

Major Program Modification

Faculty: Faculty of Business and IT	Date: October 2012
Program: Game Program – <u>Minors</u> in Operation Management and Game Production	

INTRODUCTION

The Faculty of Business and IT is proposing two new minors for the the Game Development and Entrepreneurship program. These two minors are in Operation Management and Game Production. These two minors are being proposed following discussions with industry professionals. The introduction of these minors will help our students to graduate with the skills needed in the industry and advance our mission to provide career-oriented programs that are innovative and responsive to the needs of students and employers. Currently no other Game Development programs at Canadian Universities offer such interaction with their business programs. Offering this choice and minor is a selling point for UOIT in general. Moreover, following the Entrepreneurship theme of the existing program, strengthening the business knowledge of students will have a positive impact on the formation of start-up companies from our student base.

Following the model set forth by the BCOM program, with this new map we are able to offer a common first two years to all students. This will now be set as their core development and in their third year, students may apply to a minor in Operations Management or Game Production.

The Game Production Management minor complements the existing business courses in the Game Development and Entrepreneurship specialization to enhance communication and team management skills. While the technical and design challenges in Game Development are fundamental to developing innovative video games, getting the product completed is of utmost importance. Game producers are charged with ensuring that the game is completed on time, within budget and is of appropriate scope. Producers must interact with the creative and technical teams to ensure they are developing the game efficiently and effectively. Producers must be knowledgeable in Project Management (Agile) methodologies, be able to communicate effectively, and keep teams on track during the development process. Other issues Producers must tackle are legal issues such as negotiating contracts, licensing, and intellectual property, as well as a host of ethical issues related to Game Development. A minor in Game Production will complement the technical and design expertise with knowledge and practice in topics such as organizational and consumer behaviour, business communications, law and ethics, leadership, and negotiation tactics.

As we have been developing the existing Game Development and Entrepreneurship program, we have identified that there are a number of students interested in focusing on team management and production implicitly. In order to satisfy this interest and strengthen their abilities, we determined which existing courses in the BCOM program would strengthen particular leadership and operations management skills. By choosing this path, students interested in producing interactive media content will gain further knowledge and experience. Since students within the Game Development program would take these courses, the knowledge in each course must be demonstrated through their two-semester Game Development Workshop project where they build a game as a team. Students in the production role will be able to gain real-world experience in managing a team, meeting milestones, and developing a ship-able product.

The Game Production minor replaces the electives with specific business courses (Organizational Behaviour, Consumer Behaviour, Business Communications and two Game Production Management Electives). Adding to their business/process/organizational knowledge will open up a career path in Media Production as well as possibly interest students in furthering their business knowledge in an MBA or Masters degree in Business.

DEGREE REQUIREMENTS

To be eligible for the Bachelor of Information Technology with Game Specialization, minor in either Operations Management or Game Production, students must successfully complete 120 credit hours which would comprise of all core courses outlined in the following program map and the required minor 4 core courses and two elective courses of their chosen minor.

Minor Application Process:

We will implement an application process similar to the BCOM Major application process for students to choose a stream. Students must have a C+ CGPA to apply for a minor and each minor has course specific grades that must be met. For example, to get into the Game Production Minor the student must have a C+ or higher average over Project Management, Accounting and Marketing.

Program learning outcomes

<i>This degree is awarded to students who have demonstrated:</i>	
1. Depth & Breadth of Knowledge	<ul style="list-style-type: none"> a. A developed knowledge and critical understanding of the key concepts, methodologies, current advances, theoretical approaches and assumptions in Game Production (also applicable to other Media Production categories) b. A developed understanding of team management, leadership c. A developed ability to: <ul style="list-style-type: none"> ☐ Gather, review, evaluate and interpret information; and ☐ Compare the merits of alternate hypotheses or creative options, relevant to Game Production d. A developed, detailed knowledge of and experience in research in an area of the discipline e. Developed critical thinking and analytical skills f. The ability to apply learning in a realistic context (Game Development Workshop team project)
2. Knowledge of Methodologies	<p>An understanding of methods of enquiry or creative activity, or both, in their primary area of study that enables the student to:</p> <ul style="list-style-type: none"> • Evaluate the appropriateness of different approaches to solving problems using well established ideas and techniques • Devise and sustain arguments or solve problems using these methods, and ☐ Describe and comment upon particular aspects of current research or equivalent advanced scholarship
3. Application of Knowledge	<ul style="list-style-type: none"> a. The ability to review, present and critically evaluate qualitative and quantitative information to: <ul style="list-style-type: none"> ☐ Develop lines of argument ☐ Make sound judgments in accordance with the major theories, concepts and methods of the subject(s) of study ☐ Apply underlying concepts, principles, and techniques of analysis, both within and outside the discipline ☐ Where appropriate use this knowledge in the creative process

