University of Ontario
INSTITUTE OF TECHNOLOGY

School of Business and Information Technology
Bachelor of Information Technology

Business Plan

This is the business plan for the Bachelor of Information Technology (BIT) program to be offered by the School of Business and Information Technology in Fall semester 2005. Some of the contents are extracted from the document to be submitted to the PEQAB.

SUMMARY

Information technology is one of the fastest-growing professions not only in Canada but also in the world today. The IT professionals require university graduates who have the necessary education and skills. According to the Information Technology Association of Canada (ITAC), "recent estimates suggest that more than 1,000,000 North Americans could be employed in rewarding, high-income jobs today if they had the appropriate information technology skills." It further states that the "IT skills gap in Canada is most severe in the core occupational disciplines of computer science, microelectronics design, photonics and wireless design, software design, and systems analysis. Many thoughtful analysts believe that Canada's future economic growth could be critically impaired unless we act decisively to reverse the continually worsening situation."[1] The Information Technology field offers excellent, long-term career opportunities.

MARKET ANALYSIS

ITAC released a study on IT skilled labour shortage in 2002 that the demand for skilled IT workers will once again outpace supply. The study predicts that 38,000 IT jobs will be added in 2002, potentially creating a gap of approximately 9,900 unfilled positions. The study also shows that in order to have truly committed employees, IT organizations in Ontario must do more to meet their needs. The study examined the hiring intentions of Ontario-based employers of IT workers across the whole economy, including finance, manufacturing and the resource sector as well as information technology. A majority of Ontario employers identified measurable negative impacts of a shortage of appropriate

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[1] http://www.itac.ca/client/ITAC/ITAC_UW_MainEngine.nsf/ALL/D84586ECA0FCD4A2852566EB001F481F?OpenDocument

skills on their business, with the most notable issues being project delays, customer dissatisfaction, and lost sales opportunities. The IT jobs with the greatest forecasted employment shortages overall in 2002 in Ontario are:[2]

- IT Project Manager
- IS Business Analyst/Consultant
- Database Administrator
- Data Administration Analyst
- Software Engineer

PROGRAM DESCRIPTIONS

The main objective of this program to prepare graduates is to meet the challenge of the ever-changing IT fields and job market demand. This program is designed to prepare students with technological and entrepreneur skills as well as communication skills, critical thinking, and technological competencies required in the IT workplace.

This is a unique degree program to be offered in Canada. Section 6.3 provides an overview of the Canadian universities offering a similar program with a degree in the areas of information technology. Only Carleton University, in cooperation with Algonquin College, has the degree designated as the Bachelor of Information Technology, but our program is the only degree program in Canada which combines information technology, business, and engineering, as well as with the specialization in video game development and health informatics. Most of the BIT programs in North America are offered by colleges, whereas programs overseas are offered by universities. This suggests that a BIT Program would create an attractive niche for UOIT.

In addition, the UOIT BIT program is the only degree program that offers a specialization in game development and entrepreneurship. Although Canada has a few institutions offering game development degree programs (for example, NAD Centere 's (http://www.nad.qc.ca/) in Quebec, there is none in Ontario. Furthermore, there are only a few universities in the U.S. offering a full degree in game development; for example, the University of Advanced Technology (www.uat.edu).

CURRICULUM PARTNERSHIP

The Bachelor of Information Technology program is offered in partnership with the School of Manufacturing Engineering and the Durham College School of Technology and School of Communication Arts consists of three areas of specialization:

1. Networking

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[2]http://www.itac.ca/CLIENT/ITAC/ITAC_UW_MainEngine.nsf/6ED892A8E1C529F3852565E300266D63/C1D2F309CF413F8685256BAF0071A110?OpenDocument

2. Information Technology Security
3. Video Game Development and Entrepreneurship

The integration of information technology, business and engineering courses gives our graduates a wide choice of careers in business, industry and government. Career opportunities include management, supervisory and specialist positions as:

- Information security officer
- LAN administrator
- Video game developer
- Technical support manager
- Information technology trainer
- Technology manager
- Database Manager
- Custom PC application developer
- End-user

SPECIALIZATION: NETWORKING

This specialization is designed to prepare graduates with the knowledge and skills in planning, designing, installing, operating, and managing information technology infrastructure. Computer networking has become an integrated part in today's businesses. The core curriculum in this specialization requires students to take courses in business and management. This will prepare them with the necessary business background for today's workplace.

The Networking specialization will be offered in partnership with the Durham College School of Technology (DC-SoT) and Cisco Systems, Inc. In addition to taking core technology and networking courses in the BIT program, students will be able to take courses in preparation for the Cisco certification program through the Cisco Networking Academy® Program (www.cisco.com/edu/academy) offered by the SBIT. The Academy program utilizes a blended learning model, integrating face-to-face teaching with a challenging Web-based curriculum, hands-on lab exercises, and Internet-based assessment. Academy graduates, along with a Bachelor of IT degree, will be well prepared for networking and IT-related careers in the IT industry. The program also includes essential "soft skills" identified by the US Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS).

The BIT will offer all the three levels of the Cisco certification program, namely, Cisco Certified Network Associate (CCNA®), Cisco Certified Network Professional (CCNP®), Cisco Certified Internet Engineer (CCIE®). Currently, none education institution in Canada is offering certification preparation program for CCIE, the third level of the Cisco certification. UOIT will be the only Canadian institution that provides a preparation program for CCIE certification. CCIE is considered the most rigorous of Cisco's certification program and highly respected by the industries.

