# University of Toronto
# New Undergraduate Program Proposal

## Section 1

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| **Version Date:** | **February 1st, 2011** |
| **Faculty / Academic Division:** | **Joint: UTM & Faculty of Information** |
| **Faculty/Academic Division Contact:** | **Melissa Berger,**<br>**Program and Planning Officer**<br>**Office of the Dean, UTM**<br>***melissa.berger@utoronto.ca*** |
| **Department / Unit (if applicable) where the program will be housed:** | **Institute of Communication, Culture and Information Technology (ICCIT), UTM** |
| **Program Proposed:**<br>*Please specify exactly what is being proposed Eg. A new BA degree program in …….. including Specialist, Major, and Minor options.* | **Interactive Digital Media, B.A., Specialist** |
| **Start date of new program:** | **September 2011**<br>**With the first class admitted for September 2012** |

## Section 2

### 1. Executive Summary

**Specialist Program ERSPE2172 Interactive Digital Media (IDM) – Effective September 2011**

The increasing pervasiveness of information media in our daily lives suggests that Canada's future and its participation in the global knowledge economy will depend greatly on the training of highly qualified personnel who are critical thinkers and are media savvy. These individuals will be trained to understand how to produce, engage with and critically analyze media content and its design. To address the growing demand for communication students who are information literate and media prepared, the Institute of Communication, Culture and Information Technology (ICCIT) and the Faculty of Information (FI) have designed a specialist undergraduate program in Interactive Digital Media (IDM). The program provides 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 proposed BA in Interactive Digital Media (IDM) is an interdisciplinary undergraduate program, the curriculum for which will provide 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 by the Faculty of Information (commonly known as the iSchool) at the University of Toronto and the University of Toronto Mississauga (UTM). 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 (ICCIT) at the University of Toronto Mississauga.

## 2. Rationale

The IDM Specialist program supports the academic mission of the new Institute of Communication, Culture and Information Technology (ICCIT) 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 Specialist program will significantly augment the offerings of ICCIT and provide additional opportunities for students who are already enrolled in existing ICCIT programs.

The IDM Specialist will also represent the first foray into undergraduate programs by the Faculty of Information. 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 the Masters and PhD programs, and open up the prospect of undergraduate teaching for its doctoral students and MA TAships which the Faculty of Information currently does not have. Given the synergies between the teaching and research strengths of the Faculty of Information and the existing ICCIT programs, we believe that a joint undergraduate program will leverage these complementary strengths. This will provide all UofT students with the opportunity to take advantage of the extensive expertise of faculty at both the Faculty of Information and the ICCIT.

The proposed specialist program also fits well with and advances both divisional and institutional priorities. The University of Toronto Academic Plan *Toward 2030* calls upon all undergraduate programs at the University of Toronto to have the broad goal "to facilitate the development of inquiring and analytical minds with a strong orientation to creativity and innovation" [p.6, T2030 Synthesis]. The 3rd and 4th year courses that constitute the IDM program are specifically designed to orient students to the exploration of new ideas or the testing of novel hypotheses, along with the development and application of strong analytical skills. The program furthers the development of the tri-campus model of a single university.

The Faculty of Information has as a strategic goal the development of a full spectrum of offerings from the undergraduate level through to post-degree lifelong learning opportunities. It currently has two Master's degree programs, a PhD program, and a professional learning centre, but has not offered an undergraduate degree since the abolition of the Bachelor of Library Science in the 1960s. The development of Information disciplines and the renewal and expansion of the faculty has provided the Faculty with a 'critical mass' that enables a realistic opportunity to offer an undergraduate program. Offering this program is thus a major element in achieving the Faculty's strategic goals. In addition, academic plans for the Faculty have long recognized the need for such a comparatively small Faculty to be a key locus of activity as the information society continues to emerge and as the various information disciplines become increasingly crucial in society at large.

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.

From the standpoint of the ICCIT, the IDM program will further deepen and broaden its range of program offerings and provide for a distinctive focus for both faculty development and research. Furthermore the IDM program will provide a programmatic and research 'bridge' between the ICCIT and the Faculty of Information facilitating the exchange and enhancement of expertise and stimulating the development of state-of-the-art research and teaching practice in Knowledge Media and Immersive Digital technologies.

## 3. Program Description and Content

The IDM program is innovative in design, content and delivery. With respect to the design of the IDM program it is structured with a core set of foundational courses which provide students with the essential knowledge and skills. In addition to the core set of foundational courses students will take two advanced modules - one in Knowledge Media Design and the other in Immersive Media. This structure ensures that students have the necessary skills and knowledge to benefit from the advanced modules and also results in a program that meets external demands for students who are experienced with advanced technologies and have a broad and deep understanding of the contexts in which these advanced technologies can be applied.

As has been noted, the IDM provides students with the experience of advanced technologies that will be relevant to the creation and application of digital media in virtually any domain. To the best of our knowledge no other program in Canada offers an equivalent exposure to state-of-the-art thinking and practice in these advanced technologies; see Appendix A for a listing of those comparator programs. The IDM program innovatively integrates experiential learning with self-assessment and group assessment approaches.

Finally, as advanced Knowledge Media and Immersive technologies will be at the heart of initiatives focused on the creation and application of knowledge in both research and applied domains, students will be exposed to researchers and practitioners who are at the forefront of developments in these areas. The University of Toronto has a unique set of such researchers and the Greater Toronto Area has a rich diversity of individuals and organizations developing and applying advanced Knowledge Media and Immersive technologies.

**Program Structure**

Students will be required to complete the CORE and two modules - each module will be comprised of **5** half courses (2.5 credits) and the total number of credits represented by the CORE will be **5.5** credits. Thus, the total number of credits comprising the IDM Specialist program will be **10.5**. The program requirements fall within the lower range of those required by specialist programs at UTM.

The CORE will be comprised of a number of half courses which have been identified in the accompanying table, Appendix C. All courses in the CORE are mandatory.

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 will take the following modules**: Knowledge Media Design**, and **Immersive Digital Media: Gaming, Simulation and Performance**.

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 in both commercial and non-commercial domains.

See Appendix A for a list of Comparator Programs
See Appendix B for the Calendar Description of the Program
See Appendix C for a listing of Courses and Course Descriptions

## 4. Learning Outcomes

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. 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 to.

## 5. Program Structure and Degree Learning Expectations

| Degree Learning Expectations | How developed within the program |
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| DEPTH AND BREADTH OF KNOWLEDGE | In the first year students will acquire a critical understanding of the development and history of 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, or oral through a variety of theoretical lenses and understand the relationships between the development of and practical applications of various communications strategies in CCT109H5 in order to apply these concepts to produce their own content in CCT110. 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. CCT110H5 will develop competences in critical thinking, research and communications skills, and apply various oral and written communications strategies which are generalizable across the focal disciplines of the IDM Specialist program. CCT110H5 will provide students with the opportunity to apply the aforementioned foundational skills through practical assignments conducted in laboratory and tutorial environments. Students completing CCT110H5 will have had to develop information research skills and competency in written and oral communications skills which will be further utilized throughout the program.<br><br>In the second year, students admitted to the program will deepen their knowledge of the disciplines through six core half courses that further build the theoretical framework and research skills needed for the modules students will follow in the third and fourth years of study. 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. They will critically evaluate the relationship between necessity, usability and innovation in relation to design solutions. 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 analyze 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 apply and evaluate semiotic conventions in regards to existing texts as well as to the production of their own work. CCT219H5 provides students with knowledge of the interaction between digital technologies and culture, society, and individual beliefs and values. In this course, students further their critical thinking and analytic skills and develop their knowledge of these complex interactions. Students will identify contexts that are dependent on social and cultural sensitivity and critically evaluate the possible impact of new innovations. CCT218 will provide students with the theoretical foundation that will give them the ability to understand the ways digital technologies are reconfiguring conceptions of representation, community, gender, identity, location, space, and social and cultural narrative and meaning making. |

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| | Students will further expand both the depth and breadth of their knowledge as a result of taking two modules. The elective courses within 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. |
| 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 develop competency in critical ethnographic methodologies that include discourse analysis, usability analysis and audience analysis. Discourse analysis is introduced in CCT210 Meaning and Interpretation, further developed in CCT219 Culture, Change and Innovation and continued across the curriculum. Usability analysis is introduced in CCT219 Culture, Change and Innovation and further developed in CCT372 Knowledge Media Design and CCT374 Technologies of Knowledge Media. Audience analysis is also introduced in CCT219 Culture, Change and Innovation and further developed in CCT275 Introduction to Surveillance Studies and CCT301 Design for Online Cultures.<br>Students further develop and expand their understanding of the appropriate methods of enquiry through their second year and upper year courses.<br><br>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. |
| 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.<br><br>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. |
| 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.<br><br>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. |
| 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 |

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| | 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.<br><br>Students will also develop recognition of the limits of their knowledge through the required Work-based Learning course, CCT410H5. |
| 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.<br><br>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.<br><br>Students will gain a deeper and more nuanced understanding of professionalism through their required Work-based Learning course, CCT410H5. |

## 6. Assessment of Teaching and Learning

The IDM learning outcomes will be assessed using a variety of measures that include selected combinations of term tests, exams, written assignments such as essays, research papers, reflective journals, critical evaluation reports, self and group project evaluations; a work-based practicum, oral presentations; and digital project applications such as website constructions, graphic designs, interactive digital constructions and information design. Particular attention will be paid to exploring and developing both self-assessment by the students in the program and collaborative assessment both when students are co-located and also remotely located to each other.

## 7. Need and Demand

Demand for digital media producers is projected to grow dramatically, especially in areas that have a concentration of both graduates and companies willing to hire those graduates. The Greater Toronto Area (and beyond) is developing into one of those areas, with a significant concentration of industry to production companies.

Government of Ontario policy vis-à-vis digital media is designed to build upon the significant presence of IT-intensive firms and the presence of an educated workforce (particularly in the Greater Toronto Area) in Ontario, which contains just under half of all IT-related jobs in Canada. The commitment of the government to supporting the field and attracting investment to the province provides a likelihood of demand for graduates.

Employment demand for graduates of the proposed Interactive Digital Media program is likely to be high based on numerous credible assumptions and trends and based on governmental plans and incentive structures. The commitment of the Government of Ontario to develop a strong digital media cluster in the GTA/Kitchener-Waterloo area has already helped expand existing businesses and attract new ones, and there is clear ongoing interest by the government in using digital media as one of the pillars of an economic strategy for the province as the traditional manufacturing bases of Ontario's prosperity diminish. The University of Toronto is positioned to take advantage of both governmental support and industry devaggressively at the undergraduate level.

Every reliable trend would appear to point to the likelihood of gainful employment. What employer surveys exist for the emerging digital media sector indicate continued growth in hiring for digital media companies. The interdisciplinarity of a digital media program would likely enhance the ability of graduates to be employed.

Evidence indicates that the employability prospects of graduates of the proposed Interactive Digital Media program are likely to be excellent.

See Appendix D for the Student Demand and Employability Report

*Table 1: Undergraduate Enrolment Projections*

| *Level of study* | *Academic year 2011-12* | *Academic year 2012-13* | *Academic year 2013-14* | *Academic year 2014-15* | *Academic year 2015-16* | *Academic year* | *Academic year* |
|---|---|---|---|---|---|---|---|
| *1st year* | *#* | *#* | *#* | *#* | *#* | *#* | *#* |
| *2nd year* | | *25* | *50* | *50* | *50* | | |
| *3rd year* | | | *25* | *50* | *50* | | |
| *4th year* | | | | *25* | *50* | | |

*Please note the program expects to reach steady state in 2015-16 (150 students at steady state)*

## 8. Admission Requirements

The admissions requirements for this program do not differ from other Specialist programs offered at UTM. We state that there is limited enrolment in the program and that students may apply to enrol after having completed the program's requirements in the first year, which consists of 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 for which the minimum CGPA is determined annually; but that the CGPA is never lower than 2.5.

## 9. Resources

At steady state the IDM program will require the mounting of a minimum of 21 course sections. Some of these will consist of additional sections to classes that are currently being offered, while others will be entirely new class sections. Each class section will constitute a half-credit teaching load for a faculty member. We plan to ensure that over 75% of class sections are taught by full time tenure stream/tenured faculty in ICCIT or cross-appointed to ICCIT. This will require the equivalent of approximately 3 full time faculty FTEs. The remaining course sections will be taught by contractual faculty where possible and appropriate. We would note that there will be considerable opportunity to utilize both UTM and FI faculty to teach specialist courses at the 3rd and 4th year level in the IDM.

In addition, it will be necessary to add an additional 1.5 FTE of administrative support. 1.0 FTEs will be required for student counselling, general administration and student support while 0.5 FTEs will be required for Program Development and Marketing.
The above resources however will leverage the expertise and broad range of research and teaching provided by the listing of faculty below. The pool of talent combined from across the two campuses is multidisciplinary and range from theoretical scholars to hands on practitioners.

