DAT102

ASSESSMENT

1

Ver: A1.0

DAT102 Preliminary Design

Assessment 1

Weighting

30%

Learning outcome

1 Develop a concept into a preliminary architectural design for a residential building.

Instructions

Complete and submit your assessment according to the Open Polytechnic's Assessments web page. This includes information on academic integrity, word limits and referencing.

- Include your name, student number and the assessment number.
- Number your pages.

Submission

- Submit your assessment in one file.
- Submit your work through your iQualify course.
- Emailed assessments will not be accepted.
- You will receive an automated notice following submission.

By submitting your assessment, you confirm that it is your own, original work.

Task 1: Project design report

You are to prepare a project design report for approval by the client. Refer to the project brief for client requirements, purchaser's requirements, district plan, climate zone and site information.

Purpose

This report is your opportunity to show the client your research, findings and the basis for your conclusions and recommendations.

Structure

Your report should follow the following broad structure and include:

- introduction and overview of project
- content and findings
- conclusions and recommendations

Content

The content of your report should include:

- the client's requirements
- site requirements in terms of the district plan
- site services available – foul water, stormwater, water, electricity, data
- code compliance considerations, in particular:

  B Stability (3604)
  D Access
  G1 Personal hygiene
  G4 Ventilation
  G5 Interior environment
  G7 Natural light

- Environmental factors:

  Climate – Sun, wind, rain, temperature
  Location and orientation of the building
  Design for thermal comfort – insulation, ventilation, glazing, thermal mass
  Climate zones – wind, exposure, earthquake, rainfall intensity

- Sustainability:
  - Water and treatment of wastewater
  - Biodiversity
  - Toxicity of materials

  - Renewable energy
  - Energy-efficient appliances and lighting
  - Dealing with condensation and internal moisture
  - Site features
  - Recommended landscaping
  - Illustrations
  - Membership with NZGBC

Using CAD software or drawing by hand, include the following illustrations with your report.

- Sketch of the site (site analysis drawing). As a minimum requirement, the following is to be shown:
  - legal description of the building
  - north direction
  - building location, including dimensions in metres to boundary and boundary fire ratings
  - contour levels and datum for site
  - location of services (existing and proposed)
  - excavation details (including retaining walls, if any)
  - identify vehicle crossing
  - vehicular movement inside the site

- Sketch of the buildable envelope for the site (district plan requirements). As a minimum requirement, the following is to be shown:
  - all exterior elevations
  - overall height of dwelling
  - external doors and windows with opening direction
  - cladding types
  - roofing types
  - gutter, downpipes and vent locations
  - location of construction joints

(Word count guideline: 1500 to 2000 words)

(60 marks)

Task 2: Preliminary drawings

Drawings

You are to prepare the following drawings for the project building using approved CAD software at a scale of 1:100 on A3 sheets:

- Part 1: Site and floor plan

- Part 2: Section
- Part 3: Elevations

Refer to the project brief for client requirements, purchaser's requirements, district plan, climate zone and site information.

These are preliminary drawings only, for approval by your supervisor. It is important that the building geometry is correct and the spaces are labelled. It is also important that the room layout is functional and meets the brief. Select suitable lettering for the title. Show the north point, and add colour to highlight important areas. Add furniture and fixtures to render the plan.

Once marked, these drawings (with feedback from your lecturer), are effectively the approval for you to prepare the more detailed presentation drawings required for Assessments 2 and 3. For this assessment, you will be marked on the appropriateness of your design, the accuracy of drawing and compliance with the brief and regulatory information provided.

You may not be able to meet the scheduled accommodation sizes exactly, but you should endeavour to match them as closely as possible. Note that the bubble diagram provided with the project brief is not to scale or proportion.

Format

Create the drawings using approved CAD software.

Export your drawings from CAD to .pdf format and submit your drawings.

(40 marks)

Marking schedule

	47.5–60 Marks	38.5–47 Marks	30–38 Marks	24–29 Marks	1–23 Marks
Design report	The purpose has been well researched. The structure is followed and professionally presented. Content includes relevant and accurate information on all the bullet points. The bullet points have been covered in their entirety.	The purpose has been well researched. The structure is followed. Content includes relevant and accurate information on all the bullet points.	The purpose has been adequately researched. The structure is broadly followed. Content includes pertinent information on all the bullet points.	The purpose has not been adequately researched. The structure is mostly followed, but there are omissions. Content includes information on some of the bullet points, but there may be errors.	The purpose has not been researched. The structure is not adequately followed, and there are omissions. Content does not include information on most of the bullet points.
	32–40 Marks	**26–31.5 Marks**	**20–25.5 Marks**	**16–19.5 Marks**	**1–15.5 Marks**
CAD drawings	Site and floor plans and all elevations are accurate and rendered in CAD software. The plans are professionally presented and easy to follow.	Site and floor plans and all elevations are accurate and rendered in CAD software. The plans are well-presented and easy to follow.	Site and floor plans and all elevations are accurate and rendered in CAD software.	Site and floor plans and most elevations are accurate and rendered in CAD software.	Site and floor plans and most elevations are not accurate and/or not rendered in CAD software.