

# **VET in the VCE INFORMATION TECHNOLOGY**

## **Task Sample booklet June 2004**

This publication contains samples of assessment tasks designed and used for scored assessment in VCE VET Information Technology in 2002 and 2003.

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The artwork on the cover has been reproduced from 1998 VCE student work:

Clare James

'Can Opener' 1998 (detail)

Ink, gouache and oil stick on paper

188 x 152.5 cm

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# Introduction

This publication contains a collection of coursework tasks developed and implemented by Registered Training Organisations (RTOs) delivering and assessing VCE VET Information Technology in 2002–2003. The tasks were used for assessing the achievement of competence and judging the level of performance for Study Score purposes. (Background information on scored assessment for VCE VET programs is provided at the end of this publication.)

## THE TASK SAMPLES

Four RTOs were selected to represent a variety of locations, size and program structure. The RTOs generously agreed to provide details of the Assessment Plans they devised and the tasks they used for assessment. Assessors were asked to comment critically and frankly on how well their tasks worked for assessment purposes, dealing with issues such as:

- the effectiveness of the tasks in identifying a range of student achievements
- the realism of the tasks in terms of competency based training
- the flexibility of the assessment scheme in catering for students with different needs
- the cost effectiveness of the tasks, in terms of the resources available to students and providers
- scheduling and workload.

The resulting collection should prove valuable to teachers and assessors implementing Study Score assessment in 2004 and beyond.

## **GENERAL ADVICE FROM RTOS**

In addition to providing details of their Assessment Plans, RTO staff had some general advice to offer assessors. The following practices are recommended:

- RTOs should make sure they collaborate with their secondary schools when developing the Assessment Plan, so that enrolment requirements will be met.
- The Assessment Plan needs to cater for all students, taking into account different learning and teaching styles. Tasks must be designed to provide challenge for more able students, but at the same time should be accessible to all students.
- Where there is more than one assessor, meetings should be held to ensure that the assessment is fair, valid, and reliable, and to discuss, understand and agree on the application of the assessment criteria. Contact between assessors should be encouraged during the process and at the end of the assessment program.
- A common bank of oral questions for assessors to draw on has proven useful in judging levels of performance and ensuring fairness.
- RTOs must ensure that trainers and assessors have access to information and professional development on the implementation of scored assessment.
- Providers need a streamlined system for recording and reporting. This should be electronic and ideally should have the ability to export data to meet the different reporting requirements of the TAFE and secondary school sectors.
- Good lines of communication between the students and the assessor are critical for students who may not attend the training site every day or even every week. Electronic communication can assist when delivery is flexible.

# Coursework assessment

## INTEGRATION WITH COMPETENCY BASED ASSESSMENT

The assessment of student performance in the training program continues to be competency based. In order to satisfactorily complete the program students must demonstrate competence in the units that make up the program at Unit 3–4 level. A student who is not assessed competent in all units of competence in the Unit 3–4 sequence will not be eligible to receive a Study Score, as the Study Score is subject to satisfactory completion of the Unit 3–4 sequence.

The assessment of the student's level of performance does not replace competency based assessment, but is integrated with the usual assessment process through a series of coursework tasks.

The tasks are designed to ensure that both assessment purposes can be met: judgment of the achievement of competence and assessment of the student's level of achievement in the Unit 3–4 sequence of the program. Maximum flexibility for the assessor in planning, scheduling and conducting assessments will be allowed, to reflect the range of assessment and delivery contexts in which students are undertaking their training.

## THE ASSESSMENT PROCESS

The features to be integrated with the usual assessment processes are as follows:

- Mapping the coursework task types against the units of competence to be assessed, to ensure that coverage of all units of competence can be achieved using three tasks. Rules apply to ensure an even distribution of tasks across the units of competence, to prevent situations in which nearly all, or hardly any, of the assessment will be based on a particular task. This results in an Assessment Plan for the student.
- Developing detailed specifications for each task so that both the student and the assessor have a common understanding of the performance, product or other evidence required. This step involves adapting the general parameters of the task to the units of competence to be assessed, and checking that the resulting assessment will be within the guidelines for competence set by the national training package.
- Assessing the student's level of performance on the tasks. The assessor must first establish that the student has achieved the units of competence. For students assessed as competent the assessor then records a judgment of the level of the performance on the task, using a set of descriptors, which represent a five-point scale of achievement on five aspects of each task.

Full details of the task types, procedures, criteria and tools to be used in making and recording these judgments are provided in the Information Technology Assessment Guide, available from the VCAA website.

## THE ASSESSMENT PLAN

Assessors are to assess student performance on three assessment tasks. These are to be selected from the task types listed below. A minimum of two of the following task types must be used:

- Work Performance
- Work Project
- Product
- Portfolio.

In selecting the assessment tasks the assessor is developing an Assessment Plan. This is a table that lists all the units of competence that comprise the student's Unit 3–4 sequence and maps them against three selected assessment tasks to ensure that all units have been covered.

The Assessment Plan is determined by the assessor in consultation with the teacher/trainer or the employer, where relevant. The assessor must ensure that the units of competence selected for each task can be integrated with each other and assessed holistically in practice. For example, if two units of competence are to be assessed by a Work Project, it is essential that a project is a suitable method for assessing both units of competence at the same time, incorporating all the necessary evidence.

## TASK SELECTION GUIDELINES

When choosing the tasks the assessor must ensure that assessment requirements specified in the relevant national training package are met. The assessor must also choose the tasks within the guidelines specified in the Assessment Guide. Detailed advice on task selection and development is also provided in the guide.

## CONDUCTING ASSESSMENTS

Assessors are responsible both for the assessment of competence and judgment of levels of performance on the task, for the purposes of developing a coursework score. Students will need to be assessed as competent in all the units of competence covered by a particular assessment task before being eligible to receive a score for that task.

Assessment of the student's level of performance on coursework is based on a set of criteria applied to the tasks. Assessors do not award a letter grade, but will rate each student's level of performance in terms of the criteria specified. Each criterion has a set of descriptors and a numerical rating scale of 1–5. The minimum score for a coursework task is 5 and the maximum score is 25. Criteria sheets are provided in the Assessment Guide and are available from the VCAA website.

## **TASK TYPES**

The four available task types are described in detail in the Assessment Guide.

### **Work Performance**

Work Performance involves observation of the student carrying out a range of practical activities in a workplace or appropriate simulated environment. The assessment will include:

- observation of the student's performance in clearly defined activities
- supporting oral or written questions.

### **Work Project**

A Work Project involves completing a verbal, written or visual report on an aspect of work operations. The Work Project must focus on and include information gathered in a workplace. The Work Project can be selected from:

- an investigation of work procedures/operations
- a planning exercise
- a problem-solving exercise
- a research exercise.

### **Product**

The Product involves designing and making a Product relevant to the workplace. The Product may include:

- an event
- an object
- a visual presentation.

### **Portfolio**

A Portfolio involves compiling a range of evidence of the achievement of specified units of competence. The Portfolio contains a minimum of three and a maximum of five pieces of evidence, drawn from:

- practical exercises/activities
- documentation of a work performance
- workbooks
- logbooks/journal/diary
- written/oral short answers
- visual display
- topic tests.

Evidence collected as part of the Portfolio must include at least two different forms of evidence.





## Kingswood College

‘At Kingswood College there is a strong emphasis on knowing students well and providing a wide range of experiences which foster their holistic development. To be able to be themselves is an accepted principle which gives students the freedom to attempt new things with confidence. As a result of their experiences students develop a sense of their identity. “Know yourself ... Be yourself” sums up this Kingswood attitude.’ (Kingswood College Mission Statement)

Kingswood College is a RTO and has the following qualifications on its scope of registration:

- Certificate II in Information Technology
- Certificate III in Information Technology (General)
- Certificate II and III in Multimedia

Students can also undertake training in Certificate II in Hospitality (Operations) through William Angliss Institute of TAFE.

Certificate III in Information Technology (General) has been a popular choice with students at Kingswood College since it was introduced in 2001, leading students to a number of tertiary studies and career choices.

The VCE VET course is delivered over a two-year period using up-to-date facilities and experienced staff. Clients for project work are actively sought from a supportive community and the students are given opportunities to actively observe the use of information technology through video case studies, workplace visits and excursions.

## THE ASSESSMENT PLAN

### ICA30299 Certificate III in Information Technology (General)

The following Assessment Plan was adopted.

Assigned to:			Portfolio	Product	Work Project
ICAITU018C	Develop macros and templates for clients using standard products	60		✓	
ICAITD128A	Create user and technical documentation	20		✓	
ICAITU126B	Use advanced features of computer applications	40	✓		
ICAITS032B	Provide network systems administration	20			✓
ICAITU019C	Migrate to new technology	20			✓
ICAITS031B	Provide advice to clients	40	✓		
ICAITS020C	Install and optimise system software	20			✓
<i>Allocation of nominal hours:</i>			80	80	60

## THE TASKS

### Portfolio

This task was used to assess:

- ICAITU126B Use advanced features of computer applications
- ICAITS031B Provide advice to clients

Time allowed: 5–12 hours

Students were expected to submit three pieces of work to form the Portfolio. The tasks were submitted over a three week period in the first semester. Student progress was observed on a regular basis and notes were taken to keep abreast of student achievements and progress towards the completion of the tasks.

Students were also required to include an index in their Portfolio, correlating Portfolio items to the specific units of competence.

### Item 1

This was a practical exercise that focused on the advanced features of Microsoft Excel. This included using auto filter, setting up mail merge letters with instructions to others for future use and setting up macros.

