November 16, 2012

Vice Chancellor Susan Jeffords
University of Washington, Bothell
Box 358522

Dear Susan:

Based upon the recommendations of the Executive Council, the General Faculty Organization has recommended approval of a Bachelor of Arts degree in Interactive Media Design. A copy of the approval is attached.

I am writing to inform you that the Computing and Software Systems program and the School of Interdisciplinary Arts and Sciences are authorized to specify these requirements beginning autumn quarter 2013.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The *General Catalog* website will be updated accordingly by the Registrar's Office.

Sincerely yours,

Michael K. Young
President

Enclosure

cc: Dr. Bill Erdly (with enclosure)
        Mr. Robert Corbett (with enclosure)
        Dr. Deborah H. Wiegand (with enclosure)
        Ms. Virjean Edwards (with enclosure BIMD-20120503)

UNIVERSITY OF WASHINGTON
CREATING AND CHANGING UNDERGRADUATE ACADEMIC PROGRAMS

MAY 15 2012

After college/school/campus review, send a signed original and 8 copies to the Curriculum Office/FCAS, Box 355850.

For information about when and how to use this form: http://depts.washington.edu/uwcr/1503instructions.pdf

College/Campus UW Bothell	**Department/Unit** ~~Business~~ *Interdisciplinary Arts & Sciences & Computing & Software Systems*	**Date** May 3, 2012

New Programs

☐ Leading to a Bachelor of _____ in _____ degree.

☒ Leading to a Bachelor of <u>Arts</u> degree with a major in <u>Interactive Media Design</u>.

☐ Leading to a _____ Option within the existing major in _____.

☐ Leading to a minor in _____

Changes to Existing Programs

☐ New Admission Requirements for the Major in _____ within the Bachelor of _____.

☐ Revised Admission Requirements for the Major in _____ within the Bachelor of _____.

☐ Revised Program Requirements for the Major in _____ within the Bachelor of _____.

☐ Revised Requirements for the Option in _____ within the major in _____.

☐ Revised Requirements for the Minor in _____.

Other Changes

☐ Change name of program from _____ to _____.
☐ New or Revised Continuation Policy for _____.
☐ Eliminate program in _____.

Proposed Effective Date: **Quarter:** ☒ Autumn ☐ Winter ☐ Spring ☐ Summer **Year: 20 13**

Contact Person: Bill Erdly	Phone: 2-5370	Email: berdly@uwb.edu	Box: 358534

EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE

For new program, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support and departmental handouts. (*Use additional pages if necessary*).

Proposal Attached

OTHER DEPARTMENTS AFFECTED

List all departments/units/ or co-accredited programs affected by your new program or changes to your existing program and acquire the signature of the chair/director of each department/unit listed. Attach additional page(s) if necessary. *See online instructions.

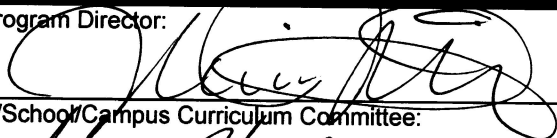| Department/Unit:	Chair/Program Director:	Date:
Department/Unit:	Chair/Program Director	Date:

Catalog Copy as currently written. Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.

Reflecting requested changes (Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications).
Please note: all copy will be edited to reflect uniform style in the General Catalog.

Chair/Program Director: (CSS Program)	Date: 5/9/12
College/School/Campus Curriculum Committee: 5/9/12	Date:
Dean/Vice Chancellor: 5.9-12	Date:
Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:	Date: 5-10-12

| Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair: | Date: 10-15-2... |

1 of 2 signature sheets

CATALOG COPY

Catalog Copy as currently written. Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.

PROPOSED CATALOG COPY

Reflecting requested changes (Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications). **Please note:** all copy will be edited to reflect uniform style in the General Catalog.

APPROVALS

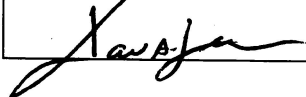|	Date:
Chair/Program Director:	J-S-1R
College/School/Campus Curriculum Committee:	Date:
Dean/Vice Chancellor:	Date:
Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:	Date:

POST TRI-CAMPUS APPROVAL (when needed)

	Date:
Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:	

2 of 2 signature sheets

UW

UNIVERSITY OF WASHINGTON

BOTHELL
Office of the General Faculty Organization

To: Kenyon Chan, Chancellor

From: Pamela Joseph, Chair, GFO Executive Council

Copy: Susan Jeffords, Vice Chancellor for Academic Affairs,
       Steve Holland, Chair, GFO

RE: GFO Executive Council Endorsement to Forward the Proposal for a BA in Interactive
       Media Design to the UW Registrar for Tri-campus Review.

Date: May 3, 2012

  On Tuesday, May 1, 2012, the General Faculty Organization's Executive Council endorsed forwarding the proposal for a BA in Interactive Media Design to the UW Registrar for Tri-campus Review.

UW

UNIVERSITY OF WASHINGTON

BOTHELL
Office of the General Faculty Organization

GFO Executive Council Motion:

The General Faculty Organization approves the proposal for a BA in Interactive Media and Design with two stipulations:
1. The first set of majors will be offered Autumn 2013
2. The curriculum and budget will be refined by the Academic Oversight Committee over the next year.

The motion was seconded, discussion followed.

Laverty called the question on the approval of the proposal with the amendments. The motion carried 8 yes, 1 oppose.

The General Faculty Organization's Executive Council endorses forwarding the proposal for a BA in Interactive Media and Design to the UW Registrar for Tri-campus review. The motion carried unanimously.

Approved by the Executive Council of the General Faculty Organization on

Date _May 3, 2012_

Chancellor's Approval:

☑ I approve this action.

☐ I do not approve this action (please include an explanation).

Signed _[signature]_

Date _May 4, 2012_

Bachelor of Arts
In
Interactive Media Design

A Proposal Submitted by:

University of Washington Bothell

April 2012

Version 3.0

I. TABLE OF CONTENTS

For information and questions regarding the IMD degree, please contact:

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II.   Introduction

"Design should do the same thing in everyday life that art does when encountered: amaze us, scare us or delight us, but certainly open us to new worlds within our daily existence." – Aaron Betsky, Director, Cincinnati Art Museum

The University of Washington Bothell proposes to offer a new degree program in Interactive Media Design (IMD). The degree will be a Bachelor of Arts with a planned start date for the program of fall 2012. The UW Bothell IMD program will be distinguished from other digital technology design programs by its expansive understanding of the processes and methods involved in designing, creating and evaluating the impact of next-generation, technology-based media applications. It is distinguished by its broad, interdisciplinary approach to the fundamentals of interactive media design, and by its focus on the studio experience as a means of challenging students to develop creative solutions to complex, real-world problems through design. Students will also identify and study a specialty knowledge area that will serve as a basis for their final capstone studio experience.

A.   Degree Program Description & Rationale

"Understanding is important, but it's only the beginning. It's got to lead to a change in behavior. The question interaction designers need to ask ourselves, then, is this: how can our work help people to not only understand the change needed, but also to begin making it?" – Tom Igoe, Tisch NYU

The IMD program perceives media design as an integrative hub of the burgeoning world of interactivity. It provides students with holistic perspectives, relevant foundations, and synthesized expertise to enable them to become innovative content creators in the interactive media culture, with its large-scale transition from third person vicarious to first person engaged and exploratory point of view. By focusing on interdisciplinary foundations, media development processes and techniques, team-oriented design principles, and technical principals of interactive media design, the IMD Program cultivates creativity of individuals and enables them to execute their imaginative visions in the dynamic and rapidly expanding world of interactive media.

It is no coincidence that the East Side is home to a plethora of enterprise as well as consumer centric technology companies. Recognizing this extraordinary trend, UW Bothell proposes to harness the abundant local industry talent to counsel, instruct, and otherwise support the program to blend academic excellence with real world perspective and project opportunities.

Graduates of the IMD program will be designers of interactive media content with application in diverse areas embracing education, engineering, sciences, game design, social media, and emerging forms of interactivity. The program will provide students an opportunity to order the learning experience to their particularized specialty area interests. Graduates will also be uniquely qualified to provide leadership in the realization of innovative and creative applications through informed collaboration with technical, business, research and production members of their workplace teams. Students will use a variety of qualitative and quantitative techniques to inform design and impact.

B.   Interactive Media Design Degree Program

The Interactive Media Design degree program is fee-based with a projected enrollment of 24 - 30 students per academic year – with the potential for additional student cohorts in year 3 or 4. It is situated as an upper-division program that will accept students entering as freshman to UW Bothell or transferring from community colleges and other four year institutions. Specialized degree transfer agreements will be completed with community colleges who may offer media-related Associate of Arts/Technology two-year degrees.