See Appendix E for the Curriculum Vitae

*Table 1: Detailed listing of committed faculty*

Note: The Faculty of Information is committed to providing IDM students with teaching excellence, and is dedicated to providing this excellence through various methods including classroom delivery at the UTM campus. This program is designed to have a 50% teaching split between FI faculty and UTM faculty.

| *Faculty name and rank* | *Home unit* | *Area(s) of Specialization* |
|---|---|---|
| Professor Zaheer Baber | Sociology, UTM | Science & Technology |
| Associate Professor Nadia Caidi | Faculty of Information | Information Policy and Community Informatics, involved in Cross-Cultural and Comparative Studies, Researching the Influence of Culture on the Production, Distribution and use of information and its Technologies |
| Professor Andrew Clement | Faculty of Information | Social Implications of Information Technology and Human-Centred Systems Development, Public Information Policy, Internet use in everyday life, Digital Identity Constructions, Public Participation in Information/Communication Infrastructures Development, and Community Networking |
| Mark Dryer, Lecturer | Biomedical Communication, UTM | 3D Biomedical Visualization |
| Assistant Professor Fiorella Foscarini | Faculty of Information | Concepts of Records and Archives, Functional approach to Records and Archives Management, with particular regard to Records Classifications and Appraisal, Organizational Cultures and Record Keeping, Diplomatics, Archival Legislation, Digital Preservation, Genre Studies |
| Assistant Professor Alan Galey | Faculty of Information | Intersections between Textual Scholarship and Digital Technologies, especially in the context of Theories of the Archive and the History of Scholarly Editing |
| Assistant Professor Sara Grimes | Faculty of Information | Children's New Media and Literature, Legal and Cultural Implications of Child-Generated content within the specific context of DIY games such as LittleBigPlanet and Spore |
| Assistant Professor Jenna Hartel | Faculty of Information | Use and Structure of Leisure Information on personal and Social levels |
| Associate Professor Kelly Lyons | Faculty of Information | Data Management, Collaboration, Distance Education, Privacy, Social Computing, Service Science, Social Media Collaboration, and |

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| | | Business Intelligence |
| Associate Professor Jens-Erik Mai | Faculty of Information | Broad area of Representation and Organization of Information |
| Associate Professor Pascal Michelucci | Language Studies, UTM | 19th and 20th Century French Poetry and Fiction, Semiotics of Narrative and Poetry, Poetic Theories of Metaphor, Interpretive Semantics, Genetic Criticism, Philosophy and Literature, History Forms, Curriculum and Theories of Reading |
| Associate Professor David Phillips | Faculty of Information | Knowledge Media Design, Political Economy, Relations among Information, Economics, Policy, Culture, Identity and Technology, Sexual Diversity studies, Surveillance Technologies and Identification |
| Professor Diana Raffman | Philosophy, UTM | Philosophy of Mind, Philosophy of Psychology, Vagueness, Philosophy of Music |
| Assistant Professor Matt Ratto | Faculty of Information | Interplay between Social Organization and Software Code, Ramifications of particular Software Design Sensibilities on our Ability to Function as Citizens and as Members of Expert Collectives, Role of Digital Commons |
| Professor and Dean of the Faculty of Information, Seamus Ross | Faculty of Information | Preserving Cultural Heritage and Scientific Digital Objects, Humanities Informatics, and the Application of Information Technology to Libraries, Archives and Museums |
| Professor Jack Sidnell | Anthropology, UTM | Linguistic Anthropology, Caribbean, Pidgens and Creoles, African American English, Conversation Analysis, Sociolinguistics, Vernacular Poetics |
| Professor Brian Cantwell Smith | Faculty of Information | Conceptual Foundations of Computation, Information and Cognitive Science, the Use of Computational Metaphors in such fields as Biology, Physics and Art. |
| Associate Professor and Director of the ICCIT, Anthony Wensley | ICCIT, UTM | Planning and Implementation of Enterprise Management Systems, Intellectual Property with particular emphasis on Digital |

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| | | Industries and the Biotechnology Industry |
| Associate Professor Nick Woolridge | Biomedical Communication, UTM | Development of Digital Media as instruments of Biomedical Research, Teaching and Patient Assistance |

Space/Infrastructure:
This program will require additional laboratory spaces as well a multi-media performance and immersive space(s) on campus. Initially a facility such as the MiST theatre located in the CCIT building will suffice but we will have to actively solicit research funds to augment this facility or develop an alternative. In addition we will require computing licenses in order to operate the required software for the program.

See Appendix F for the Library Statement
See Appendix G or the Standard Statement concerning Student Support Services (PENDING)

## 10. Quality and other indicators

The UTM faculty presently involved with ICCIT have a long-standing reputation concerning the creation and delivery of innovative new programs. Professor Wensley was actively involved in the creation of the Communication, Culture and Information Technology (CCIT) and Digital Enterprise Management (DEM) programs at UTM. He has overseen the implementation of these programs and their development over the last 11 years. Dean Ross and Professors Clement, Cantwell Smith, and Phillips from the Faculty of Information bring program design and implementation expertise to the IDM program as well as reputations for innovation in both program design and program delivery. UTM Faculty, most particularly Professor Woolridge and Marc Dryer have scholarly credentials and expertise in the design and use of immersive media for communication of rich knowledge. Professor Wensley conducts research into the management of knowledge in a variety of technology environments. The FI faculty have research strengths in areas relating to information architecture, access, and policy development. In addition, the faculty associated with the Knowledge Media Design Institute have research strength and expertise in areas closely related to the specialist courses to be offered to IDM students in Knowledge Media Design and Immersive Media.

***Developed: January 4, 2011***

## APPENDIX A: IDM SPECIALIST PROGRAM – COMPARATOR TABLE

| Institution and unit | Degree and Program (incl. URL) | Program Description | Curriculum | Comments |
|---|---|---|---|---|
| **Brock University**<br><br>Dept. of Communication, Popular Culture and Film | BA Honours or BA Pass in Popular Culture<br><br>http://www.brocku.ca/webcal/2009/undergrad/pcul.html | The Program focuses on the communicative practices and experiences of everyday life considered within their cultural, economic, political and social contexts.<br><br>Students will explore theoretical and analytical perspectives from both the humanities and the social sciences, and apply them to the study of diverse cultural forms including advertising, film, literature, music, popular entertainment and leisure, radio and television, sport and the worldwide web.<br><br>No Co-op is available. | The BA Honours Program consists of 20 credits (usually completed in four years as a full-time student) and the BA Pass Program consists of 15 credits (three years for a full-time student).<br><br>Students in the BA Honours program have the option of completing an Honours Thesis (PCUL 4F99) | This program provides a general introduction to a variety of popular culture. It is not a specialist program like the IDM, where students could develop the skills to design and implement media applications. |
| **Brock University**<br><br>Dept. of Communication, Popular Culture and Film | MA in Popular Culture<br><br>http://www.brocku.ca/social-sciences/graduate-programs/ma-in-popular-culture | The Program draws on theoretical perspectives, approaches and methods from a variety of disciplines in the Humanities and Social Sciences, as well as the established interdisciplinary field of Cultural Studies. Study methodologies range from quantitative content analysis to ethnographic observation to unstructured interviews. Themes and topics addressed in the Program emphasize both historical and contemporary perspectives.<br><br>Students admitted to the program are expected to have completed some courses related to Cultural Studies, Popular Culture or Media Studies as part of their undergraduate programs. | The MA Program offers two possible schemes:<br>• Scheme A: Six half credits and Major Research Paper (three-term or one-year program)<br>• Scheme B: Four half credits and Thesis (four-term program)<br><br>Course Listings: http://www.brocku.ca/webcal/current/graduate/PCUL.html<br><br>Full-time and part-time studies are available. | The MA program primarily builds on the understanding of *theoretical* knowledge and perspectives in Humanities, Social Sciences and Cultural Studies. Although the IDM program offers courses in media theory, the focus is on advancing students' skills in knowledge media design or interactive media application. |
| **Brock University**<br><br>Centre for Digital Humanities | BA Honours (4 years) or BA Pass (3 years) in Interactive Arts and Science<br><br>http://www.brocku.ca/humanities/departments- | The Program provides students with an opportunity to study and work in the field of new media and digital interactivity. Students are engaged in learning through independent inquiry, problem solving and portfolio building. They will explore digital and interactive tools for analyzing, representing and visualizing ideas in many traditional academic areas. Conceptual strategies such as interactive fiction, games and simulations are tested in hands-on projects and multimedia creation. | The BA Honours Program consists of 20 credits (usually completed in 4 years as a full-time student) and the BA Pass Program consists of 15 credits (3 years for a full-time student).<br><br>Sample courses offered:<br>• IASC 1F00Introduction to Interactive Arts and Science<br>• IASC 1P10 Introduction to Media Tools<br>• IASC 3F00 Imagining Immersive Worlds<br>• IASC 4F00Team-based Practicum in Interactive Media Design and | Like the IDM program, the IASC program encourages students to explore digital and interactive tools in theory and in practice. The IASC offers a concentration in Computer Game Development, which is similar to the IDM module in Immersive Digital Media: Gaming, Simulation and |

## APPENDIX A: IDM SPECIALIST PROGRAM – COMPARATOR TABLE

| Institution and unit | Degree and Program (incl. URL) | Program Description | Curriculum | Comments |
|---|---|---|---|---|
| | and-centres/interactive-arts-and-science/about-the-program | There is an emphasis on "team-based work" in tackling complex projects in new and exciting media, due to the interdisciplinary nature of interactivity.<br><br>Students can earn a concentration in Computer Game Development. | Productions<br>(Course Listings: http://edit.brocku.ca/webfm_send/1764) | Performance.<br><br>However, the IDM program has a stronger focus on the social context of information practices (privacy, surveillance and information interaction) than the IASC. The IASC offers one course in "Integrity and Literacy in the Information Age" which addresses the professional issues in computing. |
| **University of Calgary**<br><br>Dept. of Communication Studies in partnership with SAIT Polytechnic | BA, BA (Honours), and BCS in Communication Studies<br><br>http://comcul.ucalgary.ca/commstudies | The BA program teaches students on how knowledge and culture are produced and reflected in various forms of communication. The BA program is particularly strong in critical media studies, rhetorical studies, and the study of communication in the areas of health, science and technology. Students acquire the tools to critically analyze communication systems, skills in communication analysis and the ability to communicate ideas effectively and clearly.<br><br>The BSC program is designed to develop a broad critical understanding of the cultural role of communication and to give students an opportunity to acquire professional skills that can lead to a variety of career paths. The BSC program is offered in partnership with SAIT Polytechnic. | Both the BA and BSC programs are four-years in length (require 20 full-course equivalents):<br>• The BA offers more opportunities for academic breadth and depth<br>• The BCS offers more training in professional skills where students in their third and fourth year of the BSC program complete a technical diploma with SAIT Polytechnic as part of their university degree (SAIT constitutes eight of the 20 full-course equivalents required for graduation)<br>  ○ The BSC could be taken as a Co-op program (normally adding an extra year) | The BA program's focus is on communication systems, and communication analysis. It is not intended to be a specialist degree such that students are not specialized in new media, digital graphics communication (as they would be in the IDM program).<br><br>Although the BSC program offers students a technical diploma to supplement their bachelor degree, the SAIT courses are centered on print media rather than digital media. As well, the IDM program offers additional courses related to understanding information practices in social media. |
| **Concordia University**<br><br>Dept. of Communication | BA Specialist or BA Major in Communication Studies; BA Major in | The Programs offer a broad-based education in communication and the role played by mass media in society. The programs focus on the integration of knowledge based in the humanities and liberal arts, the social sciences, and actual media practice. | The BA Specialist program comprises 60 Communication Studies credits (3 credits is equiv. to a normal half-course credit) and the BA Major programs comprise 42 Communication Studies credits.<br><br>Students from all programs are required to take Practicum Courses (focus | These programs are similar to IDM in terms of the studies courses they offer students (i.e. theoretical and critical understandings of social, cultural, |

**APPENDIX A: IDM SPECIALIST PROGRAM – COMPARATOR TABLE**

| Institution and unit | Degree and Program (incl. URL) | Program Description | Curriculum | Comments |
|---|---|---|---|---|
| Studies | Communication and Cultural Studies<br><br>http://coms.concordia.ca/programs/bachelors.html | | on the development of creative media practices) and Studies Courses (offer theoretical and critical understanding of social, cultural, and formal communication and media)<br><br>There are four production streams to the BA programs:<br>• Sound<br>• Intermedia<br>• Video<br>• Film<br><br>Course Listings: http://coms.concordia.ca/programs/bachelors.html) | formal, and other aspects of human communication and media), however the practicum courses offered are in sound, intermedia, video, and film, whereas IDM provides students with technical skills in knowledge media. |
| **Concordia University**<br><br>Dept. of Communication Studies | MA in Media Studies<br><br>http://coms.concordia.ca/programs/masters.html | The Program provides core training in communication theory, media history, and media research methods.<br><br>Students admitted to the program must have a Bachelor`s degree in communication or a related field; experience in media or media-related field is an asset. | The Program comprises 45 credits (3 credits is equiv. to a normal half-course credit) and three program options are available:<br>• Option I: MA with Coursework (24 credits) and Thesis (21 credits)<br>• Option II: MA with Coursework (45 credits)<br>• Option III: MA with Coursework (24 credits) Project (21 credits)<br><br>Full-time and Part-time study options are available. | The MA program is a general doctoral stream graduate program; their core training is in communication theory, media history and media research methods. This is different from the IDM program which specializes in teaching students how to analyze as well as *use* interactive media. Graduates from the IDM program could enter specialist graduate programs in the interactive media field. |
| **Great Northern Way Campus**<br><br>Centre for Digital media at GNWC and Continuing Studies English Language and Culture Program at Simon Fraser University | Pre-Masters of Digital Media Program<br><br>http://mdm.gnwc.ca/program/pre-masters-digital-media-program | This Program is created for students who are interested in improving their English language skills as well as pursuing a masters in the digital media, entertainment technology and/gaming fields.<br><br>Students applying to the program must:<br>• be currently enrolled in 4th year of a university program; or<br>• have completed an undergraduate degree; or<br>• be planning to apply for the Masters of Digital Media Program at GNWC | This is a sessional program offered in either an 8-week or 12-week period.<br>• 8-week program: 200 hours of instruction plus workshop projects<br>• 12-week program: 300 hours of instructions plus workshop projects<br><br>Both program options includes 25 hours of instruction per week (plus workshop projects), where 12.5 hours per week is spent at GNWC and the other 12.5 hours per week is taken at Simon Fraser University. | This program provides training in digital media *and* English language skills. It acts as a bridging program for students to the Masters of Digital Media Program at GNWC. Compared to the IDM program, there is less emphasis on foundational studies (i.e. critical analysis on media production, design, criticism, and theory). |

