

MYP Grade Overview: Design Technology UWC Thailand 2018-2019

All units taught in grades 6 to 10 are **continuously** being developed and improved to best meet the needs of the students at UWCT. Therefore, the following overview is only a reflection of current plans for the course. Some changes to these course overviews may occur as a result of planning done throughout the academic year.

Gr	Unit Number and Title	Key and Related Concepts	Global Context	Statement of Inquiry	Inquiry Questions	Content (topics / knowledge/ subject specific skills)
6	Communication and digital literacy	KC: Communication RC: Sustainability Ergonomics Markets and Trends	Globalization and Sustainability	Smartphones can be influenced by advancements in technology, which enhance their form and function while improving global communication.	Factual: What is form? What is function? Conceptual: How does technology connect people globally? Debatable: Smartphones are making our lives better.	Rapid Prototyping - Introduction to Paper Prototyping Semiotics: Visual Communication. <ul style="list-style-type: none"> • Conflict minerals • Ethical production • Supply chain • Sustainable design • Prototyping • Iteration • Form/Function • Mobile devices
6	Branding	KC: Aesthetics RC: Design: Form Perspective	Personal and cultural expression <i>Explorations to develop:</i> Artistry, craft, creation, beauty Entrepreneurship, practice and competency	An effective brand strategy is a promise to your customer telling them what they can expect from the product or service and differentiates your offering from your competitors'.	Factual: What is brand recognition? Conceptual: What is a luxury brand? Debatable: Is it the company or the consumer who defines a brand ?	Graphic Design Introduction to Photoshop <ul style="list-style-type: none"> • Understanding the layout • Opening Windows • Using the tool pallet • The Type tool • Shape tools • File saving procedures • Fundamentals of design I • Filters • Innovative design
Units in Development						
6	03: Digital Design and communication	KC: Communication RC: Markets and trends Perspective	Identities and relationships Attitudes Identity formation	Communication through compelling and engaging digital design can shift consumer attitudes and behaviours globally.	Factual: What is the difference between analogue and digital? Conceptual: How can the fundamental principles of design enhance the intended message? Debatable: Does digital manipulation, filters and plugins used to enhance the aesthetics, create more harm than good?	Digital Communication: Film Production and Graphic Design <ul style="list-style-type: none"> · Shooting techniques · Composition · Sound Lighting · Post-Production · Editing · Graphics · Visual Fx · File management
6	04: Product design and Innovation	KC: Creativity RC: Form and Function	Personal and cultural expression	The shape of a building or object should primarily relate to its intended function or purpose	Factual: A product that cannot successful perform its intended function is not viable. Conceptual: How does form following function dictate the usefulness of a product. Debatable: Modern design suggests that form and function are not mutually exclusive.	Product design: <ul style="list-style-type: none"> · Safety · Manufacturing techniques · Engineering · Material properties · Hand tools · Power tools · Testing and evaluating

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7	Communication and digital literacy	KC: Communication RC: Sustainability Ergonomics Markets and Trends	Globalization and Sustainability	Excessive smartphone use is a key contributor in the rise of digital dementia and the decline of peer-to-peer engagement.	Factual: What is digital communication? Conceptual: What is artificial intelligence? Debatable: Smartphones are making us dumber?	<ul style="list-style-type: none"> • Consumption • Commodities • Commercialization • Markets and trends • Sustainable design • Prototyping • Iteration • Digital literacy
Units in Development						
7	02: Resistant materials & prototyping	KC: Form RC: Ergonomics Resources	Personal and cultural expression Artistry & craft Products Entrepreneurship	Understanding the properties of resistant material allows the designer to aptly manipulate said materials into a tangible solution.	Factual: What is the difference between hardwood and softwood? Conceptual: What properties make a material more durable? Debatable: Does mass production in developing countries help or hinder the local economy and community?	Working with resistant materials <ul style="list-style-type: none"> · Foam · Wood · Glue · Model making · Orthographic projection · Building to scale
7	03: Digital Design and communication	KC: Communication RC: Markets and trends Perspective	Identities and relationships Attitudes Identity formation	Communication through compelling and engaging digital design can shift consumer attitudes and behaviours globally.	Factual: What is the difference between analogue and digital? Conceptual: How can the fundamental principles of design enhance the intended message? Debatable: Does digital manipulation, filters and plugins used to enhance the aesthetics, create more harm than good?	Digital Communication: Film Production and Graphic Design <ul style="list-style-type: none"> · Shooting techniques · Composition · Sound Lighting · Post-Production · Editing · Graphics · Visual Fx · File management
7	04: Product design and Innovation	KC: Creativity RC: Form and Function	Personal and cultural expression	The shape of a building or object should primarily relate to its intended function or purpose	Factual: A product that cannot successful perform its intended function is not viable. Conceptual: How does form following function dictate the usefulness of a product. Debatable: Modern design suggests that form and function are not mutually exclusive.	Product design: <ul style="list-style-type: none"> · Safety · Manufacturing techniques · Engineering · Material properties · Hand tools · Power tools · Testing and evaluating