***The scenario provided to students***

Perfect Plants is a wholesale plant nursery that sells to retail outlets. The Sales Manager, Dale Daniels, has approached you to solve a marketing problem. The company wishes to be able to send out letters to clients based on the category of plants they require. Currently this is done manually, one letter at a time. This is time consuming and as the company secretary has just gone on maternity leave, a quicker way to produce the letters must be found.

Below is a sample letter that the company wishes to send. A company logo with contact details should be included on the letter. Two Microsoft Excel files would need to be created, one with clients' contact details and the other containing the list of plants available from Perfect Plants. (Perhaps use a local nursery/garden centre brochure for the information.)

***Student instructions***

Create separate mail merge documents for each category of plant using the sample letter and the clients' contact details.

- 1 Set it up so that:
  - the list is filtered for the category of plants required by a particular client
  - the merge only produces letters for a particular plant category
  - the company logo is included in the main letter.
- 2 Open the Plants list file and turn on the AutoFilter feature. Use this to copy the relevant table into each of the main merge documents for each category of plant.
- 3 Create a macro on its own toolbar that will delete a table from the letter each time you create a new main letter.
- 4 You should have six mail merge main document files that are each linked to the client data file.
- 5 Produce a set of user friendly instructions for using your merge documents to create client letters.
- 6 Submit copies of the letters produced as well as your merge documents for assessment.

### Sample client letter

<p>INSERT DATE FIELD HERE</p> <p>INSERT CLIENT CONTACT DETAILS HERE</p> <p>Dear INSERT CLIENT NAME HERE</p> <p>In answer to your query about INSERT PLANT CATEGORY HERE, please find the list of plants that we sell in this particular category:</p> <p>INSERT CATEGORY PLANT LIST HERE</p> <p>Don't hesitate to contact us if you wish to be sent a comprehensive colour brochure listing all of the plants we stock.</p> <p>Yours sincerely</p> <p>DALE DANIELS Sales Manager Perfect Plants</p>
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### Item 2

This item comprised written short answers to a series of questions sourced from the textbook used by the RTO and related to the unit of competence Provide advice to clients. Answers were presented as a word processed document using standard conventions (headers, footers, styles and table of contents). Questions related to helpdesk, identifying the problem, finding solutions and improving customer service.

### Item 3

This was a practical activity using a business case study where students analysed and developed a solution to a set of information processing problems.

### **Fabulous Furniture Pty Ltd**

Fabulous Furniture Pty Ltd is a small family business that manufactures furniture for both home and office use. Geoff Brown and his brother Michael, who does most of the designs, started the company in 1989. Since then, the company has grown and now employs another designer, two cabinetmakers, four carpenters and an apprentice. They also have an administrative assistant called Alice Holloway.

Geoff Brown manages the company and is responsible for long-term planning and ensuring that the company runs smoothly. Alice Holloway does the administrative work and is also responsible for sending out advertising material to clients. She currently types up letters and then sends them to clients, but would like to automate this process as the company's client base has grown to about 200 regular customers.

The office furniture side of the business particularly has grown in the last 18 months. Alice would like to be able to send flyers to selected clients, such as those interested in office furniture, so any automated system must be able to print selected clients' letters.

Customers send orders by mail, fax or telephone. Most customers are furniture retailers and they order from a catalogue that is sent out every six months.

Michael Brown is the Finance Manager. He manages the company's accounts, invoicing system and outsources the payroll to a company called Ferntree. Ferntree delivers the payroll slips once a month. The invoices are currently handwritten on pre-printed forms. Michael would like to introduce an electronic invoicing system but needs some help to set it up. Each invoice needs to contain:

- date
- invoice number
- Fabulous Furniture's company logo and contact details
- customer name
- customer number
- delivery address
- product codes
- product names
- product descriptions
- quantities ordered
- price per unit for each item
- total cost
- cost plus GST (10%)
- total amount due
- deposit
- amount owing
- a statement that says full payment is due within 30 days of delivery.

Fabulous Furniture has six PCs connected by an Ethernet 100Mbps network. There is a Microsoft Windows NT Server, two laser printers (one colour), a plotter and a scanner. There are also two iMac machines connected to the system that run AutoCAD for the designers. Transmission Control Protocol/Internet Protocol (TCP/IP) are used as the protocol for the network.

The PCs currently have the following specifications:

- Intel Pentium III 800 MHz processors
- 256 MB of memory
- 10 GB hard disks
- Microsoft Windows 95 operating system
- Microsoft Office 97 application software (Outlook, Word, Excel, Access, PowerPoint).

### *Work brief*

Students are required to design solutions for Alice Holloway and Michael Brown to help make their work more efficient.

Students are required to submit:

- A brief outline of your advice to the clients regarding your suggestions for a technological solution. This should include a plan for your solution and you should justify your design.
- An electronic copy of the applications developed. This should include internal documentation.
- A user guide that explains how to use your solutions, as well as the technical specifications required to run the applications.
- Sample print outs from your solution.

### **Product**

This task was used to assess:

- ICAITU018C Develop macros and templates for clients using standard products
- ICAITD128A Create user and technical documentation

Time allowed: 15 hours

The Product in this task was a detailed plan, a written report and a visual representation. Students were required to create and document the design for integrated application software to be developed for a selected client. This required the incorporation of macros and templates. Comprehensive user and technical documentation was also developed as part of the task. Part of the task also involved the delivery of training to the client for whom the application was being developed. The task required adequate documentation that the client could use when face-to-face training was completed.

At regular intervals the assessor asked students a series of questions regarding the planning and production of their Product. The assessor documented responses to the oral questions.

### **Student instructions**

For this task students were allocated a client to:

- interview to determine client needs and appropriate software
- gather data at a workplace by visiting, and then observing and/or interviewing a client
- write a plan of the proposed Product (approximately 500–700 words). The plan should outline the design, method, materials/resources required for the Product and must be submitted prior to starting the production phase
- create the associated user and technical documentation, as well as provide some user training

- the suggested software is either Microsoft Excel or Microsoft Access and integrated with Microsoft Word where appropriate, including customisation using Visual Basic. In developing macros and templates, students will be expected to demonstrate skills learnt during the semester
- students will respond to a set of questions regarding the planning and production phases of this task
- a visual presentation of the design process and resulting Product will be submitted when the Product has been developed and tested.

### **The client interview**

Once allocated a client, you are to contact your client to find a suitable time for a preliminary meeting.

A written report is to be completed using the following headings:

1. Interview questions. Make a list of interview questions that will enable you to gather enough data from your initial client meeting to create the application for the client.
2. Date of meeting
3. Preliminary investigation report. Use the following headings to summarise the client's current situation:
  - Name of organisation/department
  - Name of client
  - Date of report
  - Background – information about the business activities of the organisation.
  - Problems and issues – describe the current system and the problems associated with it. Why are you looking for a solution?
  - Objectives – what is the new system expected to achieve?
  - Scope – define the requirements of the new system.
  - Constraints – the factors that restrict or influence the product to be built.
  - Functional requirements – a list of what the new system will be expected to do.
  - Training requirements – what training will be required when the product is delivered?
4. Plan the solution. Create a preliminary sketch of your design – including the user interface and the basic data structure. Come up with alternatives if necessary.
5. Technical documentation. Include the following technical documentation for your design:
  - an Input-Processing-Output (IPO) chart showing generally the data to be input, what processing will be required and the output to be generated
  - a Systems Development Life Cycle Table (SDLC)
  - a data flow diagram or a flowchart to show the flow of information through the new system
  - a data dictionary that defines the objects, variables, links and formulas used in the construction of the product
  - a diagram/s of the user interface design
  - create a preliminary sketch of your design – including the user interface.

6. Create, build, test and deliver phase:
  - create a prototype from the proposed design
  - meet with the client to discuss proposed design
  - make adjustments to the design if necessary
  - build the product
  - test the product
  - create user documentation: create a set of user instructions/documentation for the system you have developed to facilitate the use of your product. Instructions should be clear, concise and include examples of typical input data and the system specifications for the product to run smoothly
  - deliver the product.
7. Evaluation phase. In order to evaluate the product and obtain feedback from the client create an evaluation form. After the training has been delivered, have the client complete the evaluation form.
8. Presentation of the design process and resulting product. Present your design and the Product created from it in a visual presentation to the class.

### **Work Project**

This task was used to assess:

- ICAITS032B Provide network systems administration
- ICAITU019C Migrate to new technology
- ICAITS020C Install and optimise system software

Time allowed: 15 hours

This task was given to the students so that they could create and document the design for a new network and its operating system for installation for a company profiled in a given case study. This was a problem-solving activity.

Students were given five hours to gather the evidence from a (simulated) workplace and ten hours to complete the Work Project and prepare a presentation. Students were then given approximately 15 minutes to present the results of the Work Project, as an oral report or visual presentation.

The steps involved in gathering the evidence included:

- gathering data and primary evidence
- analysing the client's computer system and describing the current operations
- developing strategies to advise the client on improvements to the computer system
- identification of new technology that may be required to implement improvements.

Students were encouraged to work in groups of two or three. They had to develop a work plan to show what each member of the group was going to achieve so that it was easier to authenticate the work of each individual student.

The problem-solving component required students to:

- identify the problems and issues facing the client
- present a strategy to introduce new technology
- develop a work plan that will demonstrate how the solution will be completed
- identify the hardware and software, including the costs associated with upgrading the components
- prepare a timeline detailing the order of completion and how long each part of the project will take.