The mission and intent of the IMD program is to seek to provide a diverse range of students with theory, practice and knowledge necessary to succeed and thrive in a highly competitive global, digital, service driven economy. The program stresses inquiry, teamwork, collaboration, communication, creativity, adaptability, entrepreneurialism and a dedication to lifelong learning. This degree accomplishes its mission through five curricular components that serve very specific functions in the overall design of the curriculum: 1) IMD program-specific prerequisites; 2) IMD advanced courses; 3) the junior-level Studio Elements sequence; 4) the senior-level Integrative Studio; and 5) the student-select Specialty Area requirement. The program is detailed in section V of the proposal that covers the IMD proposed curriculum.

C.   Relationship to UW Bothell Institutional Priorities

As designers of interactions broaden their perspective and take a higher level view of the problem, they simultaneously make another transition: they stop solving interaction design problems and begin solving problems with design… In this capacity designers of interactions bring their design skills to bear on truly complex, systemic problems—broad in scale and scope—and have the opportunity to affect truly profound and lasting change." – Steve Baty, Vice President, IxDA

Rapid growth in enrollment numbers at UW Bothell encourages academic development to keep pace with the demands of new faculty and students. In fall of 2010 we welcomed a freshman class of 400 plus students and over twenty new faculty members; in Fall of 2011 we welcomed a freshman class of over 500+ -- with an anticipated 650+ freshman joining UWB in fall of 2012. Thus, to realize our mission we are developing programs that build upon our unique strengths while enhancing our academic range and vision.

1.   Mission

The University of Washington Bothell mission statement includes, "We provide access to excellence in higher education through innovative and creative curricula, interdisciplinary teaching and research, and a dynamic community of multicultural learning." Additionally, the mission specifies that UW Bothell will "Encourage and support collaborative, interdisciplinary, and cross-program initiatives." The IMD degree is innovative and interdisciplinary in focus. It will be the first degree program at UW Bothell to have a faculty advisory board (the Academic Oversight Committee – or AOS) with members representing multiple programs and schools. The degree also reinforces UW Bothell's singular identity in translating community and regional demand into quality curricula that complements student demand. UW Bothell mission ideals are reinforced in the IMD program mission and goals outlined for the proposed degree.

2.   Strategic Plan

UW Bothell's priorities plan for 2008-2020, *The 21ˢᵗ Century Campus Initiative*, addresses our state's need to expand access to higher education by outlining a clear and compelling vision for how we intend to grow in both size and excellence. Our overarching priority is to "serve the citizens of the State of Washington by providing access to a premier university education," with particular emphasis on developing degree programs that respond to the economic development needs of the state and region. The Campus Initiative outlines seven priorities: growth, diversity, resourcefulness, student centered, innovation, community and sustainability. The following is incorporated under **growth**: *Develop new majors and graduate programs in high-demand fields and foundational studies to serve student, employer and regional needs.* The fields identified for new or continued development are:
*   Science, Technology, Engineering and Math (STEM); and Health
*   Social Sciences
*   Visual, Literary and Performing Arts
*   Foreign Language and Culture

The proposed IMD degree responds to the priority of growth by combining education in science & technology, visual, literary and performing arts, humanities, culture and business to prepare students for a diverse range of careers creating, managing, supporting, marketing and integrating interactive media, its products and services. In addition to being innovative and interdisciplinary, the IMD program will graduate students who will develop a portfolio of work that will equip them to find entry level jobs across the high tech sector and migrate rapidly to management level and leadership positions.

III.   Need for Program

"Design creates stories, and stories create memorable experiences, and great experiences have this innate ability to change the way in which we view our world." - Christian Saylor, Senior UX Design Specialist, Universal Mind

University of Washington Bothell is uniquely positioned and qualified to offer an IMD degree program that meets demand for IMD professionals in Washington and across the broader technology industry for several reasons: the region is home to several of the world's largest consumer technology and gaming companies, including Microsoft and Nintendo -- and a host of expanding social media/application companies (such as Google, Zynga, Arenanet and many others). It is important to note that Microsoft and Nintendo console systems/interfaces represent two thirds of console revenues in the world.

The region is also home to many of the leading online game publishers: Real Networks, Wild Tangent, Valve, Bigfish Games, and Amazon to name a few – with many others moving into our region. Sony, Warner Bros, Electronic Arts, and other leading game publishers fund game studios in this region to produce some of the largest scale most ambitious Massive Multiplayer Game initiatives undertaken anywhere on Earth. Sony's 80m+ MMOG "The Agency" is being developed in downtown Kirkland. Leading Asian online game publishers like, WeMade, Shanda and NCsoft also operate studios in this region and are increasingly investing in small startup studios in this area such as Runic. The Entertainment Software Association (ESA) reports that Washington State is in the top five in the nation in terms of economic output in the industry (see http://www.theesa.com/facts/econdata.asp).

A.   Interactive Media Job Types and Demand

"As companies struggle to stay relevant in today's increasingly tech-savvy world, many are turning to interactive media designers to help bring them into the 21st century." - http://www.guidetoartschools.com

Interactive Media as an industry is comprised of various areas of work. Often, due to the fluid, dynamic nature of this sector, as well as the high pace of technological change, job titles and roles tend to be less fixed than in other sectors. In small companies several roles may be undertaken by one employee, and in others, employees may collaborate on some duties and not others. Outlined in the diagram below are the principal roles associated with Interactive Media - arranged to demonstrate instances where responsibilities may overlap.[1] The colors correspond to the level of experience required for each position.

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[1] http://www.skillset.org/careers/

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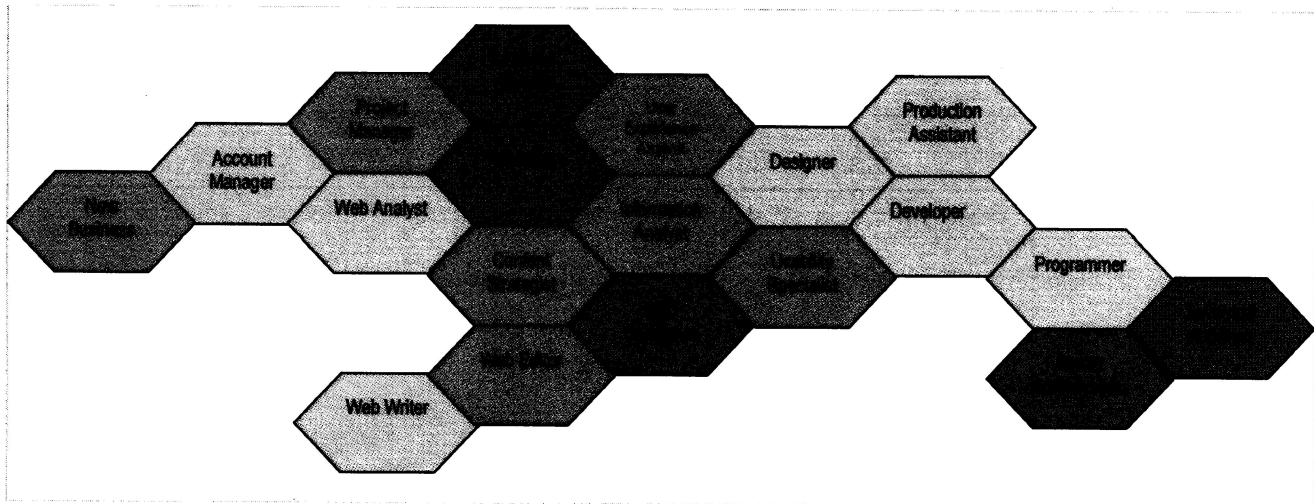
Figure 1: Associated Areas of Work
This figure depicts the wide array of specialty areas and job positions within interactive media. IMD students will understand and complete projects that leverage core theory, process and application of the IMD learning goals.

Figure 2: Legend for Level of skills and Experience Requirements for Different Job Types
As shown in figure 1, the blue boxes indicate entry-level positions; the orange boxes depict junior level jobs; green is for mid-level/management skills; and purple depict senior-level positions.