	<p>b. The ability to use a range of established techniques to:</p> <ul style="list-style-type: none"> ☑ Initiate and undertake critical evaluation of arguments, assumptions, abstract concepts and information ☑ Propose solutions ☑ Frame appropriate questions for the purpose of solving a problem ☑ Solve a problem or create a new work <p>c. The ability to make critical use of scholarly reviews and primary sources</p>
4. Communication Skills	The ability to communicate information, arguments, and analyses accurately and reliably, orally and in writing to a range of audiences.
5. Awareness of Limits of Knowledge	An understanding of the limits to their own knowledge and ability, and an appreciation of the uncertainty, ambiguity and limits to knowledge and how this might influence analyses and interpretations.
6. Autonomy & Professional Capacity	<p>a. Qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring:</p> <ul style="list-style-type: none"> ☑ The exercise of initiative, personal responsibility and accountability in both personal and group contexts; ☑ Working effectively with others; ☑ Decision-making in complex contexts; <p>b. The ability to manage their own learning in changing circumstances, both within and outside the discipline and to select an appropriate program of further study; and</p> <p>c. Behaviour consistent with academic integrity and social responsibility.</p> <p>Ability to:</p> <ul style="list-style-type: none"> - cost out a projects needs and create realistic budgets - pitch their ideas and prepare engaging pitch documents - understand existing avenues to acquire funding (government tax credits, stacking funds, angel vs VC funding) - Conflict management - Understand the ethical dilemmas in creation of a product for consumers - Understand the ethical dilemmas in the context of managing a team - Know how and when to outsource for asset creation and manage a team across continents - Understand AGILE methodologies - Understand various team sizes and how they impact management needs and timelines - Understand current monetization schemes and how this impacts the studio's bottom-line.

Admission requirements

Operations Management Minor

The Bachelor of Information Technology degree with a minor in **Operations Management** requires a minimum of 18 credit hours in Operations Management courses. Students must complete four core courses and a minimum of two Operations Management elective courses. Students must also maintain a 2.0 GPA (C average on a 4.3 scale) in their minor courses.

Game production minor

The Bachelor of Information Technology – Game Development and Entrepreneurship specialization degree with a minor in **Game Production Management** requires a minimum of 18 credit hours in Game Production Management

courses. Students must complete four core courses and a minimum of two Game Production Management elective courses. Students must also maintain a 2.0 GPA (C average on a 4.3 scale) in their minor courses.

Program structure

Pulling from the existing BCOM program, we are able to offer a great value to the students interested in becoming Game Producers by choosing specific courses currently offered. These courses will enable students to focus even more on their business skills needed for such a role and were chosen after careful discussions with Industry Game Producers and the IGDA Curriculum Framework set forth by the Games Industry.

Game Production Management Core Courses

BUSI 1020U Business Communications
BUSI 2550U Introduction to Project Management
BUSI 2311U Organizational Behaviour
BUSI 3210U Consumer Behaviour

Game Production Management Electives:

BUSI 3350U Developing Management Skills
BUSI 2930U Leadership, Negotiation and Teamwork
BUSI 2312U Introduction to Human Resources Management
BUSI 3330U Management of Change

Operations Management Core Courses

BUSI 2550U Introduction to Project Management
BUSI 2311U Organizational Behaviour
BUSI 2603U Introduction to Operations Management
BUSI3700U Strategic Management for Professionals

Operations Management Electives:

BUSI 2930U Leadership, Negotiation and Teamwork
BUSI 3330U Management of Change
BUSI3601U Operations Analysis using Spreadsheets
BUSI3650U Innovation Management
BUSI3670U Risk Management Frameworks and Processes
BUSI4610U Business Simulation Modeling

Program content

Attached Appendix A

RESOURCE REQUIREMENTS

Faculty members

The core faculty members in the Game Program currently comprises of 5 Core faculty members and 1 Teaching focus. An additional faculty member has been granted for the next year academic year. The other minors in Design, Art, and Programming will develop in the next few years as we hire and dependent on the research interested of the new hire..

Additional academic and non-academic human resources

The courses listed for the minor in Game Production and Operations Management are already part of the Bachelor of Commerce offering of courses where some of the courses listed above are already taught by sessional instructors and therefore no additional sessional funding would be requested.

