# Design and Visual Communication Level 1 Course Outline 1

# **Guide to aid teacher planning only - designed to be printed or viewed in A3, Landscape.**

## **Purpose**

This example Course Outline has been produced to help teachers and schools understand the new NCEA Learning and Assessment matrices and could be used to create a year-long programme of learning. It will give teachers ideas of how the new standards might work to assess the curriculum at a particular level.

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| **Significant Learning** | **Learning activities and assessment opportunities**Throughout the year assessment for learning happens often. Evidence may also be collected for summative assessment. | **Duration** Total of 32 weeks |
| Understand the whakapapa of a design heritage.Explore and consider design tikanga, practices, principles, and techniques from Māori, indigenous cultures within design and communication. | **LEARNING about one’s Personal Perspective** *For the very beginning of the year, a learning intention here is on setting up students for Design and Visual Communication (DVC) learning as design thinkers, noting that there will be students in the class who may be doing DVC for the first time.* *This initial learning is based around an aspect of the DVC Big Idea “Designers bring their own unique voice that draws from their personal experiences, cultures, values, and perspectives as well as those of other people” – with a particular attention given to personal perspectives.*Students will put together a set of work that shares their personal perspective:* Their background stories (something about themselves, their family, culture, interests, experiences, etc).
* The creative heritage that they might see they have (art, design, music, drama, dance, writing, craft, sports, etc – what they have done and/or examples of what they are interested in).

This is be done as a collection of images (that can be talked or written about). | 2 weeks |
| Explore and consider design tikanga, practices, principles, and techniques from Māori, indigenous cultures within design and communication. | PROJECT **ONE – SEAT DESIGN*****Brief: Students will explore ideas for outdoor seating that is to go in a specified area of the school***PROJECT **ONE – PART 1: RESEARCH AND GATHER IMAGES***A learning intention here is for students to begin to develop their research skills through image gathering and the associated visual analysis of these existing ideas that can provide a source inspiration for divergent thinking.**This learning is based around an aspect of the DVC Big Idea “Design has a whakapapa – heritage, philosophies, and knowledges, both functional and aesthetic, in relation to product and spatial design” – with a particular attention given to heritage and knowledges of a mainly aesthetic nature.*Students collect images on two artefacts from two different cultures: One artefact from a te ao Māori heritage (as might be relevant to the school’s local region) and one artefact from another heritage that may be connected to the individual student (could be based on their personal perspective work) or a peer.An artefact can be a piece of furniture or a product that serves a specific purpose (eg harakeke/fishing net, waka/canoe, patu/club, etc) – these artefacts can be traditional or contemporary.For each artefact, gather a range of images (as analytical image gathering) that may include:* photographs that show the specific artefact from different viewpoints
* photographs or drawings of close-up details and/or features of the artefact
* photographs, drawings, or diagrams that show how the artefact is constructed or assembled
* photographs, drawings, or diagrams that show how the artefact is used and any protocols associated with its use
* photographs or drawings of different versions of the same artefact that might vary in terms of its history, region, or style.
 | 1 week |
| Develop skills in visual techniques to generate design ideas such as quick sketches, sketch models, fast computer models.Play with ideas that explore possibilities and can lead to the generation of more interesting ideas.Learn how to generate ideas. | PROJECT **ONE – PART 2: GENERATING SCULPTURAL FORMS** *A learning intention here is for students to begin to develop their ideation skills that can assist divergent thinking and the generation of their own initial design possibilities.**This learning is based around an aspect of the DVC Big Idea “Design tikanga weaves together both divergent and convergent thinking in the generation, exploration, refinement, and resolving of design ideas and outcomes” – with a particular attention on divergent thinking in the generation and exploration of design ideas.*Using the gathered images as inspiration, students can generate a range of preliminary ideas that respond to different aspects of the visual qualities of the artefacts researched. These ideas are intended to be exploratory and not necessarily functional or purposeful at this stage. This idea generating can include exploring aspects of form (3D), shape (2D), pattern, texture, colour, material, surface finish, etc, and be done through any of the following visual communication techniques:* Paper sculptures that are documented though a set of photographs.
* A series of quick exploratory sketches that can be generated though a range of strategies such as rapid vis, tracings, blind drawing, mixed media, etc. They can be either 2D or 3D or a combination.
* Simple or abstract SketchUp models that are documented through images that show the idea from different viewpoints.
 | 2 weeks |
| Understand how to use appropriate visual communication techniques to generate and explore ideas beyond first thoughts.Play with ideas that explore possibilities and can lead to the generation of more interesting ideas.Learn how to generate ideas, and design innovative outcomes.Produce unique and individualised design ideas and outcomes. | PROJECT **ONE – PART 3: GENERATING, EXPERIMENTING, EXTENDING SEAT DESIGN IDEAS** *A learning intention here is for students to stimulate the expanding and extending of their divergent thinking and to encourage creative play as part of generating their own imaginative design ideas.**This learning is based around an aspect of the DVC Big Idea “Design tikanga weaves together both divergent and convergent thinking in the generation, exploration, refinement, and resolving of design ideas and outcomes” – with a particular attention on divergent thinking in the generation and exploration of design ideas. There are also some aspects of the DVC Big Idea “Visual communication is a set of visual literacy skills that allow designers to think about, evaluate and appropriately present design ideas and outcomes” – specifically in terms of visual communication skills that allow the thinking about design ideas.*Using as inspiration, the research images gathered, and their own sculptural forms generated, students can play with alternative seat design ideas that begin to incorporate the various elements and features (functional or aesthetic) in different and creative ways that may lead towards a potential seat design outcome. Part of this creative play with potential design ideas, the student may also include what will be deemed suitable for the specified area of the school setting while also considering the appropriateness to the design heritages that the ideas have responded to. In terms of thinking about the specified school setting, students may want to think about:* How will the seat be used by people? (How many will it seat? Is for resting or socialising, or studying? Is it moveable or fixed?)
* How will the seat be set in its environment? (Will it blend in with its surroundings or make a visual statement? Is it suitable for the outdoors in terms of its durability? Is it positioned to admire a view?)