The students presented their work to their classmates. This presentation included a summary of the analysis of their case study; the work plan and timeline employed in developing the situation; a description of the solution developed, including user and technical documentation and a description of how the solution was evaluated for its effectiveness. A discussion of any future improvements could also be included.

## Case study

### *Chamberlain's Carpets Pty Ltd*

Chamberlain's Carpets Pty Ltd is a small business that retails carpets and other floor coverings for both home and office use. Bryan Chamberlain and his son David own and run the company. Bryan takes care of administration and accounts and is assisted by June Watson in the office. David leads the sales team and is responsible for buying and marketing. The sales team includes Sam Gilbert, Annie Wu and Alex Dimitriadis. Andrew Ryan is the storeman who deals with deliveries.

Currently Chamberlain's Carpets have three stand alone PCs in the same office, one each for Bryan, David and June. The operating system is Microsoft Windows 95 and they use Microsoft Office 97 for record keeping and correspondence. There is only one printer connected to June's PC – a Hewlett Packard LaserJet IIIP. The company would like to upgrade their operating system and be able to access the printer from all three PCs. They would also like to be able to share files across the PCs and have the ability to add two or three more computers to the network in the future.

David approaches you for some advice on updating the current computer system to one that will address the problems of sharing files and the printer, producing marketing material and improving the overall efficiency of the system.

The limitations to any new system would include a budget of only \$4000 (not including the charge for your services); they wish to retain their current PCs if possible and it is not possible to relocate from the current office space.

## Student instructions

### *Step 1 – Background reading*

Make sure you have researched the relevant information that will enable you to develop a strategy to solve the client's problem.

***Step 2 – Gather data (5 hours)***

This step will involve investigating current procedures and gathering data/primary evidence from the simulated workplace. Analyse the client's computer system and describe the current procedures or operations. Develop strategies to advise the client on long-term improvement. Submit your findings in a word processed report of approximately one page. You need to justify your choices and cite all references.

***Step 3 – Problem solving (10 hours)***

You are to work in groups of two or three – the work plan must show how each person contributed equally to the group.

Planning – should not take more than 1.5 to 2 hours.

Identify the problems or issues with the client's current system and outline your suggested strategies to introduce new technology to either solve the problems or improve the situation. You will need to discuss strategies with your group members and come up with a common approach.

Develop a work plan that clearly sets out how you plan to effectively address the needs of the client. You will need to provide a detailed account of the planning required to produce an effective solution for the client. Identify the hardware and software required, the likely associated costs and how the solution will be implemented and evaluated.

The work plan should be in the form of a table that lists each of the tasks to be completed and who is responsible for each task. Include a timeline that indicates the order of completion and approximately how long each task will take.

***Step 4 – Individual visual presentation to present your findings (15 minutes)***

You are to make a visual presentation to the class that includes:

- a summary of your initial analysis.
- an explanation of the strategies used.
- the work plan and timeline employed in developing the solution.
- a description of the solution developed, including technical and user documentation
- a description of how you evaluated of the effectiveness of your solution and any suggested future improvements.

## EVALUATION

### Portfolio

The Portfolio was chosen as the first coursework task because it was thought to be the easiest for students to begin with. They could gradually develop their skills on smaller tasks before moving on to larger tasks.

Most of the Portfolio was completed during class time. Some written answers to questions were completed at home. Students were given a total of 12 hours over three weeks to complete the task. The Portfolio tasks were completed throughout April.

Students used the Microsoft Office suite of applications (Word, Excel and Access).

The time allocated was deemed to be sufficient for most of the students. Students who were well organised and were able to manage their time effectively received the best results. Most of the students found this task to be manageable. A few students were not entirely familiar with the application software used and needed added support to complete the tasks. In future, students might perform better if they are given more time to complete practice activities and theory beforehand, so that they are more comfortable with the use of the software.

### Product

The Product seemed to fit in well with the software-based units, and seemed to be a good way to consolidate the skills and knowledge in the *Create user and technical documentation* unit of competence.

The students each had individual clients with a simulated project brief. They met with their client to determine their needs and produced a design to suit the client. The students each developed a different Product for a different purpose.

With the Product, the client contact (interview, client review, delivery, training and evaluation of Product) occurred at arranged times outside class time to suit the client and student. The development, testing and writing of the report and presentation occurred during class time. Students were given 15 hours in total over a period of five weeks. The Product was completed throughout June.

Students used the Microsoft suite of software for this task – Excel or Access (in the development of the Product), Word (to complete the report), PowerPoint (to present the report). Students were also given the opportunity to use Inspiration for the technical documentation if they wished.

As each student was provided with a different client and a different Project it was very time consuming to organise this coursework task. Students using Microsoft Access to build database applications found it more difficult to produce a complete application in the time allowed. The task was then slightly modified to allow students to produce a prototype of the working model instead of the completed Project. It was felt that a work plan was vital to this task. Whether students found the task easy or not depended on the strength of their software skills and whether they were prepared to research and implement new skills where required by their client's brief. Students with poor organisational skills found the Product more difficult to manage than the Portfolio. It was therefore important that students were well organised, prepared to spend time to research solutions for the client and had a strong understanding of the software applications they were using.

To improve student performance and make assessment of the Product more manageable, it was felt that the next time this coursework task was used it would be better to:

- give the students the same client, or
- base the tasks on a workplace visit or excursion, or
- have a client visit the group.

The use of one software application to develop the Product, instead of a variety, was also seen as an important step to making this task more manageable. The task was difficult to assess due to the complexity and diversity of the Products produced.

In future, for the Product, it would be a good idea to restrict students to producing their own version of the Product and its documentation for a single client and focus the workplace visits more carefully as the task was too open-ended for some students to cope with. Some students spent far more than the hours that were assigned to this task. Due to the diverse range of Projects attempted by students, it was very difficult to assess and to ensure equity.

### **Work Project**

The Work Project was thought to be a good choice for the third coursework task, as it could be completed in a shorter timeframe and it suited the selected units of competence.

The task was carried out in small groups of three students working together as a team, solving a problem presented in a case study. The team completed the planning, research and final presentation, with students submitting individual reports for assessment.

Most of the work undertaken by students occurred during class time. The research and preparation for the task was completed in the student's own time and shown to the teacher at regular intervals. Students were given a total of 15 hours over a period of three weeks to complete this task. The Work Project was completed throughout September.

As far as software applications are concerned, students used Microsoft Word (to complete the work plan/report), Microsoft PowerPoint (to deliver the presentation), and a drawing package such as Macromedia Fireworks (to complete the floor plan design and the technical documentation).

All students completed the task comfortably within the three weeks allocated. The quality of the submissions was largely reflected in the amount of research and effort put into producing the report. More rigid guidelines for the structure of the report and presentation will be provided the next time, to make the time spent on it more manageable. The work had to be shared equally as far as possible and students had to identify their individual responsibilities.

# Kew High School



Kew High School is a co-educational school for students from Years 7–12. It has over 900 students from the Kew, Balwyn, Ivanhoe, East Ivanhoe, Alphington, Clifton Hill, Richmond, Abbotsford and Hawthorn neighbourhoods.

Computer technology has been progressively integrated into the curriculum. The school has four fully equipped computer laboratories, many pods of computers in classrooms, with two class sets of laptops using wireless technology and further technology support in a well-equipped Resource Centre.

Kew High School is a RTO and it has the following qualifications on its scope of registration:

- Certificate III Information Technology (General)
- Certificate II in Outdoor Recreation

Kew High School is a member of the Inner Melbourne VET Cluster (IMVC). The IMVC enables a small number of students from individual schools who would otherwise not be able to undertake VET studies, to join a program. In 2004, students were able to access training in the following programs:

- Multimedia
- Hospitality
- Clothing Products
- Broadcasting.

## THE ASSESSMENT PLAN

### ICA 30299 Certificate III in Information Technology (General)

The following Assessment Plan was adopted.

			Assigned to:	Work Project	Portfolio 1	Portfolio 2
ICAITU018C	Develop macros and templates for clients using standard products	60			✓	
ICAITD128A	Create user and technical documentation	20	✓			
ICAITU126B	Use advanced features of computer applications	40			✓	
ICAITS032B	Provide network systems administration	20				✓
ICAITU019C	Migrate to new technology	20	✓			
ICAITS031B	Provide advice to clients	40				✓
ICAITS020C	Install and optimise system software	20	✓			
<i>Allocation of nominal hours:</i>			60	100	60	

## THE TASKS

### Work Project

This task was used to assess:

- ICAITD128A Create user and technical documentation
- ICAITU019C Migrate to new technology
- ICAITS020C Install and optimise system software

Time allowed: 15 hours

The Work Project was a problem-solving exercise.

The Work Project required students to research the features and requirements of an alternative operating system such as RedHat Linux. Students were required to conduct and document the installation and procedures associated with the installation of the operating system. Students were also asked to provide user and technical documentation to accompany their new software installation.

Students were given three hours to research the requirements of the Work Project, two hours to plan for the installation and ten hours to implement the software installation and write up the documentation as requested.

## Far East Trading Company

### *Part 1 – The Scenario*

The Far East Trading Company has commissioned you to evaluate the workstation configurations of a number of computers they have received through a company merger. The workstations presently run Microsoft Windows 95. The company has a number of surplus Microsoft Windows 98 licences that could possibly be used. The computers are essentially in good working order but are a number of years old. The company has only very limited funds so any recommendations will be influenced by cost factors.

