A new program proposal must include:

(1) the Calendar description of the proposed program;
(2) the academic rationale for proposing the introduction of this program this year;
(3) the learning outcomes of the program, i.e. the knowledge, methodologies and skills students will have acquired by the time they complete the program;
(4) (for proposed new specialist and major programs) the means by which students in the program will satisfy the Degree Level Expectations of all University of Toronto Mississauga undergraduate major and specialist programs; see: [http://www.utm.utoronto.ca/fileadmin/officeOfDean/Miscellaneous_Files/dle.oct08.pdf](http://www.utm.utoronto.ca/fileadmin/officeOfDean/Miscellaneous_Files/dle.oct08.pdf)
and
(5) the resource implications of the proposed program.

Note that the Calendar description should include some of what you include under Learning Outcomes. Both may usefully include an indication of the possible career paths which graduates of the program will be equipped to embark upon. In the Calendar description and/or the Learning Outcomes section you should indicate the steps to achieve the learning outcomes in each year of study (so that students are aware of what they should have accomplished by the end of each year). The description should list all the courses or groups of courses required for completion of the program and should provide the names/subjects of the courses or groups of courses as well as their course numbers. In addition, units proposing new programs are encouraged to indicate other programs or courses in other disciplines that might be complementary to their proposed program.

With respect to the Degree Level Expectations required for specialist and major programs, the meanings of each category are included in the attached Guidelines. The administrative appendix outlines some of the ways in which these expectations can be realized within our programs.

Proposers of new Minor programs are not required to describe means of satisfying the Degree Level Expectations, and therefore do not need to complete Section 4, but they must provide a description of the learning outcomes in Section 2.

Please note (in Box 1) the need for a Course Cross-Listing and Access Agreement form in cases where you are cross-listing another unit’s courses in your requirements.
Specialist Program ERSPEXXX Interactive Digital Media (IDM) – Effective September 2011

Interactive Digital Media (IDM) is an interdisciplinary undergraduate program, the curriculum for which provides students with a foundation in the generation, diffusion, and critical analysis of the social impact of new and emerging technologies. In addition to learning how to analyze and use a variety of media tools, students will focus on digital media and its information communication infrastructures. Students will learn to design and create digital artefacts and create virtual environments suitable for collaboration, communication, learning and exploration. Finally, in the fourth year, students will be required to participate in an experiential learning based project relevant to their core interests.

The IDM program is a fully integrated undergraduate program run jointly with the Faculty of Information (commonly known as the iSchool) at the University of Toronto. The program will be administered by UTM and faculty teaching in the program will be drawn from the Faculty of Information and faculty associated with the Institute of Communication, Culture and Information Technology.

In addition to the CORE courses, students will be required to take two modules, each module consisting of 5 half courses. If resources warrant, we may provide for some choice with respect to electives but initially we plan to offer only 5 half courses per module. Modules are designed as integrated sets of courses providing students with the knowledge and skills relevant to specific areas of specialization. At the present time students can take the following modules: Knowledge Media Design, and Immersive Digital Media: Gaming, Simulation and Performance. If numbers warrant, we plan to offer additional modules in (a) Surveillance, Privacy and Media, and (b) Appraising and Exploiting and Leveraging Digital Culture.

The Knowledge Media Design module is designed to provide students with comprehensive knowledge and skills that are relevant for careers that involve the active and thoughtful design of content for knowledge media. These careers will span a range from traditional journalism through electronic publishing to the creation and management of knowledge media in traditional and digital organizations.

The Immersive Digital Media module is designed to provide students with the skills and knowledge for careers involving presentation, analysis, and immersive communication, utilizing data and information obtained from a wide variety of different media assets. These careers span traditional business, web-based business, health care, education and creative domains including gaming and simulation. Students will also be able to translate their skills and knowledge into performance environments.

The CORE

The curriculum design is based on the professional model which provides a foundation of core courses followed by a choice of integrated interdisciplinary courses constituting a variety of advanced pathways through the program. Although this is the long term intention, until the program is established we are only able to offer the pathways (modules) that provide students the most opportunities for employment and graduate school advancement.

The CORE will be comprised of the following half courses which have been identified in the accompanying table, Appendix A. The total number of credits represented by the CORE will be 5.5 credits. All courses in the CORE are
mandatory. The program requirements fall within the lower range of those required by specialist programs at UTM. Students will be required to take two modules offered in addition to the CORE – and each module will be comprised of 5 half courses (2.5 credits) Thus, the total number of credits comprising the IDM Specialist program will be **10.5**.