## APPENDIX A: IDM SPECIALIST PROGRAM – COMPARATOR TABLE

| Institution and unit | Degree and Program (incl. URL) | Program Description | Curriculum | Comments |
|---|---|---|---|---|
| | | Upon graduation, students can apply directly to the Masters of Digital Media Program. | | |
| **McMaster University**<br><br>Dept. of Communication Studies and Multimedia | BA in Communication Studies<br><br>http://csmm.humanities.mcmaster.ca/undergraduate/index.html | The Program provides students with a blended theoretical and practical approach to the study of human and mediated communication. It offers a wide variety of perspectives on the interplay between media, culture, technology and professional communication from linguistics, history, cultural studies, political economy, performance studies, policy studies, mass media and public relations.<br><br>The Program has a strong focus on research methods, which provides students a solid critical and practical foundation as researchers in both academic and professional setting. | Students enter the program in Year II; the program requires the completion of 120 units total (Levels I-IV). The program will normally be four years for full-time study. | This is a general communication program with a strong focus on research methods. Unlike the IDM, it is not a specialist program where students could develop skills to design and implement media applications. |
| **McMaster University**<br><br>Dept. of Communication Studies and Multimedia | BA in Multimedia<br><br>http://csmm.humanities.mcmaster.ca/undergraduate/index.html | Students have the opportunity to engage in hands-on media production while learning about the social, historical, and theoretical aspects of new media, design, and humanities computing.<br><br>They gain a wide range of experience and skills by creating independent and group projects utilizing audio, video, animation, digital games, web and graphic design, and programming. Courses offered range from design fundamentals to 3-D animation techniques to computer programming for the web.<br><br>Students are required to complete a Multimedia Thesis project. | Students enter the program in Year II; the program requires the completion of 120 units total (Levels I-IV) including a Thesis Project. The program will normally be four years for full-time study. | This program is similar to IDM in terms of its focus on theory and practice of media design. Students in both programs have the opportunity to create projects on digital games, programming, and web designs.<br><br>However, the IDM program is specialized in knowledge media design and immersive media, whereas this program is general for multimedia. |
| **McMaster University**<br><br>Dept. of | MA in Communications and New Media | Students in the Program will develop advanced knowledge in communication theories and methodologies, and cultivate their interest in one or more subspecialties (such as media studies, discourse | The MA is completed in 12 months or three terms, where students will take five 3-unit courses (3 units is equiv. to a normal half-credit course) and one 6-unit course, in addition to a major research project (either a 40 page research paper or a combination of a smaller paper and a digital media | Compared to the IDM program, this MA program is more theoretical-based (with a focus on research methods) then |

## APPENDIX A: IDM SPECIALIST PROGRAM – COMPARATOR TABLE

| Institution and unit | Degree and Program (incl. URL) | Program Description | Curriculum | Comments |
|---|---|---|---|---|
| Communication Studies and Multimedia | http://csmm.humanities.mcmaster.ca/grad/index.html | analysis, performance studies, audio and video art, audience studies, computer-mediated methodologies).<br><br>Admission to the program will normally require an Honours Bachelor's degree (four-year degree) in a Communication Studies and/or Multimedia program. | product). | application-based. |
| **Ryerson University**<br><br>Faculty of Communication & Design | BFA in Image Arts<br><br>http://imagearts.ryerson.ca/ | The Program provides a general background in design, art history, and cultural studies, along with professional education in the three areas of Film, New Media, and Photography Studies. The program creates a strong link between theory and practice in each of these options. | The BFA program is four years based on full-time study. Students must complete a Senior Thesis Project in their fourth year and are required to take a combination of theoretical courses and professional-related courses (i.e. multimedia workshop, screen writing, interaction design, etc…)<br><br>Course Listings for New Media:<br>http://imagearts.ryerson.ca/newmedia/courses.cfm?CourseSection=M | This program is similar to the IDM program. It offers a stream in New Media, which gives students the opportunity to learn about interactive media, create an interactive experience design, and complete a Thesis project. |
| **University of Western Ontario**<br><br>Faculty of Information & Media Studies | BA Honours Specialization in Media Information & Technoculture<br><br>http://www.fims.uwo.ca/prospective/undergrad_prosp/about_undergrad/mit.htm | Through the Program, students will:<br>• gain an understanding of the practical, theoretical, historical, social and cultural contexts of media, information, and technology<br>• critically evaluate information and information resources<br>• learn how the media of information, communication, news and entertainment are related to culture, ideology, and identity formation<br>• explore cultural responses to technology, the forms they may take and the way relations between humans and technology create different kinds of cultures or "technocultures"<br>• examine patterns of thought, cognition, interaction, culture, or power embodied in the design and use of information technologies<br>• understand the processes and institutions involved in creating and disseminating information, entertainment, and knowledge<br>• explore the connections between the control of information /communication technologies and democracy, the public sphere, capital accumulation, labour and occupations, and the environment | The program requires the completion of 20 courses and students can apply after their first year of general studies. The program is 4 years in length for full-time study.<br><br>Course Listings:<br>http://www.fims.uwo.ca/acad_programs/undergrad/mit_mpi/courses/course_outlines.htm | This program is similar to the IDM program; it combines the theoretical approaches to learn new ICT, with hands-on experience in creating digital imaging, web design, multimedia production, etc... However, this program is not specialized (unlike IDM) in knowledge media design and immersive digital media. |

**APPENDIX A: IDM SPECIALIST PROGRAM – COMPARATOR TABLE**

| Institution and unit | Degree and Program (incl. URL) | Program Description | Curriculum | Comments |
|---|---|---|---|---|
| | | Students have the opportunity to complete an academic (unpaid) or professional (paid) internship.<br><br>The program is not designed as a training program in advertising, media production, or public relations. However students will acquire the knowledge and skills for professional work in media industries, information management, or other communications-related fields.<br><br>Upon graduation, students could pursue graduate studies in media studies, communication and other disciplines. | | |
| **University of Western Ontario**<br><br>Faculty of Information & Media Studies in collaboration with Fanshawe College | BA in Media Theory & Production and two-year college diploma<br><br>http://www.fims.uwo.ca/prospective/undergrad_prosp/about_undergrad/mtp.htm | The Program is designed for students who want to have a solid academic background along with a particular media-related skill set. The purpose of the program is to allow graduates to move into media-related areas of employment upon completion of the degree and diploma. This is not an entry mechanism to university-level graduate programs. | The joint degree/diploma program is four years based on full-time study. Approximately 13.0 courses are taken at UWO; other courses are taken at Fanshawe College.<br><br>There are four areas of study for the Fanshawe diploma:<br>• Multimedia Design and Production<br>• Journalism – Broadcast<br>• Broadcasting – Television<br>• Broadcasting – Radio<br><br>UWO Course Listings:<br>http://www.fims.uwo.ca/acad_programs/undergrad/mtp/about-multimedia/requirements.htm<br><br>Fanshawe Course Listings:<br>http://www.fanshawec.ca/EN/mmd1/program/next/courses.asp | The curriculum of this program is different from IDM as it offers a joint degree/diploma program. As well unlike the IDM program, graduates from this program will not be eligible to apply for specialist graduate programs. |
| **University of Western Ontario**<br><br>Faculty of Information & Media Studies | MA in Media Studies<br><br>http://www.fims.uwo.ca/acad_programs/grad/media.htm | The MA program offers students the opportunity to conduct advance research across media and disciplines, focusing on media products, practices and reception.<br><br>Graduates of the program can pursue doctoral studies in media studies or communication, or enter the workplace in a variety of communications-related industries in | Flexible program structure: full-time and part-time programs are available (accepts up to 10 students per year)<br><br>There are two program options:<br>• Thesis Option: Five courses (includes a research workshop) and a thesis of 100 pages<br>• Major Research Paper Option: Nine courses (includes a research | This MA program is doctoral stream; students would conduct advanced research across media and disciplines (unlike the IDM which is specialized in knowledge media design/immersive media), focusing on media products, |

## APPENDIX A: IDM SPECIALIST PROGRAM – COMPARATOR TABLE

| Institution and unit | Degree and Program (incl. URL) | Program Description | Curriculum | Comments |
|---|---|---|---|---|
| | | research, consulting, education, policy and regulation. | workshop) and a research paper of 50 pages | practices and reception in a technocultural environment. |
| **Wilfred Laurier University**<br><br>Dept. of Communication Studies | BA Honours in Communication Studies<br><br>http://www.wlu.ca/homepage.php?grp_id=286 | This is an interdisciplinary program that allows students to draw on a variety of approaches, theories, methods and other resources for analyzing communication in social, economic, political and cultural environments. It has a very flexible curriculum which allows students to customize their education to match personal interests and career plans. | The program consists of 20 credits, with 12.0 credits (maximum) in the Communication Studies discipline.<br><br>Course Listings: http://www.wlu.ca/calendars/department.php?cal=1&d=764&s=364&y=44#Course_Offerings | This program is very flexible (many electives could be taken from other disciplines) and provides students with general knowledge and skills in communication. It is not a specialist program like the IDM, where students could develop the skills to design and implement media applications. |
| **Wilfred Laurier University**<br><br>Dept. of Communication Studies | MA in Communication Studies<br><br>http://www.wlu.ca/page.php?grp_id=286&p=7594 | The program offers a specialization in *Visual Communication and Culture*, and *Media, Technology and Culture*, both of which provides students with a rigorous foundation in the critical analysis of communication media.<br><br>This program is intended to equip students with the advanced analytical and methodological skills based in a rigorous foundation in the interdiscipline of Communication Studies to pursue further research work at the doctoral level.<br><br>Students applying to the MA program are not required to have previous knowledge in this field. | There are two program options:<br>• Major Research Paper: Completion of six half credits and a major Research Paper (50-60 pages)<br>• Thesis Option: Completion of four half credits and a Thesis<br><br>Course Listings: http://www.wlu.ca/page.php?grp_id=286&p=7596 | The MA program is a general doctoral stream graduate program; their core training is in the research and analysis of<br>• Communication and media<br>• Communication technology<br>• Cultures in the context of communication<br><br>This is different from the IDM program which specializes in teaching students how to analyze as well as *use* interactive media. |
| **University of Windsor**<br><br>Department of Communication, Media, and Film | BA Honours in Communication, Media and Film<br><br>http://www.uwindsor.ca/futurestudents/programprofile/communication-media-and- | This is a communication program focused on social justice. Students will be able to analyze the forms and contexts of the mass media as well as their meanings and effects on individuals and society. Required areas of study include communications theory and research methods.<br><br>Students learn basic communication skills (i.e. produce and distribute messages in print) and broadcasting | A total of 40 courses are required, the program is four years in length for full-time study.<br><br>Course Listings: http://web4.uwindsor.ca/units/registrar/calendars/undergraduate/cur.nsf/982f0e5f06b5c9a285256d6e006cff78/e116822e3c754af9852572ac006c1fc4!OpenDocument | The core/foundational courses offered by this program are similar to those in the IDM program (i.e. critical analysis of a wide variety of communication media). However, this program offers many streams (i.e. sound media, film making, digital cinema, broadcasting, etc…) and |