The company needs you to investigate whether they keep Microsoft Windows 95 on the machines or upgrade to Microsoft Windows 98. You will also need to assess the current configuration of these computers to see if they will run Microsoft Windows 98 and report any upgrade of components that is necessary. They have asked that you prepare a comparison of the features and advantages and disadvantages of each operating system.

The company also needs advice on which application program to install. Its needs are essentially word processing, spreadsheet and presentation applications. The company wants you to investigate available products that are cheaper, but compatible with Microsoft Office.

Present your comparisons in table format. In your Work Project you should also include any other issues involved such as training, timelines, implementation method to minimise disruption and resources. The report should also be written so that it complies with company documentation standards. This report should be between 1200 and 1500 words and needs to be completed in class time. The new configuration of the computer can then be determined once your assessor has evaluated this report.

### *Part 2*

After consultation the company has decided to install Microsoft Windows 98 with the application software OpenOffice.org. Based on their previous applications Far East Trading Company have provided you with features they wish to be configured with the new operating system and application software.

Conduct the installation of the new operating system and application software and make sure that all of the software works as required.

Ensure that you document the installation procedures associated with the system software and this technical documentation complies with company standards. Establish a maintenance history log file to document any future changes to the system.

For user documentation produce a sample quick reference card of the application software for users who are migrating from Microsoft Office.

Give a brief one-to-one instruction highlighting any significant features of the system software and application software and prepare a training evaluation sheet.

## Portfolio 1

This task was used to assess:

- ICAITU126B Use advanced features of computer applications
- ICAITU018C Develop macros and templates for clients using standard products

Time allowed:

Planning	1 hour
Portfolio Item 1	3.5 hours
Portfolio Item 2	3.5 hours
Portfolio Item 3	1.5 hours
Approximate total time	9.5 hours

Students were required to complete and submit three items of work for the Portfolio. The Portfolio had to include an index to indicate which pieces of evidence were related to the units of competence assessed in the task (see following Portfolio Index). The first activity related to a family business case study. Students were provided with information in Microsoft Excel format on the pay rates of a handyman business. The students were then required to convert the Microsoft Excel spreadsheet provided to a protected template with extra additions to it such as employee details and tax rates. Students needed to update the presentation of the file and improve the user interface to make it easier to use. Microsoft Visual Basic for Applications was also utilised to customise macros to automate particular functions.

Students also completed user documentation in the form of a template report. This report detailed the number of employees in the system, and the total wage bill. Students also set up mail merge reports for individual employees.

The second item in the Portfolio built on the experiences of the first activity. Students took what they had done and provided a Microsoft Access database solution to the information that had been earlier placed in Microsoft Excel. Students needed to think about the best way to store the information, establish the tables and determine the relationship that existed between each of the tables. They also had to produce a form for the input of data, work on a user-friendly interface to use the system and provide a query facility so that management could pull up and look at summary data about each pay period. Students therefore needed to think about the fields that needed to be added to the query, set up the query and run it to make sure that it worked.

The third item required students to produce a memo template and respond to a series of short answer questions.

### Portfolio Index

<i>ICAITU126B Use advanced features of computer applications</i>	
Manipulate data	Items 1, 2 and 3
Access and use support resources	Items 1, 2 and 3
Configure the computing environment	Items 1, 2 and 3
<i>ICAITU018C Develop macros and templates for clients using standard products</i>	
Determine macro or template requirements	Items 1, 2 and 3
Develop macro or template for client	Items 1, 2 and 3
Provide client support for the macro or template	Item 3

## Item 1

*Scenario*

Handy Home Services is a well established family business that has operated since 1959 in the home maintenance service industry. The company has grown to employ 14 people in various trades. The normal and overtime rates of pay for each of the trades are given below:

Trade	Regular Hourly Rate	Overtime Hourly Rate
Carpenter	\$35	1.5 times regular rate (This is also called time and a half)
Electrician	\$40	1.5 times regular rate
Plumber	\$40	1.5 times regular rate
Gardener	\$25	1.5 times regular rate
Painter	\$25	1.5 times regular rate
Cleaner	\$30	1.5 times regular rate

Gay Handy, who collects handwritten timesheets from each employee, manages the payroll system. She is required to manually calculate the gross income, superannuation (7% of gross income), tax payable and net income. Superannuation is deducted before the tax is calculated, that is, from the gross income.

Due to workload concerns and errors in calculation of income Gay Handy has asked you to automate the payroll system so that manual calculation errors are minimised if not eliminated. She has prepared an outline of how she wants it to look and what it needs to do.

The template needs to be completed so that it will use the trade code to substitute the trade description and also the pay rate for that trade. For each employee it will then use these values to calculate the total hours worked for the week, overtime rate, normal pay, overtime, gross and net income and superannuation. Gay thinks that this will save her time having to enter these details and if the pay rates change she will only have to make the changes once. Gay also wants to know the normal hours, overtime hours and total hours worked for the week, as well as the totals for gross and net income, superannuation and tax. Overtime is calculated for hours over 35 per week.

Gay also wants the spreadsheet to count the number of people employed for each trade as well as calculate the gross wage bill for each trade. She wants the wage bill for each trade represented in the form of a pie chart so that she can see each trade as a percentage of the total wages paid. This is to be inserted as an additional sheet. Gay also wants a printout of the wage details and a printout of the graph. Gay has also asked you for advice on additional features/short cuts that you can provide to make her job more efficient. In particular:

- the printing of the sheet and also the pie chart
- loading of a new blank template for each pay period
- export of the mail merge pay slip details into a file called PaySlipMergeDetails.xls.

**Item 2**

Gay would like a pay slip template created so that so she can merge it with each month's details saved in the file PaySlipMergeDetails.xls. Use the company logo provided by your teacher. Set up a macro that will load a blank template and then complete the mail merge. Make the macro accessible from the toolbar. Build in a query facility so that management can access summary data.

**Item 3**

Gay would like to produce a template to use when she issues memos to staff. She would like to be able to tab from one field to the next to enter the details. She has also asked that it contains the company logo and automatically enters the current date when opened, includes a footer that contains the file name and path, the date created and is accessible from the toolbar.

***Written short answers***

As part of the solution for the information problem at Handy Home Services you are required to demonstrate your understanding of the advice and solution given by answering the following questions:

1. Describe the problem experienced by Gay Handy in the management of the payroll system
2. Describe the training required to allow Gay Handy to operate your solution at an optimal level.
3. Provide appropriate documentation to assist Gay to use your solution.
4. List and describe the sources of help available to Gay, if and when she needs support in operating your solution.
5. Describe how you will obtain feedback from Gay to evaluate the success of your solution.

**Acknowledgment**

This Portfolio task was originally conceived and developed by Kevork Krozian, Forest Hill Secondary College, 2002.

**Portfolio 2**

This task was used to assess:

- ICAITS032B Provide network systems administration
- ICAITS031B Provide advice to clients

Time allowed:

Planning	1 hour
Portfolio Item 1	3 hours
Portfolio Item 2	2.5 hours
Portfolio Item 3	2.5 hours
Portfolio Item 4	2 hours
Approximate total time	11 hours

Students were required to complete and submit four items of work for the Portfolio.

*Portfolio Index*

<b>ICAITS032B Provide network systems administration</b>	
Provide client access and security	Portfolio Item 1– Documentation of work performance
Input into and disseminate disaster recovery plan	Portfolio Item 2 – Report
Monitor network performance	Portfolio Item 3 – Logbook/journal/diary
<b>ICAITS031B Provide advice to clients</b>	
Analyse client support issues	Portfolio Item 4 – Written short answers
Provide advice on software	Portfolio Item 4 – Written short answers
Provide advice on hardware	Portfolio Item 4 – Written short answers
Provide advice on network	Portfolio Item 4 – Written short answers
Obtain client feedback	Portfolio Item 4 – Written short answers

**Item 1 – Documentation of work performance**

You are required to carry out the following task and using a checklist or a short report in point form, record the steps used to complete the task:

A new employee has arrived in the company and you have been given a new account request form. The new employee is part-time and will work only Tuesday to Thursday. Carry out the necessary procedures and document all the steps in the process.

**Item 2 – Report**

You are the resident system administrator in a large company. You are well aware that data security is a critical aspect of a successful information system. You are also aware that damage or loss or viral infection of a single file can cause complete loss of the whole system.

You have been consulted to document the issues and strategies to implement a DISPLAN.

You are required to compile a report detailing the requirements of a plan specifically tailored to the network to ensure that a catastrophe can be avoided where possible. Your report should include advice about what should be done to ensure that sensitive and hard to replicate data is not lost.

You must include a timeline indicating how long the business will need to wait for full restoration of its information system should a disaster occur.

**Item 3 – Logbook/journal/diary****Background**

This task is to be carried out on the network simulating a work/business environment comprising a Microsoft Windows NT Server, a Microsoft Windows 95 workstation, a Microsoft Windows 98 workstation, a Microsoft Windows 2000 workstation, and a Hewlett Packard 1100 LaserJet networked printer using a 'dumb hub' to connect the cabling.

**Scenario 1**

The owner of the business network has reported a number of problems. The network runs a mixture of Microsoft Windows 95, Microsoft Windows 98, and Microsoft Windows 2000 workstations.

The users of the Microsoft Windows 2000 workstation have reported printing problems. Most text prints clearly but certain fonts print as strange characters and some images are not sharp or do not print at all. Another user reports that another Microsoft Windows 2000 workstation will not connect to the network. Another user reports that their workstation is very slow. Several programs were recently installed and another user reports they copied some work to a disk to take home. Their home computer reported it contained a virus. Using a logbook/journal/diary style of documentation, record what steps you take, including the tools you use to identify the problem and make recommendations for a solution.