**Calendar Entry**

Interactive Digital Media– Specialist Program ERSPE2171

Within an Honours degree, 10.5 credits are required.

Limited Enrolment – Students may apply to enrol after having completed this program’s requirements in the first year with a 65% in each of the following courses CCT109H5, and CCT110H5. Students must have a minimum Cumulative Grade Point Average (CGPA) for the first year in order to be accepted into the Specialist Program. The minimum CGPA is determined annually. It is never lower than 2.5.

<table>
<thead>
<tr>
<th>First Year</th>
<th>CCT109H5, CCT110H5 (program prerequisites)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Year</td>
<td>CCT204H5, CCT206H5, CCT210H5, CCT215H5, CCT218H5, CCT275H5</td>
</tr>
<tr>
<td>Third and Fourth Year</td>
<td>CCT301H5, CCT341H5, CCT410H5</td>
</tr>
<tr>
<td></td>
<td>+ 2 modules comprising:</td>
</tr>
<tr>
<td></td>
<td>Knowledge Media Design: CCT372H5, CCT373H5, CCT374H5, CCT414H5, CCT471H5</td>
</tr>
<tr>
<td></td>
<td>Immersive Digital Media: CCT380H5, CCT381H5, CCT382H5, CCT480H5, CCT481H5/CCT482H5</td>
</tr>
</tbody>
</table>
2. Academic Rationale

Please outline the reasons for creating this program at this time. These should include the relation of the proposed program to the unit’s plans and priorities, and whether it reflects changes in the discipline and/or changes in student interests and academic needs.

Note: If this is a specialist program with greater than 14 FCEs, please give the explicit rationale in terms of the multi-unit training necessary.

Given the synergies between the teaching and research strengths of the Faculty of Information and the existing CCIT programs, we believe that a joint undergraduate program will leverage these complementary strengths. The new joint program will provide a comprehensive and well-structured specialist program, which has been of particular interest to our students. The external Institute of Communications and Culture Review Committee (2008-9) recommended, in response to a burgeoning demand for students, to create a program that encompasses specialized knowledge and training in the creation, interpretation and implementation of all types of digital media. From the standpoint of the Faculty of Information, the new specialist program allows the Faculty to utilize its research and teaching strengths at the undergraduate level. The program will also provide a unique set of opportunities for undergraduates to gain knowledge and expertise encompassing digital technologies and the multifaceted interactions among these technologies, people, institutions and society.

The IDM Specialist program will support the academic mission of the new Institute of Communication, Culture and Information Technology as it seeks to establish excellence in teaching and research focusing on the creation, implementation, impact and interpretation of digital media and technologies. The IDM program will provide a vehicle for the Faculty of Information to develop its undergraduate exposure, will enable a natural progression from this program to our Masters and PhD programs, and open up the prospect of undergraduate teaching for our doctoral students and MA TAships which we currently do not have.

The IDM program has been structured in such a way as to ensure rapid start-up with relatively limited initial resource demands. Initially a significant proportion of the courses offered by the IDM Specialist program will be existing or modified CCIT courses. However, as the program ramps up there will be increasing participation of the Faculty of Information to develop a significant number of new courses at the 3rd and 4th year levels. At a stable state we expect that courses in all years will be shared between UTM and the Faculty of Information.

3. Learning Outcomes

Please give a detailed description of the learning outcomes of this program, including those which are in the Calendar description. They should include the goals concerning the disciplinary and/or interdisciplinary knowledge, understanding of relevant methodologies, and the skills which will have been acquired by a student on completion of the program; and, if not clear from the Program Description, the way these outcomes are achieved as the student progresses through the program.