The BIT Networking specialization offers a total of four courses covering the contents of CCNA1-4 and CCNP1-2 to prepare students to write the CCNA and CCNP exams. In addition, three courses will be on CCIE exam preparation. Students from this program will be highly employable when they graduate from this stream.

SPECIALIZATION: INFORMATION TECHNOLOGY SECURITY

There has never been a greater need for professionals trained in network security. This program is designed to prepare graduates to work in the IT security industry and advance students on a career path toward the further occupations in IT security. For graduate studies bound students, this program also prepares them for the Master of Information Technology program offered in the School.[3]

The specialization curriculum provides students with a broad base of networking and security expertise, and prepares them for an ever-changing and challenging IT security profession. Courses in this specialization address a wide spectrum of knowledge and skill sets in IT security. Furthermore, this specialization will prepare students to take the MCNS (Managing Cisco Network Security) and CSPFA (Cisco Secure PIX Firewall Advanced) exams in preparation for the Cisco Firewall Specialist. These exams will also count towards the CCSP (Cisco Certified Security Professional) certification. Successful completion of the course will also prepare students for the CompTIA Security+ exam and for further network security study.

UOIT provides the opportunity for the advanced level students to explore and apply IT security technology in the FBIT Hacker Research Lab. With this level of experience, students are then much better able to learn to develop anti-hacking strategies and skills.

SPECIALIZATION: GAME DEVELOPMENT AND ENTREPRENEURSHIP

The Game Development and Entrepreneurship specialization is designed to provide students with a wide range of game design and programming expertise. The core curriculum not only covers the game technology and theory, but also the artistic and creative side of game development. The uniqueness of this program is that it consists of an emphasis on entrepreneurship. Students will have learning experience in business and management, as well as being an entrepreneur. The curriculum allows graduates to move beyond an entry-level position and advance their careers. Graduates will have the knowledge and skills to be successful in the game industry, whether being employed or setting up his/her own gaming business. In addition, graduates from this program are also expected to be highly sought for growing industry in business- and educational-simulation development.

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[3] The Master of Information Technology Security program (MITS) is currently under review by the Ontario Council of Graduate Studies.

BIT Program Map – Specialization: Networking

YEAR 1	Semester 1	Technical Communications	BUSI 1900U Mathematics Foundations for Business	Information Technology	General Elective	CCNA1 Networking Basics CCNA2 Routers and Routing Basics
	Semester 2	Introduction to Entrepreneurship	BUSI 1450U Statistics	BUSI 2000U Collaborative Leadership	BUSI 1830U Introduction to Programming	CCNA3 Switching Basics and Intermediate Routing CCNA4 WAN Technologies
YEAR 2	Semester 1	BUSI 3540U Object Oriented Programming	Operating Systems 1: Windows	Marketing in the IT Sector	General Elective	CCNP1 Advanced Routing CCNP2 Remote Access
	Semester 2	Web Programming	Operating Systems II: Unix	Information Technology Project Management	General Elective	CCNP3 Mutlilayer Switching
YEAR 3	Semester 1	Database Systems	Computer Architecture	Algorithms and Data Structures	General Elective	CCNP4 Network Troubleshooting
	Semester 2	Multimedia Systems	Enterprise Network Management	Basics of Digital Transmission	General Elective	Routing and Switching, and Service Provider (CCIE1)
YEAR 4	Semester 1	BUSI 4991U UOIT Edge I -Capstone Study Project	Network Simulation	Emerging Networks Technologies	General Elective	Security (CCIE2)
	Semester 2	BUSI 4992U UOIT Edge II -Capstone Study Project	eBusiness Technologies	IT Security	Law & Ethics of IT	Voice (CCIE3)

Common BUSI courses	Common BIT courses	General Elective courses

BIT Program Map –Specialization: Information Technology Security

YEAR 1	Semester 1	Technical Communications	BUSI 1900U Mathematics Foundations for Business	Information Technology	General Elective	CCNA1 Networking Basics CCNA2 Routers and Routing Basics
	Semester 2	Introduction to Entrepreneurship	BUSI 1450U Statistics	BUSI 2000U Collaborative Leadership	BUSI 1830U Introduction to Programming	CCNA3 Switching Basics and Intermediate Routing CCNA4 WAN Technologies
YEAR 2	Semester 1	BUSI 3540U Object Oriented Programming	Operating Systems 1: Windows	Cybercrime	General Elective	CISCO Security I
	Semester 2	Information Technology Project Management	Operating Systems II: Unix	OS Security I: Windows	General Elective	CISCO Security II
YEAR 3	Semester 1	Database Systems	Computer Architecture	Web Programming	General Elective	OS Security II: Unix
	Semester 2	eBusiness Technologies	Enterprise Network Management	Basics of Digital Transmission	General Elective	Law & Ethics of IT
YEAR 4	Semester 1	BUSI 4991U UOIT Edge I -Capstone Study Project	Advanced Communications Networks	Emerging IT Security Technologies	General Elective	Malware Worms and Viruses
	Semester 2	BUSI 4992U UOIT Edge II -Capstone Study Project	eBusiness Security	VPN and Data Privacy	IT Security Policies and Procedures	Web Services Security