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8	Communication and digital literacy	KC: Communication RC: Sustainability Ergonomics Markets and Trends	Globalization and Sustainability	Communication using digital media content is transforming the ways in which we interact with people.	Factual: What is planned obsolescence? Conceptual: Is consumerism impacting humankind and the environment? Debatable: Is creative expression a requirement for innovative design?	<ul style="list-style-type: none"> • Environmental impact • Conservation • Natural resources • Infrastructure • Sustainable design • Prototyping • Iteration • Globalization • Obsolescence
Units in Development						
8	02: Resistant materials & prototyping	KC: Form RC: Ergonomics Resources	Personal and cultural expression Artistry & craft Products Entrepreneurship	Understanding the properties of resistant material allows the designer to aptly manipulate said materials into a tangible solution.	Factual: What is the difference between hardwood and softwood? Conceptual: What properties make a material more durable? Debatable: Does mass production in developing countries help or hinder the local economy and community?	Working with resistant materials <ul style="list-style-type: none"> - Foam - Wood - Glue - Model making - Orthographic projection - Building to scale
8	03: Digital Design and communication	KC: Communication RC: Markets and trends Perspective	Identities and relationships Attitudes Identity formation	Communication through compelling and engaging digital design can shift consumer attitudes and behaviours globally.	Factual: What is the difference between analogue and digital? Conceptual: How can the fundamental principles of design enhance the intended message? Debatable: Does digital manipulation, filters and plugins used to enhance the aesthetics, create more harm than good?	Digital Communication: Film Production and Graphic Design <ul style="list-style-type: none"> - Shooting techniques - Composition - Sound Lighting - Post-Production - Editing - Graphics - Visual Fx - File management
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9	Communication and digital literacy	KC: Communication RC: Sustainability Ergonomics Markets and Trends	Globalization and Sustainability	Innovation can diffuse into a global market through successful and targeted communication.	Factual: What is electronic waste? Conceptual: How does the supply chain impact sustainability? Debatable: All designs should be sustainable.	Rapid Prototyping: CAD and 3D printing <ul style="list-style-type: none"> • Conflict resolution • Demography • Global perspectives • Technological advances • Sustainable design • Prototyping • Iteration
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10	Communication and digital literacy	KC: Communication RC: Sustainability Ergonomics Markets and Trends	Globalization and Sustainability	<i>Sustainable Design meets the needs of the present without compromising the ability of future generations to meet their own needs.</i>	Factual: What is the triple bottom line of sustainability? Conceptual: What are the opportunities and tensions provided by world-interconnectedness? Debatable: Climate change is a result of consumerism.	Rapid Prototyping: <ul style="list-style-type: none"> Working with corrugated cardstock Pepakura folding software Balsa Wood scale models Material properties Joints and joinery Adhesive methods CAD Drawing: <ul style="list-style-type: none"> Autodesk Fusion 360 Software Preparing models for 3D printing.
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