Physical resource requirements

N/A

BUSINESS PLAN

From consultation with the faculty and informal discussions with students, we estimate that there is currently interest from our student base of approximately 10-15 students. As such we don't see this as having much of a short-term impact on costs. Since we are simply using EXISTING courses from the BCOM program, there is minimal cost impact overall. However, since this is a UNIQUE selling point for the program and UOIT, we will be

able to attract more students and expect that in the next two years could see an enrolment of upwards of 20-30 students interested in a production minor. This will only have impact on the TA requirements.

Statements of resource availability

Since the game production courses are existing BCOM courses, we certainly have adequate support for academic resources.

Appendix A

Bachelor of Information Technology
Game Development and Entrepreneurship Specialization
PROPOSED for 2013-2014 - GAME PRODUCTION MINOR

Year-Sem.	Subject	Subject	Subject	Subject	Subject
F1	BUSI 1700U Introduction to Entrepreneurship	INFR 1100U Intro Programming	INFR 1020U Essential Math for Games 1	INFR 1330U Introduction to Game Design	INFR 1310U Graphic Design I
	INFR 1395U Game Development Workshop I				
W1	BUSI 2210U Marketing	INFR 2140U Object Oriented Programming <i>Prereq: INFR 1100U</i>	INFR 1030U Essential Math for Games 2 <i>Prereq: INFR 1020U, INFR 1100U</i>	NEW INFR 1335U Digital Game Design <i>Prereq: INFR 1330U</i>	INFR 1320U Graphic Design II <i>Prereq: INFR 1310U</i>
	INFR 1396U Game Development Workshop II				
F2	BUSI 2550U Intro. Project Management	INFR 1350U Introduction to Computer Graphics <i>Prereq: INFR 1030U, INFR 2140U</i>	INFR 2310U Computer Animation: Algorithms & Techniques <i>Prereq: INFR 1030U, INFR 2140U</i>	INFR 2330U Intermediate Game Design <i>Prereq: INFR 1335U</i>	INFR 2340 Intro to Modeling & Animation <i>Prereq: INFR 1320U</i> <i>Co-Req: INFR 2310U</i>
	INFR 2395U Game Development Workshop I				
W2	BUSI 2120U Accounting for IT	INFR 2350U Intermediate Computer Graphics <i>Prereq INFR 1350U,</i>	INFR 2820U Algorithms and Data Structures <i>Prereq: (INFR 1030U or INFR 1010U) and INFR 2140U</i>	INFR 2810U Computer Architecture <i>Prereq INFR 1100U, INFR 1020U</i>	INFR 2370U GAME SOUND <i>Prereq: INFR 2140U, INFR 1030U</i>
	INFR 2396U Game Development Workshop II				
F3	BUSI 2700U Entrepreneurial Finance <i>Prereq: BUSI 2120U</i>	BUSI 2311 Organizational Behaviour	INFR 3110U Game Engine Design & Implementation <i>Prereq: INFR 2350U, INFR 2820U, INFR 2310U</i>	INFR 3330U Advanced Game Design <i>Prereq: INFR 2330U</i>	INFR 3340U Intermediate Modeling Techniques <i>Prereq: INFR 2340U</i>
	INFR 3395U Game Development Workshop I				
W3	BUSI 3120U Consumer Behaviour	BUSI 1020 Business Communications	INFR 3830U Distributed Systems and Networking <i>Prereq: INFR 3110U</i>	INFR 3320U Filmmaking <i>Prereq: INFR 3330U</i>	INFR 3310U Animation and Production <i>Prereq: INFR 3340U</i>
	INFR 3396U Game Development Workshop II				
F4	BUSI 4340U Business of Gaming <i>Prereq: INFR 2700U</i>	INFR 4560 Law & Ethics of Game Development <i>Prereq: 4th year standing</i>	Game Production Management Elective	INFR 4310U Social Network Games <i>Prereq: INFR 3330U</i>	INFR 4320U Artificial Intelligence for Games <i>Prereq INFR 3330U, INFR 3110U</i>
W4	Game Production Management Elective	BUSI 4995U UOIT Edge – Capstone Study Project	INFR 4391U Sp. Topics <i>Prereq: 4th year standing</i>	INFR 4350U HCI <i>Prereq: INFR 3330U</i>	INFR 4390U Demo Reel <i>Prereq: INFR 3310</i>

Bachelor of Information Technology
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