Common BUSI courses	Common BIT courses	General Elective courses

BIT Program Map – Specialization: Game Development and Entrepreneurship

YEAR 1	Semester 1	Creative Writing and Narrative Concepts	BUSI 1900U Mathematics Foundations for Business	Information Technology	General Elective (Psychology)	Drawing I – Animation
	Semester 2	Introduction to IT Business & Entrepreneurship	BUSI 1450U Statistics	BUSI 2000U Collaborative Leadership	BUSI 1830U Introduction to Programming	Drawing II - Animation
YEAR 2	Semester 1	BUSI 3540U Object Oriented Programming	Graphic Design	Marketing in the IT Sector	General Elective (Technology and Culture)	Imaging I
	Semester 2	Game Programming	Sound & Audio	Information Technology Project Management	General Elective	Imaging II
YEAR 3	Semester 1	Animation Arts	Entrepreneur Finance	Modeling and Rigging I	Computer Architecture	Game World I
	Semester 2	Accounting for IT	Filmmaking	Modeling and Rigging II	General Elective	Game World II
YEAR 4	Semester 1	BUSI 4991U UOIT Edge I -Capstone Study Project	Internet Gaming Development	Artificial Intelligence for Simulations & Gaming	General Elective	Advanced Entrepreneurship
	Semester 2	BUSI 4992U UOIT Edge II -Capstone Study Project	Game Production & Documentation	Immersive Environments, Virtual Reality	Design Studio	General Elective

Common BUSI courses	Common BIT courses	General Elective courses

SHARED RESOURCES – LABS

The DC-SoT is presently offering a Computer Systems Technology diploma program which prepares their graduates for the Cisco CCNA and CCNP certification and has the required facilities, equipment, and space. Instead of seeking out new spaces, the School of Business and Information Technology (SBIT), under the partnership, will lease the DC Cisco Academy Lab facilities to offer the program and to hire qualified instructors from the DC-SoT programs to teach in the Cisco certification courses. Both networking and information technology security specializations are expected to use the lab. The capacity of the lab is 40.

Some of courses offered under the Information Technology specialization will be using the Hacker's Lab which is housed in the Business Building.

The Game Development and Entrepreneurship specialization will be offered in partnership with the Durham College School of Media and Communication Arts (DC-SoMCA), which offers a Graduate Diploma program in Multimedia Development and Animation. Under the partnership, SBIT will hire qualified instructors from the DC-SoMCA programs to teach some of the animation courses.

The projected hiring costs of both DC-SoT and DC-SoMCA qualified instructors as SBIT sessional instructors are included in the submitted proposed budget.

SPECIAL LAPTOP REQUIREMENT

The BIT students are required to use special software in our program, especially the specialization in game development and entrepreneurship. Specialized and high-end animation software such as Maya, Macromedia Studio MX, etc. will be required on BIT students' laptop. In addition, their laptops' RAM should be upgraded accordingly. This will add on to the cost of the laptop program. Instead of cost-sharing of the additional fee of all BIT students, we are proposing that the BIT students in the game development and entrepreneurship specialization be charged an additional fee for their laptop. We also require that all students in this specialization to purchase a docking station with a 21" monitor to provide for real time animation program development. The following is a summary of the expected additional laptop configuration and software requirements:
1. 1 GB RAM
2. Video Card with upgraded memory
3. Maya

This recommendation is based on current technology at the time of writing of this Business Plan.

BIT CISCO NETWORKING ACADEMY LAB

The projected enrollment by the end of the first two years of BIT program will be 259. Among the 259 BIT students, we expect that more than 100 students will be enrolled in the Networking specialization. Therefore, the DC-SoT lab will no longer be able to meet the

needs of our growing networking student enrollment. The SBIT will need to set up a BIT Cisco Networking Academy Lab in the Business and IT building by 2006. This Lab will consist of 40 workstation/server type PCs plus an instructor station. In addition, the Lab will be equipped with the required Cisco networking hardware in order to be certified as Cisco Academy Lab. The following is the projected cost to set up this Lab:

Cisco Networking Academy Lab Budget	2005	2006	2007	2008	2009	2010	2011
Est. Total # of Students in Networking and IT Security Sepcialization [1]	105	230	280	349	453	615	751
DC Lab Leasing Cost [2]	42,000	44,100	46,305	48,620	51,051	53,604	56,284
SBIT Cisco Lab:							
41 PC Workstations [3]	-	120,000	36,000	126,000	37,800	132,300	39,690
PC Furniture [4]	-	48,000	-	-	-	-	60,000
Cisco Equipment [5]							
10/100BT Modular Router w/ WIC/VIC (20 @ $1,500 ea.)	-	30,000	-	31,500	-	33,075	-
10/100BT Multiservice Router (20 @ $3,000 ea.)	-	60,000	-	63,000	-	66,150	-
10/100BT Multiservice Access Router (10 @ $2,000 ea.)	-	20,000	-	21,000	-	22,050	-
802.11a IOS AP w/MPCI,Enet Uplink (5 @ $100 ea.)	-	1,000	-	1,050	-	1,103	-
802.11g IOS AP w/MPCI,Enet Uplink (5 @ $200 ea.)	-	2,000	-	2,100	-	2,205	-
802.11b 350 11Mbps Bridge (5 @ $700 ea.)	-	7,000	-	7,350	-	7,718	-
2.4 GHz mini-PCI Radio Module (5 @ $120 ea.)	-	600	-	630	-	662	-
2-Port Asyn/Sync Serial WAN Card (40 @ $365 ea.)	-	14,600	-	15,330	-	16,097	-
5 GHz 802 CardBus Client Adapter (20 @ $350 ea.)	-	7,000	-	7,350	-	7,718	-
2.4 GHz 802 CardBus Client Adapter (20 @ $75 ea.)	-	6,000	-	6,300	-	6,615	-
V.35 Cable, DTE Male to Smart Serial (40 @ $75 ea.)	-	3,000	-	3,150	-	3,308	-
V.35 Cable, DTE Female to Smart Serial (40 @ $75 ea.)	-	3,000	-	3,150	-	3,308	-
Autonegotiating 24-port Catalyst Switch (20 @ $750 ea.)	-	15,000	-	15,750	-	16,538	-
SMARTnet 8x5xNBD Modular Router (20 @ $160 ea.)	-	3,200	-	3,360	-	3,528	-
8x5xNBD Svc. 24-pot Autosense/nego. (20 @ $165 ea.)	-	3,300	-	3,465	-	3,638	-
RackMount System	-	20,000	-	10,000	-	10,500	-
PC Cabling and Supplies	-	5,000	-	5,250	-	5,513	-
Projection System [6]	-	25,000	-		-	30,000	-
Sub-total for SBIT Cisco Lab	-	393,700	36,000	325,735	37,800	372,022	99,690