Students will

- apply a variety of digital and interactive modes of communication.
- develop strategies for communicating in a variety of interactive and digital environments.
- assess and apply available rhetorical strategies in written, aural and interactive environments.
- develop technical fluency in current digital media creation software tools and have skills appropriate to learning any similar types of software that may be developed in future.
- critically evaluate interactive communication strategies employed using digital media.
- select appropriate modes of interaction and communication for any given task or audience.
- identify and critically evaluate appropriate materials when developing solutions to design problems in traditional, digital and interactive media domains.
- design, utilizing traditional and digital media in interactive modes, strategies for communicating with a variety of audiences.
- integrate knowledge from a variety of disciplines in generating comprehensive solutions for problems relating to design in the traditional, digital and interactive media domains.
- critically evaluate the development and implementation strategies for digital media projects, determine their feasibility, assess risk and suggest risk management strategies.
- evaluate resourcing strategies, and identify and manage critical human resource issues.
- develop methodologies to assess the social, cultural, organizational, political, economic, ethical and legal aspects of present and future digital technologies.
- present in written and oral form outcomes of their critical analyses of interactive communications strategies and, more generally, the outcomes of their comprehensive design projects.
- identify design problems relating to traditional, digital and interactive media.
- propose alternative solutions to complex design problems.
- work collaboratively on an interdisciplinary team or independently to create solutions and implementation strategies for problems relating to design in the digital and interactive media domains.
- identify situations where cultural sensitivity is vital when proposing solutions to design problems relating to traditional, digital and interactive media.
- design and implement solutions in the digital and interactive media domains that demonstrate ethical and culturally sensitive practices.
- apply their knowledge and skills of digital and interactive media in a professional and ethical manner in accordance with the laws of those domains.
- organize and manage collaborative project teams for solving interdisciplinary problems using digital and interactive media.
- apply their knowledge and skills in a real world work environment.

NOTE: The above educational outcomes will be substantially achieved as a result of students taking the core courses of the IDM program. Generally speaking, these outcomes will be reinforced through the two modules, particularly in areas such as the development of students’ research skills, their ability to problem solve, their ability to work collaboratively, and their grasp of the nature and importance of professionalism. In addition, the modules will provide them with more advanced, specialized knowledge which will be directly applicable to the career that they subsequently select or the graduate program they choose to apply themselves to.

The above Learning Outcomes would, no doubt, be enhanced as a result of the other courses that IDM students will take in order to complete their degree requirements.
4. Degree Objectives

Means by which students will satisfy the following DEGREE LEVEL EXPECTATIONS (with reference to the attached guidelines):

1. DEPTH AND BREADTH OF KNOWLEDGE

In the first year students will acquire a critical understanding of the technologies associated with the creation, analysis and diffusion of all forms of digital content initially as a result of taking CCT109H5. In addition, they will then learn to analyze digital content, be it written, visual, oral, electronic or musical, through a variety of theoretical lenses in CCT109H5. CCT110H5 will develop competences in critical thinking and analytical skills, which are generalizable across the curriculum including the focal disciplines of the IDM Specialist program. These skills will be further reinforced in the first year through CCT109H5. Finally, CCT110H5 will also provide students with the opportunity to apply foundational skills through practical assignments conducted in laboratory environments. These foundational courses will provide students with an initial understanding of the relationship between the major fields and disciplines that will be studied throughout the IDM Specialist program. These will be supported by the University Library system both at UTM and St George (e.g. Media Commons). Students completing CCT110H5 will have had to develop information research skills, which will be further utilized throughout the program.

In the second year, students will deepen their knowledge of the disciplines through a variety of core courses. CCT218H5 provides them with an understanding as to how digital media is transforming society and shaping a fluid digital culture. In this course, students further their critical thinking and analytic skills and develop their knowledge of these complex interactions. CCT204H5 provides students with knowledge and critical understanding of the central concepts of design thinking. Emphasis is placed jointly on the history of design and the practices associated with various design schools. Students are exposed to the disciplines that are incorporated into the design process and further develop critical thinking, analytic and problem solving skills related to design thinking. CCT206H5 enhances students’ insights into the law as it relates to technology with particular emphasis on intellectual property. They are exposed to key legal concepts and the nature of legal reasoning and argumentation. In addition, they assess the impact of digital technologies on the law as well as the impact of law on the trajectory of digital technologies. CCT210H5 builds on the foundation of CCT109H5 with respect to the cultural production of meaning, using digital media and information-communication technologies. Students develop their ability to analyse and interpret digital communications, and they learn how history, culture and individual characteristics and capabilities play a part in such analysis and interpretation.

Students will further expand both the depth and breadth of their knowledge as a result of taking two modules. The modules are designed with a focus on key domains of knowledge and are designed to build on the knowledge that students have acquired from the core of the program.

2. KNOWLEDGE OF METHODOLOGIES

Students develop a progressive understanding of the methods of enquiry associated with the various domains of study associated with the IDM Specialist program. Students will be exposed to a wide variety of research methodologies and interpretative methodologies. The Work-based Learning course, CCT410H5, provides further opportunities for students to utilize their knowledge to facilitate research and enquiry in a practical setting.

Students further develop and expand their understanding of the appropriate methods of enquiry through their second year and upper year courses.

