Master of Design

Core units

Design Thinking IDEA9106

This unit of study provides an overview of a human-centred approach to the design of products and systems. It introduces students to design thinking and how it can be productively applied to different design situations. The theoretical concepts, methods and tools for the key stages of interaction design are covered including user research, ideation, prototyping and user evaluation. It provides students with the principles, processes and tools for working collaboratively on design projects in studio. Students learn to build empathy with users, identify and reframe the problem space, develop value-driven design concepts and persuasively communicate design proposals with an emphasis on the user experience through visual storytelling.

Design Practice and Management DESN9001

This unit introduces students to the context, complexities and methods of utilising design within a business context. Students will learn how to use design to link business, technology and people as a way to develop competitive economic, socio-cultural and environmental advantage in an increasingly complex world. The unit will cover design thinking, design innovation and design integration methods for driving this process and creating effectively-designed products, services and environments. In this unit, the aims and objectives of design management will be explored and students will learn to identify its relationship to the leadership and strategic aspects of organisations. This unit will cover approaches for conducting design based research and contrast them to other methodologies within the design and business landscape.

Designing for the Digital Revolution DESN9001

This unit focuses on how the emergence of new technologies has revolutionised the way companies interact and build relationships with customers. In this subject, students explore the concept of "the channel". Traditionally, customer relationships have been managed via a push approach in communication, mainly "what can we sell customers?" with the hope of cultivating customer loyalty. The unit explores the emotional understanding of customers and the impact this has on how they feel about a product, service or business. Students learn how exploring and analysing customers' emotional understanding can drastically alter their engagement, behavior and purchasing preferences. The unit therefore aims to extend students understanding of how this rapidly evolving landscape has changed the way that digital channels are designed, monitored and managed. In this unit, digital channel strategies and relationships are examined, and useful concepts for designing digital engagements are detailed. The unit encompasses customer-centric design approaches as well as techniques such as scenario building, forecasting and backcasting to explore possible futures.

Strategic Design and Leadership DESN9003

In this unit, students examine design leadership and learn the various design strategies and processes that can be applied to enable it to generate innovative solutions. Students learn about what it means to be a design leader and how to learn through design. The unit demonstrates how to use design as a method for developing people-centred strategies within businesses, organisations or technology contexts that integrate internal and external factors with stakeholders and touchpoints. Students will learn how to identify existing problems, challenges, customer needs, behaviours and attitudes within an organisation and turn those into design-led opportunities for positive strategic change. In this unit, students will learn about the transformation and transactional potential of design leadership within organisations and how it is aligned to strategic management. The aim of this unit is to provide students with tools,

methods and processes that can be applied within organisations to enable innovative solutions and leadership.

Practices of Design Innovation DESN9004
In this subject, students gain a holistic understanding of design-led innovation approaches, practices and tools. Students explore and examine in detail a design based innovation methodology developed for addressing complex problems. This subject explores different modes of inquiry and encourages students to develop a diverse range of research practices. Knowledge and understanding of design thinking gained from other units will be applied to a practical industry setting. Students learn how to identify, design and review design innovation practices, and become familiar with the process by applying the methodology to a real-life case study. Students will leave this course with a comprehensive understanding of design innovation principles and practices drawing on design thinking processes explored in other units.

Major Project in Strategic Design DESN9100
This unit requires the application of design strategy methods and theory to address a real-world problem. Students will have the opportunity to advance their design strategy skills by exploring a self-selected, complex problem from their own professional practice and designing and implementing a design-led strategy in response. The unit will explore design principles, tools and methods that can be implemented to influence strategic decision and direction. Students will learn how to initiate, lead and manage design strategies in their own organisations and gain a deeper understanding of design strategy and leadership in a practical organisational setting. Each week, students will be challenged through evaluation and critique by the teaching staff and student cohort to help progress the innovation project. The unit will culminate in a final presentation where students will present their final design.

Major Project in Design Innovation DESN9200
This unit enables students to deeply engage with design thinking and innovation methods within a practical context. Students will have the opportunity to advance their design-innovation skills by exploring a self-selected, complex problem from their own professional practice and designing and implementing a design-led innovation strategy in response. Students will learn how to initiate, lead and manage design-based innovation in their own organisations and they gain a deeper understanding of the implication of design-based innovation. Students will use a design-based innovation methodology as the guiding framework over the course. Each week, students will be challenged through evaluation and critique by the teaching staff and student cohort to help progress the innovation project. The unit will culminate in a final presentation where students will present their final design.

Graduation Studio IDEA9301
This a culminating studio that provides students with a capstone experience. The aim of this studio is to draw together and synthesise the learning that has taken place during the whole degree. The student will develop a graduation design project based on an industry- or community-focused brief. Students will work in small teams or individually to produce a design proposal and solution that addresses contemporary issues and challenges and incorporates innovate interactions and applications of emergent technologies. The submitted design work should be of high quality suitable for professional presentation and portfolio.

Elective units

Inventing the Future INFC7000
Inventing the Future (ItF) is an inter-disciplinary invention program, covering the complete process of innovation, from ideation to prototyping to a funding pitch to industry, enabled by interdisciplinary collaboration and cross-faculty teaching. The unit is highly demanding and entry is selective, based on an application. Students work in teams on a design brief, and must produce a prototype by the end of semester.