Assumptions and explanations:

[1] The Game Development and Entrepreneurship specialization will have an annual enrollment capacity of up to 15 students. This specialization is expected to be a national elite program in game development. The remaining of the student enrollment is expected to be in the other two specializations in networking or information technology security.

[2] The annual DC Lab leasing cost is computed as follows: $500 per lab session for a total of 14 weeks and the BIT program will need to use the lab for an estimated of three times. In accordance with the DC Union regulations, the lab will be available for BIT program offerings after 6pm.

[3] The configurations of these PCs meet the Cisco Networking Academy requirements. The estimated cost of each PC workstation is $3,000, with a projected 30% of maintenance of the second year. There will be a bi-annual upgrade of all the PCs. An increase of 5% is expected for the bi-annual upgrade cost.

[4] Furniture for the PCs: estimated to be $1,200 each for 40 PCs and a replacement will occur in 2011 for $1,500 each.

[5] The budget for the Cisco equipment is an estimate based on a 50% education institutional discount. The increase is estimated at 5% bi-annually.

[6] The projection system consists of a podium equipped with VCR, document camera, PC workstation, laptop docking station, and a ceiling-mounted projection unit.

The proposed budget indicates that the BIT program will generate sufficient revenue to fund this Lab and its maintenances as well as bi-annual upgrades. The remodeling cost of the lab is considered as capital improvement fund from the University and, therefore, it is not included in this budget.

The SBIT proposes to convert six adjacent offices in the Trent Office area in the Business and IT building to make space for this Lab. It is important to have the additional lab facilities to support the projected BIT student enrollment. Without this additional lab, we will not be able to meet the demand of the student enrollment; consequently, we will be forced to limit our enrollment in order to maintain a quality program.

BUDGET

This Business Plan presents three budget scenarios for consideration.

   Scenario I: Projected Target Enrollment & Budget with Normal Growth
   Scenario II: Projected Target Enrollment & Budget with Enrollment Cap
   Scenario III: Projected Target Enrollment & Break-Even Budget

Assumptions:

1. The tuition is set at no increase in accordance with the current government policy. The calculation is based on a condition of freeze compensation.

2. The university receives a government grant of $4,490 (BIUs) for each full-time domestic student and $2,245 for each part-time domestic student. Full-time students are defined as ones taking six courses (18 credits) or more per year and part-time students are defined as ones taking fewer than six courses per year. The analysis assumes the government BIUs does not increase over the period. Any increase in the BIUs will increase the BIT's net revenue.

3. International student tuition annual increase is projected at 2%.

4. All salaries are computed at an annual increase rate of 5%.

5. Benefits rate is computed based on the following: Faculty/Staff (18.5%) and Teaching Assistant (11%).

6. This proposed budget does not include indirect charges by the University.

Scenario I: Projected Target Enrollment & Budget with Normal Growth

Projected Revenue

Year	Estimated Enrollment							Projected Tuition*		Projected Total Tuition		
	Domestic				International							
	Full-Time		Part-Time		Full-Time							
	New	Continuing	New	Continuing	New	Continuing	Total	Domestic	International	Domestic**	International	Total
2005	80	0	25	0	15	0	120	4,184	10,000	355,641	150,000	505,641
2006	100	72	31	23	20	14	259	4,184	10,200	764,627	336,600	1,101,227
2007	125	90	39	28	25	18	325	4,184	10,404	955,784	446,332	1,402,115
2008	156	113	49	35	33	23	409	4,184	10,612	1,194,730	591,836	1,786,566
2009	195	141	61	44	43	30	513	4,184	10,824	1,493,412	784,774	2,278,186
2010	244	176	76	55	56	39	645	4,184	11,041	1,866,765	1,040,611	2,907,376
2011	305	220	95	69	72	50	811	4,184	11,262	2,333,457	1,379,850	3,713,306

*Factors Assumed in Calculating Estimated Enrollment:

*Enrollment Increase is estimated at 25% (Domestic) & 30% (International) per year.   **Est. Part-time Cr. Hr/Yr: 6

  Attrition Rate is estimated at 10% (Domestic & International) per year.

  Part-time Students are projected taking 6 credits per year.

