



HDS315108 - TQA Level 3, 15 size value.

THE COURSE DOCUMENT

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LEARNING STATEMENT

Housing and Design develops students' knowledge, skills and capabilities to respond to design problems relating to indoor and outdoor living spaces at the highest level of complexity offered by TCE courses. Emphasis is placed on developing the architectural design skills of imagining, representing and testing design ideas, and application of research strategies to support this progress. Students will consider environmental, aesthetic, functional, social, technological and ergonomic influences and impacts within a range of housing and design projects.

RATIONALE

Housing and Design is of significance to the Tasmanian senior secondary curriculum as it addresses local and global community concerns about the impacts of domestic energy consumption on the environment. Its content and values support the goals identified in *Tasmania Together* (2006), Goals 1, 5, 6 and 11.

PATHWAYS

Vocational learning and insights into Personal Pathways are gained by working in design teams and by simulating the roles played by practitioners in the area, site visits and guest speakers. Opportunities to gain insights into the needs and values of a range of clients within the community are developed through rich design briefs which take students beyond their current experience. Further opportunities to engage with relevant community contacts are required as the students undertake an Extended Study (50 hours) in an area of personal interest in the form of a major design project (folio).

This course is a pathway for students intending to proceed to further studies in Environmental Design and Architecture, Interior Design, Building Design or Urban Planning. It is also relevant for students pursuing pathways in Design Teaching or Social Work.

While Housing and Design relates to the Science and Technology area, it also has strong links with the Art area. It complements senior secondary courses in art, graphics (including computer graphics) and environmental science depending on students' pathways.

ACCESS

This course requires space and resources to allow drawing and model making. Access to computers, scanners, a CD burner and the internet is also needed during the course.

COURSE SIZE AND COMPLEXITY

This course has been assessed as having a complexity level of TQA level 3.

At TQA level 3 the student is expected to acquire a combination of theoretical and/or technical and factual knowledge and skills and use judgement when varying procedures to deal with unusual or unexpected aspects that may arise. Some skills in organising self and others are expected. TQA level 3 is a standard suitable to prepare students for further study at the tertiary level. It is an approximate match to current Tasmanian Certificate of Education (TCE) level 5 courses and VET competencies at this level are often those characteristic of an AQF Certificate III.

This course has a size value of 15 (150 hour design-time).

This course contributes to the calculation of Tertiary Entrance Ranks.

COURSE DESCRIPTION

Housing and Design emphasises development of design capabilities through the use of imagination and creativity in making proposals and choices in the development of innovative and enterprising solutions to problems. Students learn a variety of strategies for meeting identified needs, and address considerations of a design brief.

Students learn to draw on a wide spectrum of thinking and creativity to plan, generate, synthesise and realise ideas. They use a diverse range of techniques to communicate this thinking, and their design proposals (e.g. graphical, oral, notational, textual, mathematical, digital, virtual or three-dimensional presentations). Students engage with complexity, being adaptive, creative and enterprising in their work. Their outcomes reflect qualities of appropriateness of designs and sensitivity, having learned to critically challenge housing values to improve the social and environmental impacts of the built environment.

LEARNING OUTCOMES

Through this course, students will develop knowledge, skills and capabilities in:

- accessing, acquiring, analysing, synthesising, and evaluating information from a variety of sources
- a range of verbal and visual communication strategies, and conventions to convey design ideas and proposals
- self-management techniques, including creating and pursuing goals, planning and organising, monitoring progress, and acting on reflections and revisions to complete projects within agreed timeframes
- providing active and positive contributions to collaborative design problems to produce appropriate design proposals and solutions
- applying an understanding of architectural principles relating to use of space, aesthetics and structure in design proposals
- investigating, analysing and integrating information about site, precedents, client needs and other relevant influences into the design response
- generating and communicating ideas, concepts and design options using a range of techniques to develop a viable solution to problems
- identifying and applying features which contribute to environmentally sustainable design and social cohesion within buildings, and their positioning in relation to services and resources
- critically analysing the range of design and construction techniques and materials to make informed choices to support environmental sustainability and human comfort
- testing the appropriateness of solutions through a range of analytical and evaluative techniques
- developing numeracy related to planning, including use of measurement, area, scale, proportion, ratio, gradients, solar geometry and graphically represented data
- gaining an awareness of pathways related to the built environment including roles involving design and construction, social structures and support, environmental and ecological sustainability, economics and governance, to provide insights for career and life pathways.

