Northwest Territories

Grade	Course Name and Number	Unit	Outcome
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Specific Outcome 1.5:** Identify points of failure and modes of failure in natural and built structures.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**General Outcome 2:** Investigate and analyze forces within structures, and forces applied to them.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Specific Outcome 2.3:** Identify tension, compression, shearing and bending forces within a structure; and describe how these forces can cause the structure to fail.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Specific Outcome 2.4:** Analyze a design and identify properties of materials that are important to individual parts of the structure.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**General Outcome 4:** Demonstrate and describe processes used in developing, evaluating and improving structures that will meet human needs with a margin of safety.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Specific Outcome 4.1:** Demonstrate and describe methods to increase the strength of materials through changes in design.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Specific Outcome 4.2:** Identify environmental factors that may affect the stability and safety of a structure and describe how these factors are taken into account.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Specific Outcome 4.3:** Analyze and evaluate a technological design or process on the basis of identified criteria, such as costs, benefits, safety and potential impact on the environment.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Skill Outcome (Initiating and Planning):** Identify practical problems.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Skill Outcome (Initiating and Planning):** Propose alternative solutions to a practical problem, select one, and develop a plan.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Skill Outcome (Initiating and Planning):** Select appropriate methods and tools for collecting data to solve problems.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Skill Outcome (Performing and Recording):** Use tools and apparatus safely.

7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Skill Outcome (Analyzing and Interpreting):** Test the design of a constructed device or system.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Skill Outcome (Analyzing and Interpreting):** Evaluate designs and prototypes in terms of function, reliability, safety, efficiency, use of materials and impact on the environment.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Skill Outcome (Analyzing and Interpreting):** Identify and correct practical problems in the way a prototype or constructed device functions.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Skill Outcome (Communication and Teamwork):** Communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means.
7	Grade 7 Science	Unit D: Structure and Forces (Science and Technology Emphasis)	**Skill Outcome (Communication and Teamwork):** Work cooperatively with team members to develop and carry out a plan and troubleshoot problems as they arise.
10	Course DES1020	The Design Process	**Outcome 1:** Identify the steps in the design process.
10	Course DES1020	The Design Process	**Specific Outcome 1.1:** Recognize and apply the components of the design process, including: • **1.1.1** identifying the problem or need (design brief) • **1.1.2** researching the problem • **1.1.3** generating ideas and visualizing potential solutions • **1.1.4** choosing the best solution • **1.1.5** choosing the best method of presentation • **1.1.6** making or modelling a solution • **1.1.7** presenting the solution • **1.1.8** evaluating the solution
10	Course DES1020	The Design Process	**Outcome 2:** Apply the steps in the design process through production of a designed solution.
10	Course DES1020	The Design Process	**Specific Outcome 2.1:** Follow the design process to create solutions for one or more 2-D or 3-D projects.
10	Course DES1020	The Design Process	**Specific Outcome 2.2:** Select and use appropriate tools and materials as outlined in the design brief.
10	Course	The Design Process	**Specific Outcome 2.3:** Effectively communicate intentions and decision making related

	DES1020		to the design project; e.g. form, function, aesthetics.
10	Course DES1020	The Design Process	**Outcome 3:** Present a portfolio-ready drawing, rendering or model that the student produced.
10	Course DES1020	The Design Process	**Specific Outcome 3.1:** Present sketches, drawings and/or models for assessment.
10	Course DES1020	The Design Process	**Specific Outcome 3.2:** Maintain a design folder, journal or sketchbook as part of the portfolio of ongoing observational drawing and modelling activities.
10	Course DES1020	The Design Process	**Outcome 6:** Demonstrate basic competencies.
10	Course DES1020	The Design Process	**Specific Outcome 6.1:** Demonstrate fundamental skills to: • **6.1.1** communicate • **6.1.2** manage information • **6.1.3** use numbers • **6.1.4** think and solve problems
10	Course DES1020	The Design Process	**Specific Outcome 6.3:** Demonstrate teamwork skills to: • **6.3.1** work with others • **6.3.2** participate in projects and tasks
10	Course DES1040	3-D Design 1	**Outcome 1:** Identify and practice 3-D design techniques within the parameters of a design brief to appropriate scale; e.g. process, production and presentation.
10	Course DES1040	3-D Design 1	**Specific Outcome 1.2:** Demonstrate various techniques to provide design solutions; e.g. packaging, garment, architectural model.
10	Course DES1040	3-D Design 1	**Outcome 2:** Identify and use tools and materials common to 3-D design; e.g. modelling software, foam core board, fabric, wood.
10	Course DES1040	3-D Design 1	**Specific Outcome 2.1:** Demonstrate basic skills using tools and materials.
10	Course DES1040	3-D Design 1	**Specific Outcome 2.2:** Select and use appropriate tools and materials as outlined in the design brief.
10	Course DES1040	3-D Design 1	**Outcome 4:** use 3-D design techniques to solve simple design problems.