## APPENDIX A: IDM SPECIALIST PROGRAM – COMPARATOR TABLE

| Institution and unit | Degree and Program (incl. URL) | Program Description | Curriculum | Comments |
|---|---|---|---|---|
| | film | formats. Students can concentrate on a particular stream of interest: communication theory, cultural studies, news media analysis, film studies, film and video production, media literacy, or research methods. Students can also develop skills in digital media, film, sound, broadcasting, or photography. Practicum or internship is available for students who would like to obtain on-the-job skills. | | therefore the students cannot be considered specialized in any particular area. |
| **York University**<br><br>Dept. of Communication Studies | BA in Communication Studies (Specialized Honours)<br><br>http://arts.yorku.ca/advising/degrees/descriptions/CommStudies.html | The purpose of the Program is to provide students with a comprehensive understanding of the traditional forms of mass communication (print, radio, film, television). It also examines the emerging interactive telecommunications networks and computer systems which have introduced new media and services such as teleconferencing and electronic publishing.<br><br>The emphasis of the program is academic rather than technical. Communication Studies cannot be viewed as providing vocational skills such as journalism. Graduate will acquire skills in communications analysis and a synthesis of knowledge in the increasingly complex field of communications. | The program offers full and part-time degree programs and requires the completion of 120 credits which is completed over four years of full-time study.<br><br>Courses are offered in four thematic areas:<br>• Media, Culture and Society<br>• Politics and Policy<br>• Interpersonal and Organizational Communications<br>• Critical Technology Studies<br><br>Course Listings:<br>http://arts.yorku.ca/advising/degrees/descriptions/CommStudies.html | Compared to the IDM program, this program is more focused on the traditional forms of communication. Although the students would learn about interactive media, there isn't sufficient concentration in this area to encourage students to develop skills in designing and implementing media applications. |
| **York University**<br><br>Faculty of Fine Arts and Faculty of Science and Engineering | BA in Digital Media<br><br>http://futurestudents.yorku.ca/program/digital_media | The Digital Media program has focii on cultural theory and studies and on the technical, scientific bases of digital media including a strong foundation in:<br>• the computational basis for the creation of digital media imagery and sound (including animation and the simulation of 3D environments);<br>• the theoretical, artistic and experiential ideas that lie behind an informed understanding of the aesthetic aspects of digital media;<br>• the practice of creating digital media works that explore the ways in which culture is produced and | This is a four-year Honour BA program in which students will take a diverse set of core courses:<br>• Programming for Digital Media,<br>• Building Interactive Systems<br>• The Electronic Landscape<br>• Arts and Ideas<br>• Fundamentals of Data Structures<br>• Foundations of Digital Media<br>• Designing Interactive Objects<br>• Interactive Performance and Installation,<br>• Introduction to 3D Computer Graphics | The foundational courses offered by this program are similar to those that would be offered by the IDM program. As well, students in both programs could specialize in digital game development. However IDM students would have the additional option to specialize in knowledge media design.<br><br>As well, the IDM program |

**APPENDIX A: IDM SPECIALIST PROGRAM – COMPARATOR TABLE**

| Institution and unit | Degree and Program (incl. URL) | Program Description | Curriculum | Comments |
|---|---|---|---|---|
| | | can be produced through technology; and<br>• the broader socio-cultural effects and the theory and research concerning responses to and use of digital media.<br><br>Students have the choice to further specialize in game development in the final year of the program. | • New Media Forms: The Database<br>• Interactive Dance Studio,<br>• Popular Culture: Explorations in Theory and Practice<br>• Machine-Mediated Human Communication<br>• Virtual Reality<br>• Building E-commerce Systems<br>• Digital Media Project.<br><br>Course Listings: http://www.digitalmedia.yorku.ca/courses.php<br><br>Students in the Faculty of Fine Arts will likely choose additional electives from the Fine Arts courses, whereas students in the Faculty of Science & Engineering will likely choose their electives from Computer Science or other areas of science. | collaborates with the Faculty of Information to provide its students with additional courses in understanding information practices in social media. However, similar courses in information studies are not offered at York. |

**APPENDIX B: IDM SPECIALIST PROGRAM – CALENDAR DESCRIPTION**

Interactive Digital Media– Specialist Program ERSPE2172

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.

| | |
|---|---|
| First Year: | CCT109H5, CCT110H5 (program prerequisites) |
| Second Year | CCT204H5, CCT206H5, CCT210H5, CCT218H5, CCT219H5, CCT275H5 |
| Third and Fourth Year | CCT301H5, CCT341H5, CCT410H5<br><br>+ 2 modules comprising:<br><br>Knowledge Media Design: CCT372H5, CCT374H5, CCT376H5, CCT414H5, CCT471H5<br><br>Immersive Digital Media: CCT380H5, CCT381H5, CCT382H5, CCT480H5, CCT481H5/CCT482H5 |

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

## The CORE

| Yr | Tm | Course | Name | Course Description | Responsible Partner |
|---|---|---|---|---|---|
| **1** | F | *CCT109H5<br><br>**NEW** | **Contemporary Communication Technologies** | 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] | UTM |
| **1** | F | *CCT110H5<br><br>**NEW** | **The Rhetoric of Digital and Interactive Media Environments** | 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] | UTM |
| **2** | F | *CCT204H5<br><br>**NEW** | **History and Practices in Design Thinking** | 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]<br><br>Prerequisites: CCT109H5 and CCT110H5. | iSchool |
| **2** | F | CCT206H5 | **Law, Technology and Intellectual Property** | 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 | UTM |

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

| Yr | Tm | Course | Name | Course Description | Responsible Partner |
|---|---|---|---|---|---|
| | | | | perspective. [24L, 12T]<br><br>Prerequisites: CCT109H5 and CCT110H5. | |
| **2** | W | CCT210H5 | **Meaning and Interpretation** | 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 the processes by which we perceive (or fail to perceive) these meanings. It provides a background in and approach to interpretation to understanding signs. [24L, 12T]<br><br>Prerequisites: CCT109H5 and CCT110H5. | UTM |
| **2** | W | *CCT219H5<br><br>**NEW** | **Culture Change and Innovation** | 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]<br><br>Prerequisites: CCT109H5, CCT110H5, and CCT218H5. | iSchool |

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

| Yr | Tm | Course | Name | Course Description | Responsible Partner |
|---|---|---|---|---|---|
| **2** | F | CCT218H5<br><br>**NEW** | **Introduction to Digital Culture** | 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]<br><br>Prerequisites: CCT109H5, CCT110H5. | UTM |
| **2** | W | *CCT275H5<br><br>**NEW** | **An Introduction to Surveillance Studies** | 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 visibility in a global context to uncover the watched world. [24L, 12T] | iSchool |

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

| Yr | Tm | Course | Name | Course Description | Responsible Partner |
|---|---|---|---|---|---|
| | | | | Prerequisites: CCT109H5, and CCT110H5. | |
| **3** | F | CCT301H5 | **Design for Online Cultures** | 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]<br><br>Prerequisites: CCT218H5, CCT210H5. | iSchool |
| **3** | F | *CCT341H5 **NEW** | **Collaborative ICT Project** | 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]<br><br>Prerequisites: CCT204H5, CCT218H5. | UTM |

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

| Yr | Tm | Course | Name | Course Description | Responsible Partner |
|---|---|---|---|---|---|
| **4** | W or F | CCT410H5 | **Work-based Learning** | 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]<br><br>Prerequisites: CCT341H5, Completion of 13.0 credits; minimum CGPA 2.5; OR permission from the course instructor. | UTM |

Note: All new courses have been identified by *

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

# MODULES

## *Knowledge Media Design (KMD)*

| Year | Course | Name | Course Description | Responsible Partner |
|---|---|---|---|---|
| ***3 or 4*** | *CCT 372H5<br><br>**NEW** | **Knowledge Media Design: Contexts and Practices** | 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]<br><br>Pre-requisite: CCT210H5. | iSchool |
| ***3 or 4*** | *CCT376H5<br><br>**NEW** | **Introduction to Modelling Information** | 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]<br><br>Pre-requisite: CCT372H5. | iSchool |
| ***3 or 4*** | *CCT374H5<br><br>**NEW** | **Technologies of Knowledge Media** | 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]<br>Pre-requisite: CCT372H5. | iSchool |

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

| Year | Course | Name | Course Description | Responsible Partner |
|---|---|---|---|---|
| | | | | |
| ***3 or 4*** | *CCT471H5<br><br>**NEW** | **Knowledge Representation and Reasoning** | 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]<br><br>Pre-requisite: CCT372H5. | iSchool |
| ***3 or 4*** | CCT414H5 | **Representation in Language, Mind and Art** | 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 "language of thought"? [24L, 12T]<br><br>Pre-requisite: 13 credits and CCT471H5. | UTM |

Note: All new courses have been identified by *

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

## *Immersive Digital Media: Gaming, Simulation and Performance*

| Year | Course | Name | Course Description | Responsible Partner |
|---|---|---|---|---|
| ***3 or 4*** | *CCT380H5<br><br>**NEW** | **An Introduction to Immersive Environments** | 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]<br><br>Pre-requisites: CCT210H5, CCT218H5. | UTM |
| ***3 or 4*** | CCT381H5 (was CCT333) | **Virtual Media Audiences: Imagined and Actual** | 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]<br><br>Pre- or Co-requisite: CCT380H5 | iSchool |

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

| | | | | |
|---|---|---|---|---|
| ***3 or 4*** | *CCT382H5<br><br>**NEW** | **Edutainment: Immersive Learning** | 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]<br><br>Pre- or Co-requisite: CCT380H5 | UTM |
| ***3 or 4*** | *CCT480H5<br><br>**NEW** | **Human Computer Interaction and Communication** | 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]<br><br>Pre-requisite: CCT382H5 | iSchool |
| ***3 or 4*** | *CCT481H5<br><br>**NEW** | **Augmented Places and Social Media Spaces** | 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 | UTM |

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

| | | | | |
|---|---|---|---|---|
| | | | visualizing context-based information and the shaping of social media spaces. [24L, 12T]<br><br>Pre-requisite: CCT382H5 | |
| ***3 or 4*** | *CCT482H5<br><br>**NEW** | **Play, Performance and Community in Digital Games** | 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]<br><br>Pre-requisite: CCT382H5 | iSchool |

Note: All new courses have been identified by *

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

## *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

**APPENDIX C: IDM SPECIALIST PROGRAM – COURSES/DESCRIPTIONS**

## 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)

UNIVERSITY OF TORONTO
FACULTY OF INFORMATION

Office of the Dean

5 November 2010

Dear Colleague,

I am delighted to forward you two studies that the Faculty of Information prepared as part of the preparation of the proposal to establish a new undergraduate program with the University of Toronto at Mississauga.

(1) *Undergraduate Interactive Digital Media Program Demand Survey: Summary of Results*

(2) *Analysis of Potential Employability of Graduates of an Interactive Digital Media Program*

In short, these reports show that the demand from potential students for a program in Interactive Digital Media is high and the employability prospects for its graduates, both in the near term and long term, are excellent.

I look forward to the establishment of the program.

Sincerely

Seamus Ross
Dean and Professor, Faculty of Information

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# Proposal for Specialist Program in Interactive Digital Media
# Undergraduate Program Demand Survey: Summary of Results

As a part of the Faculty of Information at the University of Toronto and the University of Toronto Mississauga investigations of the possibilities of launching an interdivision undergraduate degree in Interactive Digital Media the Faculty of Information undertook to design and conduct a Program Demand Survey.

The Faculty of Information sent out a survey to 1000 randomly selected second-year students in all Arts and Science disciplines across the three University of Toronto campuses. The list was generated by the Office of the University Registrar with the approval of Professor Jill Matus, Vice-Provost (Students). All answers were anonymous. An incentive (namely, the chance to win a Netbook computer) was provided to encourage responses.

202 students responded (for a 20% response rate, which should be considered very reliable) to a short survey on possible interest in the specialist program as well as various possible course areas in the program. 63.6% of the respondents were female and 36.4% male.(See Figure 1.) (In winter term 2010, female students comprised 58.4% of all arts and science students.) Just over half (50.8%) graduated from high school in 2009, with 31.8% graduating in 2008. (See Figure 2.)

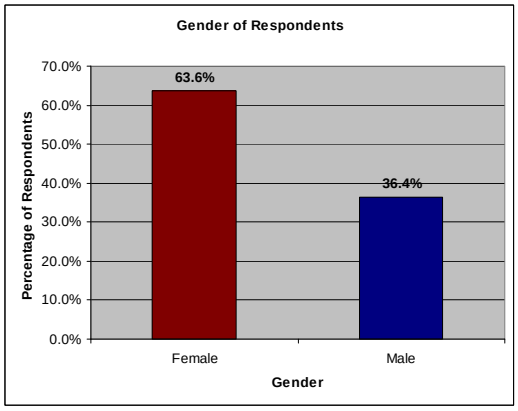


**Figure 1: Gender of Respondents**

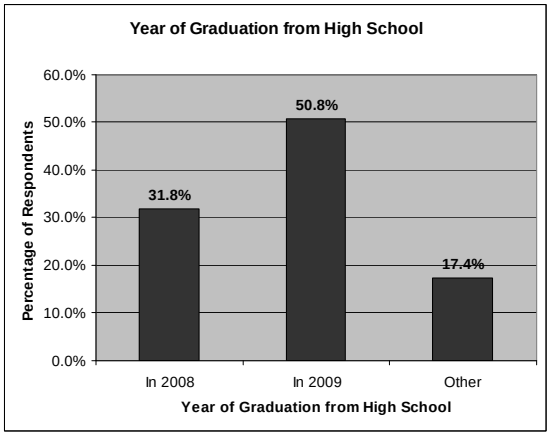


**Figure 2: Year of Graduation from High School**

The results reflected a very high level of interest, given that almost all the students already had declared a major or specialist.

- **Three-fifths (59.6%)** of respondents declared that they would have been interested in pursuing a specialist program, with 8.9% saying they would have been very interested. Only 10.9% said they would have not be interested in pursuing this type of specialist program.

  Given that this sample is of majors in all arts and science disciplines, the level of interest shown is very high. (See Figure 3.)