Through courses such as CCT218H5, CCT341H5, CCT382H5, and CCT481H5/CCT482H5, students broaden their understanding of the nature of creative activity in the context of digital and interactive technologies and actively engage in increasingly challenging creative activity.

Students will extend and enrich their knowledge of methodologies through the modules. They will be required to
apply methodologies extensively in assignments and research projects in all the modules. Though the focus of the modules differs they both utilize the key methodologies to which the students will have been exposed to in the core of the program.

3. APPLICATION OF KNOWLEDGE

From the outset students are required to actively apply the knowledge that they acquire. The foundations for these skills are provided by CCT110H5, and CCT109H5. CCT110H5, in particular, inculcates skills associated with the gathering, reviewing, presentation, production and critical evaluation of information, arguments, abstract concepts, and hypotheses. Courses in the second year provide students with significant opportunities to further develop and refine these skills. The collaborative project, CCT341H5, and the Work-based Learning course, CCT410H5, require students to exercise all these skills independently when identifying and pursuing both the collaborative project and the project which is central to the Work-based Learning experience.

Given the inter-disciplinary nature of the IDM Specialist program, students have ample opportunity to apply relevant concepts, principles, and techniques that they have learned outside the disciplines with which they are associated. It is further noted that the Work-based Learning course, CCT410H5, requires that students demonstrate an ability to apply relevant concepts, principles, and techniques to problems and issues that arise outside a university or scholarly setting.

4. COMMUNICATION SKILLS

From the outset students are required to master both oral and written communication. These skills are initially developed in the foundational courses. However, all subsequent courses have components requiring students to communicate in writing and in many instances orally. Given that students are required to develop extensive knowledge of, and facility with, communications technologies as part of the IDM Specialist program, naturally they are required to make use of the technologies where appropriate.

Students’ communications skills will be further enhanced through required second, third and fourth year courses both in the core of the program and the modules that students take as part of their IDM Specialist program. In particular, fourth year project courses will require presentations to be a substantial component of the course grade.

5. AWARENESS OF LIMITS OF KNOWLEDGE

The multi-disciplinary nature of the IDM Specialist program provides a natural environment within which to explore the limits of knowledge. Such exploration becomes a key element of such courses as CCT204H5, History and Practices of Design Thinking, and CCT206H5, Law, Technology and Intellectual Property. Further opportunities to provide students with an appreciation of the limits of knowledge are provided by CCT471H5, Knowledge Representation and Reasoning. In addition, the collaborative project, CCT341H5, and the Work-based Learning course, CCT410H5, will require the students to apply the knowledge that they have absorbed in the program and come to terms with the limitations of that knowledge and the necessity of constantly learning new knowledge and engaging in active inquiry. Awareness of uncertainty and ambiguity is an integral aspect of many of the courses including CCT204H5, History and Practices of Design Thinking, CCT206H5, Law, Technology and Intellectual Property. Such awareness is further enhanced through the Surveillance course, CCT275H5, and the Knowledge Representation and Reasoning course, CCT471H5.

Students will also develop recognition of the limits of their knowledge through the required Work-based Learning course, CCT410H5.

6. AUTONOMY AND PROFESSIONAL CAPACITY

The inter-disciplinary nature of the IDM Specialist program encourages students to develop mature and thoughtful approaches to the selection of appropriate courses across disciplines consonant with their interests, abilities, and goals both while at the University of Toronto and subsequently.
Since they will be involved throughout the program with projects that will require independent work in some cases, and collaborative work in others, students will be required to develop an awareness of their own capacity and, as a result of being given the appropriate knowledge and guidance, be able to work professionally with other students from a variety of different cultures and academic and social backgrounds.

Students will gain a deeper and more nuanced understanding of professionalism through their required Work-based Learning course, CCT410H5.

<table>
<thead>
<tr>
<th>Estimated Enrolment per Academic Year in this program (please explain)</th>
<th>100 students at stable state (300 in the program)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New courses (sections) necessary to mount this program</td>
<td>34 course (sections)</td>
</tr>
<tr>
<td>Additional Instructor(s) Requirements</td>
<td>2 – 2.5 full time faculty, 6 FTE sessionals or some combination of cross-appointments and/or additional full time faculty.</td>
</tr>
<tr>
<td>New Teaching Assistant(s) Requirements</td>
<td>4900 Hours</td>
</tr>
<tr>
<td>New Laboratory Equipment Requirements</td>
<td>Require multi-media performance and immersive space(s). Initially a facility such as the MIST facility in the CCIT building may suffice but we will have to actively solicit research funds to augment this facility or develop an alternative.</td>
</tr>
<tr>
<td>New Computing Resources Requirements</td>
<td>Additional laboratory space, a variety of new software licences to be determined.</td>
</tr>
<tr>
<td>New Other</td>
<td>Program administration, program marketing (1.5 FTEs at steady state)</td>
</tr>
</tbody>
</table>
### APPENDIX A

