

Technology (Mandatory)



A Guide to the New Years 7–8 Syllabus

The new *Technology (Mandatory) Years 7–8 Syllabus* will replace the current mandatory *Design and Technology Years 7–10 Syllabus* and will be implemented in 2005 with Year 7 students.

The new syllabus is informed by contemporary research about how people learn and about how learning outcomes can be enhanced by teaching practice.

The syllabus promotes *assessment for learning* as an essential component of good teaching. It follows the broad directions established in the NSW Board of Studies *K–10 Curriculum Framework* and is part of a continuum of learning from Kindergarten to Year 12 that supports sustained, sequential, high quality learning.

What is similar?

Much of the content is similar to the current mandatory syllabus. Students will continue to:

- engage in the design, production and evaluation of projects
- develop knowledge, understanding and skills relating to the use of a range of materials, tools and techniques
- focus on the production of practical projects as the basis of their learning.

Current programs can be modified to meet the requirements of the new syllabus and many existing units of work will form the bases of effective programs. The majority of existing resources will continue to be relevant.

The recent experience teachers have gained in implementing the range of Stage 6 Technology syllabuses (1999) will assist in the implementation of the new *Technology (Mandatory) Years 7–8 Syllabus*.

What is different?

The new syllabus builds on the current syllabus in directions identified through research into the teaching of Technology-related subjects in other systems nationally and internationally, and through consultation at forums, meetings and during wide circulation of the draft syllabus.

- There is a significant reduction in the number of objectives and outcomes. This will simplify the processes of programming, assessing and reporting.
- A range of new areas of study (known as context areas in the current *Design and Technology Years 7–10 Syllabus*) have been added. These new areas of study, namely Built Environments, Products, and Information and Communications, link to three content strands of Science and Technology Stage 3 that have a technology focus.
- Each area of study includes a number of design specialisations.
- The number of projects has been reduced to a minimum of four and a maximum of eight to enable more in-depth study and greater focus on quality.
- Project work must be undertaken from each of the three areas of study.
- Greater depth of content has been provided through essential design-related content and essential technologies-specific content as a foundation for students moving into a range of Stage 5 technology-based electives.
- The technologies-specific content includes materials, tools and techniques for fourteen technologies. Projects must include a minimum of six technologies.
- Stage statements from Early Stage 1 to Stage 4 describe the continuum of learning in Technology (Mandatory).

The features of the content pages

Content is expressed as *Students learn about* and *Students learn to* in a consistent format.

Technology (Mandatory) Years 7–8 Syllabus

Outcomes A student:	Students learn about:	Students learn to:
4.4.1 explains the impact of innovation and emerging technologies on society and the environment	<ul style="list-style-type: none"> • innovation and emerging technologies relating to tools, materials, techniques or products in each area of study • the impact of innovation and emerging technology on society and the environment 	<ul style="list-style-type: none"> • identify and describe a selected innovation or emerging technology in each area of study of Built Environments, Products, and Information and Communications • explain the impact of innovations and emerging technologies on society and the environment including new ICTs
4.5.1 applies management processes to successfully complete design projects	<ul style="list-style-type: none"> • resource availability including <ul style="list-style-type: none"> – time – money – materials, tools and techniques – human resources including skills and expertise – other resources • management techniques including action, time and budget planning 	<ul style="list-style-type: none"> • identify resource availability and apply realistic limitations to each design project • develop and apply action, time and budget plans in design projects
4.5.2 produces quality solutions that respond to identified needs and opportunities in each design project	<ul style="list-style-type: none"> • suitable materials, tools and techniques for design projects • skill development and refinement • construction steps that contribute to a quality solution • relationship of quality solutions to needs and opportunities and the criteria for success for each design project 	<ul style="list-style-type: none"> • identify suitable materials, tools and techniques for each design project • practice and refine skills needed for design projects • apply a design process that responds to needs and opportunities for each design project • produce solutions reflecting quality standards appropriate to each design project

Outcomes and content are linked in tables to assist teachers with planning and programming.

Cross-curriculum content is embedded in the syllabus content.

- An overview statement is provided that shows how each cross-curriculum area is embedded in the essential content.
- Content relating to the use and understanding of information and communication technologies (ICT) is incorporated in the syllabus content.
- Life Skills outcomes and content have been provided for those students with special education needs, particularly those students with an intellectual disability, for whom it has been determined that the outcomes and content found in sections 6 and 7 of the syllabus are not appropriate.
- Built into the syllabus is the concept that *assessment for learning* is integral to teaching and learning in a standards-referenced framework. *Assessment for learning* involves teachers planning how and when they will gather evidence of learning at the same time as they plan the work that students will do. It recognises the importance of assessment to student motivation and self-esteem, and promotes the active involvement of students in their own learning.

How can the syllabus be used to program?

The syllabus outcomes provide the focus for teaching and learning in Technology (Mandatory). This syllabus encourages a model of programming that begins with outcomes, and is precise about what is being taught and what is being learnt.

Developing integrated programs from the new *Technology (Mandatory) Years 7–8 Syllabus* involves:

- identifying the outcomes to be addressed (see syllabus p 13)
- identifying the required evidence of learning
- planning explicit teaching and learning experiences to address the outcomes (see syllabus pp 20–40) to allow students to demonstrate evidence of learning
- identifying strategies to teach the content
- incorporating *assessment for learning* by using the assessment advice in the syllabus and in the support material that will be provided by the Board of Studies.

Stage statements describe a continuum of learning from Early Stage 1 to Stage 4. This enables teachers to map students' learning development, and to plan and program work according to students' needs and abilities.

How does the syllabus cater for all students?

A key principle of the *K–10 Curriculum Framework*, which guides K–10 syllabus development, is that the curriculum must be inclusive of all students in New South Wales.

The rationale, aim, objectives, outcomes and content of the syllabus have been designed to accommodate teaching approaches that support the learning needs of all students.

Students with special education needs will participate fully in learning experiences and assessment activities. These students may require additional support in terms of modified tasks and varied learning approaches. There may also be occasions when different strategies need to be adopted to broaden and deepen the learning experiences of gifted and talented students.

Life Skills outcomes and content, using the rationale, aim and objectives of this syllabus, have been included in section 8. They will provide a program of study for the small percentage of students with special education needs for whom the outcomes and content in sections 6 and 7 of the *Technology (Mandatory) Years 7–8 Syllabus* are not appropriate.

What support is the Board providing to assist with initial implementation of the syllabus?

Following the release of the syllabus, support materials will be distributed to assist teachers in understanding the syllabus and its associated assessment requirements.

The first School Certificate credential based on the new syllabuses will be awarded in 2006. Specific advice about requirements for the School Certificate and will be provided well in advance of 2006.

distributed with the syllabus	Phase 1 <ul style="list-style-type: none">■ this guide to the new <i>Technology (Mandatory) Years 7–8 Syllabus</i>■ draft Descriptions of Levels of Achievement
3 months after distribution of the syllabus	Phase 2 <ul style="list-style-type: none">■ advice on programming■ sample units of work■ sample assessment activities
6 months after distribution of the syllabus	Phase 3 (incorporates Phases 1 and 2) <ul style="list-style-type: none">■ annotated samples of student work
12 months after implementation of the syllabus	Phase 4 <ul style="list-style-type: none">■ final Descriptions of Levels of Achievement

The Department of Education and Training, the Catholic Education Commission, other school systems, the Association of Independent Schools and professional associations will assist and support the ongoing implementation of the syllabus.