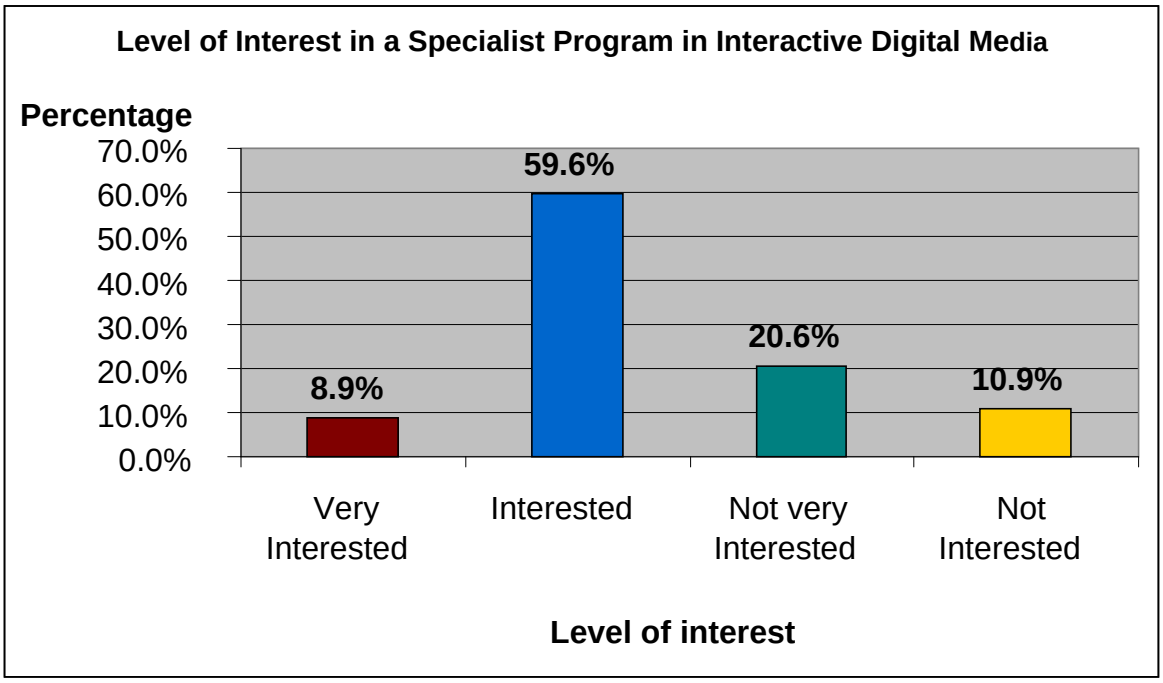


**Figure 3: Level of Interest in a Specialist Program in Interactive Digital Media**

- While interest in the program as a whole was high, **levels of interest in individual course areas were generally even higher**. (See Figure 4.) This is likely a result of students majoring in other disciplines wanting to take options that would be of academic interest:

  - Courses with topics on the cultural transformations brought on by new digital media technologies had a very high level of interest, with 24.5% of respondents indicating that they would be 'very interested', with an additional 44.4% indicating interest at a lower level.

  - Over one-fifth (21.4%) of respondents said they would be very interested in taking courses in social theories of gaming and performance, while 35.5% said they would be somewhat interested.

  - Over a quarter (26.5%) would be very interested in courses in digital and web culture; an additional 36.5% would be interested to a lesser degree.

- 20.9% would be very interested in courses in social media and activism, with 44.4% being somewhat interested.

- Courses in knowledge media design and personal privacy issues garnered relatively less, but still significant, interest. 15.3% said they would be very interested in courses in IT and protection of privacy (38.8% were somewhat interested), and 19.9% were very interested in knowledge media design (33.7% were somewhat interested.)

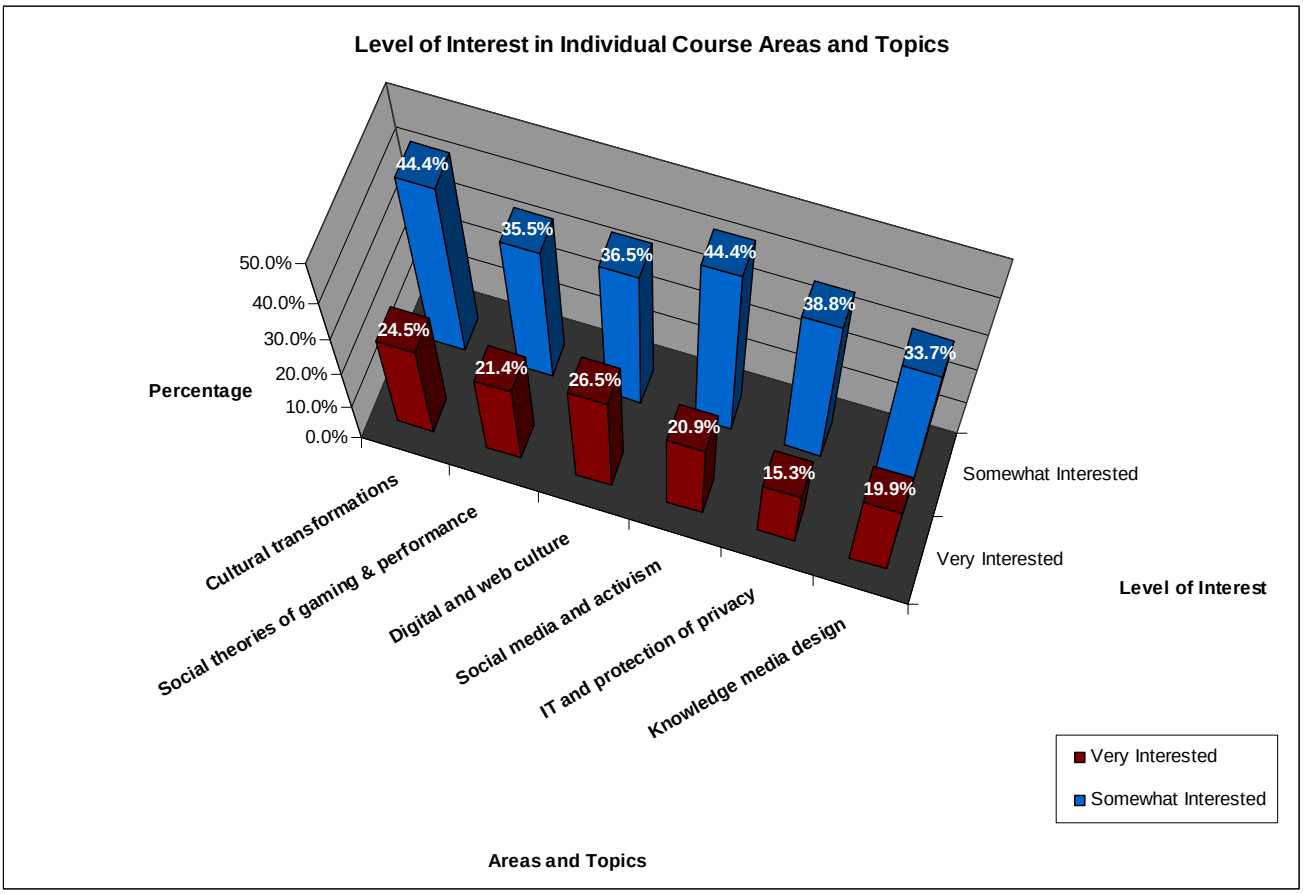


**Figure 4: Level of Interest in Individual Course Areas and Topics**

Given the high response rate and the broadly representative sample, it would seem that course offerings would be attractive to a wide variety of students in numerous programs. More surprising, however, is the number of respondents who would have found the entire program worthy of pursuing. These results would indicate that students would very likely pursue courses within the program (at the very least), and possibly the program itself, in sufficient numbers to justify offering it.

In **Conclusion the demand for a program in Interactive Digital Media is high, in fact even higher than anticipated.**

***Analysis of Potential Employability of Graduates***
***Interactive Digital Media Program***
***October 2010***

## *I Introduction / Summary*

As a part of The Faculty of Information at the University of Toronto and the University of Toronto Mississauga investigations of the possibilities of launching an interdivision undergraduate degree it was agreed that a clearer understanding of the employment market place for graduates of such a degree would be an important guide.

The Faculty of Information undertook to conduct this study. Colleagues in FI began by considering the various approaches to accumulating evidence as to the employability of graduates of a program in digital media. It was agreed that there was a wide range of public and private sector research that had already been conducted into trends in the labour force specifically relating to jobs and careers in the information and digital media sector, and those jobs most likely to be desired by graduates of the proposed Interactive Digital Media program. So, instead of collecting new data we agreed to take advantage of this already well-funded research.

At the outset it is essential to acknowledge that complications in assessing demand arise from the difficulty in pinning down the types of careers for which graduates of the proposed program might be suited. The digital media/information technology environment is changing so rapidly that the Cultural Human Resources Council of Canada advises those seeking to enter the field to define their own career paths because of the open and fast-developing nature of the field.[1] This in and of itself is a strong indicator of the diversity and extent of the employment opportunities for digital media graduates. Categories used by the Statistics Canada Labour Force Survey in defining digital media careers probably lack the descriptive depth to capture the convergence of numerous skills and techniques because they focus on Information Technology careers of the sorts that would require primarily technical education or training, such as from a Computer Science or Engineering department. The static categories currently in use for the Labour Force Survey are altered only rarely because they are designed to allow researchers to track change over a long period of time. They assume, therefore, a scientific or technical grounding that does not typically take into account the artistic/design background that digital media careers demand. The Canadian Coalition for Tomorrow's ICT Skills (CCTICT) notes that

> Supply, demand and employment data on ICT-related occupations is inadequate. … the categories ("national occupation code") that government uses to quantify ICT sector employment are outdated and incomplete … Consider what is missing. Using health and life science as an example, the market needs annual supply and

[1] Cultural Human Resources Council of Canada, "Careers in Digital Media: Create Your Own Work", available at http://www.culturalhrc.ca/careersinculture/Interzone/e/05-06.asp.

> demand data on health informatics analysts and consultants; computer-based medical equipment technicians; bio-informatics researchers; health applica5tion designers/developers; and so on. Digital media gets a code for web designers and developers, but what about game designers and developers, mobile applications designers and developers, entertainment and arts creators, etc.?[2]

Additional complications arise from issues of credibility. Because of the relative newness of digital media professions as they are currently understood and because of the near ubiquity of social media in everyday life, many commentators are more advocates than analysts. And advocacy for the advent of digital media frequently seems to project an economy verging on a utopian ideal.

Nonetheless, IT career categories are relevant to the proposed program and its graduates. The IT and Communications sector is seeing some significant internal changes, accelerated by the recent economic downturn. Even so, the sector as a whole will continue to increase in importance to the Canadian economy, and has demonstrated a relative immunity to economic downturn. More than most other employment sectors, IT and Communications areas lost fewer jobs and project higher gains than other parts of the labour market. This relative strength is projected to continue for the foreseeable future. In short, demand for jobs in the IT and Communications sector, and especially in positions for information managers, database analysts, interactive media developers, and web developers, according to all sources, is projected to rise. These are just the kinds of careers that a program in digital media would educate its students to be able to pursue. The recent global economic downturn, however, has adjusted projected demand downward in all areas, a movement which should be taken into account. This downward trend is especially evident in software and hardware engineering which are in decline and projected to continue to be for the foreseeable future; of course this is not an area in which we would expect graduates in digital media to seek employment. Though it has not done so for the key posts which are covered by digital media. The downturn has been less limiting to ICT investment than other forms of asset investment as a percentage of capital investment in organizations: the real limiting factor has been the inability of existing IT staff groups to master the added IDM skill sets quickly, and to create the necessary additions to the portfolio of applications and services required to deal with burgeoning user and customer demand. Retiring IT staff are often replaced now with new hires that bring these additional skills to the table, although the new hires are placed into traditional roles and thus this skill expansion is not yet showing up with new position titles, etc. that traditional data would track.

As organizations move toward direct consumer engagement (e.g., banks with iPhone applications), they have had to add the IDM Program skill sets to their organizations. There is no general agreement in industry yet as to how to classify these roles (a key to getting them into the data and analyses) but various leading figures in industry – e.g., Don Tapscott and Anthony Williams in *Wikinomics* and *Macrowikinomics*, Bruce

[2] Canadian Coalition for Tomorrow's ICT Skills, *Canada: The Go-To Country for Brainpower Resources in the Global Digital Economy*, July 12, 2010, p. 16

Rogow, Andrew McAfee – report this occurring, and spreading rapidly across industry sectors. Further to this, what also is reported is that Chief Information Officers (CIOs) are increasingly gaining responsibility for formerly-separate Information Management, Records Management and "Application Product" development groups attached to Marketing with the mandate to integrate these. At the same time an explosion in device diversity (smartphones, pads, tablets, netbooks, etc.) in use in business and government is leading these CIOs to invest in organizational resources capable of delivering information in visual ways to users of these types of devices, as opposed to the classical presentation of large-scale enterprise software packages, and to build web-based interfaces to these older systems in order to make them useful in a heterogenous device environment, all of which require IDM skill sets to be accomplished.

The proposed program, however, is not a traditional IT-oriented program. Enrolments in Computer Science programs have plummeted since a peak approximately 10 years ago.[3] While demand for IT-competent employees will remain high, most commentators agree that the advent of ubiquitous computing, the rise of various forms of 'social media', the convergence of content production and content consumption in various forms, and the growing demand for 'digital media' expertise is changing the marketplace in ways that cannot be predicted reliably. Digital media has become a governmental priority, with significant investment by the Government of Ontario.[4] It is also the subject of a major planning process in the federal government. No particular 'career path' for digital media employees has emerged, though several universities worldwide are beginning to develop programs in digital media; Griffiths University in Brisbane, Australia[5], the University of Central Lancashire[6], Simon Fraser University, and the Tisch School at New York University are examples of this emerging trend.