**Scenario 2**

The owner of the business network has reported a number of problems:

- The network has intermittent problems of connections dropping in and out and the network has become agonisingly slow. The business has recently completed some renovation work and added new connections to the network.
- The server has begun to 'freeze' and this tends to occur when many users are trying to log on at the same time.
- The backup tape unit has not worked for the last two nights. It has not worked since an electrical storm two nights earlier during which the power was cut for a few seconds.
- Whilst you may not be able to 'fix' the problem immediately you are, however, required to carry out certain diagnostic tests to determine the symptoms and the circumstances under which the problem occurs.

Again use a logbook/journal/diary style of documentation to record what steps you take, including the tools you use to identify the problem and make recommendations for a solution.

**Item 4 – Written short answers**

Answer the following questions to demonstrate your understanding of the solutions and recommendations given to the owner of the simulated business/work network:

- Describe the problem experienced by users of the Microsoft Windows 2000 workstations in terms of the hardware and software.
- What problems may be present and also encountered in the future by maintaining two different desktop configurations such as Microsoft Windows 95C and Microsoft Windows 98 SE?
- What is meant by hardware compatibility issues?
- What is meant by software compatibility issues?
- What recommendations would you make to the owner of the simulated business in order to minimise compatibility issues?
- Describe the hardware requirements for your solution to run efficiently.
- Describe the software requirements for your solution to run efficiently.
- What are possible limitations on the networking capabilities of the Microsoft Windows 95 machines compared to the Microsoft Windows 98 machines?
- List and describe the sources of help available to the owner of the business if and when he needs support to implement your solution.
- Describe how you will obtain feedback from the owner to evaluate the success of your solution. Give some examples.

## EVALUATION

### Work Project

For the Work Project, students were stretched for time and it was necessary to offer them an extra two hours to complete the task. The Work Project was due in July.

Students found the task straightforward once the teacher clarified what was intended. To make it easier for future students, the task will be revised and edited. The basic premise of the task, however, will not change, as the breadth and difficulty of the task were appropriate.

### Portfolio 1

All work for the Portfolios was completed in class and students generally worked individually. However, some tasks such as installing software were done in pairs, but each student had to produce their own documentation of the process. Individually they were asked questions and they had to perform a task to confirm they understood the concepts.

For Portfolio 1, many students found the task difficult and also too long for the time allowed. In particular, they found the Microsoft Visual Basic coding of macros very difficult. This certainly challenged the best students in the group. The problem arises because students are not previously exposed to Microsoft Visual Basic and therefore have to learn the language in a brief time span before attempting the task.

It was thought appropriate to shorten the task the next time it was given to students by dropping the database component by only using recorded macros instead of writing macros in Microsoft Visual Basic for Application script. Some of the wording would also be edited to make the instructions clearer.

Another option is to change the order of the tasks around and give this task to the students at a different time of the year, such as Term 2. This was seen as a better alternative as Term 2 contains fewer interruptions. It was also seen as a burden on students to have to attempt more than one coursework assessment in a term.

### Portfolio 2

For Portfolio 2, the amount of time provided to students to complete these tasks was found to be sufficient. Students handled most components well, except for the DISPLAN. For the next year, the wording of the task will need to be altered to make the requirements of the task clearer to the students. The other components seemed to work without any great difficulties.

The first Portfolio was collected from students in May and the second Portfolio was due in August.

In conclusion, the assessor experienced some difficulty applying the scoring criteria to the coursework tasks. The assessor believes that the VCAA could provide more detailed advice about the implementation of the scoring criteria when designing the tasks.



## Nhill College



Nhill College is a small rural P–12 College in north western Victoria. It has a total enrolment of approximately 400 students and offers senior students a comprehensive range of VCE subjects including a wide range of VCE VET programs. This is complemented by the provision of VCAL and a local school-to-work program.

In 2002 and 2003, Nhill students were enrolled in the following VCE VET programs:

- Automotive
- Building and Construction
- Business
- Electronics
- Engineering
- Horticulture
- Hospitality
- Information Technology
- Multimedia
- Sport and Recreation

Nhill College uses a number of RTOs including:

- University of Ballarat TAFE Division – Horsham Campus
- Wimmera Hub Inc.
- Longerenong College which is part of the Institute of Land and Food Resources – The University of Melbourne
- Precision Consultancy Pty Ltd
- Workco Ltd.

Nhill College is affiliated with the Wimmera and Southern Mallee cluster for the delivery of VET programs.

## THE ASSESSMENT PLAN

### ICA30299 Certificate III in Information Technology (General)

The following Assessment Plan was adopted

		Assigned to:	Portfolio	Product	Work Project
ICAITU018C	Develop macros and templates for clients using standard products	60			✓
ICAITD128A	Create user and technical documentation	20		✓	
ICAITU126B	Use advanced features of computer applications	40	✓		
ICAITS032B	Provide network systems administration	20			✓
ICAITU019C	Migrate to new technology	20		✓	
ICAITS031B	Provide advice to clients	40	✓		
ICAITS020C	Install and optimise system software	20		✓	
<i>Allocation of nominal hours:</i>			80	60	80

## THE TASKS

### Portfolio

This task was used to assess:

- ICAITU126B Use advanced features of computer applications
- ICAITS031B Provide advice to clients

Time allowed: 7 hours

The Portfolio contained four items. The first Portfolio item was a practical activity using a case study called The Spaghetti Emporium. This practical activity required students to establish a Microsoft Word template document and mail merge it with a Microsoft Excel spreadsheet that students had designed and populated. A second worksheet with customer data was also required, using filters to display certain elements of data (such as all the customers living in a particular suburb). Finally, students were expected to devise a short user manual for using the data sheets they had compiled.

The second item in the Portfolio was also a practical activity that required students to design a front page index for all of the data sheets constructed in the first activity. Students then used Microsoft Visual Basic for Applications script to manufacture macros, allowing the user to navigate from worksheet to worksheet or from file to file, via the index, or introductory page. Again, a short user manual was required as part of the activity, to explain to the user what a macro was, how macros could be used and how to customise the introductory index sheet to add further buttons and macros as required.

The third item in the Portfolio, a visual display, asked students to put together a multimedia presentation using Microsoft PowerPoint and a version SWiSH on the topic 'The Commonwealth Games are coming to Melbourne'. An outline of the information required on each slide was provided to students.

The fourth item in the Portfolio required students to submit written short answers to a number of test questions. The questions related to advanced features in Microsoft Word and Microsoft PowerPoint, the advantages of these advanced features such as macros, templates and mail merge facilities, the purpose of a user manual, the different types and purpose of documentation, and the function and purpose of a help desk

Students had to include an index to indicate which pieces of evidence were related to the units of competence assessed in the Portfolio.

### Task 1 – The Spaghetti Emporium

Reggiano Spagettiano from The Spaghetti Emporium believes that excellence in the production of spaghetti and pasta products is as important as life itself. In 1954, Reggiano arrived in Melbourne and at time there were very few places that offered authentic Italian cuisine. He decided that the time was ripe to open up an Italian-style food store.

Gradually, the local people caught on to Reggiano's products. He also found that Italians from near and far began coming to his shop to purchase the authentic products that he was able to offer. As his fame grew, so too did his range of products. With the increase in trade came a demand for more space and before long, Reggiano bought out the business next door so he had more floor space.

Initially, Reggiano kept his records of receipts and payments in a book ledger. It was updated with the receipts from the register once a week and maintained over a long period of time. However, as business increased, the amount of time that Reggiano had to maintain the books decreased, until he found that he was falling further and further behind in the paper work.

Providing receipts to customers became a larger chore as his business expanded and he found that he was spending much of his evenings writing out receipts from the day's trade rather than enjoying traditions such as eating, visiting relatives and tending his garden.

Reggiano's son, Emilliano strove to show his father that technology could be used to enhance the business.

Finally, Reggiano allowed Emilliano to develop a blue print that would computerise The Spaghetti Emporium.

#### *Work brief*

Input the customer details into Microsoft Excel and then type up a Microsoft Word template document that will allow you to send the weekly specials to customers. The first weekly specials are:

- 2 kg tomato and basil spaghetti                   \$ 6.20
- 1 kg homemade gnocchi                               \$ 4.50
- 1.25 litre bottle of sauce                             \$ 2.50
- 5 kg fettuccine   \$14.00

Conduct a mail merge, and then print out and submit five of the merged letters. Also, print out the form letter with the merged fields showing.

Create a second worksheet using the same customer details. Use filters so that only customers living in one suburb or town are displayed. Print out both worksheets.

A short user manual should accompany your work explaining how a mail merge works and how to use it.

### *Task 2*

Create a front page for your spreadsheet for The Spaghetti Emporium and re-name the tab 'Index'. Place two buttons on this introductory spreadsheet; each will take you automatically to the next sheet.

A short user manual should accompany the exercise, explaining what a macro is, how to use it, and how to add another button to the spreadsheet at a later date if required.

### *Task 3*

The Commonwealth Games are coming to Melbourne in 2006. Create a multimedia presentation/movie using a version of SWiSH that can be placed into a Microsoft PowerPoint slide show. The presentation should last for thirty seconds, and start with a banner that reads: 'The Commonwealth Games are coming to Melbourne'.

