

Tools for review

Information and software technology

- tools for reviewing teaching and assessment plans, units of work and assessment tasks in Stage 4/5 technology subjects
- key resources and specific policy links

INFORMATION AND SOFTWARE TECHNOLOGY YEARS 7 - 10 SYLLABUS

OVERVIEW

Information and Software Technology is an elective 100 or 200-hour course that enables students to develop knowledge, understanding, confidence and creativity in analysing, designing, developing and evaluating information and software technology solutions.

TEACHING AND ASSESSMENT PROGRAM

Does the teaching program (including course plan and units of work):

- demonstrate how all syllabus requirements are met? (syllabus page 14)
 - o projects include an organised series of activities to design, produce and evaluate information and software technology solutions for an identified need or problem
 - o projects are relevant to student needs and interests and address real- world problems
 - o projects are used to integrate the core content with options
 - o for the 100 hour course
 - all core content is covered
 - minimum of two options
 - minimum of two and maximum of four projects.
 - o for the 200 hour course
 - all core content is covered
 - minimum of four options
 - minimum of four and maximum of eight projects.
- focus on the deep and significant skills and understandings of the course and clearly articulate key concepts?
- recognise and build on student interests and prior learning?
- have projects that are based on a chosen option involving designing and producing quality solutions to meet authentic needs?
- incorporate design tasks and related learning activities that will be significant, engaging and challenging to students and allow for student negotiation and self directed learning?
- allocate significant course time to practical work including exploring and defining tasks, generating, developing and testing ideas and producing solutions?
- demonstrate a logical flow of relevant learning and ideas within each project and from project to project?
- reflect the available school resources (staff expertise, facilities, equipment, organisational structure)?
- demonstrate a progression of student learning over the course towards more sophisticated, deeper understandings and skills?
- identify appropriate assessment opportunities for students to demonstrate the skills and conceptual understandings that are significant in the course? (assessment will occur throughout the course and address learning related to both the design process and the final product or solution).

Does the assessment program/plan/scheme for the course:

- outline the assessment tasks to be used in each reporting period and directly link to school reporting requirements?
- use a balanced range of assessment strategies that reflect the most significant learning in the syllabus?
- specify the targeted syllabus outcomes/content?
- include a timeframe?
- demonstrate student progression over the course?
- facilitate consistent teacher judgement?
- appear to be manageable for students and teachers?
- address the school assessment and reporting policy and support the allocation of course performance descriptors for the School Certificate?

Does each assessment task:

- focus on specific syllabus outcomes and content?
- focus on depth of understanding and skill of a manageable number of key concepts?
- focus on significant learning in the course?
- assess knowledge and skills that students have had an opportunity to learn?
- provide students with clear expectations about requirements?
- include explicit assessment criteria that identify the features of successful student work?
- allow students to demonstrate performance at each level of performance?
- allow for meaningful feedback to be provided to the student?

TEACHING PRACTICE

In an effective Information and Software Technology classroom the following features may be evident:

Students

- each student will be engaged in their project work and may be working on different aspects of their project at different times to other students
- students will be asking for regular feedback from peers and teachers and at times will be having conversations about the project directions and decisions
- students will be applying safe and correct work practices to all practical activities
- students may be moving around the classroom as they get resources, move to different activities or seek feedback from the teacher
- mistakes may be made as students test new ideas and evaluate how this learning can be applied to design projects
- students are responsible for their own physical and digital work areas and manage their time to leave the room ready for the next class.

Teachers

- the teacher can clearly articulate what they want the students to learn and why this learning matters
- the teacher can identify the relationship between the lesson and the teaching program and explain any variations to the program
- the teacher is aware of individual student ability, how student learning is progressing and adjusts teaching practice in relation to this understanding
- the teacher can explain their choice of learning activities in relation to the needs and interests of their students and the teaching program
- the teacher regularly reinforces the connectedness of project work to relevant legal, ethical, social and industrial issues
- the teacher uses a variety of senses to monitor the classroom and to inform their practice including the look, sounds and smells etc of the classroom
- the teacher monitors and assesses potential risks in an ongoing manner and if a particular student is identified as unsafe then immediately takes action to change or modify the activity for that student
- the teacher is aware of and provides feedback to students about their progress in the design project. the teacher allows some student direction of ideas and decisions and uses questioning to challenge and identify issues that the student may need to consider
- the teacher may be instructing individual students, small groups or the whole class or may be circulating about the room observing and interacting with students as they work.

Learning environment

- the classroom has available resources such as workstations, software, equipment and information that are appropriate to the project
- equipment, materials and or equipment that may present hazards has been risk assessed and relevant DET policy and guidance advice followed.
- the relationship in the classroom between teacher and students is productive and the teacher promotes constructive relationships and feedback between students about their project work.

REFERENCES

- **Board of Studies advice:**
Syllabus and support document, assessment advice
http://www.boardofstudies.nsw.edu.au/syllabus_sc/#indonesian
Assessment Resource Centre
<http://arc.boardofstudies.nsw.edu.au/go/sc/ist/>
- **Curriculum K-12 Directorate programming and assessment advice:**
Programming tools and templates, sample course plans, units of work, assessment plans, assessment tasks and teaching ideas
<http://www.curriculumsupport.education.nsw.gov.au/secondary/technology/index.htm>

DET POLICIES/GUIDELINES

- Teaching and assessment programs and practice should reflect relevant DET policies available at:
<https://detwww.det.nsw.edu.au/policiesintra/atoz/search.do?level=>
- Specific policies and related support materials to note include *Occupational health and safety policy*, *Copyright: pod casting in schools*
(https://detwww.det.nsw.edu.au/policies/administrative/legal/copyrt_podcast/PD20060355_i.shtml?level=Schools)