1.   National Demand

"What kinds of jobs get outsourced? In a nutshell, jobs that satisfy clearly defined functions in the context of mature sectors with intense competition. Functions that require constant adjustment to changing consumer tastes or client demands are poor candidates for outsourcing. For example, it's often efficient to outsource the writing of blocks of software code but it isn't efficient to outsource the process of defining the software's features, design and documentation."[2]

As demonstrated in figure 1 above, the field of Interactive Media Design includes various occupations. Demand is best demonstrated by including information from several occupations associated with multi media and information technology. By looking at positions that require similar education and skills, a list of related occupations can be compiled. According to O-Net, the outlook for these positions is bright.[3] The outlook for *video game designers is reported as being bright but the data is folded into the category of, "all other computer specialists" for both national and state reporting.

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[2] http://goldsea.com/Text/index.php?id=2288.
[3] http://www.onetonline.org/find/quick?s=interactive+media+design.

8

United States	Employment 2008	Employment 2018	Percent Change	Job Openings
Multi-media artists and animators	79,000	90,200	14%	2,890
All other computer specialists*	209,300	236,800	13%	7,260
All other media and communication workers	34,300	37,900	10%	1,170
Technical writers	48,900	57,800	18%	1,680
Operations research analysts	63,000	76,900	22%	3,220
Cartographers and Photogrammetrists	12,300	15,600	27%	640
Graphic designers	286,100	323,100	13%	12,480
Commercial and industrial designers	44,300	48,300	9%	1,760

Table 1: Various Occupations from Career One Stop[4]

The following table reports information for positions with STEM associations that are also related to IMD.

Occupation	Employment, 2008		Percent Change, 2008-18
	Number	Percent	
All Occupations	263.7	100	30
Management, business, and financial occupations	49.8	18.9	29.8
General and operations managers	5.5	2.1	16.4
Computer and information systems managers	9.3	3.5	30.3
Accountants and auditors	4.2	1.6	32.8
Professional and related occupations	159.2	60.4	31.4
Programmers	18.3	6.9	2.7
Software engineers	65.2	24.7	29.3
Computer support specialists	18.9	7.2	42.2
Computer systems analysts	11.4	4.3	42.2

Table 2: STEM employment related to Interactive Media Design

2.   Washington State

The region already has 14 percent of the global market share of the $42 billion interactive media industry. But it faces stiff competition from Asia and needs to stay competitive. (Flash, 2008)

It is essential now more than ever that Washington supports and strengthen its technology sector. Labor Market Economic Analysis (LMEA) is a branch of Washington State's Employment Security Department (ESD) that gathers, analyzes, and publishes information about the state's labor market. LMEA reports show that information technology occupations are recession proof. In job vacancies by major occupations both Software/Computer and Arts/Design

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[4] http://www.careeronestop.org/.

occupations are listed in the top twenty occupations. Positions also require education beyond high school including bacculaureate degrees with 94% of the openings in Software/Computer occupations requiring more education than a high school degree and 30% in Arts/Design occupations.[5]

Industry growth supports the need for more graduates. In 2006, Washington ranked second nationally in computer and video game personnel, with 9,284 direct and indirect employees. The industry added $497.2 million to the state economy, which equated to a growth rate of 14.4 percent, more than double Washington's overall growth.[6] Enterprise Seattle has identified over 150 Interactive Media companies and divisions dedicated to the Interactive Media Industry in our state with the largest employers located in King County. Enterprise Seattle also asserts, "… attracting this talent is the number one challenge facing these companies today."[7]

This is an emerging field; thus, an identical industry classification is not available. Applicable Workforce Explorer occupations include: Multi-Media Artists, Computer Software Engineers, and Computer Specialists Other. Workforce Explorer designates all of these occupations as, **"In Demand"**[8] The demand is documented in the following table which represents information technology.

	Snohomish	King	State
Estimated Employment (2006):	1021	19779	24922
Average Annual Long-Term Growth Rate (2006 - 2016):	2.7	3.1	2.9
Average Annual Short-Term Growth Rate (2nd Qrt. 2007 - 2nd Qrt. 2009):	3.5	2.6	2.4
Average Annual Total Openings (2006 - 2016):	49	1046	1246
Unemployment Ratio (2007):	0	0	0
Statewide Vacancies (April 2008):	1388	1388	1388

Table 3: Workforce Explorer – Information Technology Occupations

Queries in Workforce Explorer on Interactive Media Design produce the following occupations in Table 3. Growth is projected for the state in the listed *similar* occupations. Also, according to O-Net, entry level positions require bachelor's level education.

[5] Roubinchtein, Alex & Mary Ayala (2008), "Identifying Washington's Recession-Resistant Industries" in *Washington Labor Market Quarterly Review*, LMEA, 32(4), p15.
[6] *Industry Facts* (2009), Entertainment Software Association: www.theesa.com.facts/index. Accessed 03/2008.
[7] Chris Mefford, et al, (November 2007), *Interactive Media Study*, enterpriseSeattle, p10.
[8] WA State Employment Security Department: Workforce Explorer Washington http://www.workforceexplorer.com/cgi/databrowsing/occExplorerQSSelection.asp, Accessed 04/2009.

Employment Projections Washington State	Employment Projections		Change	% Change	Annual Avg Openings
	2008	2018			
Computer Specialists, All Other –	8,434	9,036	602	7.1	248
Multi-Media Artists and Animators	4,198	4,976	778	18.5	179
Software Applications	25,003	30,239	5,236	20.9	756

Table 4: Similar Occupations to IMD

3.   Regional and Community Demand

The Bothell Technology Corridor has been designated since 2007 as an Innovation Partnership Zone (IPZ) by Governor Chris Gregoire, joining ten other zones designated in the state as geographic areas that promote and develop the state's regional economies. Areas designated as Innovation Partnership Zones receive special access to state funding and resources. Designations last for four years and then a designee must reapply.[9] UW Bothell is identified as an IPZ partner and is doing its part by developing degree programs that are responsive to regional demand.

EnterpriseSeattle has identified what it terms as the Interactive Media cluster which includes Seattle, Bellevue, Kirkland and Redmond. Based on input from both public and private sectors, the Washington Interactive Network (WIN) was formed in 2004 to promote and grow the interactive media industry in Washington State due to recognized potential for growth in the Puget Sound region. WIN proposed four objectives that were undergirded by solid implementation strategies. The objectives are:
1. To promote the region as a major center for interactive media;
2. To nurture and create opportunities for entrepreneurial and expanding businesses;
3. To develop and recruit talent to WA; and
4. To educate government about the interactive media business.

WIN includes **education** as a key strategy and notes: "As with many technology-based clusters, workforce is a huge issue. There are simply not enough employees who have the experience to fill the jobs that are open."[10] Hence, appropriate education is considered to be essential in achieving the listed objectives. The proposed degree is an opportune response to a critical need that will launch an innovative discipline from which the region and state will benefit.

B.   Student Demand

"Enough confidence to believe you can solve any design problem and enough humility to understand that most of your initial ideas are probably bad. Enough humility to listen to ideas from other people that may be better than your own and enough confidence to understand that going with other people's ideas does not diminish your value as a designer. True concern for the comfort and happiness of other people, including your users and your teammates." Larry Tesler

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[9] Joyce Goedeke, (October 2007), Municipal Research & Services Center of WA. *Bothell Technology Corridor Designated as Innovation Partnership Zone by Governor Chris Gregoire.* http://www.mrsc.org/GovDocs/B67InnoZoneDes.pdf. Accessed March, 2009.

[10] Washington Interactive Network (March 2009), http://www.washingtoninteractivenetwork.org.

Demand for a degree program with a focus on interactive and digital media has been acknowledged in four ways on campus: 1) enrollment in courses with IMD content, 2) informal surveys, 3) recruitment and advising reports, & 4) Center for Serious Play (CSP).

1.   Course Enrollment

Current course offerings exist in BUS, CSS, IAS, and S & T that include components of gaming, digital media, and narrative and interactive design:

- CSS 385: Introduction to Game Development: Examines fundamental issues in designing and developing games.
- CSS 490: Theory of Game Design: Explores contemporary and advanced theories that explain why people play games – and determines gameplay mechanisms that are built on these foundations
- CSS 390: Multimedia Media Worlds: transmedia property represents the integration of narrative and entertainment experiences across a range of different media platforms.
- BIS 343(IAS): Media Production Workshop: Hands-on experience in communicative practice and the production of media. Combines production and theory.
- B BUS: 476 New Technology and Future Markets: The course objective is to help managers critically analyze the potential impacts of upcoming "leading edge" technologies on their industry sector.
- BST 310 Mathematical Game Theory: Covers mathematical aspects of Game Theory, including symmetric and asymmetric games, mixed and pure strategies, equilibria, and strategic moves. Examines examples from several disciplines including anthropology, philosophy, business, social psychology, and biology
- BST 322 Exploration of Consciousness: Investigates the impact of thoughts and emotions on brain functioning, biological plasticity, and psychological development.