Details for each slide are provided below:

- use the following statement in a slide: 'A celebration of sport presented by the Victorian Government and the people of Victoria'. Include photos of Commonwealth Games sports and/or flags of Commonwealth countries
- include a map of Australia
- include a map of Victoria with Melbourne clearly labelled
- provide a brief description of Victoria – perhaps include information such as population, geographic size, large regional centres, types of industry and farming undertaken
- select five Victorian tourist attractions; provide a photo and a brief description of the attraction and where it is located in Victoria. Use at least five different slides
- provide a brief description of current facilities available for use as Commonwealth Games venues
- include a photo of at least two of these venues
- include an acknowledgments slide listing web addresses and source of any pictures used.

Any images or information downloaded from the Internet must be properly acknowledged so as not to infringe copyright.

Once the presentation is complete, save it in the appropriate format and insert it into a Microsoft PowerPoint slide format for viewing.

**Task 4****Short-answer test**

1. Name two advanced features that can be used in Microsoft Word and explain their function.
2. Name two advanced features in Microsoft PowerPoint, and explain their function.
3. What is the advantage of using the mail merge facility in Microsoft Word?
4. What is the purpose of a user manual?
5. In what ways can a user manual be provided to a client?
6. What is the difference between a user manual and a technical manual?
7. When providing advice to a client regarding a computer upgrade, what important factors should you discuss with the client?
8. What is the purpose of a macro?
9. What are some common macros that can be used in Microsoft Excel?
10. Where are macros saved?
11. What are three ways of navigating from one worksheet to another worksheet?
12. What is the function of a help desk?
13. What sources of information can a help desk use to look up answers to problems?
14. How do you password protect a word document?
15. Can you protect an Microsoft Excel spreadsheet in the same way?

**Work Project**

This task was used to assess:

- ICAITU018C Develop macros and templates for clients using standard products
- ICAITS032B Provide network systems administration

Time allowed: 12–13 hours

The Work Project was a problem-solving exercise related to the workplace.

The Work Project was divided into two parts. Students were given a case study based on a company that required a DISPLAN and installation of new software to create templates. Students were asked to prepare a report based on the requirements of a DISPLAN.

The second part of the Product asked students to respond to a series of questions that would assist in the preparation of an instruction manual to guide users in developing a set of templates and macros using standard software applications such as Microsoft Word and Microsoft Excel.

**Part 1****Case Study**

A major computer virus has struck the electronic world. It has destroyed a number of computers, deleting the address books from countless Microsoft Outlook programs, replicating and sending harmless messages to millions and millions of computers worldwide and deleting system files from unprotected computers.

An employee has discovered the virus in your workplace and luckily it could be deleted, avoiding an information catastrophe.

Your bosses, however, are concerned that there is a lack of documentation covering such a catastrophe and have asked you, as the resident computer administrator, to compile a report to them detailing the requirements of a plan to ensure that a catastrophe can be avoided where possible. The report should also advise on what should be done to ensure that data is not lost.

In your report include a detailed solution to the disaster plan:

- Discuss with the company what a DISPLAN is.
- Develop a display for this company that identifies the risks that their data is exposed to on the network, put in place control measures or ways that these risks can be minimised and details of what steps should be taken should a disaster still occur.

## Part 2

The following questions were provided to students.

1. What is a document template?
2. What are some common things you might put on a document template?
3. How do you edit a document template?
4. What are some common macros that can be used in Excel or Word?
5. What is the purpose of a macro?
6. What is a one-to-many relationship in a database?
7. What is the purpose of a query in a database?
8. How can a Form Wizard help data entry in a database?
9. What is the difference between operating software and application software?
10. How would you make a shortcut and how would it help you?
11. There are a number of programs such as ScanDisk available. What is the purpose of such a program?
12. What is software piracy?
13. What is freeware software?

Students are to include the written responses to these questions in their report and these questions can assist in the preparation of an instruction manual to guide new users in developing a set of templates and macros using standard software application.

The instruction manual is to be included in the report.

## Product

Time allowed: 12 hours

This task was used to assess:

- ICAITD128A Create user and technical documentation
- ICAITU019C Migrate to new technology
- ICAITS020C Install and optimise system software

The Product in this task was a report and installation for the client. Students were presented with a business scenario describing a recently established rural energy company, which needed help to make its information system run more effectively and efficiently.

Students were required to investigate possible options for loading a new operating system over the current Microsoft Windows 98 system. Once they decided on the best available option, they were provided with the software and asked to install it on a computer. They were also asked to load appropriate application software onto the newly set up computer so that the users of the system could maintain a database of customers. Students also had to complete user and technical documentation as part of the task.

The Product was separated into three parts – students were given three hours to research the different operating systems and the advantages and disadvantages of each one. Students were then given approximately an hour to write up and present their findings in a plan, with a recommendation on which system software to load and the application software that needed to be loaded onto the computer to meet the requirements of the user. Finally, students were given eight hours to load all the software onto the computer that was provided to them and write up the relevant user and technical documentation. The students were provided access to a range of resource material to help them address any problems as they arose.

### **House Zappers**

House Zappers is a rural energy producing company that was founded about 19 years ago. Over the last year, as government regulations were eased the House Zappers found that it was able to offer its unique brand of electricity at a competitive price to households and businesses.

Originally, four employees worked for the company. Dave Roberts is the foreman, and basically runs the company. It is his job to make sure that the electricity is delivered to households at the demand that is required. Dave is aware that good customer relations are of paramount importance and if a customer makes a complaint about a lack of supply of electricity that is justified, Dave instantly grants them a \$50 concession on their electricity bill.

Sheila Concern works in the office and answers the phone. It is her job to collate the usage data that is given to her, enter it into the computer, and generate the invoices that are mailed out to the customers. She currently uses an Intel Pentium 600 MHz with 128 MB of RAM, 20 GB HDD, Microsoft Windows 98 and Microsoft Office 97.

Dahlia Mocassin has worked for the company for three years. Each day, she does the rounds of properties in the area that are supplied electricity from House Zappers. She has a table drawn up on a clipboard, with the addresses of the properties that she has to visit that day. One of the columns supplies the electricity meter reading that she took the last time she visited – generally every 90 days. Dahlia enters the current meter reading in the appropriate column and if she has time, determines the electricity usage for the billing period. If not, she leaves the usage column empty and assumes that Sheila will work it out later.

Bob Deremiah looks after the machinery at the electricity plant and ensures that the supply of electricity is kept constant. Periodically, he checks the electricity pipes for leakages, as any escaping electricity is wasted money.

Dave is becoming increasingly annoyed and concerned about the costs associated with running Microsoft Windows 98 and Microsoft Office software. He has heard about cheaper alternatives such as Linux and Geometer's Sketchpad. Although he does not know a great deal about these software alternatives, he is willing to look at other products.

Dave has asked you to research the alternatives, test them out and see if they are worthwhile pursuing as alternatives to the current systems.

### **Student Task**

- present research findings in a detailed plan
- conduct the installation of the new operating system
- load on an application such as Geometer's Sketchpad
- document the installation procedures associated with the system software
- complete user documentation for Microsoft Word XP

### ***Assessment questions***

1. What is technical writing?
2. Do you think that is better to get an external consultant to write the user documentation rather than the person who wrote the program?
3. Why is backing up data an important process to follow and how often do you think data should be backed up?
4. List three media that can be used to back up data and the approximate capacity of each.
5. There are many programs available now such as Microsoft Backup, BrightStor ARCserve, and Second Copy. What is the purpose of such programs? Discuss how they may improve effectiveness and efficiency in an organisation.
6. Define what an operating system is and give three examples. How is it different from application software?
7. Why is it not possible to view Linux and make files using Microsoft Windows as the operating system?
8. What is contained in a DISPLAN?
9. What general principles guide technical writers?
10. Briefly describe four types of documentation.
11. What things do you need to consider when upgrading to new software?

## EVALUATION

Students were directed to complete the tasks individually. The tasks were all computer-based and students were expected to present their findings in electronic format.

The time allocated to students appeared to be generous as most of the students completed the tasks in less time than allotted. The time allocated for each task is to be reviewed; however, it was worth noting that this group of students was very capable and future students may require the additional time.

The software used was predominantly from the Microsoft Office suite –Word (for macros, typing and presentation of the required documentation), Excel and PowerPoint. Whereas for the multimedia presentation, a version of SWiSH was used. For the Product, Linux and Microsoft Windows NT operating systems were used, in addition to OpenOffice.org and Geometer’s Sketchpad for the software applications.

The Portfolio was due in May. The Work Project was collected from the students in July and the Product was completed in September. Students were able to complete the coursework tasks within the allotted times.

In future, it would be useful to have a preparation class a week before students commenced work on the tasks, in order to help them organise their time appropriately and give them the opportunity to demonstrate a high level of performance. This would also assist the weaker students who needed a bit more time to digest the requirements of the task and organise their time accordingly.

After conducting scored assessment for the second time, it was found to be far easier to prepare the assessment plan before the school year commenced, as this led to a more defined delivery timeline. The second year of assessment also gave a greater understanding of the requirements of the assessment tasks.

The flexible delivery strategies which can be used to deliver the units of competence, regardless of stream, are a great feature of the VCE VET Information Technology program. Schools were able to use the software or hardware resources available within the school. This flexibility allowed students to pursue the software that they were interested in. For example, students could investigate distributions of Linux – RedHat Linux as opposed to Mandrake Linux or Corel Linux. The flexibility within the training package also allowed the teacher to concentrate on the strengths and skills that students possessed, as they were able to use software programs they were familiar with rather than mandated software.