Demand for digital media producers is projected to grow dramatically, especially in areas that have a concentration of both graduates and companies willing to hire those graduates. The Greater Toronto Area (and beyond) is developing into one of those areas, with a significant concentration of digital media opportunities ranging from the gaming industry to production companies.

[3] Statistics Canada, *Labour Force Survey*
[4] Ontario Ministry of Finance, *Budget 2010*
[5] http://www17.griffith.edu.au/cis/p_cat/admission.asp?ProgCode=1110&Type=overview#3
[6] http://www.uclan.ac.uk/information/courses/interactive_digital_media.php

## *II Definition of the 'Field' and Employment Implications*

As computing has become ubiquitous and generally user-friendly, demand for traditional Computer Science programs has dropped dramatically in North America and elsewhere. The Statistics Canada Labour Force Survey includes a category of occupations related to IT and Communications called "Computer and Information Systems Professionals" and describes professions like Information Systems Analysts/Consultants, Database Analysts and Database Administrators, Software Engineers, Computer Programmers, Interactive Media Developers, and Web Designers/Developers.[7] Broadly speaking, qualifications for careers in these different areas could range from college-level certification through graduate school completion, and in a variety of different disciplines.

The advent of the 'digital media' field(s) has complicated the definitions. Digital media has been defined one way as follows:

> Digital Media, also known as New Media, is the 21st century locus where art, technology and science come together. It is a field of study and a professional practice—a cultural phenomenon radically altering the way we view our world and dream about our tomorrows. …
>
> Digital Media is about art, design, communication and storytelling; it is about working with people. Beyond the computer and software courses, beyond the art and design courses, a quality program will introduce students to a basic understanding of human interaction and communication as understood by philosophers, psychologists, sociologists, and anthropologists. A quality curriculum will not only be broad, it will be deep, and will provide guidance for students to develop interests and expertise in how 3D modeling, animation and interactive media operate in social and cultural contexts.[8]

Each organization interested in digital media defines it differently. The Government of Ontario, for instance, heavily associates digital media with gaming, and focuses many of its economic initiatives vis-à-vis digital media on the gaming subsector. Indeed, the gaming sector is actually larger than the PC sector now, both in terms of device sales and in terms of the associated software. Likewise, the app stores for iPhone/iPad and Android demonstrate explosive growth in opportunities. Building successful products in these environments depends on a solid IDM grounding in addition to other traditional programming/analysis skills.

Relating those many differing but overlapping definitions to coherent career paths is difficult, especially given that digital media employment stands at the intersections of art

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[7] Statistics Canada, *Labour Force Survey*. *National Occupation Classification for Statistics (NOC-S)*

[8] Glen Muschio, "What is Digital Media/New Media?", *The 2010 High School Graduate*. http://www.thehighschoolgraduate.com/editorial/MP/MPdigitalmedia.htm

and science, and of content production and content use. For example, the Cultural Human Resources Council of Canada summarizes possible career paths as follows:

> Digital Media includes e-learning, DVDs, virtual reality, chat rooms, digital TV, email, e-commerce, digital encyclopedias, podcasts, blogging, DVD and Online games, e-zines, Webcasts, computer conferencing, interactive kiosks, distance education, digital special effects, 3-D animation, digital video, digital music production, photo enhancement, electronic publishing and…more.[9]

Projections for employment in those categories of work are therefore more complex than in a 'traditional' career path in the ICT sector.

*III Government Planning and Projections*

The Government of Ontario's Ministry of Research and Innovation has defined digital media and information and communications technology as one of four key areas of economic development designed to renew the province's economy.[10] The Ministry of Economic Development and Trade has identified Information and Communications Technology (ICT) as one of four priority sectors for the Strategic Jobs and Investment Fund.[11] Indeed, the provincial government has articulated through its Innovation Agenda a specific goal of being at the forefront of the digital media revolution, and has provided resources and incentives in order to meet the goal. The Innovation Agenda includes a specific reference to supporting the academic sector:

> New industries emerge at the intersections of industries and sectors. As information and communications technology has intersected with other sectors new markets have exploded, for example: advanced communications products, digital animation, interactive gaming, advances in the delivery of financial services and healthcare. By supporting multidisciplinary research in areas of intersection Ontario is helping to further develop new ideas for new industries.[12]

This is designed to build upon the significant presence of IT-intensive firms and the presence of an educated workforce (particularly in the Greater Toronto Area) in Ontario, which contains just under half of all IT-related jobs in Canada. The commitment of the government to supporting the field and attracting investment to the province provides a likelihood of demand for graduates.

The Ontario employment picture has been changing for decades, with a decreasing emphasis on manufacturing/goods production and a greater emphasis on services. The

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[9] Cultural Human Resources Council, "Careers in Culture: Careers in Digital Media", available at http://www.culturalhrc.ca/careersinculture/Interzone/e/03-01.asp
[10] Ontario Ministry of Finance, *Budget 2009*
[11] Ontario Ministry of Economic Development and Trade, "Strategic Jobs and Investment Fund", http://www.ontariocanada.com/ontcan/1medt/econdev/en/ed_sjif_main_en.jsp
[12] Ontario Ministry of Research and Innovation, *Ontario's Innovation Agenda,* p.15

manufacturing sector was responsible for fully one-third of all job losses in the 2008-09 recession, while the service sector was comparatively minimally affected. While this divide is most striking in Ontario, it is reflected to a lesser degree across Canada.[13]

The Government of Ontario's long-term forecast (to 2025) notes that the share of ICT (including digital media) employed will rise throughout the intervening years and acquire additional importance as time progresses. The forecast notes that because ICT is an 'enabling technology', having a prosperous ICT sector is crucial and "underpin[s] the competitiveness and efficient operation of all sectors of the economy." Furthermore, the same report notes the importance of, and forecasts the growth of, the creative and entertainment sector, which includes "newspaper, periodical, book and database publishers; motion picture and sound recording; specialized design services; advertising-related services; radio and television broadcasting; pay TV and specialty TV and program distribution; performing arts; spectator sports and related industries; and heritage institutions." Such a shift would likely increase demand for digital media expertise, given digital media's overlap with the sector.[14] The Digital Media area is actually a key economic success for North America relative to the growth of outsourced enterprise software maintenance and support in other parts of the world. It is therefore expected to grow, relative to other forms of IT, within the Canadian and American markets. Governments have chosen to follow the "cluster" model of economic development (hence choosing different subsectors within Digital Media to emphasize) but the sectors tend to grow based on the success of particular ventures, and thus there are more areas of opportunity than appear based on government promotion.

Both the provincial and federal governments have recently announced commitments to developing the digital media sector as a whole and in a variety of ways. Inducements to investment are likely to increase potential employment in the digital media arena. For example, the Government of Ontario has specifically introduced the Ontario Interactive Digital Media Tax Credit for corporations that develop and market their own products and for companies that develop projects under a fee-for-service arrangement with other companies. In 2009 this credit was increased both in amount and extended to digital media game developers. In addition, the Ontario Computer Animation and Special Effects Tax Credit was expanded to include more labour costs than previously. Partly as a result of the government's initiatives, Ubisoft, a large gaming company, recently opened a production studio in the GTA, bringing with it 800 jobs. In addition to the Digital Media Tax Credit and other credits made available in the various provinces, many companies in the IDM space qualify for the Federal Scientific Research and Experimental Development (SR&ED) credit program through the Canada Revenue Agency. This can be retroactively applied for and thus accelerates a product development success.

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[13] Ontario Ministry of Training, Colleges and Universities, Research and Training Branch, *The Ontario Labour Market in 2009*, July 2010, pp. 10-13

[14] Ontario Ministry of Finance, *Toward 2025: Assessing Ontario's Long-Term Outlook*, p. 43

Existing programs under the umbrellas of the regional economic expansion agencies or the associated agencies of Industry Canada (e.g. the NRC's IRAP) were designed to promote the creation of software products for the enterprise and PC ages and are less well fitted to the more rapid cycles of the interactive digital media markets. On the other hand, the capital requirements for startups in this space are far less, and the availability of app stores and other digital distribution channels mean the typical new venture can generally be funded on a small scale basis and then from sales, reducing the need for VC, business development bank, or product development funding program monies. As a result, IDM-skilled graduates are well positioned for an entrepreneurial life in addition to the traditional job market.

Statistics Canada and Industry Canada project that ICT professions will be expected to balance labour demand and supply over the 2010-2018 period. The recent labour shortages in the professions will be balanced out over the next period with growth in numbers of job seekers, while job openings will mainly result from employment growth. This projection is justified by the conclusion that computer technology is now an integral part of the economy, which is increasingly knowledge-based. Recent trends – that growth in IT services professions has been far above Canadian job growth as a whole – are expected to continue.[15]

### *IV Private Sector Projections*

Private sector and non-governmental organizations also generally seem to forecast growth in the ICT and digital media sectors, with some caveats. DigiBC, the best organized and most prominent of the provincial associations of digital media companies, representing companies of all sizes with almost 5000 employees among them, found in a detailed survey that 69% of their membership intends to hire additional staff over the medium term. (An additional 28% plan to stay the same size.) The same DigiBC survey found that virtually all their members' employees have completed postsecondary education and approximately two-thirds have completed at least an undergraduate university degree, indicating demand for highly-educated employees in the field.[16]

The Information and Communications Technology Council of Canada (ICTC) has been tracking data on the ICT sector for many years and routinely conducts sector forecasts. While its data pertain more strictly to the traditional Labour Force Survey categories of IT careers (e.g., Information Systems Analyst, Software Engineer, Computer Programmer, etc.), and not on digital media career categories (digital media careers classified in this sector would all fall under "Computer Programmers and Interactive Media Developers"), it is still possible to glean useful information about historical trends

[15] Statistics Canada, *Labour Force Survey*
[16] *2010 BC Digital Media and Wireless Industry Survey*, prepared by PriceWaterhouse Coopers for DigiBC Inc., p. 8

in the economy and how they relate to ITC, new trends in ICT; resilience of the ICT sector in responding to recessions, and career trending within different fields of ICT.

*ICT Hiring Trends, up to 2010*

ICT careers in Canada have been on a long-term rise in importance within the Canadian economy, with more and more positions for those with backgrounds in databases, information systems, computing science, etc. Furthermore, recent drops in enrolment in Computing Science and Computer Engineering programs domestically are creating a major skills shortage. The proposed program, however, would not address these particular needs other than in a tangential way. The recent recession had a minimal impact upon ICT employment, with unemployment rates running at approximately one-third the national average and with a smaller portion of job losses throughout the downturn.[17]

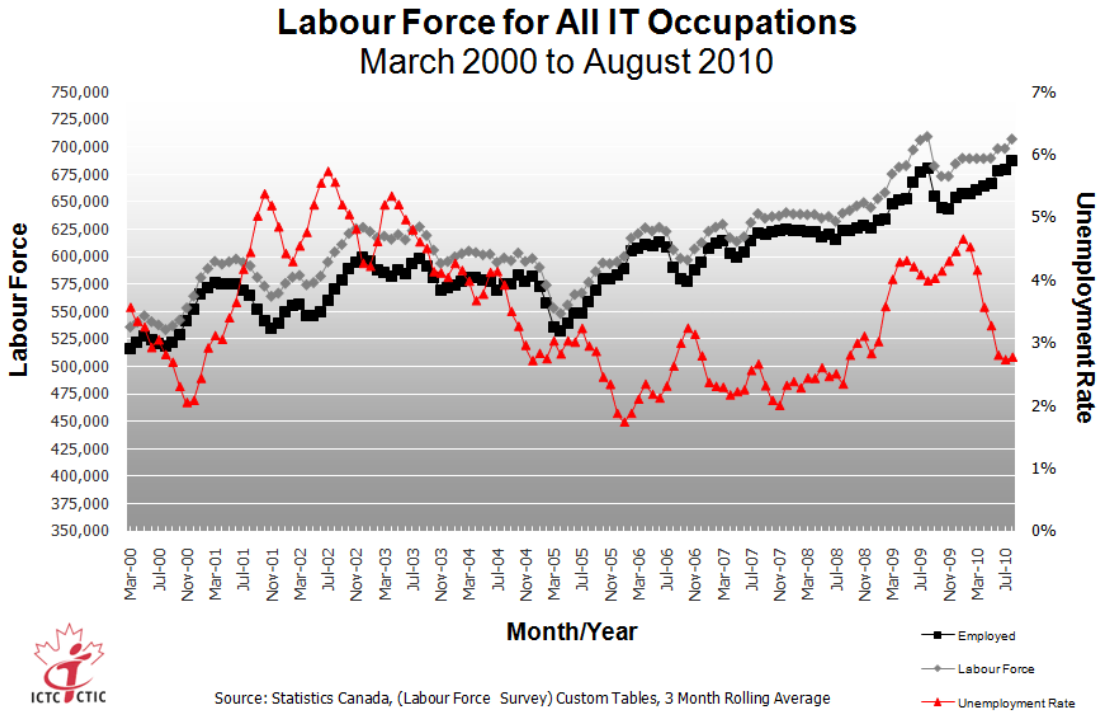


**Figure 1: Labour Force for IT Occupations 2000-2010 (copyright: ICTC 2010)**

*ITC Internal Adjustments*

Recent rends in ubiquitous computing have altered dramatically the nature of employment prospects for those with backgrounds in ICT fields. The recession saw

[17] Information and Communications Technology Council, *The Canadian Labour Market Initiative: Labour Force Survey August 2010.*

dramatic job losses among software engineers and, especially, computer engineers in non-software fields, as well as user support technicians. These fields are projected to show only slow growth over the next eight years, compared to much more rapid growth for other areas of ICT expertise such as information systems analysts.