Students select a complement of courses to address their interests, but without a degree or minor the work is un-transcripted to acknowledge the focus. Due to high interest these courses are consistently oversubscribed.

2.   Surveys

A practice with degree ideas is to construct informational surveys to determine if visitors to the UWB website are seeking information for particular degrees. The surveys are available to existing students as well as site visitors. The surveys can be accessed once by each participant.

- Degree Interest Survey is a list of thirteen (13) possible degrees and the survey question on choice of preferred degree includes fifteen (15) possible responses. The survey was administered February 10 2009 to May 1, 2010. There were a total 176 total respondents. Of this number 19% of the respondents expressed interest in the degree.
- A survey specific to the Interactive Media Design Degree was also made available February 10, 2009. As of January 1, 2011 there are 92 respondents to this survey: 85% of the respondents were interested in the degree and 68% showed a preference for the degree to be situated at UW Bothell. **(Appendix B)**
- UW Professional and Continuing Education has conducted a survey to assess program interest in terms of being self-sustaining. A summary of this survey is attached. **(Appendix C)**
- The University of Washington Bothell maintains a list of student inquiries about potential degree offerings. At this time there are over 1800 inquiries from students indicating interest in this field.

3.   Recruitment & Advising

The PNOI for the degree was approved by the HEC Board in January 2010. The degree is listed as a possible degree pending approval. UWB Recruiters and Advisors report that there is very strong interest in this degree expressed by potential students. Advising also reports that enrollment in classes with IMD content is rapid and reaches maximum enrollment within the first week of class registration each quarter. Additionally, during our advisors open house events, advisors from community colleges, Everett, Edmonds and Bellevue CCs in particular, also report significant interest in the proposed degree. More recent work has been done to examine articulation agreements with local community colleges for their media-related programs. The enthusiasm for this degree is quite high – and several colleges have indicated

their desire to make modifications to their two-year programs that will make entry into the proposed IMD degree program more seamless.

4.   Center for Serious Play (CSP) at UW Bothell

The Center for Serious Play (CSP) was launched in December 2009. It has offered weekly workshops led by industry leaders and it has hosted interdisciplinary activities contributed by IAS and the Business Program. The Center has had immediate success in offering workshops and activities for students and community members. The Center's Advisory Board is comprised of regional and national educators as well as noted industry experts.(**Appendix D**) CSP provides a venue for undergraduate and graduate students to collaborate with each other, faculty, and industry professionals in the exploration and creation of intellectual properties and narrative structures.

This Center will enhance and encourage students to work together solving today's problems along with finding ways to create and innovate new ideas and ways of thinking. The Center will foster students to understand the design research and innovation in the development of new products, services and processes in support of the IMD degree.

As UWB develops other cent5ers, the IMD degree program will work them where appropriate. Centers related to entrepreneurship, the arts, education/learning, performance/theater, sciences, computing/data visualization and others will be prime candidates for collaborative work.

IV.   Support for the Statewide Master Plan

The Higher Education Board outlines two primary goals in its strategic plan:

   Goal 1: We will create a high-quality higher education system that provides expanded opportunity for more Washingtonians to complete postsecondary degrees, certificates, and apprenticeships.

   Goal 2: We will create a higher education system that drives greater economic prosperity, innovation and opportunity.

UW Bothell's charge is to provide educational opportunity and increase access for the region and community. We structure programs with the goal of incorporating flexibility and support for our students, particularly those who are non-traditional or from underserved populations.

The State and Regional Needs Assessment (SRNA) also holds that Washington is a leader in innovative and technology-based industries but we are not producing enough graduates; thus, the industry is forced to look outside the state for talent.[11] It also describes a critical need for promoting student enrollment in STEM fields noting, "It is critical that the state's investment in the expansion of enrollments in high demand programs of study must be maintained, along with efforts to improve the pipeline of interested and prepared students. The SRNA and the Strategic Master Plan both show that the gap between the baccalaureate degree production in information technology-related fields and actual workforce demand is increasing.[12]

Translation of Inteactive Media into specific job classes is hampered by the fact that the discipline is new and has cross-over into several occupations and industries. Nonetheless, the Interactive Media Design degree will produce graduates who will fit in at least five of the demand areas listed: 1)Research/technical, 2) Editors/writers/performers, 3) Computer Science, 4)Software engineering, and 5) Business/management (especially in technology). The HEC Board's Enrollment and Degree Trends and Goals report documents that employer demand exceeds the workforce supply for the State.[13]

The Interactive Digital Media industry is identified as one of the rapidly growing industries within the state and the Sno-King region in particular. This proposed BA in Interactive Media Design will provide students with the necessary education and experience to meet HEC Board identified needs.

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[11] *State and Regional Needs Assessment Report* (February, 2006), Washington Higher Education Coordinating Board, p.8.

[12] *Strategic Master Plan for Higher Education in Washington,* (February 2006)Washington Higher Education Coordinating Board.

[13] *Enrollment and Degree Trends and Goals,* (July 2007), Washington Higher Education Coordination Board, p.8.

The program will also increase the number of spaces available to students transferring from two year institutions with an interest in Interactive Media. The State Board of Technical and Community Colleges (SBTCC) identified digital media and information technology as areas where students and industry need additional or broadened pathways.[14] WSBTCC data also indicates that there are more community college graduates than available spaces.[15] Also, the SBTCC report entitled, "Baccalaureate Enrollment Growth Needed to Meet Educational Needs of Technical Associate Degree Graduates," lists one institution as a pathway for digital arts transfers – Henry Cogswell- which is no longer in the region. Thus, the proposed Interactive Media Design program would create a pathway for AS-T and AAS-T program transfers in the region and state.

Comparison of Current Supply with Future Demand for Baccalaureate and Graduate Degrees

■ Current Average Annual Supply by Washington Institutions, 2004-2006

■ Additional Supply Needed to Meet Average Annual Demand, 2011-2016

Category	Current	Additional
Research, scientists, technical	1,655	280
Human/protective service professionals	1,850	498
Editors/writers/performers	1,359	607
Medical professionals	2,493	1,134
Computer science	2,052	2,973
Engineering/software enginr/architecture	1,292	1,148
Business and management	7,805	304

-   1,500   3,000   4,500   6,000   7,500

Table 5: WA HECB

V.   Relationship to Other Programs

The proposed UW Bothell Interactive Media program is distinct from other related degree programs in several key ways. The degree emphasizes leadership rather than just technology or creativity. This structure lends itself to generating graduates who can ultimately visualize and manage the entire technical, creative, and promotional scope of generating complex technology products and services. Claude Comair, founder of Digipen and Don Marinelli, co-founder of Carnegie Mellon's famed Entertainment Technology Center are proponents of this distinctive structure for the program. The following is a review of IMD related programs we have identified including regional, national and international programs.

A.   Regional Programs

This section covers regional schools and in this region, most of these are community colleges. A few private institutions also have a specialized vocational focus as well as Lake Washington Technical College (LWTC). LWTC offers a Bachelors of Technology in Applied Design (BTAD).

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[14] *Research Report No. 08-2.* (March 2008), WSBTCC, p.2.
[15] *Research Report No.05-1.* (April 2005), WSBTCC, p.10.

14

1.   UW Seattle - BFA Digital Arts and Experimental Media

The Digital Arts and Experimental Media program is housed in the Center for Digital Arts & Experimental Media (DXARTS). DXARTS, a new research center and degree-granting program unique to the University of Washington, establishes the UW as a leading institution for the creation and study of new and experimental genres of digital art and culture. The goal of the undergraduate program is to create opportunities for artists to discover and document new knowledge and expertise at the most advanced levels higher education can offer to emerging artists. Unlike the many other BFA degrees (the initial professional studio art degree), this BFA is primarily a pre-graduate, research-oriented degree. It signifies that an individual is professionally qualified to proceed further toward graduate studies in the digital arts and sciences and investigate fundamental problems in the nature and practice of Digital Arts and Experimental Media.

2.   UW Seattle - BS Human Centered Design & Engineering

The Department of Human Centered Design & Engineering (HCDE) is housed in the College of Engineering (COE) at UW Seattle. The department offers degree programs in Human Centered Design & Engineering, Technical Communication, and other areas of specialization. HCDE offers its students a strong education in user-centered design, user-interface design, usability research, human-computer interaction, human-robot communication, computer-supported cooperative work, and documentation.