10	Course DES1040	3-D Design 1	**Specific Outcome 4.1:** Demonstrate techniques common to 3-D design by: • **4.1.1** brainstorming ideas • **4.1.2** manipulating forms and space • **4.1.3** practising basic modelling techniques • **4.1.4** relating materials and techniques
10	Course DES1040	3-D Design 1	**Specific Outcome 4.2:** Prepare portfolio-ready product.
10	Course DES1040	3-D Design 1	**Specific Outcome 4.3:** Select and solve one or more 3-D design problems using the design process.
10	Course DES1040	3-D Design 1	**Outcome 5:** Produce and present a portfolio-ready drawing, image, model, rendering or animation.
10	Course DES1040	3-D Design 1	**Specific Outcome 5.1:** Present images or model for assessment.
10	Course DES1040	3-D Design 1	**Specific Outcome 5.2:** Maintain a design folder, journal or sketchbook as part of the portfolio of ongoing observational drawing activities.
10	Course DES1040	3-D Design 1	**Outcome 8:** Demonstrate basic competencies.
10	Course DES1040	3-D Design 1	**Specific Outcome 8.1:** Demonstrate fundamental skills to: • **8.1.1** communicate • **8.1.2** manage information • **8.1.3** use numbers • **8.1.4** think and solve problems
10	Course DES1040	3-D Design 1	**Specific Outcome 8.3:** Demonstrate teamwork skills to: • **6.3.1** work with others • **6.3.2** participate in projects and tasks
11	Course DES2045	3-D Design 2	**Outcome 1:** Plan and produce solutions to 3-D design briefs.
11	Course DES2045	3-D Design 2	**Specific Outcome 1.1:** Select and use appropriate tools and materials as outlined in the design brief.
11	Course	3-D Design 2	**Specific Outcome 1.1:** Apply the design process to solve a 3-D design problem; e.g.

	DES2045		software modelling, cutting, joining, bending, measuring.
11	Course DES2045	3-D Design 2	**Outcome 2:** Incorporate the elements and principles of design to achieve the design solution.
11	Course DES2045	3-D Design 2	**Specific Outcome 2.1:** Apply techniques, tools, materials, and other resources in design solution; e.g. tone, texture and colour, markers and paints, images, typeface, drawing, layout, measuring, notation, rendering, assembly drawing, and correct use of tools.
11	Course DES2045	3-D Design 2	**Specific Outcome 2.2:** Use mathematical and/or scientific principles as they apply to design projects assigned; e.g. organization of visual space, measurement of internal space, borders, columns, use of scale.
11	Course DES2045	3-D Design 2	**Outcome 3:** Present a portfolio-ready drawing, image or rendering.
11	Course DES2045	3-D Design 2	**Specific Outcome 3.2:** Discuss intentions and decision making related to the application of elements and principles of design.
11	Course DES2045	3-D Design 2	**Specific Outcome 3.3:** Present images and/or model(s) for assessment.
11	Course DES2045	3-D Design 2	**Specific Outcome 3.4:** Maintain a design folder, journal or sketchbook as part of the portfolio of ongoing observational drawing activities that illustrates skill building.
11	Course DES2045	3-D Design 2	**Outcome 6:** Demonstrate basic competencies.
11	Course DES2045	3-D Design 2	**Specific Outcome 6.1:** Demonstrate fundamental skills to: • **6.1.1** communicate • **6.1.2** manage information • **6.1.3** use numbers • **6.1.4** think and solve problems
11	Course DES2045	3-D Design 2	**Specific Outcome 6.3:** Demonstrate teamwork skills to: • **6.3.1** work with others • **6.3.2** participate in projects and tasks