#### The CORE

<table>
<thead>
<tr>
<th>Yr</th>
<th>Tm</th>
<th>Course</th>
<th>Name</th>
<th>Course Description</th>
<th>Responsible Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F</td>
<td>*CCT109H5</td>
<td>Contemporary Communication Technologies</td>
<td>This course examines different information and communication technologies (ICTs) through the analysis of such genres as contemporary written, visual, oral, electronic and musical forms. It illustrates a range of theoretical perspectives that seek to explain the relationship between communication and technology. This course will also examine, briefly, the history of ICTs. [24L, 12T]</td>
<td>UTM</td>
</tr>
<tr>
<td>1</td>
<td>F</td>
<td>*CCT110H5</td>
<td>The Rhetoric of Digital and Interactive Media Environments</td>
<td>This course critically examines the written, visual, aural, and dynamic rhetoric as it pertains to communications for academic and other purposes across a range of digital and interactive media discourses. [24L, 12T]</td>
<td>UTM</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>*CCT204H5</td>
<td>History and Practices in Design Thinking</td>
<td>The communication of information must be designed and this course investigates the methods and processes for doing this. It studies the principles and practices of design and the ways of thinking and working that produce innovative approaches, solutions, and services. The course highlights the processes of creative and critical thinking in exemplary design and offers students foundational theoretical and practical frameworks. [24L, 12T] Prerequisites: CCT109H5 and CCT110H5.</td>
<td>iSchool</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>CCT206H5</td>
<td>Law, Technology and Intellectual Property</td>
<td>This course provides a detailed review of copyright, trademark and patent law with a special emphasis on how they apply to digital media. This course reviews the law of contract as it applies to digital industries and investigates the relevant tort law. In addition, other regulatory issues will be discussed such as telecommunications and broadcasting law both from a Canadian and an international perspective. [24L, 12T] Prerequisites: CCT109H5 and CCT110H5.</td>
<td>UTM</td>
</tr>
<tr>
<td>2</td>
<td>W</td>
<td>CCT210H5</td>
<td>Meaning and Interpretation</td>
<td>In everyday life we encounter a diversity of objects, written and spoken texts, gestures and virtual entities; they are all signs laden with layers of meaning. Developing a capacity to investigate the meaning of signs, to unpack the relationships between signs, to determine what they stand for, and to situate the people (and systems) who eventually interact with them is foundational. This course examines signs and their relations to meaning. This course investigates how entities acquire meanings and</td>
<td>UTM</td>
</tr>
<tr>
<td>Yr</td>
<td>Tm</td>
<td>Course</td>
<td>Name</td>
<td>Course Description</td>
<td>Responsible Partner</td>
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<tr>
<td>2</td>
<td>W</td>
<td>*CCT215H5 NEW</td>
<td>Culture Change and Innovation</td>
<td>Digital technologies have reshaped modern culture. These technologies have been disruptive and they have been transformative to the shape of contemporary society. They have reshaped how we create, communication, and work. The course explores these changes and the processes that brought them about. [24L, 12T] Prerequisites: CCT109H5, CCT110H5, and CCT218H5.</td>
<td>iSchool</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>CCT218</td>
<td>Introduction to Digital Culture</td>
<td>This course provides an opportunity for students to develop an understanding as to how digital media is transforming society and shaping a fluid digital culture. It provides students with the ability to understand the way digital technologies are reconfiguring conceptions of representation, community, gender, identity, location, space, and social and cultural narrative and meaning making. The process by which information technology creates new relationships, communities, and identities is explored. During the course students acquire the ability to examine the cultural and social contexts of technological change and gain an awareness of the different critical methods for studying digital culture and communities. [24L, 12T] Prerequisites: CCT109H5, CCT110H5.</td>
<td>UTM</td>
</tr>
<tr>
<td>2</td>
<td>W</td>
<td>*CCT275H5 NEW</td>
<td>An Introduction to Surveillance Studies</td>
<td>From the Orwellian Big Brother to Bentham's Panopticon, surveillance has become an everyday facet of modern life. From a Surveillance Studies perspective surveillance can also be applied as a framework for understanding social, political, and technological interrelationships. This framework can help us study more effectively power, identity, and control associated with the spread of Information Communication Technologies (ICTs). This course will introduce students to viewpoints, vision and visibility in Surveillance Studies. Students will look at a range of topics from information politics, identification, privacy, security, suspicion, social sorting, bodies, borders, and biometrics, to explore a range of perspectives under the Surveillance Studies umbrella. The course will introduce students to key issues surrounding data, discrimination, and</td>
<td>iSchool</td>
</tr>
<tr>
<td>Yr</td>
<td>Tm</td>
<td>Course</td>
<td>Name</td>
<td>Course Description</td>
<td>Responsible Partner</td>
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<td>visibility in a global context to uncover the watched world. [24L, 12T] Prerequisites: CCT109H5, and CCT110H5.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>CCT301H5</td>
<td>Design for Online Cultures</td>
<td>This course builds upon the concepts introduced in CCT218H5, History and Practices of Design Thinking, through an exploration of the design and development of online information services (e.g. websites, digital libraries). It examines the standards, modeling approaches, and methods for testing. Students will experiment with different approaches to design of websites or other online services for different types of delivery devices (e.g. desktops, mobiles). [24L, 12T] Prerequisites: CCT218H5, CCT210H5.</td>
<td>iSchool</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>*CCT341H5 NEW</td>
<td>Collaborative ICT Project</td>
<td>Increasingly work projects and work teams are spread across geographic boundaries and collaboration must be mediated. Computer Supported Collaborative Work (CSCW) is a major area of design and research across many disciplines and contexts. This class takes a theoretical and practical approach to computer supported collaboration by placing students in interdisciplinary teams across traditional geographic boundaries. The class will be focused on project based learning and will look at key literatures in CSCW and project management. [24L, 12T] Prerequisites: CCT204H5, CCT218H5.</td>
<td>UTM</td>
</tr>
<tr>
<td>4</td>
<td>W</td>
<td>CCT410H5</td>
<td>Work-based Learning</td>
<td>This course is a work-based learning opportunity available only upon application from students registered in any CCIT program. Through an experiential work placement (e.g., possibly a volunteer position), students will apply the expertise in interactive digital media that they have gained through previous courses. Students must plan well in advance for the placement and work closely with the placement officer for CCIT to determine eligibility and suitability. A report and presentation will be required at the end of the placement. These, along with the employer's assessment, will provide the main part of the course mark. [24L, 12T] Prerequisites: CCT341H5, Completion of 13.0 credits; minimum CGPA 2.5; OR permission from the course instructor.</td>
<td>UTM</td>
</tr>
</tbody>
</table>