The Bachelor of Science in Human Centered Design & Engineering gives students strong communication and design skills, coupled with a solid foundation in math and science. Students learn to design, write, edit, and evaluate technical and scientific materials. Students also learn about technical discourse, human-computer interaction, hypermedia and multimedia, publications management, and online support systems. Graduates apply their knowledge to create and enhance communication in scientific and technical environments.

HCDE undergraduate students complete core requirements (43 credits) including coursework in communication design, usability and user-experience design, and project management. Students choose one of three degree options: Human-Computer Interaction (HCI), Technical Communication, (TC) or Individualized Course of Study (27 credits).

The *HCI concentration* provides students with an opportunity to design, evaluate, implement interactive computing systems for human use, and to study major phenomena surrounding them.

The *TC concentration* provides students with practical applications and fundamental concepts in technical communication, including information design, software user-assistance, technical editing, and uses of software applications to solve communication problems.

The *Individualized Course of Study* gives students an opportunity to create an individualized curriculum designed around students' professional and academic interests. They work with their advisor to identify electives that complement the core and create a specialization in a field of their choice.

3.   UW Seattle -- Bachelor of Design – Major in Interaction Design (pending final approval)

This degree is currently in the final stages of review and is offered through the School of Art. It has already been offered as a Bachelor of Fine Arts (BFA) and is now being renamed to better reflect current trends in the field and in industry. Enrollments in the School's three Bachelor of Design areas has been quite strong; with many qualified applicants not being admitted into the program (e.g.; In 2010/2011 there were 24 out of 172 qualified applicants gaining admission into the BFA in Visual Communication and Design). Given the heavy, on-site studio components in their program and as well as in the proposed IMD degree, we expect to be drawing students from different geographic areas.

4.   WSU – Digital Technology & Culture BA

The Program at WSU is called Digital Technology and Culture and is an interdisciplinary degree program administered by the Department of English. It combines studies in language and society, cognition and learning, design and visual communication, rhetoric, fine arts, and information science to prepare students for careers in a wide range of fields. The WSU program is media focused and does not include technology and business tracks.

5.   Lake Washington Technical College - BTAD

The Bachelor of Technology in Applied Design program trains and develops successful supervisors and project managers to utilize technology and create competitive advantages for their business enterprises. The Applied Design Core stresses the process of design, managing creativity, design technology, project management, entrepreneurship and ethical issues. The objective is to prepare graduates to function as lead designers or project managers of creative and technical personnel.

The Bachelor of Technology in Applied Design produces about 22 production workers in graphic design, gaming and animation fields who currently possess an AAS degree in Engineering Graphics and Multimedia Design/Production to advance into lead design and project management roles. The degree provides a local educational opportunity geared to meet the needs of employed workers.

6.   DigiPen –BFA, BA, and BS Degrees

The DigiPen Institute of Technology is a private school located in Redmond, Washington, and offers several baccalaureate degrees related to Production Animation, Game Design, Real-Time Simulation, and Computer Engineering. DigiPen emphasizes foundational skills and knowledge in coursework, project-based learning, and industry involvement. Students have the option to choose courses that they may feel are more relevant to their degree paths to fulfill their general education and elective requirements—for example, using a course like "Storytelling for Game Design" or "Journey of the Hero" to fulfill one of their English requirements. The major objectives of these degrees are to prepare graduates to function in high-demand fields in industry.

B.   National and International Programs

It is important to understand the scope of the emerging field of Interactive Media. Most programs were developed within the last fifteen years with a focus on Masters level education. A survey of national and international program is attached as Appendix F. The survey provides insight in to the range of approaches to degree programs as well as illustrating the diverse location of the programs within the faculties of the different universities.

VI.   Interactive Media Design (IMD) – Degree Overview

"It's not rocket science. It's social science - the science of understanding people's needs and their unique relationship with art, literature, history, music, work, philosophy, community, technology and psychology. The act of design is structuring and creating that balance." Clement Mok

The proposed BA in Interactive Media Design (IMD) is a joint program degree sponsored by faculty across multiple programs (CSS, IAS, and S&T). This degree is in response to the critical need to prepare students to examine core theoretical models and processes related to the design, production and measurement of new interactive media technologies. Such systems may include areas such as cloud-based learning systems, emerging approaches to collaborative computing, on-line social media, games-based entertainment and productivity systems, geographic information systems – and other forms of search/display media, data visualization/interactive systems, as well as new forms of digital arts.

Students will experience an immersive, studio-based learning environment that blends academic theory, digital design techniques, process management approaches, and methods for gathering and analyzing critical metrics. Students will learn to work on projects with subject matter experts across many UW Bothell programs and research areas. The student will be assessed on core dimensions related to media systems design theory, team processes, analytics (qualitative and quantitative), technology management/integration and application to real-world projects. Students will

assemble a media portfolio (required as a part of their on-going coursework/assessment) that prepares them for their future academic and job-related goals.

Upon completion of the IMD degree students will be able to:
1) Demonstrate a solid understanding of core theories and learn advanced concepts related to the analysis, design, development and implementation of interactive media projects.
2) Use contemporary media design tools, technologies, processes and techniques.
3) Create a variety of interactive media projects that demonstrate breadth and depth of knowledge.
4) Focus on methods and approaches for effective team building and productivity.
5) Establish specialized knowledge and skills in a student-defined, media-related specialty area.
6) Experience intense team-oriented projects that require working with faculty and media design specialists from a variety of disciplines.
7) Gain a thorough understanding of quantitative and qualitative analysis techniques used throughout the media process.
8) Develop a thorough understanding of technology infrastructure and systems required to support next-generation media projects.
9) Practice effective communication techniques – including documentation, project updates, formal presentations to a variety of audiences, and creation of an effective portfolio.

A.   Program Mission

The IMD program seeks to provide a diverse range of students with theory, practice and knowledge necessary to succeed and thrive in a highly competitive global, online service driven economy. The program stresses teamwork, collaboration, communication, creativity, adaptability, entrepreneurship and a lifelong dedication to learning.

This degree accomplishes its mission through five major currculum elements:

1. Pre-major Requirements
2. IMD Prgram Core (Introductory & Advanced Courses)
3. Studio Elements (Junior-year studio epereince)
4. Integrative Studio (Senior-level studio experience)
5. IMD Specailty Area

B.   Curriculum

"When you design with people instead of for people, it involves being open to what they bring to the table, understanding how their lives are put together and recognizing that they are the experts of their own lives." – Andy Polaine, Lucerne University

IMD is a 90 credit, fee-based, upper-division undergraduate program with a projected enrollment of 25 students per academic year. It is organized around five curricular components that serve very specific functions in the overall design of the curriculum: 1) Pre-major Requirements; 2) IMD Program Core courses; 3) Junior and Senior-level Studio courses; and 4) the IMD Specialty Area.

1.   Pre-major Requirements (30 credits minimum prior to IMD Major)

Thirty credit hours of UWB courses (or transfer equivalents) are required prior to entry in IMD. These courses may include a variety of 100- and 200-level courses that will fulfill the Language Skills (<u>English composition</u> and <u>Foreign language</u>), Reasoning and Writing in Context (<u>Quantitative/Symbolic reasoning</u> and <u>Additional Writing</u>), and <u>Areas of Knowledge</u> (VLPA, I & S, NW) requirements. Students may take IMD 200 (see below) to partially fulfill this requirement.

Students are required to successfully complete B CUSP 123: Functions, Models & Quantitative Reasoning or an equivalent pre-calculus course to prior to admission into the IMD program. Students are encouraged to further develop their math skills as it will provide opportunities to take advanced specialty area courses offered by many STEM-oriented programs (Science, Technology, Engineering, and Math) that are offered in a variety of UWB Programs.

2.   IMD Program Core (4 pre-major courses or equivalents; 3 IMD Major Courses – 30 IMD credits)

The IMD Program Core – 200-level (4 courses) and 300-level (3 courses) – provide fundamental concepts critical to understanding and preparing for the intensive 3rd and 4th year studio experiences. The Year 2 courses may be waived for two-year transfer students with AA-level degrees in appropriate areas as determined by the AOS committee. International students may be admitted as IMD pre-majors upon successful completion of the four core courses. The 200-level courses may be offered by other programs such as IAS, CSS, and S&T.