Projected Revenue vs. Estimated Expenses

	2005	2006	2007	2008	2009	2010	2011
Projected Tuition Revenue	505,641	1,101,227	1,402,115	1,786,566	2,278,186	2,907,376	3,713,306
BIU/Gov't Grant [1]	396,617	852,726	1,065,907	1,332,384	1,665,480	2,081,850	2,602,313
Total Revenue	902,257	1,953,953	2,468,023	3,118,950	3,943,667	4,989,226	6,315,619
Salaries							
Faculty [2]	360,000	663,000	995,400	1,360,170	1,758,929	2,194,875	2,792,619
Part-Time Faculty [3]	36,000	91,800	127,390	164,760	172,997	181,647	190,730
Teaching Asst [4]	135,000	330,750	545,788	729,377	820,551	919,018	1,085,619
Student Financial Asst [5]	15,000	17,250	19,838	22,813	26,235	30,170	34,696
Tech Support	52,500	55,125	111,381	116,950	179,798	188,788	198,227
Admin Staff [7]	42,500	44,625	91,856	96,449	148,272	155,685	163,469
Benefits	99,025	177,491	281,785	371,342	476,355	570,871	702,966
Sub-Total	740,025	1,380,041	2,173,437	2,861,861	3,583,136	4,241,055	5,168,326
Cisco Networking Academy Lab [8]		393,700	36,000	325,735	37,800	372,022	99,690
Rental [9]	42,000	44,100	46,305	48,620	51,051	53,604	56,284
Other Teaching Rsrc [10]	50,000	55,000	60,500	66,550	73,205	80,526	88,578
Miscellaneous [11]	50,000	52,500	55,125	57,881	60,775	63,814	67,005
Total Expenses	882,025	1,925,341	2,371,367	3,360,647	3,805,968	4,811,021	5,479,883
Net Revenue	20,232	28,612	96,656	(241,697)	137,699	178,205	835,736
Revenue Balance	20,232	48,844	145,499	(96,198)	41,501	219,707	1,055,442

BIU: $ 4,490.00

Explanations:

1. BIU/Government grant is calculated based on the full-time and part-time domestic student enrollment and BIU of $4,490.

2. The budget request for new faculty is indicated in the table below. Some of our existing faculty will also be teaching courses in the BIT program.

Year	New Faculty Positions	Total No. of Faculty
2005	4	4
2006	3	7
2007	3	10
2008	3	13
2009	3	16
2010	3	19
2011	4	23

3. Part-time faculty to teach courses mainly in the Cisco Networking Academy and game development curriculum.

4. The teaching assistant allocation allows hiring of at least 5 student assistants to provide faculty with instructional assistance labs as well as tutorial sessions. The proposed budget provides for following number of assistantships per year:

Year	New TA Positions
2005	15
2006	20
2007	20
2008	15
2009	5
2010	5
2011	10

5. A student financial assistance program is also included in the program. This scholarship will provide qualified students with tuitions, textbook costs, or other academic activities.

6. The School will use the tuition revenue to hire technical support staff to administer and set up the lab and tutorial sessions. This position will be necessary to operate and manage the BIT Cisco Networking Academy Lab. It is important to have a qualified person on hand to address problems efficiently and effectively as faculty resources are not available to do so. An additional position will be hired in 2007 and 2009 to

manage the lab as is expected that increasing usage of the lab is expected and more courses will require the use of lab facilities.

7. The School will hire an administrator to work as advisor and placement officer of the program in 2005 the Scenario I. This person is expected to have close contacts with the industry and to arrange field placement for the BIT students, in addition to be an advisor to all BIT students. An additional administrator will be hired in 2007 and 2009 respectively in order to meet the demand of the increasing student enrollment and administrative responsibilities.

8. The budget includes an allocation to fund a Cisco Networking Academy Lab. Details are presented in the previous section.

9. This is the allocation to rent the DC lab facilities. Details are presented in the previous section.

10. Other teaching resources include hiring of technical consultants, instructional materials, etc., to support the program. Furthermore, it is very important for our faculty to keep up-to-date of the latest in information technology. Therefore, a budget allocation of other teaching resources for conference attendance is included. This allows our faculty to attend any professional and technical conferences and seminars.

11. The miscellaneous line item is for purchasing required supplies to support the BIT program. This also includes a variety of operating costs. Most importantly in the early years of the program is advertising to promote the program. Advertising will use cost-efficient media to minimize the cost and maximize the effectiveness of the advertising. Advertising vehicles will include appropriate websites and trade publications. Other miscellaneous costs could include, but not limited to, travel to promote the program and for faculty to attend relevant conferences, engagement of technical consultants and part-time instructors to support the program, instructional aides, office and classroom supplies, acquisition of relevant journals and other publications, and other required cost.

Summary

The "Scenario I: Project Target Enrollment with Normal Growth" Budget clearly shows that there is net revenue in the first three years and there will be a deficit in each of the following three years. The deficit is due to the upgrade of the Cisco Networking Academy Lab and hiring of additional faculty and tech support staff. However, there will be sufficient revenue generated in 2011 to cover that deficit and the program will be financially sound with a healthy revenue balance for future development, or any unexpected changes in the budget as well as indirect charges of the university.

The following table shows the % ratio of projected revenue and estimated expenses.