It should, however, be considered that this flexibility can create increased difficulty when assessing a diverse range of tasks. As a variety of software programs were used, some tasks were found to be more difficult to assess against a common set of criteria; however, students enjoyed the opportunity to pursue areas of interest.



# Box Hill Institute of TAFE



Box Hill Institute of TAFE's Centre for Vocational Access and Education offers a diverse range of programs designed to meet the needs of many different members of the community.

The Centre for Vocational Access and Education offers a wide range of courses for students who wish to return to study or work, or who wish to pursue further study.

Students in these programs include adults returning to study or seeking vocational change, women returning to the employment market, overseas-born professionals entering the employment market and people seeking to improve literacy, numeracy and English skills.

The Centre continues to meet the specific needs of all these groups through relevant and professional program content and flexible delivery in appropriate learning environments.

There is a comprehensive range of VCE subjects and VCE VET programs offered, as well as a number of courses that provide a bridge into VCE, including the Certificate of General Education for Adults. In addition, the Centre offers the newly accredited Victorian Certificate in Applied Learning. These courses afford opportunities for progression along various pathways.

Box Hill Institute is in partnership with a large number of secondary schools for the provision of VCE VET programs including:

- Automotive Technology
- Building and Construction
- Business
- Community Services
- Equine Industry
- Electronics
- Furnishing
- Hospitality
- Information Technology
- Multimedia
- Music Industry.

## THE ASSESSMENT PLAN

### ICA30199 Certificate III in Information Technology (Software Applications)

The following Assessment Plan was adopted.

Assigned to:			Product	Work Project 1	Work Project 2
ICAITU018C	Develop macros and templates for clients using standard products	60		✓	
ICAITD128A	Create user and technical documentation	20		✓	
ICAITU126B	Use advanced features of computer applications	40	✓		
ICAITU019C	Migrate to new technology	20			✓
ICAITS031B	Provide advice to clients	40	✓		
ICAITS020C	Install and optimise system software	20			✓
<i>Allocation of nominal hours:</i>			80	80	40

## THE TASKS

### Product

This task was used to assess:

- ICAITU126B Use advanced features of computer applications
- ICAITSO31B Provide advice to clients

Time allowed: 15 hours

### Scenario

A local hardware store has recently merged with a chain of other hardware stores. They are looking to link their respective information systems together to make savings in terms of stock control, re-ordering stock, etc. They have asked you, as the systems analyst, to suggest and build a prototype system that would better meet their needs.

### Product: Software configuration

Students were asked to provide a plan of approximately 500–700 words completed in class time detailing support issues, the problem that needs to be solved and the initial response as to the best way of dealing with the problem.

Students were presented with the current range of hardware and software configurations of the existing computer network and asked to comment on whether the current components would be satisfactory or not, or whether parts of the network would need to be upgraded in order to function at the required level. A budget detailing the cost of the upgrade was requested as well.

Students had to complete the software requirements of the solution, including populating a table of data with specific information needs, creating macros that increased the efficiency of the data transactions and triggering warning messages when the level of the stock items dropped below a pre-determined critical level. Students were also required to prepare a report that detailed how the file could be shared across the network and what other hardware and software components would be needed in order for this to happen. Part of the requirements also asked students to prepare a mail merge facility that would allow items to be quickly re-ordered from the manufacturers and distributors.

A report detailing how the training would be provided to each storeowner was also requested. This included training covering aspects of the network, how to use the spreadsheet, how to print files and how to maintain the computer system. As part of the submission, students were required to produce a survey that could be sent to the storeowners asking them if they were happy with the new system.

The assessor developed a set of questions that each student responded to. The assessor documented these responses as evidence of student achievement.

## Student instructions

### *Hammer 'n' Tongs Hardware*

The local hardware store, Hammer 'n' Tongs has hired you to take charge of their computer information system. It is a relatively small store, which has recently merged with a chain of hardware stores. All the stores have different information systems and different ways of storing data. The client has asked you to come up with a consistent approach to the storage of data, so that the computer systems are all interchangeable and data that is stored on one computer is compatible with data that is stored on another computer.

The client has also recently installed a dedicated cable network that links all the computers together in a WAN. This means that all the computers can access one centralised file containing the inventory data.

The client hopes to be able to make cost savings by ordering in bulk to decrease unit costs. The client would like a prototype solution to be presented to them within a month so that they can determine the long-term viability of the system.

Steps in making the Product:

1. Analyse the needs of the client, and present a plan (approximately 500–700 words) detailing support issues, the problem that needs to be solved and your solution to the problem.
2. Provide advice to the client regarding appropriate software and hardware that will need to be purchased. The average configuration of the computers currently being used is:
  - CPU speed: Intel Pentium 3 866 MHz; 128 MB RAM; 20 Gb HDD; 15" monitor, mouse, keyboard, 20 X CD-ROM. Software: Microsoft Windows 98, Microsoft Office 97.
3. If upgrades are required, detail the components that need to be upgraded, and an approximate cost.
4. Establish a table of data using an appropriate software program that can record the following data:
  - part number
  - part item
  - purchase cost
  - sale price

- store location
  - quantity sold
  - total sale price.
5. Populate the table with sample data of about 30 entries, five of which contain items that have already been sold; the remaining 25 items are unsold at this point. All quantities should initially be set to 100.
  6. Now create a second table in the same file, which initially contains the same data as the one above. This table will be used by each individual store and will periodically refresh the first table. Modify this table so that it only displays items that are yet to be sold.
  7. Create a macro that refreshes this worksheet so that each time an item is sold, it removes the 'sold' items.
  8. Create a macro that refreshes the central file to record item sales across the stores.
  9. Provide a report detailing how the files will be able to be shared across the network and what components are needed in order to ensure that this can happen.
  10. The central file needs to take into account stock levels. When stock levels fall to critical levels (i.e. quantities of ten or less), a message should be triggered to order more parts. Use the Data, Validation facility to achieve this.
  11. It is requested that at the end of each week, a button on the worksheet can be pressed. This will print the worksheet out to a networked printer.
  12. To enable the quick re-ordering of stock, the storeowners would like you to create a worksheet that stores the items that need to be re-ordered. Again, this worksheet needs to be able to be refreshed so that all items with critical quantity levels can be re-ordered in a timely fashion.
  13. A mail merge facility can now be established so that the required items can be quickly re-ordered. Establish the required files to do this; set up a prototype mail merge facility and print out a sample of five mail merge letters.
  14. Present the Product to each storeowner with instructions on how to use: the network, the worksheets, print files, refresh.
  15. Provide a feedback form that you will use to determine whether your training and software development has been successful.
  16. Print out the code for all your macros.
  17. Print out all the worksheets, and any other documentation that you have produced.
  18. Submit all the required documents.

### **Work Project 1**

This task was used to assess:

- ICAITU018C Develop macros and templates for clients using standard products
- ICAITD128A Create user and technical documentation

Time allowed: 15 hours

The Work Project was a planning exercise that required students to solve a problem for a business or their school. For instance, they could approach their school canteen and offer to streamline the supply ordering system, or the main office to help them with booking sheets for rooms. Students were told that it was necessary to include macros and templates as part of their solution.

The students were responsible for approaching a company, or the administrative/teaching staff at their school, to see if there was anything that they could do to improve the efficiency of the information system. If the response was positive, the students then needed to organise a time to interview relevant personnel. They needed to write up questions that they intended asking and make a convenient interview time. Students were then required to prepare a report of their findings.

### Student instructions

- gather data at a workplace by visiting and then observing and/or interviewing. You need to identify a problem.
- plan the proposed solution. The plan should outline the design, method, materials/resources required for the solution and must be submitted prior to starting the production phase.
- produce the design for the intended solution (maximum time about 10 hours) and submit for assessment.
- present a report with a word range of 1200–1500 words

Your task is to identify a problem and plan a solution for a business or company. For instance, it may be to make an easy ordering system for the school tuck shop; it may be to make an inventory control spreadsheet for a local company. The solution you create may have to take into account things such as the items that are ordered, the suppliers of that item, and the amount of remaining stock.

Determine which company or business you are able to interview. Approach the manager or person involved and establish a timeframe in which to interview them.

Prior to conducting the interview, you will need to discuss with your teacher a list of questions you have developed to help you find out the needs of the company. Macros should be determined that are appropriate for individual circumstances, but might include macros to move from one screen to the next, queries that return certain reports such as stock levels, macros that alert the user once a stock item falls below a certain level. Templates will also be developed to promote a unified view of the organisation and could include business cards, letterheads and order forms

Essentially, your task is to make one of the jobs of the company easier and to provide standardised templates that can be used for various processes such as ordering, or disseminating information. If the company has already established these items, your role might be to suggest methods of improvement.

1. Organise a time to interview the appropriate personnel. Prepare a list of questions that you will need to ask the person you are interviewing. Show these questions to your teacher before you proceed.
2. Interview the person. You may also be able to observe them working in order to gain a better appreciation of how they work, the problems that they encounter and how you can customise the macros and templates for them to make their work practices more efficient.
3. Type up this interview using your company's template and present the findings to your teacher.
4. You now need to produce a detailed plan of the design of the solution – what program you will use (generally Microsoft Word, Excel or Access, or a combination of these), the design of the program, the materials and resources that are required, and a justification of the program detailing why it will improve the operation of the company. As a guide, your final report will be approximately 1200–1500 words.
5. Show the plan to the person you interviewed and have them sign their approval for the enhancements you wish to make.