Modes of visual communication that students can use can include design sketches, physical models, digital models, or any combination of these, and can use any range of techniques that may include tracing, photography, collage, etc. | 4 weeks |
|  | ***Summative Assessment for DVC 1.1:*** *Generate product or spatial design ideas in response to te ao Māori and another design heritage (Internal, 5 credits)* | *Due start of Term 1, week 10* |
| Develop skills in visual techniques to generate design ideas, such as quick sketches, sketch models, fast computer models.Produce unique and individualised design ideas and outcomes. | PROJECT **TWO – SHADE STRUCTURE DESIGN*****Brief: Students will develop a shade structure design idea for a specified outdoor area*** PROJECT **TWO – PART 1: GENERATING INITIAL DESIGN IDEAS***A learning intention here is for students to generate initial responses to a given design brief and a specified location through the generation of distinctly different potential design ideas.**This learning is based on an aspect of the DVC Big Idea “Design tikanga weaves together both divergent and convergent thinking in the generation, exploration, refinement, and resolving of design ideas and outcomes” – with a particular attention on divergent thinking in the generation and exploration of design ideas.*The outdoor area that students select can be one that they personally connect with, and it can be a public space (such as school grounds, local park, sports field, beach, civic square, etc.) or a more private space (like their home deck, entertainment area, garden, backyard, etc).Students are to generate at least two different initial design ideas for a potential Shade Structure Design for the outdoor area they have identified.To assist with generating initial design ideas that are distinctly different from each other, students can generate an idea that is inspired by elements of their Seat Design (from Project One) and an idea that is inspired by elements from one of the following famous buildings:* 4 x 4 House – Tadao Ando
* Barcelona Pavilion – Mies van der Rohe
* Christchurch Transitional ‘Cardboard’ Cathedral – Shigeru Ban
* Fortuna Chapel – John Scott
* K Valley House – Herbst Architects
* Kawakawa Public Toilets - Friedensreich Hundertwasser
* Len Lye Centre – Andrew Patterson
* The Hive NTU – Thomas Heatherwick
* Vitra Fire Station – Zaha Hadid

