23 U1/2	Systems Engineering 2019-2025 Units 1 & 2 (First edition) ISBN: 978 1925619 461
SE19-23 U3/4	Systems Engineering 2019-2025 Units 3 & 4 (First edition) ISBN: 978 1925619 478
SETR19-23U1/2	Systems Engineering 2019-2025 Units 1 & 2 Teacher Resource (1st edition) ISBN 978 1925619 485
SETR19-23U3/4	Systems Engineering 2019-2025 Units 3 & 4 Teacher Resource (1st edition) ISBN 978 1925619 492
SE26-32	Systems Engineering 2026-2032 *Currently being written. Should be ready end-of-July*
VCE VOCATIONAL MAJOR - Work Related Skills (NEW)	
VCE-WRS1n2	Work Related Skills – VCE Vocational Major Units 1 and 2 (ISBN: 978 1920914 96 7)
VCE-WRS3n4	Work Related Skills – VCE Vocational Major Units 3 and 4 (ISBN: 978 1920914 95 0)
VICTORIAN CURRICULUM DESIGN AND TECHNOLOGIES (STEM) YEARS 5 TO 10	
AI-UNO	Basic of Artificial Intelligence using Arduino UNO ISBN: 978 1920914 516 (VIC/AUST)
AI-UNO2	Artificial Intelligence using Arduino UNO ISBN: 978 1920914 530 (VIC/AUST)
Crane	Using Hydraulics to Transmit Motion ISBN: 978 1925619 645 (VIC/AUST)
ST-FORCE	Using Hydraulics to Transmit Force ISBN 978 1 920914 936 (VIC/AUST)
Sustain	Sustainable Me (VIC/AUST) ISBN: 978 1925619 638
MakeaPet	Design and Make a Pet (VIC/AUST) ISBN: 978 1925619 621
Zero	Towards Zero - Designing for Sustainability (VIC/AUST) ISBN: 978 1925619 522
BS	Assemble & dismantle 4 stroke single cyl. Briggs & Stratton engine (ISBN: 978 1920914 882)
EPOD1	Design & Technologies - Book 1 (5th edition) ISBN: 978 1921838 750
EPOD2	Design & Technologies - Book 2 (5th edition) ISBN: 978 1921838 767

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3D-Picaxe	Design & Technologies - 3D printing advanced using Picaxe ISBN: 978 1925619 515
VIC_Elec-Gears	Introduction to Electricity and Gears (ISBN: 978 1925619 508)
MICRO2	SES - Introduction to Microcontrollers (PICAXE) ISBN: 978 1921838 774
RHAdv	Systems Engineering - Rev Heads Advanced ISBN: 978 1921838 743
RnR	Rockets and rockets cars (ISBN: 978 1921838 255)
ROBOT_P	Make a robot using Picaxe (ISBN: 978 1920914 820)
STEM-D	Stem Smartphone Amplifier (ISBN: 978 1925619 041)
AUSTRALIAN (NATIONAL) CURRICULUM DESIGN AND TECHNOLOGIES (STEM) YEARS 5 TO 10	
AI-UNO	Basics of Artificial Intelligence using the Arduino UNO ISBN: 978 1 920914 516 (VIC/AUST)
AI-UNO2	Artificial Intelligence using Arduino UNO ISBN: 978 1 920914 530 (VIC/AUST)
ST-FORCE	Using Hydraulics to Transmit Force (VIC/AUST) ISBN 978 1 920914 936
Crane	Using Hydraulics to Transmit Motion (VIC/AUST) ISBN: 978 1925619 645
MakeaPet	Design and Make a Pet (VIC/AUST) ISBN: 978 1925619 621
Sustain	Sustainable Me (VIC/AUST) (ISBN: 978 1925619 638)
Zero	Towards Zero - Designing for Sustainability (VIC/AUST) ISBN: 978 1925619 522
Elec-Gears	Introduction to Electricity and Gears ISBN: 978 1925619 607
STEM BK1	DT Book 1 - Electricity and gear trains ISBN: 978 1 925619 546
STEM BK2	DT Book 2 - Basic Electronics (ISBN: 978 1 925619 614)
STEM BK3	DT Book 3 - Introduction to Micro-electronics ISBN: 978 1925619 553
STEM BK4	DT Book 4 - Rocket and Rocket Cars (ISBN: 978 1925619 560)
STEM BK5	DT Book 5 - Make a Robot using PICAXE (SES) ISBN: 978 1925619 577
STEM BK6	DT Book 6 - Smartphone Amplifier (ISBN: 978 1925619 584)
STEM BK7	DT Book 7 - 3D Printing Advanced (ISBN: 978 1925619 591)
STEM BK8	DT Book 8 - Towards Zero Designing for Sustainability ISBN: 978 1920914 523