6. The business will require some documentation to accompany the plan that you have devised.
  - (i) Produce appropriate technical documentation, which specifies the operating system, hardware configuration, hardware components, co-existing applications software and printers, which will be required to run with the program.
  - (ii) Produce user documentation, which explains how to use the program, what it does, and how to input and extract the required information. It should include step-by-step instructions about how to load and run the program, it should have a trouble-shooting section that explains what to do when something goes wrong with the program, and it should describe how the data is validated to ensure that incorrect data cannot be accepted.
7. Design an evaluation form relating to your product that can be given to the person who is using it, to determine whether the new program makes the job more efficient.
8. Submit the final report including all documentation associated with the Work Project.

### **Work Project 2**

This task was used to assess:

- ICAITU019C Migrate to new technology
- ICAITS020C Install and optimise system software

Time allowed: 15 hours

Work Project 2 is a problem-solving exercise that required students to upgrade the operating system of a company and to prepare a backup procedure to safeguard information. Students had to formulate a DISPLAN, which documents the process to undertake if a disaster strikes. The key requirements are to produce a report detailing the hardware and software required to use specific backup programs, including a simple user manual showing how to use the backup hardware and software, explain the various options for upgrading the system software and provide justifications for the recommendations made in the report.

Students were expected to obtain the necessary hardware and software required to undertake the backup, install it and ensure that it worked satisfactorily. Students were expected to provide both oral and written instructions on how to use the software to maximise the efficiency of the new computer system.

Finally, a formatted DISPLAN was required to be submitted for the completion of the task.

### **Scenario**

The company that has contracted you to work for them on a short-term project would like you to provide them with advice on upgrading the operating system that they are currently using on their network. Microsoft Windows 98 has been a stable operating system for them for three years, but they are finding that many of the programs that they are installing on their system do not work to maximum efficiency with Microsoft Windows 98. They have no preference for the upgrade other than it should allow them to use Second Copy 2000, a new back up program that they have just purchased.

The company would also like to document a DISPLAN, which would formalise in writing the processes that would take place if a disaster struck. This disaster may take the form of a power failure, network failure, hardware failure, or human intervention such as hacking, a virus attack, or theft of key hardware components.

Currently data is backed up onto the second computer on the network, basically by copying the 'My Documents' data folder across from one computer to the other using Network Neighborhood. The user initiates this sequence each night when they leave work. Occasionally they forget, but to date, no data has been lost.

To explain the increased efficiency with which the network could run, the network systems administrator has asked you to produce a written report of 1200–1500 words.

The key requirements of the Work Project are as follows:

1. A phase one report detailing the hardware and software required for Second Copy 2000 to run. Detail any known incompatibility issues that will impact on the new operating system that will be selected. Note down minimum specifications required for Second Copy to run. In the report discuss the various options for upgrading the system software. It is expected that you will express an opinion as to the preferred option, with a justification based on ease of use, improving efficiency of the network, increasing security and cost effectiveness.
2. Produce a user manual showing how to load and use Second Copy 2000. It is expected that you will provide oral and written instructions on how to use and maximise the efficiency of the new system software. You will therefore need to set aside time to discuss this with your client. The written instructions should provide information to technicians (technical documentation) as well as users (user documentation).
3. With the new system software loaded onto one of the computers, explore how it affects the other computers on the network. Determine whether you are able to use other computers on the network. Determine whether it is possible to share resources across the network utilising the different system software.
4. Provide a written DISPLAN that discusses options for the various concerns noted above.
5. A final report including all documentation associated with the Work Project.

## **EVALUATION**

The tasks were chosen because it was felt that they gave the students the best chance to demonstrate a high level of performance. The Portfolio task was chosen the previous year and it was found that the students struggled to complete a large number of smaller activities. A number of the students also held part-time jobs so it was relatively easy to get the students to combine some of the tasks with their work duties. Overall, it was found that the students coped better completing one discrete task, rather than a larger number of activities.

The software that students used tended to be the Microsoft suite of products (Word, Excel and PowerPoint), Linux, Microsoft Windows 2000 and NT, Inspirationpro, a version of SWiSH and some small diagnostic software when it was necessary to load the operating systems onto the computers.

## **Product**

Students were able to complete the Product within the required timeframe. The more able students were able to extend themselves, while the less capable students were able to complete the basic requirements of the task and achieve competency for the units involved. A number of the students took the initiative and actually interviewed a couple of small local businesses. These students then tended to have more of a focus on the solution and were able to complete a Product with more useful applications as opposed to the students who only completed the basic requirements of the task.

The Product was completed in May.

In general, it was noted that students performed quite well on this task. It was reasonably straightforward to mark according to the criteria, although the generic nature of the VCAA assessment criteria made it a little difficult the first time it was used.

### **Work Project 1**

For Work Project 1 a number of students struggled to come up with an appropriate business solution. Many of the students wasted the five hours allocated for the gathering of evidence. The more able students tended to be able to approach businesses, suggest ways that they might be able to improve the information system, build a prototype and then take it back to the local business to show them. Two students managed to use their plans to complete prototypes that were accepted by local businesses. One was for a local milk bar; the other was for the local grocery store. Both these businesses asked the students to continue to work on the prototype that had been presented to them and build a more complete system that could be used in the business. These students tended to spend far in excess of the 15 hours allowed for the task, but they also gained greater satisfaction by building a prototype that could be used in a commercial environment. It was noted that these students did very well in the three coursework tasks.

This planning exercise Work Project was quite difficult to assess. The main reason for this was because of the range and diversity of the tasks attempted. Overall, the students felt that this was the hardest task to complete, but the most rewarding.

Work Project 1 was due in August.

### **Work Project 2**

Work Project 2 was straightforward and students found it easier to complete than Work Project 1. It was also easier for the teacher to assess.

Work Project 2 was completed during September/October.

Overall, it was felt that the coursework tasks gave the students a good opportunity to display their knowledge, skills and time-management techniques.

## Background: the VCE VET Study Score Project

Major recommendations of the VCE Review concerned the enhancement of the status of VET programs within the VCE and the exploration of ways in which students may be granted full recognition for their achievements in VET programs within the VCE.

Along with the redevelopment of VET programs to place them in the VCE Unit 1–4 structure and to identify Unit 3–4 sequences for them, the establishment of the VCE VET Study Score Project is one of the steps taken to implement these recommendations. The project was designed to provide a means of granting equal recognition of student achievement in VCE VET programs with the recognition available for other VCE studies.

During pilot studies conducted in 1999–2000, a Project Reference Group was closely involved in all development work. The reference group consisted of teachers and coordinators from each of the pilot providers and representatives of their associated RTOs. Representatives of the relevant industry training bodies commented on work in progress and provided assistance in the development process. A Project Steering Group was also established, consisting of expert people drawn from the schooling and VET sectors, and including the Australian National Training Authority, Victorian Tertiary Admissions Centre, Office of Employment, Training and Tertiary Education, and employer representation. The relevant Industry Training Boards (ITBs) were also represented and engaged in ongoing consultation. This group reviewed work in progress and evaluated project outcomes.

Study Scores are now available to all students in 12 specified VCE VET programs:

- Business Administration
- Community Services
- Dance
- Electronics
- Equine Industry
- Financial Services
- Furnishing
- Hospitality (Operations)
- Information Technology (Certificate III level training package based programs)
- Laboratory Skills
- Multimedia
- Music Industry.

The quality of assessment practice and outcomes continues to be monitored and reviewed, and industry advisory bodies will continue to be consulted on Study Score assessment as it is implemented in 2004 and beyond.

A Study Score is calculated using assessments of each student's levels of performance. Judgments about each student's level of performance are based on evidence from two sources:

- Coursework – a set of three tasks students undertake during their program, assessed by assessors authorised by the relevant RTO.
- Examination – a task taken under examination conditions and assessed by a panel of assessors appointed by the Victorian Curriculum and Assessment Authority (VCAA).

A coursework score will be calculated using the assessments recorded for the three coursework tasks. For Information Technology this score contributes 66% to the student's final Study Score and will be reported on the student's Statement of Results as a letter grade. The examination score contributes 34% to the student's final Study Score and will also be reported as a letter grade.

Using these two sources of information, a Study Score will be calculated by procedures similar to those in use for other VCE studies, including the same statistical moderation procedures. The Study Score will be reported as a single number out of 50.

For further details of how Study Scores are calculated and how they may make a contribution to the Equivalent National Tertiary Entrance Rank (ENTER), see the Information Technology Assessment Guide, available on the VCAA website: [www.vcaa.vic.edu.au](http://www.vcaa.vic.edu.au)

## Further information

This resource needs to be read and understood in conjunction with the national ICA99 Information Technology Training Package (Version 3, April 2002) and with the following publications:

- *VET in the VCE Information Technology program booklet*, published in July 2000
- *VET in the VCE Information Technology Supplementary Advice*, published in the February 2003 *VCE Bulletin*
- *VET in the VCE Information Technology Assessment Guide*, published in 2002 (website publication).

All publications are available from the VCAA website: [www.vcaa.vic.edu.au](http://www.vcaa.vic.edu.au)

General enquiries about scored assessment in VCE VET programs may be directed to the VCE VET unit at the VCAA on:

Tel: (03) 9651 4458

Email: [vet.vcaa@edumail.vic.gov.au](mailto:vet.vcaa@edumail.vic.gov.au)

Advice on development of Assessment Plans and implementation of scored assessment in VCE VET Information Technology is available from the State Reviewer. For current State Reviewer details, please contact the VET Unit (details above) or go to the website.