Students will visually communicate their own initial design ideas through a set of 2D and 3D drawings that can be created manually, digitally, or a combination of both. These design drawings can be supported by labels and brief notes that help explain the main aesthetic and functional features as well as the student’s design thinking behind each idea. | 2 weeks |
| Engage with people, places, and cultures to develop design ideas and outcomes.Show understanding of aspects of function and use. |  PROJECT **TWO – PART 2: CLARIFYING THE CONTEXT***A learning intention here is for students to begin to understand a site’s environmental conditions (as related to their specific outdoor area identified) and how this needs to be factored into any spatial design ideas.**This learning is based around an aspect of the DVC Big Idea “Design has a whakapapa – heritage, philosophies, and knowledges, both functional and aesthetic, in relation to product and spatial design” – with a particular attention given to functional considerations in relation to spatial design.*Students are to clarify and visually communicate the details of their selected outdoor location in the form of a site analysis. Information to be given includes where it is, the size of the area, topography, acknowledging any built or natural features (both on site and adjacent to the site), sun, wind, and views. Students can also clarify the activities that take place and a profile of the people that occupy or use the area.Students will visually communicate this analysis of the site location using maps, aerial views, photographs (both looking at the site and looking from the site) and diagrams (such as sun path), supported by labels and brief notes. | 1 week |
| Understand how to use appropriate visual communication techniques to generate and explore ideas beyond first thoughts.Develop skills and apply design knowledge to context.Understand the purpose of design is to enhance lives and environments using aspects of kaitiakitanga and hauora.Understand that all ideas have value through critique to make decisions.Show understanding of aspects of function and use.Develop visual communication skills to explore design ideas and thinking in a context.Develop visual skills and techniques to communicate details of design ideas and outcomes. | PROJECT **TWO – PART 3: DEVELOPING A SHADE STRUCTURE DESIGN OUTCOME***A learning intention here is for students to develop their emerging design thinking skills that uses convergent thinking to support informed decision making which considers the people that are likely to experience the idea and underpins the refinement their own design ideas.**This learning is based around aspects of all five DVC Big Ideas – with a particular attention on seeking new ways to improve the lives of people and their places, generating and refining design ideas, bringing their own voice and the perspectives of themselves and others, knowledge in relation to spatial design, and visual literacy skills.*Students will choose one of their initial design ideas, giving a reason for their selection. Their decision might be informed by what is deemed as most suitable for the selected outdoor location, the people who are likely to experience the shade structure, or what has the strongest aesthetic qualities. Students will develop their design ideas, refining and clarifying the aesthetic and functional features of their main design idea for a potential shade structure. The intention is to improve the spatial experiences of the likely user and consider the environmental conditions of the location. Areas of development that can be considered (in no set order) includes:* overall form and aesthetics
* overall use and functionality
* size and site placement
* materials and colour
* basic construction.