Note: All new courses have been identified by *
**MODULES**

Initially, there are two modules proposed to be included in the Calendar for 2011-2012 and first offered in the 2012-2013 academic year. The initial modules to be offered are:

- *Knowledge Media Design (KMD)*
- *Immersive Digital Media: Gaming, Simulation and Performance*

### Knowledge Media Design (KMD)

<table>
<thead>
<tr>
<th>Year</th>
<th>Course</th>
<th>Name</th>
<th>Course Description</th>
<th>Responsible Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 or 4</td>
<td><em>CCT 372H5 NEW</em></td>
<td>Knowledge Media Design: Contexts and Practices</td>
<td>Knowledge media are systems incorporating computer and communications technology that enhance human thinking, creativity, communication, collaboration, and learning. This course reviews the emerging field of knowledge media design and the use of digital media for communication, collaboration, and learning. The course includes topics in human-centred design; knowledge media technologies; social implications of knowledge media; examples and applications of knowledge media; and the future of knowledge media, and is organized via themes of design, media, and knowledge. [24L, 12T] Pre-requisite: CCT210H5.</td>
<td>iSchool</td>
</tr>
<tr>
<td>3 or 4</td>
<td><em>CCT373H5 NEW</em></td>
<td>Introduction to Modelling Information</td>
<td>The analysis and modelling of information is key to being able to being able to develop appropriate information architectures for organizations in particular and society as a whole. Students explore the modelling and analysis of information from a conceptual, technical and practical perspective. [24L, 12T] Pre-requisite: CCT372H5.</td>
<td>iSchool</td>
</tr>
<tr>
<td>3 or 4</td>
<td><em>CCT374H5 NEW</em></td>
<td>Technologies of Knowledge Media</td>
<td>The course covers understanding the context in which knowledge media are introduced, understanding the team, group, or work setting for designing collaborative knowledge media. We also explore different techniques for understanding and designing for the individual who uses or engages with knowledge media. Techniques and tools are drawn from a range of design perspectives including traditional user centered design, participatory design, engineering, and industrial design. The appropriateness of each technique and tool for different design problems and settings is discussed and the course concludes with an examination of the development of new techniques and tools for new design challenges. [24L, 12T] Pre-requisite: CCT372H5.</td>
<td>iSchool</td>
</tr>
<tr>
<td>3 or 4</td>
<td><em>CCT471H5 NEW</em></td>
<td>Knowledge Representation and Reasoning</td>
<td>This course explores the various formalisms that have been developed to represent knowledge and uncertainty. In addition, since much knowledge is 'created' as a result of reasoning processes, the representation and implementation of reasoning schemes are explored. [24L, 12T] Pre-requisite: CCT372H5.</td>
<td>iSchool</td>
</tr>
<tr>
<td>Year</td>
<td>Course</td>
<td>Name</td>
<td>Course Description</td>
<td>Responsible Partner</td>
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<tr>
<td>3 or 4</td>
<td>CCT414H5</td>
<td>Representation in Language, Mind and Art</td>
<td>This course examines philosophical questions surrounding the nature of representation in language, mind and art. Questions to be examined include: How can one thing represent something else? What is the difference between representation by words and representation by pictures? Do we think in a &quot;language of thought&quot;? [24L, 12T] Pre-requisite: 13 credits and CCT471H5.</td>
<td>UTM</td>
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<tr>
<td>Year</td>
<td>Course</td>
<td>Name</td>
<td>Course Description</td>
<td>Responsible Partner</td>
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<tr>
<td>3 or 4</td>
<td>*CCT380H5</td>
<td>An Introduction to Immersive Environments</td>
<td>Innovative user interfaces and powerful information technology services enable individuals to construct and immerse themselves in virtual environments. This course investigates different types of immersive technologies. This is a domain of artistic, scientific, and commercial experimentation and exploration. Students will also be exposed to a variety of these technologies both from a conceptual and a practical perspective; they will explore questions of representation, perception, consciousness, and behaviour. Through the course the students will have an opportunity to appreciate the process of defining, creating, experiencing and evaluating immersive environments. [24L, 12T] Pre-requisites: CCT210H5, CCT218H5.</td>
