



Government of **Western Australia**
School Curriculum and Standards Authority



DESIGN

ATAR COURSE

Year 12 syllabus

IMPORTANT INFORMATION

This syllabus is effective from 1 January 2016.

Users of this syllabus are responsible for checking its currency.

Syllabuses are formally reviewed by the School Curriculum and Standards Authority on a cyclical basis, typically every five years.

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Rationale

‘Design is the human power to conceive, plan, and realise products that serve human beings in the accomplishment of any individual or collective purpose.’ (Richard Buchanan, Carnegie Mellon University)

Design involves the strategic development, planning and production of visual and tactile communication. It deals with the effective and efficient communication of ideas, values, beliefs, attitudes, messages and information to specific audiences for specific purposes and with specific intentions.

Design has its own set of theories and practices and incorporates a wide range of principles, methods and techniques drawn from a variety of different disciplines, such as psychology, communication studies, digital design, technical graphics, art, engineering, architecture, sociology, cultural studies, marketing and economics. The disciplined application of these elements forms a design process that guides the development of creative and functionally effective solutions to identified possibilities or problems.

We live in a diverse and constantly changing information-rich society and culture, constantly immersed in design communication. Sometimes the intention of design is to inform, express, educate or entertain. Often the intention is also to influence or persuade. An understanding of design and how it works can enhance an individual’s ability to interact with their environment, to learn from it and to grow within it. It also empowers the individual by making them more discerning of, and therefore less susceptible to, manipulation and influence via design.

The goals of the Design ATAR course are to facilitate a deeper understanding of how design works; and how ideas, beliefs, values, attitudes, messages and information are effectively communicated to specific audiences with specific intentions or purposes via visual media forms. This course aims to achieve these goals by exposing students to a variety of communication forms and a thorough exploration of design.

Design projects allow students to demonstrate their skills and understandings of design principles and processes; to analyse problems and possibilities; and to devise innovative strategies within design contexts. There is potential for students to develop transferable skills and vocational competencies while devising innovative designs.

In this course, students develop a competitive edge for current and future industry and employment markets. This course also emphasises the scope of design in professional and trade based industries allowing students to maximise vocational and/or university pathways.

Course outcomes

The Design ATAR course is designed to facilitate achievement of the following outcomes.

Outcome 1 – Design understandings

Students understand that design theory, audience response, and design principles are reflected in design.

In achieving this outcome, students:

- understand that communication theories are demonstrated in design
- understand that design and audience behaviours are related.

Outcome 2 – Design process

Students apply the design process to develop design solutions.

In achieving this outcome, students:

- generate ideas to develop design solutions
- refine the development of design solutions.

Outcome 3 – Application of design

Students use skills, techniques and methods to plan, construct and produce design creations.

In achieving this outcome, students:

- use interpretative skills when constructing design creations
- use design skills, techniques and methods to construct creations
- use planning and production methodologies to construct design creations.

Outcome 4 – Design in society

Students understand the relationship between design, society and culture.

In achieving this outcome, students:

- understand how values, beliefs and attitudes are communicated and learned through design
- understand responsibilities and issues in developing design
- understand relationships between social practices and design.

Organisation

This course is organised into a Year 11 syllabus and a Year 12 syllabus. The cognitive complexity of the syllabus content increases from Year 11 to Year 12.

Structure of the syllabus

The Year 12 syllabus is divided into two units which are delivered as a pair. The notional time for the pair of units is 110 class contact hours.

Unit 3 – Commercial design

Students become aware that design has commercial considerations that are influenced by various stakeholders to produce products, services and brands.

Unit 4 – Influential design

Students learn how the communication of ideals, messages, information and values can influence opinion and attitudes.

Each unit includes:

- a unit description – a short description of the focus of the unit
- contexts – a context in which the unit content could be taught
- unit content – the content to be taught and learned.

Organisation of content

Contexts

Four different contexts have been identified in this course: Photography, Graphic Design, Dimensional Design and Technical Graphics. Course content may be covered in one or more contexts.

Photography context

In this context, design may use analogue, and/or digital photographic systems and/or digital media.

Graphic Design context

This context may include elements of digital media, interactive media, graphics technology, and visual communication. Whilst these fields share a common link through digital technology, graphics also includes traditional two dimensional (2D) media.

Dimensional Design context

Dimensional Design may include elements of fashion, textiles, architecture, furniture design and three dimensional (3D) graphics, including computer-aided design. This context enables the design and production of objects having 3D content, including models, glass, jewellery, ceramics, sculpture or a series of design drawings in which any of the 3D examples are represented.