Ratio of Projected Revenue vs. Estimated Expenses

	2005	2006	2007	2008	2009	2010	2011
Total Revenue	902,257	1,951,973	2,462,787	3,108,567	3,925,364	4,958,978	6,267,629
Salaries & Benefits	725,025	1,362,791	2,153,600	2,839,048	3,556,901	4,210,885	5,133,630
Relative to Revenue	80%	70%	87%	91%	91%	85%	82%
Expenses	157,000	562,550	217,768	521,599	249,066	600,136	346,253
Relative to Revenue	17%	29%	9%	17%	6%	12%	6%
Net Revenue	20,232	26,632	91,420	(252,080)	119,396	147,957	787,746
Relative to Revenue	2%	1%	4%	-8%	3%	3%	13%

Scenario II: Projected Target Enrollment & Budget with Enrollment Cap

Projected Revenue

Year	Estimated Enrollment							Projected Tuition*		Projected Total Tuition		
	Domestic				International							
	Full-Time		Part-Time		Full-Time						International	
	New	Continuing	New	Continuing	New	Continuing	Total	Domestic	International	Domestic**	International	Total
2005	80	0	25	0	15	0	120	4,184	10,000	355,641	150,000	505,641
2006	100	72	31	23	20	14	259	4,184	10,200	764,627	336,600	1,101,227
2007	125	90	39	28	25	18	325	4,184	10,404	955,784	446,332	1,402,115
2008	156	113	49	35	33	23	409	4,184	10,612	1,194,730	591,836	1,786,566
2009	125	141	39	44	30	30	408	4,184	10,824	1,180,838	642,088	1,822,926
2010	144	113	47	35	34	27	399	4,184	11,041	1,140,795	671,303	1,812,098
2011	129	129	38	42	31	31	400	4,184	11,262	1,149,294	691,409	1,840,703

*Factors Assumed in Calculating Estimated Enrollment:
*Enrollment Increase is estimated at 25% (Domestic) & 30% (International) per year.   **Est. Part-time Cr. Hr/Yr: 6
  Attrition Rate is estimated at 10% (Domestic & International) per year.
  Part-time Students are projected taking 6 credits per year.

Projected Revenue vs. Estimated Expenses

	2005	2006	2007	2008	2009	2010	2011
Projected Tuition Revenue	505,641	1,101,227	1,402,115	1,786,566	1,822,926	1,812,098	1,840,703
BIU/Gov't Grant [1]	396,617	852,726	1,065,907	1,332,384	1,316,891	1,273,336	1,281,053
Total Revenue	902,257	1,953,953	2,468,023	3,118,950	3,139,817	3,085,434	3,121,756
Salaries							
Faculty [2]	360,000	663,000	995,400	1,255,170	1,317,929	1,383,825	1,453,016
Part-Time Faculty [3]	30,000	61,500	95,575	118,954	124,901	131,147	137,704
Teaching Asst [4]	135,000	330,750	545,788	677,277	711,141	746,698	784,033
Student Financial Asst [5]	-	-	-	-	-	-	-
Tech Support	52,500	55,125	112,881	118,525	124,452	130,674	137,208
Admin Staff [7]	42,500	44,625	94,356	99,074	104,028	109,229	114,691
Benefits	99,025	177,491	282,525	346,963	364,311	382,526	401,653
Sub-Total	719,025	1,332,491	2,126,525	2,615,963	2,746,761	2,884,099	3,028,304
Cisco Networking Academy Lab [8]		393,700	36,000	325,735	37,800	372,022	99,690
Rental [9]	42,000	44,100	46,305	48,620	51,051	53,604	56,284
Other Teaching Rsrc [10]	35,000	38,500	42,350	46,585	51,244	56,368	62,005
Miscellaneous [11]	35,000	36,750	38,588	40,517	42,543	44,670	46,903
Total Expenses	831,025	1,845,541	2,289,767	3,077,420	2,929,398	3,410,763	3,293,186
Net Revenue	71,232	108,412	178,256	41,530	210,419	(325,328)	(171,429)
Revenue Balance	71,232	179,644	357,899	399,429	609,848	284,520	113,090

BIU: $ 4,490.00

Explanations:

1. The SBIT enrollment will be limited to a total of 1,500 students in both B. Comm. and BIT programs by 2008. The B. Comm. enrollment will be limited to 1,100 while the BIT program will have an enrollment limit of no more than 400. BIU/Government grant is calculated based on the full-time and part-time domestic student enrollment and BIU of $4,490.

2. The budget request for new faculty is indicated in the table below. Some of our existing faculty will also be teaching courses in the BIT program.

Year	New Faculty Positions	Total No. of Faculty
2005	4	4
2006	3	7
2007	3	10
2008	2	12
2009	0	12
2010	0	12
2011	0	12

3. Part-time faculty to teach courses mainly in the Cisco Networking Academy courses and the animation courses.

4. The teaching assistant allocation allows hiring of at least 5 student assistants to provide faculty with instructional assistance labs as well as tutorial sessions. The proposed budget provides for following number of assistantships per year.

Year	New TA Positions
2005	15
2006	20
2007	20
2008	15
2009	0
2010	0
2011	0

5. There will be no student financial assistance available in this enrollment and budget scenario in order to keep the expenses at the minimal while maintaining quality of the program.

6. The School will use the tuition revenue to hire technical support staff to administer and set up the lab and tutorial sessions. This position will be necessary to operate and manage the BIT Cisco Networking Academy Lab. It is important to have a qualified person on hand to address problems efficiently and effectively as faculty resources are not available to do so. Unlike the Budget Scenario I, only one position is requested in here.

7. The School will hire an administrator to work as advisor and placement officer of the program in 2006 under the Scenario I. This person is expected to have close contacts with the industry and to arrange field placement for the BIT students, in addition to be an advisor to all BIT students. Unlike the Budget Scenario I, no additional position is requested in here.

8. The budget includes an allocation to fund a Cisco Networking Academy Lab. Details are presented in the previous section.