COURSE CONTENT

The course will develop design and generic capabilities through housing and interior design briefs. These will contain challenges and constraints through the application of design principles and information, including:

- Architectural design principles
- Environmentally sustainable practices
- Information about needs, precedents and influences.

Students will develop knowledge and skills by undertaking a range of briefs which provide a foundation for completing an individual design folio on a topic of their choice.

DESIGN PRACTICE

Design Process

- Brief Development (going beyond “client” immediate stated needs)
- Identification of relevant design principles and information (see previous three sections)
- Formulation of aims
- Generation of ideas to address problems and integrate design information using 2D or 3D testing and analysis
- Ideation (visual brainstorming) indicating catalytic / critical threads in process
- Ongoing reflection on problem, brief and aims.

Design Product

Respond to the brief and aims, which would usually include:

- Functional requirements
- Aesthetic qualities / expression
- Environmental considerations
- Discussion / analysis of areas of brief not able to be resolved.

GENERIC CAPABILITIES

Research, analysis and synthesis

- Critical information literacy skills
- Sourcing information from primary sources, e.g. client, expert, practitioner
- Locating local and Australian sources (and international sources where appropriate)
- Referencing of sources.

Communication

Verbal:

- Evidence of research
- Communicating to an audience (small and class group).

Visual:

- Documentation of research and design process
- Architectural conventions for developmental and final plans
- 2D and 3D modelling / perspective images.

Numerical:

- Measurement, area, scale (1:20, 1:50, 1:100), proportion, ratio, gradients, solar geometry and graphically represented data.

ICT:

- Including photo imaging, scanning, word processing, layout and formatting, PowerPoint presentations, email, internet searches.

Self Management for individual and team projects

Individual

- Project management for larger (e.g. larger design projects and folio)
- Planning and organising tools (e.g. timelines, gant charts)
- Goal setting and action planning
- Critical reflection.

Collaborative

- As above
- Roles, responsibility and leadership
- Problem solving, negotiation, conflict resolution.

DESIGN PRINCIPLES AND INFORMATION

Design and Architectural principles

Aesthetic

- Elements and principles of design
(colour, texture, shape, line, direction, space, mass, balance, proportion)

Use of space

- Layout, flow, circulation and zoning
- Ergonomics

Construction materials and techniques

- Functional, environmental and comfort factors of exterior, interior and related construction materials
- Construction methods

Environmental Sustainability

- Sources of energy for housing
- Active and passive energy sources for housing
- Passive solar design for cool temperate and hot humid tropical climates
- Embodied energy of building materials
- Impact of choice of housing materials, services, construction and design techniques on sustainability of energy consumption levels and the environment
- Sustainable urban planning principles

Investigation of needs, precedents and influences

Analysis of site, user and community needs to integrate and respond to:

- Users current and projected needs
 - Practical, psychological and sociological needs during lifecycle
 - Demographic trends and housing needs for future
- Precedents
 - Historical, exemplary contemporary architectural responses
- Social and economic influences
 - Housing affordability
 - High, medium and low density housing
 - Cultural values in relation to housing
 - Provision of housing for groups with specific needs (e.g. homeless, people with disability).

The *Teaching and Learning Guide* provides support for teachers and students through:

- Suggested topics for folios
- Examination of briefs which provide foundation learning in the Design Principles and Information content area
- References and resources.

ASSESSMENT

Criterion-based assessment is a form of assessment which identifies the extent of student achievement at an appropriate end-point of study. Assessment in the classroom is continuous, much of it is formative, and is done to help students identify what they need to do to attain the maximum benefit from their study of the course. Therefore, assessment for summative reporting should focus on what both teacher and student understand to reflect end-point achievement.

The primary audience for assessment and reporting is the student and the teacher, but may also include parents when appropriate.

The standard of achievement each student attains on each criterion is recorded as a rating 'A', 'B', or 'C', according to the outcomes specified in the standards section of the course.

A 't' notation must be used where a student demonstrates any achievement against a criterion less than the standard specified for the 'C' rating. The 't' notation is not described in course standards.

A 'z' notation is to be used where a student provides no evidence of achievement at all.

Providers offering this course must participate in quality assurance processes specified by the Tasmanian Qualifications Authority to ensure provider validity and comparability of standards across all awards. Further information on quality assurance processes, as well as on assessment, is available in the TQA Senior Secondary Handbook or on the website at <http://www.tqa.tas.gov.au>

Internal assessment of all assessment criteria will be made by the school. Schools will report the student's rating for each criterion to the Tasmanian Qualifications Authority.