Technical Graphics context

Technical Graphics uses conventions of technical drawing and computer-aided design to create designs that deal with mainly 3D subjects, usually of an industrial nature.

Representation of the general capabilities

The general capabilities encompass the knowledge, skills, behaviours and dispositions that will assist students to live and work successfully in the twenty-first century. Teachers may find opportunities to incorporate the capabilities into the teaching and learning program for the Design ATAR course. The general capabilities are not assessed unless they are identified within the specified unit content.

Literacy

Literacy is of fundamental importance in the study of design. Students will access design content through a variety of print, oral, visual, spatial and electronic forms, including data books, texts, computer software, images, and written technical materials. They learn to investigate, interpret and apply design elements and principles from a variety of sources to design solutions for tasks. They analyse and evaluate information for reliability, relevance and accuracy. They learn to monitor their own language use for accuracy in the use of design terms for clarity of ideas, processes and explanations of design activities and development and evaluation of functioning products.

Numeracy

Numeracy is fundamental in calculating material quantities and evaluating design process costs. Students develop their understanding and skills of numeracy while undertaking tasks to produce, test and evaluate products. Common and context-specific theory continues to be studied to forge greater understanding of the scientific, mathematical and technical concepts that explain how designed products function.

Information and communication technology capability

Information and communication technology (ICT) capability is important in all stages of the design process. Students use digital tools and strategies to locate, access, process and analyse information. They use ICT skills and understandings to investigate and devise design ideas. Students access information from websites and software programs to develop design solutions. Students use computer-aided drawing software and computer control software to produce products.

Critical and creative thinking

Critical and creative thinking is integral to the design process. The design thinking methodologies are fundamental to the Design ATAR course. Students develop understandings and skills in critical and creative thinking during periods of evaluation at numerous stages of the design process. They devise plausible solutions to problems, and then through interrogation, critically assess the performance of the most efficient solution. Students identify possible refinements in their design solutions and analyse, evaluate and modify the developing solution to create a prototype.

Personal and social capability

Personal and social capability skills are developed and practised in the Design ATAR course by students enhancing their communication skills and participating in teamwork. Students have opportunities to work collaboratively during stages of investigation and production of products. Students develop increasing social awareness through the study of the impact of the use of materials and manufacturing technology in society and on the environment.

Ethical understanding

Students have opportunities to explore and understand the diverse perspectives and circumstances that shape design processes, the actions and possible motivations of people in the past compared with those of today. Students have opportunities, both independently and collaboratively, to explore the values, beliefs and principles that have influenced past design achievements, and the ethical decisions required by global design processes of today.

Intercultural understanding

Students have opportunities to explore the different beliefs and values of a range of cultural groups and develop an appreciation of cultural diversity. Students have opportunities to develop an understanding of different contemporary perspectives with regard to design inspiration, product styles, building materials, energy supply and use, and design influences on different groups within society, and how they contribute to individual and group actions in the contemporary world.

Representation of the cross-curriculum priorities

The cross-curriculum priorities address contemporary issues which students face in a globalised world. Teachers may find opportunities to incorporate the priorities into the teaching and learning program for the Design ATAR course. The cross-curriculum priorities are not assessed unless they are identified within the specified unit content.

Aboriginal and Torres Strait Islander histories and cultures

Students may have opportunities to explore Aboriginal and Torres Strait Islander development and use of design and the interconnectedness between design, purpose and innovation, and how these relate to identity, people, culture and country/place.

Asia and Australia's engagement with Asia

Students may have opportunities to explore traditional, contemporary and emerging design achievements in the countries of the Asia region. Students explore Australia's rich and ongoing engagement with the peoples and countries of Asia to create appropriate products and services to meet personal, community, national, regional and global needs.

Sustainability

Students take action to create more sustainable patterns of living. Students can develop knowledge, understanding and skills necessary to design for effective sustainability.

Students focus on the knowledge, understanding and skills necessary to choose design solutions with regard to costs and benefits. They evaluate the extent to which the process and designed solutions embrace sustainability. Students reflect on past and current practices and assess new and emerging designs from a sustainability perspective.

Unit 3 – Commercial design

Unit description

Students become aware that design has commercial considerations that are influenced by various stakeholders to produce products, services and brands. Commercial design is client and market driven and is a reflection of contemporary consumer demands. Students are introduced to a client-focused design brief to create a product or service. They plan, develop and analyse to create designs that reflect the client, audience, and market needs. They also consider commercial and manufacturing requirements for a real world solution, with relevant production skills and processes, materials, and technologies.