9. This is the allocation to rent the DC lab facilities. Details are presented in the previous section.

10. Other teaching resources include hiring of technical consultants, instructional materials, etc., to support the program. Furthermore, it is very important for our faculty to keep up-to-date of the latest in information technology. Therefore, a budget allocation of other teaching resources for conference attendance is included. This allows our faculty to attend any professional and technical conferences and seminars.

11. The miscellaneous line item is for purchasing required supplies to support the BIT program. This also includes a variety of operating costs. Most importantly in the early years of the program is advertising to promote the program. Advertising will use cost-efficient media to minimize the cost and maximize the effectiveness of the advertising. Advertising vehicles will include appropriate websites and trade publications. Other miscellaneous costs could include, but not limited to, travel to promote the program and for faculty to attend relevant conferences, engagement of technical consultants and part-time instructors to support the program, instructional aides, office and classroom supplies, acquisition of relevant journals and other publications, and other required cost.

Summary

The "Scenario II: Projected Target Enrollment & Budget with Enrollment Cap" Budget clearly shows that there is net revenue in each year until year 2010. However, it is clear that this scenario generates sufficient revenue to cover the deficit in the last two years included in this budget. The deficit in this budget has decreased in 2011. It must also be noted that this budget is projected with the assumption on the tuition freeze for seven years. However, this tuition freeze policy is likely to change in a few years. Therefore, the with more tuition revenue, there might not be a deficit in 2010 and 2011.

The following table shows the % ratio of projected revenue and estimated expenses.

Ratio of Projected Revenue vs. Estimated Expenses

	2005	2006	2007	2008	2009	2010	2011
Total Revenue	902,257	1,953,953	2,468,023	3,118,950	3,139,817	3,085,434	3,121,756
Salaries & Benefits	719,025	1,332,491	2,126,525	2,615,963	2,746,761	2,884,099	3,028,304
Relative to Revenue	80%	68%	86%	84%	87%	93%	97%
Expenses	112,000	513,050	163,243	461,457	182,637	526,664	264,882
Relative to Revenue	12%	26%	7%	15%	6%	17%	8%
Net Revenue	71,232	108,412	178,256	41,530	210,419	(325,328)	(171,429)
Relative to Revenue	8%	6%	7%	1%	7%	-11%	-5%

The net revenue in 2009 is the highest as it will be the peek enrollment. The above table shows that the salaries and benefits are very low relative to the revenue. The net revenue will be less in the following year as the implementation of an enrollment cap is in place. The major expense, excluding the salaries and benefits, is the cost to set up and upgrade the Cisco Networking Academy Lab. Although the enrollment is being kept at a level in this scenario, this program still maintains its profitability. However, under this scenario, the net revenue is obviously less than the first scenario under normal enrollment growth. If the government insists of limiting the enrollment, this program will still be self-sustainable.

Scenario III: Projected Target Enrollment & Break-Even Budget

Projected Revenue

Year	Estimated Enrollment							Projected Tuition*		Projected Total Tuition		
	Domestic				International				International		International	
	Full-Time		Part-Time		Full-Time		Total	Domestic	International	Domestic**	International	Total
	New	Continuing	New	Continuing	New	Continuing						
2005	35	0	25	0	15	0	75	4,184	10,000	167,361	150,000	317,361
2006	44	32	31	23	20	14	162	4,184	10,200	359,825	336,600	696,425
2007	55	39	39	28	25	18	204	4,184	10,404	449,781	446,332	896,113
2008	68	49	49	35	33	23	257	4,184	10,612	562,227	591,836	1,154,062
2009	85	62	61	44	43	30	324	4,184	10,824	702,783	784,774	1,487,557
2010	107	77	76	55	56	39	409	4,184	11,041	878,479	1,040,611	1,919,090
2011	134	96	95	69	72	50	516	4,184	11,262	1,098,099	1,379,850	2,477,949

*Factors Assumed in Calculating Estimated Enrollment:

*Enrollment Increase is estimated at 25% (Domestic) & 30% (International) per year.   **Est. Part-time Cr. Hr/Yr: 6

  Attrition Rate is estimated at 10% (Domestic & International) per year.

  Part-time Students are projected taking 6 credits per year.

Projected Revenue vs. Estimated Expenses

	2005	2006	2007	2008	2009	2010	2011
Projected Tuition Revenue	317,361	696,425	896,113	1,154,062	1,487,557	1,919,090	2,477,949
BIU/Gov't Grant [1]	194,567	418,318	522,898	653,622	817,028	1,021,285	1,276,606
Total Revenue	511,927	1,114,743	1,419,011	1,807,685	2,304,585	2,940,375	3,754,555
Salaries							
Faculty [2]	270,000	473,500	696,675	941,509	1,209,084	1,501,538	1,942,615
Part-Time Faculty [3]	25,000	71,250	103,313	138,478	145,402	152,672	160,306
Teaching Asst [4]	81,000	132,300	188,540	197,967	207,865	275,699	410,134
Student Financial Asst [5]	-	-	-	-	-	-	-
Tech Support	52,500	55,125	57,881	60,775	63,814	67,005	70,355
Admin Staff [7]	-	45,000	47,250	49,613	52,093	54,698	57,433
Benefits	68,573	120,674	169,074	216,377	267,989	330,626	428,139
Sub-Total	497,073	897,849	1,262,732	1,604,719	1,946,247	2,382,238	3,068,982
Cisco Networking Academy Lab [8]	393,700	36,000	37,000	37,800	383,572	99,690	
Rental [9]	42,000	44,100	46,305	48,620	51,051	53,604	56,284
Other Teaching Rsrc [10]	20,000	22,000	24,200	26,620	29,282	42,210	71,431
Miscellaneous [11]	20,000	21,000	22,050	23,153	24,310	35,526	62,302
Total Expenses	579,073	1,378,649	1,391,287	1,740,111	2,088,690	2,897,150	3,358,689
Net Revenue	(67,145)	(263,905)	27,724	67,573	215,895	43,225	395,866
Revenue Balance	(67,145)	(331,051)	(303,327)	(235,754)	(19,859)	23,366	419,232

BIU: $ 4,490.00

Explanations:

1. This is a scenario for a break-even budget with a minimum of 35 students to begin in the first semester of the program offering. All the other factors, including estimated % increase and attrition remains the same as the other two scenarios. BIU/Government grant is calculated based on the full-time and part-time domestic student enrollment and BIU of $4,490.