The Tasmanian Qualifications Authority will supervise the external assessment of designated criteria (*) in TQA courses that include an external assessment regime. The ratings obtained from the external assessments will be used in addition to those provided from the school to determine the final award.

QUALITY ASSURANCE PROCESSES

The following processes will be facilitated by the TQA to ensure there is:

- a match between the standards for achievement specified in the course and the standards demonstrated by students, and
- community confidence in the integrity and meaning of the qualifications.

Processes – the Authority gives course providers feedback about any systematic differences in the relationship of their internal and external assessments and, where appropriate, seeks further evidence through audit and requires corrective action in the future.

EXTERNAL ASSESSMENT REQUIREMENTS

The following criteria will be externally assessed: 3, 4, 6, 7 and 8.

Further information regarding external assessment processes and requirements is given in TQA issued Assessment Guidelines.

COURSE CRITERIA

The assessment for this course will be based on the degree to which a student can:

1. Communicate ideas and information using a range of techniques
2. Demonstrate self-management strategies to complete individual and team activities
3. *Apply features and principles which will contribute to environmental sustainability within design decisions
4. *Understand and use architectural design principles relating to functional use of space
5. Understand and use architectural design principles relating to aesthetic
6. *Locate, analyse and integrate information about user needs, precedents and influences in design projects
7. *Use and document the design process
8. *Generate design solutions which respond positively to the brief and identified aims.

*denotes criteria that are externally assessed

STANDARDS

<p>CRITERION 1: COMMUNICATE IDEAS AND INFORMATION USING A RANGE OF TECHNIQUES</p>	<p style="text-align: center;">‘C’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> • communicate ideas and information using a range of techniques which are structured to reveal understanding and some synthesis • select and combine forms, styles and conventions which are appropriate in relation to the context and purpose • check communication for clarity, detail, accuracy and effectiveness and make adjustments based on feedback. 	<p style="text-align: center;">‘B’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> • communicate ideas and information using an appropriate range of techniques which are clear and structured to reveal understanding and synthesis • select and combine forms, styles and conventions which are appropriate in relation to the context and purpose • revise and reflect upon communication to check for clarity, detail, accuracy and effectiveness and make adjustments. 	<p style="text-align: center;">‘A’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> • communicate ideas and information using an appropriate and diverse range of techniques which are clear and structured to reveal comprehensive understanding and synthesis • competently select and combine appropriate forms, styles and conventions which are appropriate in relation to the context and purpose • with a high degree of independence, revise and reflect upon communication to check for clarity, detail, accuracy and effectiveness and make adjustments.
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<p>CRITERION 2: DEMONSTRATE SELF-MANAGEMENT STRATEGIES TO COMPLETE INDIVIDUAL AND TEAM ACTIVITIES</p>	<p>'C' RATING</p>	<p>'B' RATING</p>	<p>'A' RATING</p>
	<p>A student can:</p> <ul style="list-style-type: none"> • use planning and self management strategies which facilitate the successful completion of most tasks within agreed time frames • reflect upon planning timelines and attempt to make modifications, utilise appropriate resources and seek to address most other barriers to achieve individual or team goals • demonstrate a sense of individual and collective responsibility when working in teams by monitoring and reviewing progress and through communication in relation to team goals • employ collaborative strategies, address issues which affect achievement of team goals, and can lead when required. 	<p>A student can:</p> <ul style="list-style-type: none"> • use a range of planning and self management strategies which usually enable the effective completion of tasks within agreed time frames • reflect upon planning timelines and make modifications, utilise appropriate resources and seek to address other barriers to achieve individual or team goals • demonstrate a sense of individual and collective responsibility when working in teams by monitoring and reviewing progress and effective communication in relation to team goals • effectively employ a range of collaborative strategies, address issues which affect achievement of team goals, and adopt appropriate leadership roles when required. 	<p>A student can:</p> <ul style="list-style-type: none"> • use a wide range of planning and self management strategies which consistently enable the effective completion of tasks within agreed time frames • consistently reflect upon planning timelines and make modifications, utilise appropriate resources and effectively address other barriers to achieve individual or team goals • demonstrate a sense of individual and collective responsibility when working in teams through ongoing monitoring and reviewing of progress and effective communication in relation to team goals • effectively employ a range of collaborative strategies, identify and address issues which affect achievement of team goals, and effectively adopt appropriate leadership roles when required.