Graduate Internship DESC9153
The aims of the internship are to provide a direct link between the academic core of the course and the disciplines and methods of practice; to enable candidates to experience aspects of practice and provide the opportunity for them to work in areas of the field outside their specific expertise; to enable candidates to observe, analyse and comment on the interaction between theoretical and practical issues of their Program as it is practiced, and to establish connections between practice and the development of relevant research programs. The internship is intended to provide the opportunity for students to work in various situations in their Program's area. A secondary intention is that students use the opportunities of placement to broaden their own experience beyond the limitations of their chosen discipline. Candidates must find a suitable professional placement. Permission to enrol is given after the proposed placement has been approved by the Program Director. The host organisation will nominate a supervisor for the student for the internship. The student must complete at least 120 hours of full or part-time experience, supervised by a practicing designer (or other professional depending upon the field). A log-book of each day's work, signed by the supervisor must be submitted on completion. A 2000-word report on the benefits of the internship must also be produced. At the end of the internship the student will: demonstrate that they have completed a program of work (through a log-book); present a report; analyse their experiences and compare these to the theoretical content of the units they have completed, and suggest appropriate research directions so as to improve the complementarity of theory to practice.

3D Computer Design Modelling MARC6102
This unit of study consolidates students' knowledge of advanced concepts in digital modelling, visualization media and digital fabrication techniques available for architectural design. The unit develops conceptual understanding of generative geometric logic through a case study analysis followed by a small design project. Students will explore the practical applications of the digital geometry they create using commercial modelling and rendering packages in conjunction with the digital fabrication equipment available in DMaF. It will help students: generate sophisticated digital geometry through pre-packaged techniques and scripting processes, assign colour and texture information, generate sophisticated images for visualization purposes and fabricate prototypes. At the conclusion of this unit students should be conversant with 3D modelling, photo-rendering and digital fabrication terminology and be able to generate complex 3D models. Class preparation: 3 hours/week, assessment preparation 8 hours/semester.

Object Design DESA9008
In this unit students produce light objects exploring diverse materials and fabrication techniques in the DMaF workshops. Emphasis is placed on developing and inter-relating manufacturing and artisan skills with research, analysis and design development. The course aims to develop a critical awareness of the nature of objects that surround us, exploring cultural, contextual and symbolic aspects of object design as well as functional and aesthetic qualities working with light. Sustainability and social issues relating to their manufacture, use and disposal are also discussed; the unit aims to increase appreciation of the materiality of objects focusing on timber as an example paying attention to associated environmental and ethical issues, and emerging alternative materials. Through a series of exercises, experiments and production of

their major project, students develop knowledge of construction techniques and skills in using wood/plastics tools and machinery and in so doing, build an awareness of industrial and craft practices and how they impact on the design process and outcome. Students will be expected to produce a research process journal and report on how a particular designer/s or movement has informed or influenced their final project/s.

2D Print Processes in Design DESA9012
This studio-based unit introduces a variety of traditional and experimental techniques that will enable students to design and print a series of 2D works both within and around the context of design and Architecture. It will provide students with the knowledge and skills to design and print on a variety of substrates including paper, wood, and perspex through a range of techniques and creative exercises that can be developed into an edition or a series of experimental printed works. Students will also explore the historical roots of print and print as an element in design and architecture. Techniques covered include: digital photography and vector illustration, typography, hand and laser-cut paper stencils, ink mixing, registration and print set-up for multi-coloured prints. Through studio practice, set exercises, illustrated talks, gallery visits and library research, students will develop an understanding of their creative process and ability to interpret ideas through the medium of printing and with particular focus on design and architecture applications.

Digital Editing for Film and Video MFDI9313
The aim of this unit of study is to equip you with a conceptual understanding and technical expertise in the use of digital editing for film and video projects. You will be introduced to the use of software programs such as Final Cut Pro HD to explain how edit moving images in to a project and how moving images can be transformed over time in combination with text, masks, filters, effects and sound. You will learn how to edit and master in Final Cut Pro HD through an intensive series of tutorials film/video screenings and practical studio workshops. This will culminate in the production of a studio project. The project is to be developed in consultation with an academic adviser.

Digital Effects for Film and Video MFDI9303
The aim of this unit of study is to equip you with a conceptual understanding and technical expertise in the use of digital effects for film and video projects. You will be introduced to the use of software programs such as Adobe After Effects to explain how moving images can be transformed over time in combination with text, masks, animation, filters, effects and sound. You will learn how to author in After Effects through an intensive series of tutorials film/video screenings and practical studio workshops. This will culminate in the production of a studio project. The project is to be developed in consultation with an academic adviser.

Understanding IT Innovations INFO5992
An essential skill for an IT manager is the ability to keep up-to-date with emerging technologies, and be able to evaluate the significance of these technologies to their organisation's business activities. This unit of study is based around a study of current technologies and the influence of these technologies on business strategies. Important trends in innovation in IT are identified and their implications for innovation management explored. Major topics include: drivers of innovation; the trend to open information ("open source") rather than protected intellectual property; and distribution of innovation over many independent but collaborating actors. On completion of this unit, students will be able to identify and analyse an emerging technology and write a detailed evaluation of the impact of this technology on existing business practices.