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AUR20720 CERTIFICATE II IN AUTOMOTIVE VOCATIONAL PREPARATION	
AUMAFA001	Apply for job and undertake job interviews
AURAEA002	Follow environmental & sustainability best practice in auto w/place
AURAFA009	Carry out research into the automotive industry
AURAFA103	Communicate effectively in an automotive workplace
AURAFA104	Resolve routine problems in an automotive workplace
AURAMA001	Work effectively with others in an automotive workplace
AURASA102	Follow safe working practices in automotive workplace
AURETK001	Identify, select and use low voltage electrical test equipment
AURETK003	Operate electrical test equipment
AURETR006	Solder electrical wiring and circuits
AURETR048	Construct and test basic eletronic circuits
AURETR103	Identify automotive electrical systems and components
AURETR115) AURETR146) AURETR147)	Inspect, test and service batteries Remove and refit vehicle batteries Recharge vehicle batteries
AURLTA101	Identify automotive mechanical systems and components
AURTTA003	Use and maintain basic mechanical measuring devices
AURTTA105	Select and use bearings, seals, gaskets, sealants and adhesives
AURTTA127	Carry out basic vehicle servicing operations
AURTTB007	Remove and replace brake assemblies
AURTTC004	Remove and replace radiators
AURTTE007	Dismantle and assemble single cylinder four stroke petrol engines
AURTTE008	Dismantle and assemble multi cylinder four stroke petrol engines
AURTTE009	Remove and replace engine cylinder heads
AURTTJ003	Remove and replace wheel and tyre assemblies
AURTTK102	Use and maintain tools & equipment in an automotive workplace
AURVTA005	Clean vehicles
AURVTW010	Set up and use welding equipment
22614VIC - CERTIFICATE II IN BUILDING & CONSTRUCTION PRE-APPRENTICESHIP	
CPCCOM1014	Conduct workplace communication (ISBN: 978-1-920914-97-4)
CPCCOM1015	Carry out measurements and calculations ISBN: 978-1-920914-98-1
CPCCCM2006	Apply basic levelling procedures (ISBN: 978-1-920914-99-8)
CPCCWHS2001	Apply WHS requirements, policies and procedures in the construction industry (ISBN: 978-1-921838-01-9)
CPCWHS1001	Prepare to work safely in the construction industry ISBN: 978-1-921838-16-3
VU23312	Prepare for work in the building and construction industry ISBN: 978-1-921838-02-6

VU23313	Interpret and apply basic plans and drawings ISBN: 978-1-921838-03-3
VU23314	Erect and safely use working platforms (ISBN: 978-1-921838-04-0)
VU23320-1	Identify and handle carpentry tools and equipment - Book 1 ISBN: 978-1-921838-05-7
VU23320-2	Identify and handle carpentry tools and equipment - Book 2 ISBN: 978-1-921838-06-4
VU23321	Perform basic setting out (ISBN: 978-1-921838-07-1)
VU23322	Construct basic sub-floor (ISBN: 978-1-921838-08-8)
VU23323	Construct basic wall frames (ISBN: 978-1-921838-09-5)
VU23324	Construct a basic roof frame (ISBN: 978-1-921838-10-1)
VU23325	Install basic external cladding (ISBN: 978-1-921838-11-8)
VU23326	Install basic window and door frames (ISBN: 978-1-921838-12-5)
VU23327	Install interior fixings (ISBN: 978-1-921838-13-2)
VU23328	Dismantle basic timber structures (ISBN: 978-1-921838-14-9)
VU23329	Construct basic formwork for concreting (ISBN: 978-1-921838-15-6)
CPC20220 - CERTIFICATE II IN CONSTRUCTION PATHWAYS (National Curriculum - NEW)	
CPCCOM1014	Conduct workplace communication (ISBN: 978-1-925619-71-3)
CPCCOM1015	Carry out measurements and calculations (ISBN: 978-1-925619-67-6)
CPCCCM2006	Apply basic levelling procedures (ISBN: 978-1-925619-68-3)
CPCWHS1001	Prepare to work safely in the construction industry ISBN: 978-1-925619-65-2
CPCCWHS2001	Apply WHS requirements, policies and procedures in the construction industry (ISBN: 978-1-925619-66-9)
CPCCCA2002-1	Use carpentry tools and equipment - Book 1 (ISBN: 978-1-925619-69-0)
CPCCCA2002-2	Use carpentry tools and equipment - Book 2 (ISBN: 978-1-925619-70-6)
CPCCCA2011	Handle carpentry materials (ISBN: 978-1-925619-72-0)
CPCCOM1012	Work effectively and sustainably in the construction industry ISBN: 978-1-925619-75-1
CPCCOM1013	Plan and organise work (ISBN: 978-1-925619-73-7)
CPCCBL2001 CPCCBL2002	) Handle & prepare bricklaying/blocklaying materials) Use bricklaying/brocklaying tools and equipment ISBN: 978-1-925619-78-2
CPCCCM2001	Read and interpret plans and specifications (ISBN: 978-1-925619-73-7)
CPCCCO2013	Carry out concreting to simple forms (ISBN: 978-1-925619-77-5)
CPCCVE1011	Undertake a basic construction project (ISBN: 978-1-925619-76-8

FORMATIVE AND SUMMATIVE ASSESSMENT

Formative assessment

Formative assessment refers to a wide variety of methods that teachers use to conduct in-process evaluations of student comprehension, learning needs, and academic progress during a lesson, unit, or course.