<p>*CRITERION 3: APPLY FEATURES AND PRINCIPLES WHICH WILL CONTRIBUTE TO ENVIRONMENTAL SUSTAINABILITY WITHIN DESIGN DECISIONS</p>	<p>‘C’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> develop design decisions which include most of the key features and principles that contribute to environmental sustainability and apply, describe and justify these demonstrate a knowledge of the main environmental impacts of aspects of housing and design identify competing factors which impact on the environment and address some of these factors when designing. 	<p>‘B’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> develop design decisions that successfully contribute to environmental sustainability and apply, describe and justify most of the appropriate features and principles in a detailed and informed manner demonstrate a sound knowledge of environmental impacts of aspects of housing and design identify and analyse competing factors which impact on the environment and address most of these factors when designing. 	<p>‘A’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> develop design decisions that successfully contribute to environmental sustainability and apply, describe and justify appropriate features and principles in a detailed and informed manner demonstrate an accurate and broad knowledge of environmental impacts of aspects of housing and design identify, analyse and seek to resolve competing factors which impact on the environment when designing.
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<p>*CRITERION 4: UNDERSTAND AND USE ARCHITECTURAL DESIGN PRINCIPLES RELATING TO FUNCTIONAL USE OF SPACE</p>	<p>‘C’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> develop design solutions that usually contribute to functional use of space and relate to most of the identified needs of the users in a range of housing and design contexts consider and refine designs to respond to the main ergonomic, circulation and spatial relationships, including zoning provide annotations relating to critical design decisions which reflect relevant knowledge of most architectural design principles. 	<p>‘B’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> develop design solutions that effectively contribute to functional use of space and relate to the majority of the identified needs of the users in a range of housing and design contexts consider and refine a range of designs to appropriately respond to ergonomic, circulation and spatial relationships, including zoning provide annotations relating to critical design decisions which reflect relevant knowledge of architectural design principles. 	<p>‘A’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> develop design solutions that effectively contribute to functional use of space and relate directly to the identified needs of the users in a wide range of housing and design contexts consider and refine a wide range of designs to appropriately respond to ergonomic, circulation and spatial relationships, including zoning provide clear annotations relating to critical design decisions which reflect relevant and broad knowledge of architectural design principles.
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<p>*CRITERION 5: UNDERSTAND AND USE ARCHITECTURAL DESIGN PRINCIPLES RELATING TO AESTHETICS</p>	<p>‘C’ RATING</p>	<p>‘B’ RATING</p>	<p>‘A’ RATING</p>
	<p>A student can:</p> <ul style="list-style-type: none"> • identify aesthetic features in a range of architectural settings to develop an understanding of the elements and principles of design • develop design solutions that explore and use a range of the aesthetic elements and principles of design to create a specific visual impact • annotate design to reflect an understanding of the elements and some principles of design with justification of key aesthetic design decisions. 	<p>A student can:</p> <ul style="list-style-type: none"> • analyse aesthetics in a range of architectural settings to reflect an understanding of the elements and principles of design • develop design solutions that explore, analyse and use the aesthetic elements and principles of design to create a specific visual impact • annotate design to reflect a sound understanding of the elements and some principles of design with clear justification of key aesthetic design decisions. 	<p>A student can:</p> <ul style="list-style-type: none"> • critically analyse aesthetics in a range of architectural settings to reflect an understanding of the interrelationships between elements and principles of design • develop design solutions that explore, analyse and selectively use an appropriate range of the aesthetic elements and principles of design to create the specified visual impact • clearly annotate design to reflect a broad and accurate understanding of the elements and principles of design with sound justification of all aesthetic design decisions.