Year 2 IMD Introductory Courses include:
    IMD 200*: Introduction to Interactive Media Systems (taught by IAS/IMD faculty)
    IMD 210: Writing Narrative for Digital Media (taught by IAS/IMD faculty)
    IMD 230: Quantitative Methods in Interactive Media (taught by S&T/IMD faculty)
    IMD 240*: Media Technologies (Media literacy concepts -- taught by CSS/IMD faculty)

    * May be waived for AAT/media transfer students

Year 3 IMD Advanced Courses include:
    IMD 340: Systems of Digital Media Architecture
    IMD 350: Designing Interfaces to Media
    IMD 360: Advanced Media Production Techniques

3.   "Studio Elements" Sequence (30 IMD credits) – Junior Year

Third year students in the IMD degree are required to take three (10 credit) IMD-specific content courses. These unique studio courses will provide students with be grounded in learning a series of "content modules" as well as apply them to a specific sequence of design/development processes. Students will also use contemporary software tools and techniques during this process.

    IMD 351/361*: Studio Elements I – Includes Content Modules
    IMD 352/362: Studio Elements II – Includes Content Modules
    IMD 353/363: Studio Elements III – Includes Content Modules

    * May be waived for AAT/media transfer students

Content modules will be integrated into the studio sequence and will vary in length depending on topic area. These will be taught by subject matter experts from a variety of disciplines within and outside of IMD-specific faculty. Each studio elements course comprises two critical components for assessment – the first is based upon mastery/knowledge of academic content in specific knowledge domains (IMD 35X); the second is based process/product elements (IMD 36X). Students will be required to maintain a portfolio of all work that will be evaluated as part of the IMD 36X assessments.

Sample content modules may include:

(Note: see Skill Set competency list; subject areas offered by faculty; minors; concentrations; specific subject areas such as physics, math, software engineering, art, film studies, narrative, cultural studies, theater/performance studies, communication/media studies, etc.)

4.   "Integrative Studio" Sequence (30 credits) – Senior Year

The Integrative Studio sequence provides students the opportunity to complete a substantial project that is linked to the student's defined knowledge specialty. These knowledge specialties are comprised of non-IMD courses that include coursework from pre-defined specialty areas or by a set of courses arranged with the IMD advisor and approved by the Academic Oversight Committee (or designee). A student must take at least three courses that are related to a defined specialty.

> IMD 481/491: Integrative Studio I – Includes Content Modules
> IMD 482/492: Integrative Studio II – Includes Content Modules
> IMD 483/493: Integrative Studio III – Includes Content Modules

The Integrative studio courses require students to successfully complete a series of Advanced Content Modules (IMD 48X) and the Advanced Studio production components (IMD 49X). The Advanced Studio production components will be evaluated based on product development, integration of specialty area knowledge into the student's final portfolio, documentation & evaluation of product impact and criteria related to the synthesis of content modules into the integrated final project. Students will be required to maintain a portfolio of all work that will be evaluated as part of the IMD 49X assessments.

5.   IMD Specialty Area – (15 credits – non-IMD)

Specialty areas are groups of courses offered outside of the IMD degree that may be linked to a form of media that the student wishes to study in more depth. A set of selected knowledge specialty areas will be determined by the faculty in such areas as interactive narrative, art, 3-D graphics, data visualization, geographic information systems, cultural studies, film or other areas. Students will be required to take a minimum of three courses in a selected area and must seek pre-approval from the IMD Academic Oversight Committee (or its designee). This will provide the students with the opportunity to study a companion knowledge domain that will be the focus of their fourth year Integrative Studio project. A specialty area must include at least two-200 level courses or one 300-level (or above) course.

The University of Washington Bothell offers a variety of minors, concentrations and other courses of study that will provide an IMD student with a rich, detailed experience within a specific knowledge domain. These knowledge domains provide students with the opportunity to develop their final Integrative Studio project that is focused on their chosen specialty area. It is important to note that these specialty areas are often built

on a series of pre-requisite courses that may be taken during the freshman/sophomore years prior to admission to IMD.

Examples of pre-defined specialty areas may include:

1) **Geographic Information Systems Specialty**
   Location plays an important role in connecting people, facilitating business, and navigating real and virtual worlds. In this specialty, students study geography and learn contemporary tools to understand how to use spatial data in interactive media applications with emphasis on structures, visualization, and the human element.

   Suggested prerequisite courses:
       BIS 218 The Power of Maps

       Required courses:
       BIS 342 Geographic Information Systems
       BIS 442 Advanced Geographic Information Systems

       Choose at least one from following courses:
       BIS 242 Environmental Geography
       BIS 314 Topics in Geography
       BIS 406 Urban Planning and Geography
       IMD 4xx Location in Real and Virtual Worlds

2) **Math Specialties (4 Options)**
   The Math specialty track is for students who are interested in exploring the mathematical framework of interactive media and design, and/or in acquiring the ability to analyze and visualize statistics. Several math tracks can be chosen depending on the interest of the student, including the ability to communicate quantitative information effectively, gaming mathematics, probability, etc. Preparatory courses may be taken during the freshman/sophomore year and subsets of courses may be selected as determined by the student's academic level/proficiency/interests. For example, students wishing to complete a more advanced math specialty may be required to take the CUSP 124, 125 and 126 sequence as a pre-IMD major – and then get pre-approved for three additional math courses that will meet the student's specialty interests.

   Gaming Mathematics Basic
       CUSP 124 Calculus I
       BST 310 Mathematical Game Theory
       BIS 315 Understanding Statistics
       STMATH 341 Introduction to Statistical Inference
       BIS 447 Topics in Quantitative Inquiry

   Gaming Mathematics
       CUSP 124 Calculus I
       CUSP 125 Calculus II
       CUSP 126 Calculus III
       STMATH 307 Differential Equations

STMATH 308 Matrix Algebra
BST 310 Mathematical Game Theory
BIS 315 Understanding Statistics
STMATH 341 Introduction to Statistical Inference

Choose One:
STMATH 381 Discrete Mathematical Modeling
STMATH 390 Probability and Statistics in Engineering and Science
BISMRV 4XX Combinatorics and Discrete Probability

Data Analysis and Visualization Basic
BIS 209 Engaging Visual Arts
BIS 232 Using, Understanding, and Visualizing Quantitative Data
BIS 315 Understanding Statistics
BIS 342 Geographic Information Systems

Elective:
BIS 382 The Visual Art of Biology

Choose One:
BIS 447 Topics in Quantitative Inquiry
BEDUC 491 Special Topics: Data & Graphical Analysis: Tools for a Data Driven World

Data Analysis and Visualization
CUSP 124 Calculus I
CUSP 125 Calculus II
BIS 232 Using, Understanding, and Visualizing Quantitative Data
BIS 315 Understanding Statistics
BIS 342 Geographic Information Systems

Elective:
BIS 382 The Visual Art of Biology

Choose One:
BIS 447 Topics in Quantitative Inquiry
BEDUC 491 Special Topics: Data & Graphical Analysis: Tools for a Data Driven World
STMATH 4X3/BEDUC 5X3 Fostering Data, Graphical & Statistical Understanding

3) Physics Specialties (3 Options)

Physics provides elegant ways of describing the world around us, as well as providing students the opportunity to hone their critical thinking and problem solving abilities. This specialty will allow students to incorporate physical phenomena into all aspects of interactive media and design. Various tracks allow for different backgrounds in mathematics from conceptual physics, through algebra-based physics, to calculus-based physics – depending on student's background and interests.

Conceptual Physics

BPHYS 110 Conceptual Physics
BIS 250 How Things Work: Motion and Mechanics
BIS 251 How Things Work: Electricity and Invention

Algebra-based Physics
BPHYS 110 Conceptual Physics
BPHYS 114 General Physics I: Mechanics
BPHYS 115 General Physics II: Heat and Electromagnetism
BPHYS 116 General Physics III: Sound, Light, and Modern Physics
BPHYS 117 General Physics I Lab
BPHYS 118 General Physics II Lab
BPHYS 119 General Physics III Lab

Physics
BCUSP 124 Calculus I
BCUSP 125 Calculus II
BPHYS 121 Mechanics
BPHYS 122 Electromagnetism and Oscillatory Motion
BPHYS 123 Waves
BPHYS 2XX [Student Choice, e.g., Biophysics, Classical Mechanics, Modern Physics, etc...]

4) Other pre-defined specialty areas may include selected courses (and their pre-requisites) in the following areas:

Database programming
Art Studies
Computer Networking
Diversity Studies
Business/Marketing
Media/Cultural Studies

Students may also define a custom area of study that they are interested in. These custom specialty areas require pre-approval from the IMD AOC and the partner program.