Formative assessment examples include:

- Observations
- Learning tasks
- Peer assessment
- Visual representations
- Questioning
- Response logs
- Self-assessment
- Kinaesthetic assessment
- Discussion
- Graphic organiser
- Presentations
- Concept mapping

Summative assessments

Summative assessments are used to evaluate student learning, skill acquisition, and academic achievement at the conclusion of a **defined** instructional period—typically at the end of a project, unit, course, semester, program, or school year.

- Unit assessments
- End of unit knowledge test

COMPETENCY BASES ASSESSMENT

What is Competency Based Assessment?

Competency based assessment is a learning process that must focus on the elements and performance criteria for each unit of work. The unit of competency (UOC) can be downloaded from training.gov.au.

What do you need to do?

Your job as an assessor is to develop or obtain assessment strategies that provide you with sufficient evidence to enable you to deem the student competent. This evidence must be gathered and recorded over several assessment items. This means that the student must be able to display competence to industry standard and be able to demonstrate the relevant skills and knowledge in a variety of industry contexts on repeated occasions.

What are the best assessment tools?

For your assessment tools to be effective they must be designed to collect evidence against the following areas of competency.

- **Practical skills** – Assess the student undertaking specific workplace tasks.
- **Task management skills** – Observe how the student manages several different tasks to complete a whole work activity.
- **Contingency management skills** – Nothing ever is straight forward, observe how the student responds to problems and irregularities when undertaking a work task.
- **Job/role environment skills** – Note how the student deals with the responsibilities and expectations of the work environment, when undertaking a work task, this includes:
    - Working with others.
    - Interacting with colleagues and managers.
    - Complying with standard operating procedures.
    - Observing company policy and procedures.

The most appropriate method of assessing workplace competence, under normal working conditions is on-the-job in a workplace, if this is not possible assessing workplace competence can be achieved successfully in a simulated workplace environment that mirrors the industry standards. In a simulated work environment, you must use industry standard tools, and equipment.

Conclusion

For assessment to be successful it must be based on an integration of the workplace competencies for the unit into a holistic activity. A holistic activity promotes the development of all aspects of a person, this includes, physical, social, emotional, and cognitive. The cognitive activity refers to any mental process involved in knowing, learning, understanding and remembering. It is an individual's selective activity aimed at transforming the object and achieving the task and goal.

To be deemed competent the student must successfully demonstrate the performance and knowledge evidence within the unit.

A successful assessment activity will require the learner to:

- Demonstrate they can perform the task according to the standards defined in the unit's performance criteria, range of conditions, foundation skills and knowledge evidence.
- Apply the skills and knowledge which underpin the process required to demonstrate competency in the workplace.

MODERATION

What is moderation?

Moderation is a collaborative, peer-appraisal process that promotes a shared understanding of what constitutes quality course design, delivery and outcomes for learners. It is related to maintaining best work practices making sure that the workbooks are suitable, assessments are fair, valid, reliable, and consistent. It is a process for ensuring that assessment grades are awarded appropriately and consistently. Moderation involves checking and reviewing assessment tasks and assessment judgements.

Moderation is a process designed and implemented to:

- Provide comparability of RTO based assessments.
- Form the basis for valid, reliable, fair and consistent assessments.
- Involve all concerned parties in the cooperative process.
- Maintain the quality of RTO based assessments.

What you need to do

Use the Moderation Process to review the content and delivery of the course that you are delivering, then mapping and checking the suitability of the course content, delivery method and outcomes against the UOC Performance evidence.

Both internal and external moderation processes form an important part of a professional development program. Moderation encourages teachers to get actively involved in the review and continuous improvement process implemented by the RTO. The process also promotes teachers to further developing their own networks, skills, knowledge and experience.

Benefits of moderation

The moderation process assists teachers to:

- Plan and review sessions and courses.
- Reflect and document what their learners gained from the course.
- Address employability skills.
- Increase their professional experience and skills, supported by a peer-appraisal model.

VALIDATION

What is validation?

Validation is a quality review process that confirms your RTO's assessment system can consistently produce valid assessment judgements.

A valid assessment judgement is one that confirms a learner holds all the knowledge and skills described in a unit of competency (UOC).

It is best to carry out validation activities after the assessment process is complete. Doing so ensures that your RTO can consider the validity of both assessment practices and judgements made on completed work.

Validation involves checking that your assessment tools have produced fair, valid, reliable, sufficient, current and authentic evidence. Viewing and discussing the evidence allows your RTO to make reasonable judgements about whether the requirements of the UOC have been met.

The validation process involves reviewing a statistically valid sample of the assessments and making recommendations for future improvements to the assessment tool, process and/or outcomes if applicable.

The validation process also includes acting upon any recommendations for future improvement. As part of the validation process, your RTO must have a documented plan which describes:

- Who will lead and participate in the validation activities.
- Which training products will be the focus of the validation.
- When assessment validation will occur.
- How the outcomes of those activities will be documented and acted upon.