Contexts

Within each context, teachers can choose a learning focus. This list of learning foci below is not exhaustive:

- Photography: book cover and magazine design; outdoor advertising design; print advertising campaign; calendar design; still life, portrait; fashion; landscape photography; narrative photography; anti-advertisements; services; organisations and non-profit organisations; formal portrait; environmental portrait; landscape; architectural; reportage; event; macro; corporate portraiture
- Graphic Design: illustrated covers pages/web gallery/Facebook hero images; game cover; band CD plus promotional T-shirt; seasonal calendars for a specific target audience; greetings cards with several contexts, for example, birthday, sympathy; Shakespeare-in-the-Park promotional poster; musical theatre poster; product cartons, for example, milk shakes, juice, soups; logos; branding; design for need; web pages; product labelling; advertising and promotional materials; marketing or economic exchange; corporate identities; annual reports; labels and packaging; branding, advertising and universal design; company branding; client identity for a juice bar, café or a gelato company
- Dimensional Design: a range of jewellery for a commercial market; an interior design for a new café; a 3D card board display stand for a commercial product; fashion design; giftware; commercial buildings and spaces; shop fronts/fitting; window display and signage; commercially viable 'green' product design
- Technical Graphics: projects for local councils, for example, play equipment, park seating, board walks and landscaping; furniture items for a small furniture making business or architectural designs such as sustainable accommodation for an environmentally sensitive area; projects for commercial purposes; architecture for industry and commerce; product design constrained by client's requirements, designing with materials appropriate to place, cost or commercial constraints

Unit content

An understanding of the Year 11 content is assumed knowledge for students in Year 12. It is recommended that students studying Unit 3 and Unit 4 have completed Unit 1 and Unit 2.

This unit includes the knowledge, understandings and skills described below. This is the examinable content. Students study the examinable content within one or more of the contexts: Photography, Graphic Design, Dimensional Design and Technical Graphics.

Design

Design elements and principles

- characteristics of design elements and principles and experimentation with their application in design
- design principles relevant to particular tasks: form follows function

Design process and methods

- interpretation of the design brief
- application of a design process and consideration of a commercial design process
- application of design methods: visual research, idea generation techniques, synectics, mind maps, brainstorming to generate solutions to design problems
- inquiry processes to formulate specific meaning in design work, including investigation of currently available materials and technologies
- documentation of visual development, visuals/layouts to reflect progressive resolution of design problems and thinking
- critical reflective analysis to devise and evaluate solutions to design problems

Communication

Communication theories

- investigation of communication models relevant to the design brief
- application of semiotics, codes and conventions relevant to design
- application of type and colour relevant to theme and content

Stakeholders

- influences of theories and media forms on all stakeholders
- analysis and evaluation of appropriate strategies for communication to an intended audience: shock tactics, humour, metaphor and emotion
- design relevant to the cultural values, ideologies and belief systems that are important to society and individuals

Production

Production processes and methods

- production planning considering costs and constraints, sustainability and life cycle costing
- selection of suitable production processes
- critical analysis and refinement of production processes and methods
- possible future trends in production processes

Materials and technologies

- selection and use of specific production materials and/or technologies appropriate to the design brief
- application of skills relevant to the production
- occupational safety and health (OSH) concepts and their impact in design

Unit 4 – Influential design

Unit description

The focus of this unit is the communication of ideals, messages, information and values, to influence opinion and attitudes. Students produce products and visual layouts for specific and applied contexts with an understanding of applied semiotics and the construction of meaning. They analyse the audience in terms of empathy, profiling and stereotyping, and develop persuasive solutions using a research, testing and feedback mechanism.

Contexts

Within each context, teachers can choose a learning focus. The following list is not exhaustive:

- Photography: print design; poster design; surrealism; photo montage and joiners; creative portrait and fashion; urban landscape photography; creative advertising; advertising campaign; third world issues created by first world consumers; gender politics; mental health issues; health related; counter culture; persuasive advertising
- Graphic Design: identity design for sustainable café; social issue awareness posters; t-shirt design and flyers to promote blood donation; organ donation; safety posters (transport); political initiative promotional material, for example, Environment and Heritage; illustrated cover pages for professional materials; technical manuals; game cover; client focussed calendars, advertisements, magazines, target audience focussed; political poster; viewpoint/persuasive advertisements logos, branding, awareness posters, advertising; design for need; leaflets, newsletters and web pages
- Dimensional Design: jewellery; fashion; textile; ceramics; set design; public art; furniture design; architecture; design paraphernalia for a pressure group; power dressing; fashion that creates a new market; a product that will encourage environmental responsibility; educational toys; a concept shop; universal design and design for need
- Technical Graphics: design projects that assist the public in conforming to rules and regulations, for example, interpretive display areas for National Parks; health related issues, for example, underage drinking or anti-smoking campaigns; monuments or structures which encourage national pride and patriotism

Unit content

This unit builds on the content covered in Unit 3.