<td>UTM</td>
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<tr>
<td>3 or 4</td>
<td>CCT381H5</td>
<td>Virtual Media Audiences: Imagined and Actual</td>
<td>Audiences are social constructions which must be imagined to be actualised. In emerging social media space capacity to characterize imagined audiences provides a foundational framework for determining the information representations and presentations necessary to create those virtual audiences. This approach is foundational to personal, commercial, and public sector exploration of virtual worlds. Beginning with an exploration of the nature and role of audiences across multiple virtual and electronic media, the students explore the conception, perception and reality of imagined and actual audiences. Broadcast models, interactive models, live audience, audience reading, gender, culture, and audience feedback are investigated. [24L, 12T] Pre- or Co-requisite: CCT380H5</td>
<td>iSchool</td>
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<tr>
<td>3 or 4</td>
<td>*CCT382H5</td>
<td>Edutainment: Immersive Learning</td>
<td>In this course, students will be introduced to Multimedia Knowledge Management by working on and building a prototype of an educational interactive knowledge game. Addressing issues of Digital Media design, students in collaborative groups will develop and/or employ appropriate research methodologies, read relevant material to design the game flow, create characters, and design storyboards / wireframes. Students will identify an educational need, define requirements, and develop a web-based interactive game to meet them. Students will conduct iterative usability testing and finally build a website featuring their semi-functional prototype. The course does not require programming experience, but a familiarity with web design, image rendering, and animation software could be an asset. [24L, 12T] Pre- or Co-requisite: CCT380H5</td>
<td>UTM</td>
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<tr>
<td>3 or 4</td>
<td>*CCT480H5 NEW</td>
<td>Human Computer Interaction and Communication</td>
<td>The course investigates how people interact with digital systems to enable the production of quality design from the perspective of the user. The course examines how interactive systems are conceptualized, designed, implemented, and deployed to meet users’ needs. Students will be also acquire the capacity to evaluate systems and to critically assess different HCI methods and approaches. It begins by developing an understanding of usability and focuses on enabling students to acquire an understanding of the user-centred design process (e.g. user studies, prototyping, and evaluation). [24L, 12T] Pre-requisite: CCT382H5</td>
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<td>3 or 4</td>
<td>*CCT481H5 NEW</td>
<td>Augmented Places and Social Media Spaces</td>
<td>Increasingly we are seeing a hybridization of information location where media provide a framework or environment for users (participants) to construct reality and relationships. The course explores emergence of new ubiquitous communication cultures and the increasingly pervasive use of technology for the augmentation of people, places, and actual world entities (e.g. objects). In this course, students will explore various mechanisms of visualizing context-based information and the shaping of social media spaces. [24L, 12T] Pre-requisite: CCT382H5</td>
<td>UTM</td>
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<tr>
<td>3 or 4</td>
<td>*CCT482H5 NEW</td>
<td>Play, Performance and Community in Digital Games</td>
<td>In this course, students will explore the complex relationship between games and play. Starting with an overview of the major play theories, students will learn how cognitive, philosophical and social theories of play are used to guide and inform game design. The increasingly prominent role of the player in the co-creation and performance of digital games will be examined. Students will also explore the emergence of player communities and consider the various issues that this introduces into design and management processes, including important new questions about governance, player and creative freedoms, and immaterial labour. [24L, 12T] Pre-requisite: CCT382H5</td>
<td>iSchool</td>
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</table>