2. The budget request for new faculty is indicated in the table below. Some of our existing faculty will also be teaching courses in the BIT program. With the less number of students as compared to the other two scenarios, this budget presents with a lower number of faculty position requests.

Year	New Faculty Positions	Total No. of Faculty
2005	3	3
2006	2	5
2007	2	7
2008	2	9
2009	2	11
2010	2	13
2011	3	16

3. Part-time faculty to teach courses mainly in the Cisco Networking Academy and game development curriculum.

4. The teaching assistant allocation allows hiring of at least 5 student assistants to provide faculty with instructional assistance labs as well as tutorial sessions. The proposed budget provides for following number of assistantships per year.

Year	New TA Positions
2005	9
2006	5
2007	5
2008	0
2009	0
2010	0
2011	10

5. Due to the anticipated less net revenue generated from this budget scenario, the student financial assistance will not be made available to students.

6. The School will use the tuition revenue to hire technical support staff to administer and set up the lab and tutorial sessions. This position will be necessary to operate and manage the BIT Cisco Networking Academy Lab. It is important to have a qualified person on hand to address problems efficiently and effectively as faculty resources are not available to do so. Unlike the Budget Scenario 1, there is only one position requested in this budget scenario.

7. The School will hire one administrator to work as advisor and placement officer of the program in 2006 under the Scenario I. This person is expected to have close contacts with the industry and to arrange field placement for the BIT students, in addition to be an advisor to all BIT students. Unlike the Budget Scenario 1, only one position is being requested in here.

8. The budget includes an allocation to fund a Cisco Networking Academy Lab. Details are presented in the previous section. There will be no upgrade of equipment in 2007 in this break-even budget which only consists of an allocation to cover basic maintenance and minor upgrades. This will have an impact on the quality of the Cisco program as it is to prepare our students for the Cisco certification exam. Without the proper equipment setup, our students may not be well prepared for the exam.

9. This is the allocation to rent the DC lab facilities. Details are presented in the previous section.

10. Other teaching resources include hiring of technical consultants, instructional materials, etc., to support the program. Furthermore, it is very important for our faculty to keep up-to-date of the latest in information technology. Therefore, a budget allocation of other teaching resources for conference attendance is included. This allows our faculty to attend any professional and technical conferences and seminars.

11. The miscellaneous line item is for purchasing required supplies to support the BIT program. This also includes a variety of operating costs. Most importantly in the early years of the program is advertising to promote the program. Advertising will use cost-efficient media to minimize the cost and maximize the effectiveness of the advertising. Advertising vehicles will include appropriate websites and trade publications. Other miscellaneous costs could include, but not limited to, travel to promote the program and for faculty to attend relevant conferences, engagement of technical consultants and part-time instructors to support the program, instructional aides, office and classroom supplies, acquisition of relevant journals and other publications, and other required cost.

Summary

The "Scenario III: Projected Target Enrollment & Break-Even Budget" shows the minimal enrollment for a break-even budget. It is projected that if there are 35 students initially enrolled in the program, with the normal enrollment growth of 25% and attrition rate of 10%, the budget will be in break-even state by 2010. Beginning 2011, the program

will even expect to generate net revenue. However, this break-even budget only provides a very low number of faculty positions and support staff position. The Lab facilities budget remains the same as the other two scenarios as this is the critical part of the program. Therefore, numbers of faculty and staff positions are reduced accordingly. The immediate impact will be heavy teaching load and large class sizes. In addition, there is no longer a budget line for student financial assistance.

The following table shows the % ratio of projected revenue and estimated expenses.

Ratio of Projected Revenue vs. Estimated Expenses

	2005	2006	2007	2008	2009	2010	2011
Total Revenue	511,927	1,114,743	1,419,011	1,807,685	2,304,585	2,940,375	3,754,555
Salaries & Benefits	497,073	897,849	1,262,732	1,604,719	1,946,247	2,382,238	3,068,982
Relative to Revenue	97%	81%	89%	89%	84%	81%	82%
Expenses	82,000	480,800	128,555	135,393	142,443	514,912	289,707
Relative to Revenue	16%	43%	9%	7%	6%	18%	8%
Net Revenue	(67,145)	(263,905)	27,724	67,573	215,895	43,225	395,866
Relative to Revenue	-13%	-24%	2%	4%	9%	1%	11%

In this scenario, the salaries & benefits ratio relative to revenue is decreasing after the break-even state in 2010.

Conclusion

The BIT program is a unique program being offered to meet the market demands and to prepare the right graduates for the IT and game industry. This is the opportunity for UOIT to be a leader in offering IT academic degree programs. With the specialization in the fields of networking, IT security, and game development, the faculty also recognizes the potential in obtaining research funding and grants, as well as corporate supports with in-kinds or monetary contributions to the program.