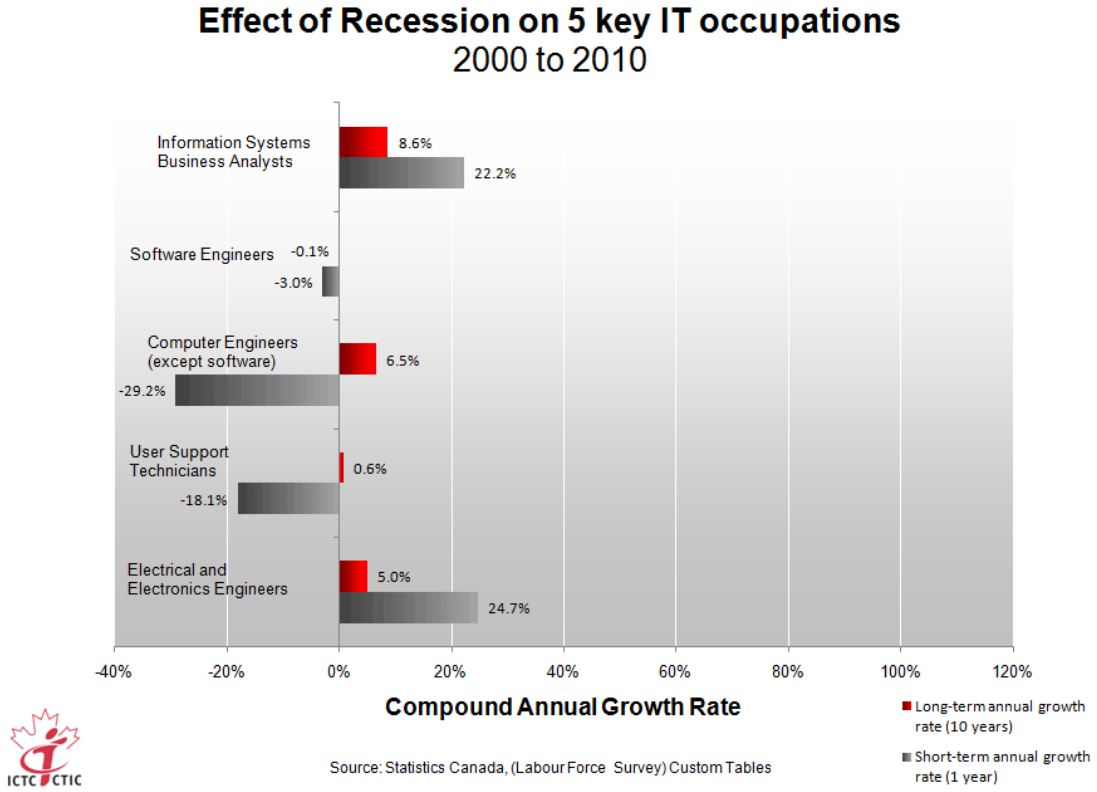


**Figure 2: Effect of Recession on IT Occupations (copyright: ICTC 2010)**

*ICT Trends, 2010-2015*

In Ontario alone, a 'low-growth' scenario for ICT employment up to 2015 would see the need for 5,649 Computer Programmer/Interactive Media Developer positions, rising to 6,095 in a 'standard growth' economy and 8,034 in a 'high growth' economy.[18]

Private sector projections will continue to be skewed toward lower growth for the next several years, as many of Canada's major employers are making extensive (if not total) use of systems integration firms and outsourcing for all major enterprise programs currently underway (e.g. the Insurance Corporation of BC committed to a $70 million + program of application renovation in 2009, but awarded the business to a systems integration firm rather than hire additional internal resources to facilitate this effort; BC Hydro comprehensively outsourced their IT function to Accenture, to facilitate new

[18] Information and Communications Technology Council of Canada, *Outlook for Human Resources in the Information and Communications Technology Labour Market*, p. 53

applications such as smart metering and growth in power sales; Accenture, in turn, has held employment levels steady while doing this work as it can leverage work done elsewhere in the world on Hydro's behalf). Corporate/government IT jobs will therefore be a lagging indicator of market take up of IDM, although in some cases (e.g. ICBC) the direction is to hire IDM+IT to replace retiring "traditional IT" during the systems integration period.

The ICTC, while primarily concerned with "traditional" ICT categories and employees, acknowledges massive changes in the way society functions based on the advent of digital convergence, and has recently released a White Paper on Digital Literacy in Canada. As with other individuals and think-tanks, it takes as a given that new digital media patterns are shaping future prosperity:

> It should be stressed that Digital Literacy means more than skill in the Information and Communications Technology sector. Participation in a digital economy requires digital literacy across every sector…It involves a sufficient working knowledge of current digital usage that citizens can function in their daily lives using digital media. Digitally literate people can communicate and work more efficiently, especially with those who possess the same knowledge and skills. [19]

The ICTC's call to action is not just for workers, however; the whole of society must be engaged for future prosperity.

> Putting information into digital form touches music, film, art, audio, and other formats. The various media using digitally-based expression can be found in almost every profession and activity, from athletes who use digital motion capture to improve their performance to industrial designers, entertainers, resources and service workers, and social networkers. In some sectors the impact of digital media has in fact created the sector itself, such as the computer gaming industry, which brings in more revenue than traditional movie entertainment. In other sectors, digital capability means the difference between being a player and not being in the game at all, such as financial services. Other sectors are not yet as committed to digital as this, but digital is making inroads everywhere. In fact, there is no instance where the impact of digital is shrinking—it is on the rise across the board! [20]

While many commentators on the future of digital media lack credibility altogether, this particular assessment arises from a serious analysis of economic trends and sector development. It suggests likely success for graduates of a program focusing on digital media.

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[19] *Digital Literacy: Canada's Productivity Opportunity – A White Paper from the Information and Communications Technology Council*, p.4
[20] *Ibid.*, p. 5

## *V Conclusions*

Employment demand for graduates of the proposed Interactive Digital Media program is likely to be high based on numerous credible assumptions and trends and based on governmental plans and incentive structures. The commitment of the Government of Ontario to develop a strong digital media cluster in the GTA/Kitchener-Waterloo area has already helped expand existing businesses and attract new ones, and there is clear ongoing interest by the government in using digital media as one of the pillars of an economic strategy for the province as the traditional manufacturing bases of Ontario's prosperity diminish. The University of Toronto is positioned to take advantage of both governmental support and industry development by entering the digital media field aggressively at the undergraduate level. If, as the CCITCS believes, that "every sector faces digital economy skills shortages,"[21] then the development of some kind of digital media program is all the more important.

Every reliable trend would appear to point to the likelihood of gainful employment. What employer surveys exist for the emerging digital media sector indicate continued growth in hiring for digital media companies.

The interdisciplinarity of a digital media program would likely enhance the ability of graduates to be employed. Professor Glen Muschio, Professor of Media Arts and Director of Undergraduate and Graduate Programs, Digital Media at Drexel University, has laid out what a good program should accomplish:

> Becoming a successful Digital Media designer is much more than becoming a software jockey. Digital Media is about art, design, communication and storytelling; it is about working with people. Beyond the computer and software courses, beyond the art and design courses, a quality program will introduce students to a basic understanding of human interaction and communication as understood by philosophers, psychologists, sociologists, and anthropologists.[22]

The information skills coupled to the technical competencies inherent in the IDM program (and, for those going on, the MI degree) are a key driver of the competencies in analysis, design, architecture and rapid delivery now being sought by the ICT marketplace.

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[21] CCITCS, p. 17

[22] Glen Muschio, "What is Digital Media/New Media?", *The 2010 High School Graduate.* http://www.thehighschoolgraduate.com/editorial/MP/MPdigitalmedia.htm

In conclusion, demand for students educated in digital media is growing and will continue to grow into the future as the place of digital media in the development of the global society and economy gathers pace. Canada must ensure that its produces an increasing number of graduates in this domain if it is to retain (and expand) its potential to contribute to these developments. All the evidence indicates that the employability prospects of graduates of the proposed Interactive Digital Media program are likely to be excellent.

*Prepared by:*
*Andrew Drummond, Manager, Strategic Planning, Faculty of Information*
*and*
*Bruce Stewart, Director, iSchool Institute, Faculty of Information*
*October 2010*

UNIVERSITY OF TORONTO
LIBRARIES

# University of Toronto Libraries Report for Interactive Digital Media Program, Institute of Communication, Culture and Information Technology, University of Toronto Mississauga, January 2011

**Context:** The University of Toronto Library system as a whole is the largest academic library in Canada and is currently ranked fourth among academic research libraries in North America, behind Harvard, Yale, and Columbia[1]. The research and special collections, together with the undergraduate libraries, comprise almost 11.5 million print volumes, nearly 5.5 million microform volumes, more than 17,000 journal subscriptions in addition to a rich collection manuscripts, films, and cartographic materials. The system also provides access to approximately 900,000 electronic resources in various forms including e-books, e-journals and journal collections, indices, and an increasing number of PDA or handheld materials[2]. There are numerous collection strengths in a wide range of disciplines reflecting the breadth of research and instructional programs at the University of Toronto. The strength of the collections, facilities and staff expertise has now begun to attract unique donations of books and manuscripts from around the world, which in turn draw scholars for research and graduate work.

**ARL Ranking of Major North American Research Libraries[3]**

| ARL RANK | 1998-1999 UNIVERSITY | 2005-06 UNIVERSITY | 2006-07 UNIVERSITY | 2007-08 UNIVERSITY | 2008-09 UNIVERSITY |
|---|---|---|---|---|---|
| 1 | Harvard | Harvard | Harvard | Harvard | Harvard |
| 2 | Yale | Yale | Yale | Yale | Yale |
| 3 | Stanford | Columbia | Columbia | **Toronto (3rd)** | Columbia |
| 4 | **Toronto (4th)** | **Toronto (4th)** | **Toronto (4th)** | Columbia | **Toronto (4th)** |
| 5 | California, Berkeley | California, Berkeley | California, Berkeley | California, Berkeley | Michigan |

**Top 5 Canadian Universities in the ARL Ranking of Major North American Research Libraries**

| 1998-1999 RANK/ UNIVERSITY | 2005-06 RANK/ UNIVERSITY | 2006-07 RANK/ UNIVERSITY | 2007-08 RANK/ UNIVERSITY | 2008-09 RANK/ UNIVERSITY |
|---|---|---|---|---|
| **4/ Toronto** | **4/Toronto** | **4/Toronto** | **3/Toronto** | **4/Toronto** |
| 30/Alberta | 27/Alberta | 19/Alberta | 12/Alberta | 16/Alberta |
| 31/British Columbia | 29/British Columbia | 25/British Columbia | 25/British Columbia | 26/British Columbia |
| 57/McGill | 34/Montreal | 33/Montreal | 26/McGill | 34/Montreal |
| 76/York | 39/McGill | 36/McGill | 33/Montreal | 40/McGill |

**Space and Access services:** The Library system provides a variety of individual, group undergraduate and graduate study spaces in the 10 central and 23 divisional libraries on the St. George, Mississauga, Scarborough and Downsview campuses. Library study space and library computer facilities are available 8:00 a.m.-12:00 midnight as well as extended hours during exams (twenty four hours, five days per week). Web-based services and electronic materials are accessible at all times from campus or remote locations, through the U of T based

[1] Chronicle of Higher Education, "Library Investment Index at University Research Libraries, 2007-2008." In the Almanac of Higher Education 2009.
[2] Figures as of September 2010 taken from UTL's "What's new in E-Resources page http://main.library.utoronto.ca/eir/EIRwhatsnew.cfm and UTL's annual statistics http://discover.library.utoronto.ca/general-information/about-the-library/annual-statistics
[3] Association of Research Libraries Statistics, 2010



University of Toronto Libraries
Toronto, ON M5S 1A5 Canada
www.library.utoronto.ca

Scholars Portal and other leading edge digital services. Within the UTM Library, the AstraZeneca Canada Centre for Information and Technological Literacy features 11 high-performance workstations that provide access and support for powerful applications such as Adobe Master Collection CS5.

**Instruction & Research Support:** The Library plays an important role in the linking of teaching and research in the University. To this end, information literacy instruction is offered to assist in meeting degree level expectations in the ability to gather, evaluate and interpret information. These services are aligned with the Association of College and Research Libraries (ACRL) Information Literacy Competency Standards for Higher Education.[4]

**Program specific instruction:** Instruction can occur at a variety of levels for Interactive Digital Media students and is provided by the faculty liaison librarian for the Institute of Communication, Culture and Information Technology. The liaison librarian facilitates instruction integrated into the class schedule by working with TAs and the course instructor. This has been done in other classes in ICCIT at the Mississauga campus of the University of Toronto, including CCT100 and PWC320. The liaison librarian also customizes feeds for the library resources which appear prominently in Blackboard course pages and are also made available on the UTM library's website. Additionally, the UTM Library can provide instruction and support from the Emerging Technologies Librarian and the Visual Resources Librarian.