**Future Modules**

Since the program is designed to be supported by the CORE curriculum, modules may be added and changed. Future modules will be developed with the Faculty of Information. Modules currently under discussion for the 2012-2013 and 2013-2014 academic years include:

- Appraising and Leveraging Digital Culture (2012-2013)
- Surveillance, Privacy and Media (2012-2013)

Possible future modules should resources allow:

- Digital Services and Health
- Digital Learning and Communication
Listing of Courses with Title

First Year Courses
CCT109H5 Contemporary Communication Technologies (a combination of existing CCT100 and CCT101)
CCT110H5 The Rhetoric of Digital and Interactive Media Environments (NEW)

Second Year Courses
CCT204H5 History and Practices in Design Thinking (NEW)
CCT206H5 Law, Technology and Intellectual Property
CCT210H5 Meaning and Interpretation
CCT215H5 Culture Change and Innovation (NEW)
CCT218H5 Introduction to Digital Culture
CCT275H5 Introduction to Surveillance Studies (NEW)

Third Year Courses
CCT301H5 Design for Online Cultures
CCT341H5 Collaborative ICT Project (NEW)
CCT372H5 Knowledge Media Design: Contexts and Practices (NEW)
CCT373H5 Introduction to Modelling Information (NEW)
CCT374H5 Technologies of Knowledge Media (NEW)
CCT380H5 An Introduction to Immersive Environments (NEW)
CCT381H5 Virtual Media Audiences: Imagined and Actual (adapted CCT333H5)
CCT382H5 Edutainment: Immersive Learning (NEW)

Fourth Year Courses
CCT410H5 Work-based Learning
CCT414H5 Representation in Language, Mind and Art
CCT471H5 Knowledge Representation and Reasoning (NEW)
CCT480H5 Human Computer Interaction and Communication (NEW)
CCT481H5 Augmented Places and Social Media Spaces (NEW)
CCT482H5 Play, Performance and Community in Digital Games (NEW)

Note: Assuming class size for 1st and 2nd year at stable state of 100 and then 50 for 3rd and 4th year results in an overall count of course/sections of 34.
Total Number of Courses/Sections 34.
• Faculty of Information will teach 14.
• ICCIT will teach 20.
• This reflects roughly 40%/60% split in teaching between the Faculty of Information and ICCIT.
CHECK LIST

For Specialist/Major Programs

1. Does your description of the Learning Outcomes indicate how the outcomes are accomplished in each year?

2. Which courses achieve the Depth and Breadth of Knowledge in the program?

3. Will the following expectations be satisfied? (Yes/No)
   i. Depth and Breadth of Knowledge
   ii. Knowledge of Methodologies
   iii. Application of Knowledge
   iv. Communication Skills
   v. Awareness of Limits of Knowledge
   vi. Autonomy and Professional Capacity

   If any objective cannot be satisfied within the proposed program, have you explained why not and how the students are expected to acquire that competency?

4. If you are including courses offered by another unit(s) in your program description, provide a Course Cross-Listing & Access Agreement signed by the academic head of the other unit for each unit providing courses in your program.

For Minor programs

1. Have you indicated how the Learning Outcomes of the program will be satisfied by the sequence of courses?

2. If you are including courses offered by another unit(s) in your program description, provide a Course Cross-Listing & Access Agreement signed by the academic head of the other unit for each unit providing courses in your program.

For all programs

Have you completely described the resource implications and how the resources will be made available?