This unit includes the knowledge, understandings and skills described below. This is the examinable content. Students study the examinable content within one or more of the contexts: Photography, Graphic Design, Dimensional Design and Technical Graphics.

Design

Design elements and principles

- characteristics of design elements and principles and experimentation with their application in design
- integration of design principles in applied design contexts

Design process and methods

- source inspiration to influence original design
- application of design process and reflective practice applying critical analysis to develop designs that reflect themes
- advanced design processes and methods: research, investigation, questioning and interviewing of client groups, surveys of opinions
- documentation of visual development, visuals/layouts to reflect progressive resolution of design problems and thinking
- critical reflective analysis to devise and evaluate solutions to design problems

Communication

Communication theories

- selection of a suitable communication model for an intended audience
- selection of semiotics, codes and conventions suitable for an intended audience
- selection of type and colour relevant to theme and content

Stakeholders

- selection of appropriate visual devices to attract attention of the audience, including shock tactics, humour, metaphor and emotion
- manipulation of visual codes to present particular viewpoints for an audience
- use of design to reinforce and challenge representations and values in society

Production

Production processes and methods

- production planning considering costs and constraints, sustainability and life cycle costing
- selection of suitable production processes
- critical analysis and refinement of production processes and methods
- possible future trends in production processes

Materials and technologies

- selection and use of specific production materials and/or technologies appropriate to the design brief
- application of skills relevant to the production
- occupational safety and health concepts (OSH) and their impact in design

School-based assessment

The Western Australian Certificate of Education (WACE) Manual contains essential information on principles, policies and procedures for school-based assessment that needs to be read in conjunction with this syllabus.

Teachers design school-based assessment tasks to meet the needs of students. The tables below provide details of the assessment types for the Design ATAR Year 12 syllabus and the weighting for each assessment type.

Assessment table practical component – Year 12

Type of assessment	Weighting	To SCSA	Weighting for combined mark
Production (portfolio) Production of a portfolio in which students investigate, explore ideas and follow a design process in response to a design brief. Students are required to evaluate the final solution's effectiveness for specific purposes and audiences.	100%	100%	50%

Assessment table written component – Year 12

Type of assessment	Weighting	To SCSA	Weighting for combined mark
Response Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts related to the unit content, including the extended production project. Responses could include short answers, oral presentation, multimodal presentation, flowcharts and diagrams.	40%	100%	50%
Written examination Typically conducted at the end of each semester and/or unit and reflecting the examination design brief for this syllabus.	60%		

Teachers are required to use the assessment table to develop an assessment outline for the pair of units.

The assessment outline must:

- include a set of assessment tasks
- include a general description of each task
- indicate the unit content to be assessed
- indicate a weighting for each task and each assessment type
- include the approximate timing of each task (for example, the week the task is conducted, or the issue and submission dates for an extended task).

In the assessment outline for the pair of units, each assessment type must be included at least twice.

The set of assessment tasks must provide a representative sampling of the content for Unit 3 and Unit 4.

Assessment tasks not administered under test/controlled conditions require appropriate validation/authentication processes. For example, the teacher is able to cite clear evidence of the development of a response or performance/production.

Grading

Schools report student achievement in terms of the following grades:

Grade	Interpretation
A	Excellent achievement
B	High achievement
C	Satisfactory achievement
D	Limited achievement
E	Very low achievement

The teacher prepares a ranked list and assigns the student a grade for the pair of units. The grade is based on the student's overall performance as judged by reference to a set of pre-determined standards. These standards are defined by grade descriptions and annotated work samples. The grade descriptions for the Design ATAR Year 12 syllabus are provided in Appendix 1. They can also be accessed, together with annotated work samples, through the Guide to Grades link on the course page of the Authority website at www.scsa.wa.edu.au

To be assigned a grade, a student must have had the opportunity to complete the education program, including the assessment program (unless the school accepts that there are exceptional and justifiable circumstances).

Refer to the WACE Manual for further information about the use of a ranked list in the process of assigning grades.