**Collections:**

Collections are purchased in all formats to support the needs of particular disciplines and include new media formats where appropriate. The University of Toronto Library supports open access to scholarly communication through its institutional research repository T-Space, its open journal and open conference services, and subscriptions to open access publications.

**Journals**: The Library subscribes to all of the 25 top cited journals listed in ISI's 2009 Journal Citation Report Social Science Edition for the subject categories Communication and Information Science & Library Science, and to all of the 25 top cited journals listed in ISI's Journal Citation Report Science Edition, Computer Science, Information Systems. These journals contain articles on the verbal and non-verbal exchange of ideas and information; communication theory, media studies, information modeling and information ethics well as the sociocultural impact of digital media technologies. As well it subscribes to all of ISI's top 20 cited journal which contain articles for the searched topics: Information Communication Technology/ies (ICT) and the searched topic Information Communication Technologies and Surveillance. All of these titles but one are available electronically to staff and students of the University.

**Monographs:** The University of Toronto Mississauga Library maintains 31 book approval plans in addition to the 53 book approval plans maintained by the University of Toronto Library. These approval plans ensure that the Library receives academic monographs from publishers worldwide in an efficient manner. In this way, the Library continues to acquire more than 120,000 print monograph volumes per year and an ever growing number of electronic books. In addition to these plans, the Communications, Culture and Information Technology Institute selector selects unique and interesting scholarly material overlooked by standard approval plans. These selections include individual e-books and e-book packages, contributions to the collections in the Thomas Fisher Rare Book Library, and requests from faculty. Selectors also work to meet the variety of preferences and styles of our current students and faculty and the UTM Library is planning to implement an e-book preferred book approval plan for monographs in Communications, Culture and information Technology. In addition to acquiring e-books through approval plans, as part of the digitization program of the University of Toronto Libraries Internet Archive, all materials published before 1923 have been digitized for preservation and wider-access purposes.

**Key Indexes and E Resources:**

UTL has active subscriptions to all key databases that would support research and study of Interactive Digital Media including Communication & Mass Media Index, Computer and Information Systems

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[4] Association of College & Research Libraries. *Information Literacy Standards*. ACRL, 2006.

Abstracts, INSPEC, LISA: Library and Information Science, Sociological Abstracts, Web of Science, Scopus, ACM Digital Library Search Social Science Abstracts, Communications Studies (Sage), Expanded Academic ASAP, Art Full Text; and Design and Applied Arts Index. The library also has access to online encyclopedias such as the Encyclopedia of Human Computer Interaction, Encyclopedia of Knowledge Management, the Encyclopedia of Communication and Information, the Encyclopedia of Information Science and Technology, the Encyclopedia of Rhetoric, and the Encyclopedia of Virtual Communities and Technologies.

Prepared by: Pam King, Librarian, University of Toronto Mississauga Library, January 21, 2011
Sheril Hook, Librarian, University of Toronto Mississauga Library, January 21, 2011

Submitted by: Carole Moore, Chief Librarian, University of Toronto Libraries, January 28, 2011

Carole Moore

## Student Service Information for Quality Assurance Framework – UTM

Undergraduate and graduate students at the University of Toronto Mississauga have access to a range of services and co-curricular educational opportunities that complement the formal curriculum. Organized in Student Affairs & Services, the Registrar's Office, the Academic division and its departments, and the School of Graduate Studies, these services support the success of our students from the time they are admitted through degree completion and beyond.

**Academic advising** at UTM links students with content experts. The Registrar's Office helps new and graduating undergraduate students understand program and degree requirements, and provides specialized support to students at academic risk and those seeking special academic consideration due to unusual circumstances. Services are delivered one-on-one, through small group advising sessions, and in workshops. Individual academic departments at the undergraduate and graduate levels focus on individual academic advising with students in their particular areas of study.

**Career development** is primarily offered by the UTM Career Centre, with service areas including career counselling and work search support. Services are delivered in a variety of modes, including one-on-one advising and counselling, workshops, on-line tools and large-scale employment and service events. UTM also supports internships, externships, job shadowing, volunteer registries and recognition, and other career development opportunities through a broad range of academic departments and other services' offices.

**Disability-related accommodations** are facilitated by UTM's Access*Ability* Resource Centre, which works to match qualified students to appropriate sources for academic accommodation of physical, sensory, learning and mental health disabilities.

**Student housing** is available through 1,500 on-campus residence rooms under the Student Housing and Residence Life department. Housing options include traditional dormitories, suites/apartments, and townhouses, with distinct communities and programming for new undergraduates, upper-years undergraduates, graduate and professional students, and students with families. Support for off-campus housing is provided through partnerships with an external housing registry, the City of Mississauga, and the St. George campus Student Housing Office.

**Learning skills development** is a primary focus of the Robert Gillespie Academic Skills Centre, which offers workshops, seminars and individual consultations to help students identify and develop skills for success in their studies. The ASC also benefits students by educating instructors and teaching assistants on best practices in teaching and learning.

**International experience** is encouraged through the International Centre. The IC serves students from abroad who benefit from its immigration support, social opportunities and educational programming on transition issues. The centre also supports domestic/Canadian students seeking international experiences through travel and study abroad opportunities.

**Physical and mental health care**, including health promotion initiatives, are provided by the Health & Counselling Centre. This service utilizes a comprehensive range of health professionals,

including nurses, physicians, psychiatrists, personal counsellors and social workers, a nutritionist, and health educators. Services include physical exams, first aid, immunizations and allergy injections, pregnancy testing, sexually transmitted infection information and testing, birth control counselling and specialist referrals. A sports medicine clinic is also available on campus.

**Financial aid and awards** are supported through the Office of the Registrar, assisting students with OSAP, UTAPS, scholarships and other sources for financing their education, while assisting them in learning/strengthening budgeting skills.

**Student clubs and activities** are supported through the Student Affairs office for student governments and clubs, and the Office of the Dean and its academic departments for academic societies. Matching funds are offered by the Academic Dean for many activities that encourage individual and small-group interaction between instructors and students. A range of programming is offered by departments across campus, including new student orientation, leadership development, volunteer service, and educational programs, and diversity initiatives in gender, disability, ethnicity, faith, and sexual orientation supported both locally and through UT-wide equity officers.

**Physical well-being** is supported by the Department of Physical Education, Athletics & Recreation, offering individual and team-based recreational and sport activities from casual use through high-performance sport.

**Equity issues**, both broad and specific to sexual and gender diversity, ethnicity and culture, disability, family status, and other student identities facing barriers, are supported through a local network of UTM departments and referrals to UT-wide equity officers.

**New Program Proposal**
**Appraisal Report Template – Undergraduate Program**

**Name of Program:** Interactive Digital Media Specialist, B.A., UTM
**Faculty/Division:** University of Toronto Mississauga
**Name of Reviewer:** Professor John Unsworth
Dean, Graduate School of Library and Information Science
Director, Illinois Informatics Institute
University of Illinois, Urbana-Champaign
**Date of Review:** March 4th, 2011

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## Report Summary

The proposal for an Interactive Digital Media Specialist B.A. presents a well thought-out curriculum that leverages existing faculty and their strengths, in units on two campuses of the University, in order to teach students how to combine production and reflection, critique and performance, in the creation of digital media. From a practical point of view, the resources to launch such a program, the student demand for the program, and the employer demand for graduates are all well documented in the proposal. Without altering the program as proposed, the units offering it might consider strategies for allowing students to combine material from different modules, at later points in the program. Consideration might also be given to strategies for crediting work experience, as these students may often come in with some that is relevant.

## Program evaluation criteria

### *1. Objectives*

**a) Consistency of the program with the institution's mission and unit's academic plans.**

The proposed program seems consistent with the academic plans of both participating units, and it looks like a viable partnership across two campuses of the University of Toronto, which no doubt has value to the University as a whole. The community of iSchools, of which FIS is a leading member, is characterized by programs that have both the graduate and professional programs that FIS has and undergraduate programs like the one it is proposing. As noted in the *Rationale* section of the proposal, the general undertaking here seems aligned with the *Toward 2030* strategic plan for the University.

**b) Clarity and appropriateness of the program's requirements and associated learning outcomes in addressing the academic division's undergraduate or graduate Degree Level Expectations.**

The proposal does an admirable job of identifying its intended learning outcomes and situating them with respect to the program's requirements. One might hope that as the program develops, it will be able to offer more modules than it requires; in the meanwhile, the units might consider offering the option for students to design their own module out of existing courses not already taken, with the approval of an advisor. That would give students flexibility to design some part of the program to meet their own needs and interests.

**c) Appropriateness of the degree or diploma nomenclature.**

The name proposed for the degree is accurate and unambiguous.

## *2. Admission requirements*

**a) Appropriateness of the program's admission requirements for the learning outcomes established for completion of the program.**

According to the proposal, admission requirements don't differ from those of other Specialist programs at UTM. CCT109 and CCT110 seem like appropriate first-year pre-requisites for this curriculum.

**b) Sufficiency of explanation of any alternative requirements for admission into the program such as minimum grade point average or additional languages or portfolios, along with how the program recognizes prior work or learning experience.**

Minimum GPA is defined in the proposal. Alternative requirements such as additional language or portfolios are not mentioned, nor are strategies for recognizing prior work or learning experience. The latter two might be accommodated by petition under the program's structural elements called "awareness of limits of knowledge" and "autonomy and professional capacity," or by substituting experience for the work-based learning course required in "Application of Knowledge."

## *3. Structure*

**Appropriateness of the program's structure and regulations to meet specified program learning outcomes and Degree Level Expectations.**

The structure as proposed is closely tied to learning outcomes and degree-level expectations. There is a good balance between production and communication, on the one hand, and reflection and method on the other.

## *4. Program content*

**a) Ways in which the curriculum addresses the current state of the discipline or area of study.**

The curriculum addresses the current state of its area of study by involving faculty who come from backgrounds in humanities, social sciences, and information science, and by combining production and performance with critical analysis and reflection.

**b) Identification of any unique curriculum or program innovations or creative components.**

The production of interactive digital media as a focus of this curriculum will be unique, though related to journalism, communication, advertising, or other professions and disciplines. There will be good opportunities in this curriculum for creativity.

## *5. Mode of delivery*

**Appropriateness of the proposed mode(s) of delivery (distance learning, compressed part-time, online, mixed-mode or non-standard forms of delivery, flex-time options) to meet the intended program learning outcomes and Degree Level Expectations.**

This appears to be a program that will be delivered face-to-face, with no online or mixed-mode delivery methods, at least at the level of whole courses or the whole degree. While it is possible that this program could be delivered online at some point in the future, at present it is fairly difficult to teach some of the hands-on components in that way. The fact that the program involves faculty and

students on two campuses means that it will have some interesting culture-building challenges to overcome, though, and those will be distance-based, in part. The proposed mode of delivery seems appropriate; I would advise some deliberate steps to build a successful antipodal culture.

### *6. Assessment of teaching and learning*

**a) Appropriateness of the proposed methods for the assessment of student achievement of the intended program learning outcomes and Degree Level Expectations.**

The proposed methods for assessment are appropriate, given the kind of things students will be asked to learn and demonstrate in this program. These are the ways we assess learning in the humanities and qualitative social sciences.

**b) Completeness of plans for documenting and demonstrating the level of performance of students, consistent with the academic division's statement of its Degree Level Expectations.**

It's not clear that this is addressed by the proposal.

### *7. Resources*

**a) Adequacy of the administrative unit's planned utilization of existing human, physical and financial resources, and any institutional commitment to supplement those resources to support the program.**

The personnel plan for this seems well worked out: good faculty with appropriate expertise exist in adequate numbers across the two participating units. Some commitment of institutional resources for lab and studio space is required, but you can't do this kind of learning without that commitment.

**b) Participation of a sufficient number and quality of faculty who are competent to teach and/or supervise in the program.**

As noted above, the expertise and quality of faculty required for this program are already available in the participating units.

**c) Adequacy of resources to sustain the quality of scholarship and research activities of undergraduate students, including library support, information technology support, and laboratory access.**

These are all accounted for in appendices F and G, and in the statement on Space/Infrastructure in the proposal. I assume that the two participating units have appropriate IT support, given the nature of what they already do.

**d) Adequacy of and planning for:**

- **Numbers and quality of faculty and staff to achieve the goals of the program.**

This is on target: staffing projections are well supported.

- **Commitment to provide the necessary resources in step with the implementation of the program.**

As far as I can tell, the commitment is there. I note the proposal's stated need for performance and visualization lab space, and it's not clear from the proposal that the parent units here will provide those.

- **Planned/anticipated class sizes.**

The numbers of students are achievable, and class sizes are reasonable.

- **Provision of supervision of experiential learning opportunities (if required).**

This seems mostly to be covered by CCT410, and the practical experience of making interactive digital media in other classes along the way.

- **The role of adjunct and part-time faculty.**

It isn't clear from the proposal that adjunct or part-time faculty will be involved.

### *9. Quality and other indicators*

**a) Quality of the faculty (e.g., qualifications, research, innovation and scholarly record; appropriateness of collective faculty expertise to contribute substantively to the proposed program).**

There are high-quality faculty in both units, with strong professional orientations in both as well. The faculty are individually strong, and collectively complementary, in ways that will provide good intellectual substance and structure for this program.

**b) Program structure and faculty research that will ensure the intellectual quality of the student experience.**

All indications are that the program structure and faculty research will provide students with a high-quality intellectual experience.