C.   IMD Junior and Senior-level Studio Projects

Critical to the success of our students is the demonstrated ability to translate advanced media theory and concepts into products that meet the ever-increasing demands of user communities/audiences. In partnership with local, regional, national and international organizations – including government, non-profit, and corporate partners – students will complete projects that are connected with the content modules covered in the Studio Elements and Integrative Studio course sequences.

Each studio sequence will have a Studio Manager and associated faculty who are teaching the individual Content Modules. The Studio Manger will provide consistency throughout the studio sequence and will be

skilled in the processes and techniques for interactive media design and development. Faculty will provide assessments for each of the Content Modules. Specific guidelines for the design and process of the IMD studio sequences are provided in Appendix F.

IMD projects may also be completed in partnership with community-based learning and research (CBLR). This approach provides a pedagogical method that combines service with and research in the community, structured preparation and reflection opportunities. CBLR opportunities are tied to academic coursework and address community-identified concerns. This approach can transform courses and learning in the interactive media design program and will help students and faculty to collaborate effectively with the broader community to design projects that innovatively meet community needs. In particular, students that are starting the junior and Senior-level Studio Projects could have the option of designing, developing, and implementing their research and project design using community-based methods at all stages of their proposed projects.

Sample projects for the immersive studio experiences include the design, development and implementation of the following media:

- Social Websites
  - Social web applications that feature the ability user communities to interact with web content and each other.
- Media Applications
  - From HBO's application to fashion apps and everything in between -- every application requires designers to think about how users interact with the enormous amount media content available.
- Location-based Applications
  - From social apps like 4-Square to location-based games, more and more apps will become contextually sensitive to the user's physical location.
- Interactive film/video for Mobile
  - Smart phones and tablets all feature the ability to play video content. Increasingly app designs incorporate the non-linear use of video assets and it is likely this trend will continue.
- Interactive Audio
  - Smart phones and tablets all feature the ability to play audio and music content. Increasingly app designs incorporate the non-linear use of audio and music assets and it is likely this trend will continue.
- Touch-activated Narrative
  - As reading transitions from paper to tablets, books will become increasingly tactile and interactive. IMD's will lead the exploration of how to move past novelty to use this new axis of narrative interaction to add substantial depth to the reading experience.
- Interactive fiction Authoring Environments
  - While non-linear narrative structures have existed for decades, the shift from paper to tablets as the primary reading medium opens the opportunity to dramatically expand the types and depth of non-linear narratives.
- Transmedia Narratives
  - For the first time in human history every form of storytelling ever created are now available on the same devices through the a common user interface. This close proximity will certainly lead to fascinating "children". IMD's should take a leading role in the exploration of new narrative forms which combine multiple types of media into cohesive interactive experiences.
- Game design categories
  - Mobile game design
  - Social network game design
  - Console video game design

- o Web based game design
- Educational Applications
  - o The challenges facing primary and secondary education are staggering and interactive app design is looked at as part of the solution. IMD's will play a major role collaborating with educators in the creation of touch screen based interactive learning systems.
- Educational Entertainment
  - o As the world's babysitter shifts from the living room television set to handheld touch screen devices the need to create the next generations "Sesame Street" looms large. IMD's will play key roles in the creation of babysitter apps which contribute to the child's social emotional development and basic education.
- Social Applications for Business
  - o IMD's continue to push the envelope in exploring both synchronous and asynchronous social interactions designed to meet the needs of business.

1. Studio Team Composition – Program Partnerships

Projects within the Integrated Studio Sequence may be done in collaboration with students from other degree programs within the UWB. Examples may include:

1) Artists and performers from IAS;
2) CSS students working on individual/group projects within advanced specialty/elective courses such as 2-D/3-D graphics, cloud computing, knowledge management systems, artificial intelligence/machine learning, and other specialty offerings;
3) CSS 497 internships focused on application, media, graphics design, software engineering and/or other projects;
4) Faculty and/or graduate research projects;
5) Partnership opportunities – perhaps even dual enrollment opportunities -- with affiliated Community/Technical Colleges;
6) Collaborative efforts with UWB Centers (e.g., Center for Serious Play);
7) CSS Graduate final projects as required for CSS 595 and CSS 596 (the CSS graduate student capstone series); and
8) Project partnerships using collaborative/linked teams with community/industry project sponsors.

Integrative Studio projects of this nature will help IMD students – and their affiliated team members – have a rich, dynamic and relevant learning experience. It will also provide visibility and "real world" interdisciplinary experiences for all involved.

2. Content Modules

A unique and critical approach to immersive learning is the integration of Content Modules into the Studio elements and Integrative Studio sequences. There are many specialty areas with the field of IMD that a student must have specific knowledge of in order to make informed design decisions. Content Modules will be developed by faculty with in-depth knowledge and experience. The method of delivery may range from traditional lecture methods to the latest forms (and uses) of interactive media within the classroom. Each Content Module will have specific learning objectives (and be mapped to IMD competencies) and will have

detailed assessment requirements. During each quarter of either the Studio Elements *(junior- level) or Integrative Studio (senior-level) students will complete a specified sequence of Content Modules as delivered by faculty and/or industry experts. Assessments of the completed Content Modules will be combined to form the "knowledge domain" grade for the studios. Students will also be assessed on their related projects in their expression/translation of the Content Modules into their projects.

Below are sample content modules that will be developed for the IMD program. These may range from short, one-hour segments to two-week modules depending on the academic requirements and depth of knowledge required. The Content Modules assumes preliminary knowledge as delivered in the IMD 200 and 300-level required coursework. Content Modules will be updated and/or replaced as new approaches, technologies, requirements, and processes evolve. This is critical to maintain the contemporary nature of the IMD degree — and ensure academic relevance and quality.

a)   *Studio Elements Content Modules*

Below are examples – and general themes – of content modules that may be covered in the Studio Elements sequence:

Theme A: Projects & Teams
> Project Inception
> Project Management
> Team Creation
> Team Structures
> Communication Techniques
> Direction of Media Projects
> Business Planning/Pitch/Selling/Forecasting
> Negotiation Techniques

Theme B: Understanding Audience
> Intro to Audience
> Motivation theory
> Feedback Systems
> Personality Theory

Theme C: Design Processes & Systems
> Development Lifecycles
> Database Management
> Quality Assurance
> Storyboarding
> Systems Modeling – wireframes, etc.

Theme D: Creativity
> Idea Generation & Decision-Making
> Interactive Elements of Performance/Theater
> Disabilities and Design

Theme E: Nature, Science and Design Intersections

Bio-mimicry/Systems Biology/Complex Adaptive Systems
Interactive Physics
Science Visualization

Theme F: Media Techniques
Photographic Techniques
Elements of Film
Music – Framing/Mood
Art Techniques
Sound Effects
Designing Media for Search Engines
Audio Techniques
Location Mapping/3-D Worlds

Theme G: Responsible Design
Security/Privacy
Ethics
Intellectual Property/Legal Issues (NDA's, contracts,

b)   Integrative Studio Concept Modules – Core & Student Defined

The following are Concept Modules that will be covered during the Integrative Studio courses:

Team Leadership
Project Elaboration
Business Analysis
Localization/Cultural Design Approaches
Asset Management/Configuration Mgt
Content Management
Media Impact
Tool Automation
Interactive Art
Social Media
Virtual Worlds
Mash-ups
Interactive Media for Learning
Financial Systems Integration – (e.g., PayPal, FB, digital economies)

c)   Math Concepts – Concept Modules

The field of interactive media design requires students to use a variety of mathematical concepts and approaches on a daily basis. The areas of math that will be emphasized include the course content in the IMD 230: Quantitative Methods in Interactive Media (taught by S&T) as well as selected Content Modules included

in both the Studio Elements and Integrative Studio course sequences. They include the following areas of math and statistics:

- Probability Theory
    - The understanding of probabilities and being able to design interactions based on them is critical.
- Statistics & Analytics
    - By the time that our first graduates hit the job market 100% of their work will be driven by internal analytics. IMD's will need to understand how to incorporate analytics into their products and how to interpret and act upon the statistics the analytics deliver.
- Economics/Forecasting
    - Websites and apps often incorporate the sale of additional functionality and digital items whose prices are revised as often as hourly. Understanding the forces that drive pricing will be critical.
    - Many interactive games incorporate internal economies which are central to the game's play and to the game's monetization. Understanding the "laws" of supply and demand and the associated mechanics is imperative to being able to design these types of games.
- Demographics & Psychographics

    Designers should understand how to research and incorporate audience studies into their designs.
- Data Visualization
    - Combines both math, art, and UX. With the amount information being distributed within interactive apps and websites, the ability to present that information in visually compelling and understandable ways is increasingly important.