<p>*CRITERION 6: LOCATE, ANALYSE AND INTEGRATE INFORMATION ABOUT USER NEEDS, PRECEDENTS AND INFLUENCES IN DESIGN PROJECTS</p>	<p>‘C’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> locate and select relevant and current information about the context of the brief from a range of sources and use this to inform design decisions consider impact of user needs, precedents and influences on designs reveal the link between research and the design through documentation and communication strategies. 	<p>‘B’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> identify, locate and select relevant and current information about the context of the brief from a broad range of sources and use this to inform design decisions analyse impact of user needs, precedents and influences on designs clearly reveal the links between research and the design through appropriate documentation and communication strategies. 	<p>‘A’ RATING</p> <p>A student can:</p> <ul style="list-style-type: none"> identify, locate and select relevant and current information about the context of the brief from a broad range of sources and appropriately use this to inform effective design decisions critically analyse impact of user needs, precedents and influences on designs clearly and insightfully reveal the links between research and the design through appropriate and effective documentation and communication strategies.
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<p>*CRITERION 7: USE AND DOCUMENT THE DESIGN PROCESS</p>	<p>'C' RATING</p>	<p>'B' RATING</p>	<p>'A' RATING</p>
	<p>A student can:</p> <ul style="list-style-type: none"> • explore a range of ideas and consider these by reflecting on the design brief, aims and most of the other related design principles to refine design decisions • sequence and present graphics and annotations to reflect the problem solving process • use scale appropriately to test and improve design ideas in the majority of the design development process • show that refinements based on feedback and reflective thinking skills are evident within the process. 	<p>A student can:</p> <ul style="list-style-type: none"> • explore a range of ideas and analyse these by reflecting on the design brief, aims and other related design principles to refine design decisions • sequence and clearly present graphics and annotations to reflect the problem solving process and some of the pivotal points in design decisions • use scale appropriately to test and refine design ideas for the design development process • show that refinements based on feedback and ongoing reflective thinking skills are addressed and clearly evident within the process. 	<p>A student can:</p> <ul style="list-style-type: none"> • explore a range of ideas and critically analyse these by reflecting on the design brief, aims and other related design principles to refine design decisions • sequence and clearly present graphics and annotations to reflect the problem solving process and the pivotal points in design decisions • use scale appropriately and effectively to test and refine design ideas for the design development process • show that effective refinements based on feedback and ongoing reflective thinking skills are methodically addressed and clearly evident within the process.

<p>*CRITERION 8: GENERATE DESIGN SOLUTIONS WHICH RESPOND POSITIVELY TO THE BRIEF AND IDENTIFIED AIMS</p>	<p>'C' RATING</p>	<p>'B' RATING</p>	<p>'A' RATING</p>
	<p>A student can:</p> <ul style="list-style-type: none"> • address most key aspects of the brief and aims within the final design(s) in a positive manner • integrate relevant design information into the final design • select and use a range of communication conventions and styles to present the final design. 	<p>A student can:</p> <ul style="list-style-type: none"> • address all aspects of the brief and aims within the final design(s) in an effective manner • effectively integrate relevant design information into the final design • select and accurately use an appropriate range of communication conventions and styles to present the final design. 	<p>A student can:</p> <ul style="list-style-type: none"> • address all aspects of the brief and aims within the final design(s) in an effective manner with a high degree of resolution • thoroughly and effectively integrate all relevant design information into the final design • select and accurately use a broad range of communication conventions and styles to present an effective final design.

QUALIFICATIONS AVAILABLE

Housing and Design (*with the award of*):

PRELIMINARY ACHIEVEMENT
SATISFACTORY ACHIEVEMENT
COMMENDABLE ACHIEVEMENT
HIGH ACHIEVEMENT
EXCEPTIONAL ACHIEVEMENT

AWARD REQUIREMENTS

The final award will be determined by the Tasmanian Qualifications Authority from the 13 ratings (8 ratings from the internal assessment and 5 ratings from the external assessment).

The minimum requirements for an award in this course are as follows:

EXCEPTIONAL ACHIEVEMENT (EA)

10 'A', 3 'B' ratings (4 'A', 1 'B' from external assessment).

HIGH ACHIEVEMENT (HA)

5 'A', 5 'B', 3 'C' ratings (2 'A', 2 'B', 1 'C' from external assessment).

COMMENDABLE ACHIEVEMENT (CA)

7 'B', 5 'C' ratings (2 'B', 2 'C' from external assessment).

SATISFACTORY ACHIEVEMENT (SA)

11 'C' ratings (3 'C' from external assessment).

PRELIMINARY ACHIEVEMENT (PA)

6 'C' ratings.

A student who otherwise achieves the ratings for a CA (Commendable Achievement) or SA (Satisfactory Achievement) award but who fails to show any evidence of achievement in one or more criteria ('z' notation) will be issued with a PA (Preliminary Achievement) award.

COURSE EVALUATION

Formal evaluations of the course will be undertaken during the second and fourth years of accreditation. An evaluation report will be provided to the TQA.

The evaluations will focus on identifying any issues with regards to:

- the match between the standards for achievement specified in the course and the standards demonstrated by students
- community confidence in the integrity and meaning of the qualifications
- access, delivery and resources

and, if appropriate, make recommendations regarding changes to the course.

COURSE DEVELOPER

Department of Education, Tasmania.

ACCREDITATION

The accreditation period for this course is from 1 January 2008 to 31 December 2012.

VERSION HISTORY

Version 1 – Accredited version (4 October 2007).

Version 1.a – Clarification of Course Size and Complexity (6 March 2008).

Version 2 – New quality assurance regime as per the Authority's decision on 1 October 2008 (28 November 2008).