WACE examination

All students enrolled in the Design ATAR Year 12 course are required to sit the WACE examination. The examination is based on a representative sampling of the content for Unit 3 and Unit 4. Details of the written and practical (portfolio) WACE examinations are prescribed in the examination design briefs on the following pages.

Refer to the WACE Manual for further information.

Practical (portfolio) examination design brief – Year 12

Additional information

Submission of a design portfolio up to 15 A3 single-sided sheets

SUBMISSION	SUPPORTING INFORMATION
<p>Portfolio 100% of the practical examination</p>	<p>The practical (portfolio) submission should demonstrate a comprehensive design process.</p> <p>Candidates are required to demonstrate their ability in the realisation of the design process. Emphasis should be placed on quality not quantity.</p> <p>The practical (portfolio) submission provides evidence of the understanding of, and practical skills in, the generation and production of design.</p> <p>The practical (portfolio) submission includes evidence of a design process used to arrive at completed design solutions. Evidence of processes can include idea generation methods such as brainstorming and mind-mapping and concept development processes such as thumbnail sketches. Evidence of testing such as user feedback can also be included. Specifically, for all contexts, the following evidence can be included in the practical (portfolio) submission:</p> <ul style="list-style-type: none"> • research and investigation • brainstorming and idea generation methods • analysis of information and translation into design concepts • application of design principles • visualisation of concepts • application of interrelated thinking and innovative development process • use of interpretive skills and problem solving • selection and use of a diverse range of skills, techniques and procedures • application of planning and production methods • use of design elements.

Written examination design brief – Year 12

Time allowed

Reading time before commencing work: ten minutes
 Working time for paper two and a half hours

Permissible items

Standard items: pens (blue/black preferred), pencils (including coloured), sharpener, correction fluid/tape, eraser, ruler, highlighters
 Special items: non-programmable calculators approved for use in the WACE examinations; approved drawing instruments consisting of a drawing compass, set square, dividers, protractor, templates

SECTION	SUPPORTING INFORMATION
<p>Section One Short response 30% of the written examination Five questions Suggested working time: 30 minutes</p>	<p>Questions can be in parts. Questions can require the candidate to create design briefs, evaluate criteria, justify design improvements and respond to scenarios based on a design situation and/or respond to briefs based on human problems and/or respond to stimulus material. Stimulus material can include a range of primary and secondary sources of design forms relevant to each context.</p>
<p>Section Two Extended response 70% of the written examination Six questions:</p> <ul style="list-style-type: none"> • one compulsory question common to all contexts • one compulsory question to a given stimulus • four context-specific questions, one for each of the four contexts <p>The candidate answers one of the four questions. Suggested working time: 120 minutes</p>	<p>The question common to all contexts will refer to work completed throughout the year. The question related to given stimulus material can include a design situation, a design brief or visual stimulus. The context-specific question will have a question relating to each of the four identified contexts. Stimulus materials draw upon a range of primary and secondary sources that use quantitative and/or qualitative data such as research data, case studies, survey results, written texts, and/or pictorial representations of products or diagrams of material properties. Questions can be in parts.</p>

Appendix 1 – Grade descriptions Year 12

A	Clearly and comprehensively develops a relationship between the purpose of the design brief and the intended audience, and addresses those complex factors affecting the relationship.
	Consistently explores a range of creative and innovative solutions throughout the design process.
	Selects design elements and principles with discernment and applies these with purpose.
	Provides comprehensive and perceptive critical reflection and analysis of design thinking.
	Consistently executes control and manipulation of a range of skills and techniques relevant to the design brief.
B	Develops a clear relationship between the purpose of the design brief and the intended audience. Interprets the design brief and communicates effectively to the intended audience.
	Explores a range of creative solutions throughout the design process.
	Effectively selects and applies design elements and principles.
	Provides detailed critical reflection and analysis of design thinking.
	Executes control and manipulation of skills and techniques relevant to the design brief.
C	Develops a clear link between the purpose of the brief and the intended audience satisfying the design brief.
	Explores possible creative solutions throughout the design process.
	Selects and applies with some purpose design elements and principles.
	Presents a record of design thinking, including simple analysis.
	Executes skills and techniques relevant to the design brief.
D	Develops a tenuous link between the purpose of the brief and the intended audience; does not fully satisfy the brief.
	Explores a few solutions throughout aspects of the design process.
	Uses design elements and principles in a basic manner.
	Provides a simple and/or brief description of design thinking.
	Uses some skills and techniques relative to the discipline.
E	Does not meet the requirements of a D grade.