Encouraging students to finds opportunities to develop an aspirational design idea that elevates the user experience within the brief context should be done whenever possible and at any point within the project.Students will visually communicate their design thinking through the iterative use of 2D and 3D design drawings that can be created manually, digitally, or as a combination of both. This narrative of design drawings can be supported by labels and brief notes that can help explain the aesthetic and functional features and details as well as the design decisions that are made.Students should conclude their design thinking with a summary of 2D and 3D design drawings (with supporting labels and brief notes) that visually communicate the design outcome in terms of all its key features, details, and decisions.  | 6 weeks |
|  | ***Indicative Summative Assessment for DVC 1.3:*** *Use visual techniques to develop product or spatial design ideas that consider people (External, 5 credits)* | *Due start of Term 2, week 9* |
| Develop visual skills and techniques to communicate details of design ideas and outcomes. | **LEARNING about Instrumental drawing techniques and drawing systems***A learning intention here is for students to begin to develop their manual instrumental drawing techniques and an emerging understanding of drawing systems that can aid the precise visual communication of technical information of design ideas.**This learning is based around an aspect of the DVC Big Idea “Visual communication is a set of visual literacy skills that allow designers to think about, evaluate, and appropriately present design ideas and outcomes” – with particular attention to appropriately presenting design ideas.*Students will work through a series of manual drawing exercises that scaffold the learning of instrumental drawing techniques and principles covering the following aspects of:* using manual drawing equipment (such as pencils, T-square, set-squares, compass, circle templates, etc)
* applying the principles of line weights, line types, and labelling
* applying the principles of orthographic and paraline drawing systems
* applying foundational instrumental drawing techniques related to product or spatial design (eg sectional drawing, exploded drawing, drawing details etc).
 | 2 weeks |
| Understand how to use appropriate visual communication techniques.Develop visual skills and techniques to communicate details of design ideas and outcomes. | PROJECT **THREE – INSTRUMENTAL DRAWINGS OF OWN DESIGN OUTCOME*****Brief: Students will create instrumental drawings to visually communicate the construction or assembly details of one of their design outcomes***PROJECT **THREE – PART 1: PRELIMINARY DRAFTS OF INSTRUMENTAL DRAWINGS***A learning intention here is for students to practice applying their manual instrumental drawing techniques and emerging understanding of drawing systems in the precise visual communication of technical information for one of their own design outcomes.**This learning is based around an aspect of the DVC Big Idea “Visual communication is a set of visual literacy skills that allow designers to think about, evaluate and appropriately present design ideas and outcomes” – with particular attention to appropriately presenting their own design outcomes and an aspect of the DVC Big Idea “Design has a whakapapa – heritage, philosophies, and knowledges, both functional and aesthetic, in relation to product and spatial design” – with a particular focus on functional knowledge.*Students will select one of their design outcomes (either their seat design or shade structure design) for which to create their instrumental drawings. Students will draft their instrumental drawings, beginning with an overall assembled paraline drawing that is then followed up by either an exploded paraline drawing or sectioned paraline drawing as deemed appropriate for visually communicating construction or assembly details. Depending on the nature of the design outcome and the capability of the student, they may wish to substitute some, or all, of the paraline drawings for appropriate orthographic drawings. By drafting these drawings, students can critique and amend the drawings that are utilised and correct any errors or inaccuracies prior to the creation of their final instrumental drawings.  | 3 weeks |
| Understand how to use appropriate visual communication techniques.Develop visual skills and techniques to communicate details of design ideas and outcomes.Use visual communication skills and presentation techniques to communicate a design idea or outcome. | PROJECT **THREE – PART 2: CREATING THE FINAL INSTRUMENTAL DRAWINGS***A learning intention here is for students to best apply their manual instrumental drawing techniques and emerging understanding of drawing systems in the precise visual communication of technical information for one of their own design outcomes.**This learning is based around an aspect of the DVC Big Idea “Visual communication is a set of visual literacy skills that allow designers to think about, evaluate and appropriately present design ideas and outcomes” – with particular attention to appropriately presenting design ideas and an aspect of the DVC Big Idea “Design has a whakapapa – heritage, philosophies, and knowledges, both functional and aesthetic, in relation to product and spatial design” – with a particular focus on functional knowledge.*Once the students have resolved their inaccuracies and selection of instrumental drawings, they can then proceed to undertake an improved and refined set of final instrumental drawings that visually communicate the construction or assembly details of their selected design outcome. | 3 weeks |
|  | ***Indicative Summative Assessment for DVC 1.4:*** *Use instrumental drawing techniques to communicate a product or spatial design outcome (External, 5 credits)* | *Due start of Term 3, week 7* |
| Use visual communication skills and presentation techniques to communicate a design idea or outcome. | **LEARNING about Rendering Techniques***A learning intention here is for students to develop their manual rendering techniques and an emerging understanding of rendering principles that can aid the precise visual communication of aesthetic qualities for one of their own design outcomes.**This learning is based around an aspect of the DVC Big Idea “Visual communication is a set of visual literacy skills that allow designers to think about, evaluate and appropriately present design ideas and outcomes” – with particular attention to appropriately presenting design ideas.*Students will work through a series of manual rendering exercises that scaffold the learning of techniques and principles covering the following aspects of:* applying the principles of tonal effects of a light source, cast shadows, shadow lines and highlights, materials, and textures
* using manual rendering media (such as pencils, colour pencils, design markers, pastels, etc).
 | 2 weeks |
| Understand how to use appropriate visual communication techniques.Develop visual skills and techniques to communicate details of design ideas and outcomes.Use visual communication skills and presentation techniques to communicate a design idea or outcome. | PROJECT **FOUR – FINAL RENDERED DRAWING OF OWN DESIGN OUTCOME** ***Brief: Students will create rendered drawings to visually showcase the aesthetic qualities of one of their design outcomes*****TRIALLING AND CREATING A FINAL RENDERED DRAWING OF OWN DESIGN OUTCOME***A learning intention here is for students to develop their application of rendering techniques, skills in determining the best drawing or viewpoint to showcase their design idea, and an awareness that quality rendered drawings can visually promote the best aesthetic features of their design ideas to the viewer.**This learning is based around an aspect of the DVC Big Idea “Visual communication is a set of visual literacy skills that allow designers to think about, evaluate and appropriately present design ideas and outcomes” – with particular attention to appropriately presenting design ideas.*Students will select one of their design outcomes (either their seat design or shade structure design) for which to create their instrumental drawings. They are able to select any idea, and they can also modify their idea if this will allow for the best possible showcasing of the aesthetic qualities of a design outcome.Students can trial suitable techniques and media as drafts for their rendered drawing of their own design. These can be critiqued and refined in preparation for the actual final rendered drawing. Students will also have the option of digitally rendering one of their digital models. The key thing is that the students should be working to their strengths that are reflective of their personalised capability.Students are to undertake the final hand or digital render of their own design outcome (either their seat design or shade structure design) that will visually showcase its aesthetic qualities with maximum visual impact. This final rendered drawing of their own outcome can form part of a class display for other students and teachers to view and critique. | 4 weeks |
|  | ***Summative Assessment for DVC 1.2:*** *Use representation techniques to communicate a conceptual product or spatial design outcome (Internal, 5 credits)* | *Due start of Term 4, week 4* |