3.   IMD Portfolio Assessment

A critical characteristic of the IMD program is to prepare the student to be both "work ready" as well as be prepared for competitive admission into graduate work in a variety of media-related academic disciplines. Having a portfolio that demonstrates the integration of advanced media design and development concepts is essential for success in the interactive media space. These portfolios will be assessed in the IMD 361, 362, 363, 491, 492, 493 studio sequences.

VII.   IMD Course Schedule

The following sections describe two course delivery options for the IMD degree. The first delivery option (see section 6.1 below) provides a pathway for students new to the field of IMD. It includes the prerequisite courses to be taken by the end of the sophomore year. Section 6.2 provides a rapid enrollment model for students who have completed an AAT degree (or equivalent) in a media-related field. This course sequence requires an intensive course load during the Autumn Quarter to transition students to the university environment. It assumes that students have had freshman/sophomore-level studio experience within their AAT degree programs, thus allowing students to skip the autumn quarter Studio Elements requirement. Specific transferability of other general education requirements will be determined by University of Washington course transfer agreements and/or specific UWB -- Community college articulation agreements.

A.   IMD Course Schedule – for new IMD students

The IMD 200-level preparatory courses will be taught by faculty with joint appointments in IAS, S&T, and/or CSS. These courses will be cross-listed with existing courses currently taught by these programs. Twenty credits of IMD-specific 200-level (or transfer equivalents) are required for admission into the IMD degree program.

- Completion of pre-calculus (minimum)
- IMD Preparatory courses – 20 credits during the Junior Year
- IMD Junior/Senior Courses – 75 Credits
- Specialty Courses 15 Credits
- One pre-specialty course (taken as a pre-major) may count toward fulfilling Specialty Course Requirements

	Autumn	Winter	Spring
Sophomore – Pre- IMD Major; transfer; or IMD Admit (International)	Pre-calculus (varied courses)	IMD 200 (5) – IAS IMD 210 (5) – IAS Distribution/Pre-Specialty (5)	IMD 230 (5) – S&T IMD 240 (5) - CSS Distribution/Pre-Specialty (5)
Junior (45 credits)	IMD 351/361 (10) IMD 340 (5)	IMD 352/362 (10) IMD 350 (5)	IMD 353/363 (10) IMD 360 (5)
Senior (45 credits)	IMD 481/491 (10) Distribution/Specialty 1 (5)	IMD 482/492 (10) Distribution/ Specialty 2 (5)	IMD 483/493 (10) Distribution/Specialty 3 (5)

Notes:
1 – Transfer credits may substitute for distribution requirements
2 – Flexible distribution credits allows IMD students to achieve a minor in another program; also allows other programs to participate in revenue models and/or develop specialty areas that target IMD students.
3 – Sophomore credits may be covered in specialty AA programs – thus not required.

B.   IMD Course Schedule – Community College Transfer with AAT Media-related degrees (90 credits)

Students with an AAT in a media-related AAT degree may take the following sequence of courses that include IMD 210, 230 and IMD 240 in Autumn Quarter. They will then join the IMD Studio Elements sequence in winter quarter. Requirements include:

- Completion of approved media-related AAT degree prior to admission into IMD
- IMD 210, 230 and 340 to be taken in Autumn quarter (15 credits)
- Two quarters of IMD Studio Elements Sequence, IMD 350 and IMD 360 (30 credits)
- IMD Integrative Studio (senior-year) – (30 credits)
- Specialty Courses - 15 Credits
- One pre-specialty course (taken as a pre-major) may count toward fulfilling Specialty Course Requirements

	Summer (optional)	Autumn	Winter	Spring
Junior (45 credits)	Distribution/ Prerequisites as needed	IMD 210 (5) IMD 230 (5) IMD 340 (5)	IMD 352/362 (10) IMD 350 (5)	IMD 353/363 (10) IMD 360 (5)
Senior (45 credits)	Distribution/ Prerequisites as needed	IMD 481/491 (10) Distribution/Specialty 1 (5)	IMD 482/492 (10) Distribution/ Specialty 2 (5)	IMD 483/493 (10) Distribution/Specialty 3 (5)

Notes:
1 – Transfer credits may substitute for distribution requirements
2 – Flexible distribution credits allows IMD students to achieve a minor in another program; also allows other programs to participate in revenue models and/or develop specialty areas that target IMD students.
3 – Sophomore credits may be covered in specialty AA programs – thus not required.
4 – Students transferring from an AAT or other two-year associate degree may be required to take additional courses to fulfill UW distribution/general education requirement

VIII. IMD Course Descriptions

The following courses are required for completion of the IMD degree program.

Course Number	Course Description	Credits
	IMD Introductory/Pre-Major Courses *May be taught/cross-listed within the IAS, CSS, and/or S&T Programs; IMD 200 and IMD 240 may be waived if student has completed an AAT/media-related Associate's Degree. Student must complete a pre-calculus course prior to admission.*	20
IMD 200	**Introduction to Interactive Media Systems:** Develops a framework for understanding various forms of media today including textual, electronic, digital, location based and physical objects.	5
IMD 210	**Writing Narrative for Digital Media:** Exploration of interactive narrative design for a variety of platforms both online and offline. Examination of current properties (e.g., film, game, comics, ARGs, "webisodes," television, and location-based).	5
IMD 230	**Quantitative Methods in Interactive Media:** Emphasizes mathematical concepts and principles related to the design, production and analysis of media applications. Areas include probability theory, statistics, data visualization, project metrics, and research strategies management metrics, and 2-D/3-D math essentials.	5
IMD 240	**Media Technologies:** Examines the core technologies used to design, build and support media development. Examines database management, process management, production tools (audio, video, animation, and narrative production), configuration control, team communication systems, scripting languages and their integration into the media production cycle.	5
	IMD Major – Advanced Courses	15
IMD 340	**Systems of Digital Media Architecture:** This course provides a systems approach to designing and building the underlying technologies used to support digital media. It provides the core theory and practical knowledge required to work with the engineering design and development team. Students will explore a variety of system architectures and their key components as they are used to support a variety of digital media solutions based on contemporary requirements analysis and systems specification techniques. Emphasis will be on network design (including QoS considerations); database modeling and architecture design – including "cloud computing" implementations; system staging and deployment practices including automated quality assurance and delivery mechanisms. Methods for identifying and collecting systems metrics – and analysis data analysis strategies will also be reviewed.	5
IMD 350	**Designing Media Interfaces:** Usability is a critical – and often overlooked element – of a successful application. This course will cover fundamental cognitive, social, cultural, and human factor engineering theories and concepts and their application to interactive media design. A variety of requirements analysis strategies ranging from formal approaches to rapid	5

	application techniques will be covered. Particular emphasis will also be placed on user decision-making models and adaptive techniques for creating inviting and engaging applications as they are used from within a variety of different device types (e.g.; mobile, desktop, console, and other emerging technologies). Methods related to application mechanics, interest curves, balance, and methods for measuring usability and achievement of the application goals will be examined. Students will conduct an independent research project and participate in weekly design studies/reviews.	
IMD 360	**Advanced Media Production Techniques:** Studies production methods and techniques required to design, build, deliver and evaluate a variety of forms of interactive media projects. Explores contemporary media technologies, direction processes and approaches required to synthesize media components into final production.	5

Studio Elements (30 credits) – Junior Year

- IMD 35X Studio Elements – Concept Module
- IMD 36X Studio Elements – Process/Product

Note: IMD 351/361 may be waived if student has completed an approved AAT/media-related Associate's Degree. Student will be required to complete IMD 210 and IMD 230 instead.   30

IMD 351/361	**Studio Elements I: Introduction** -- Provides a survey of media design principles and technologies including characteristics of the studio process, fundamental design methodologies, creativity, understanding audience, and explores human-centered design concepts. Projects will be linked to a series of introductory concept modules.	10
IMD 352/362	**Studio Elements II: Essentials** – Examines core media design theories and techniques. Emphasis on team concepts, process management, design methodologies, media production formats, project/resource management, and personality/social psychological elements. Projects are designed to emphasize essential concept modules that emphasize team processes.	10
IMD 353/363	**Studio Elements III: Advanced** – Expanded emphasis on interdisciplinary approaches to media design as applied to specific content areas such as music, film, interactive art, theater, science, games, education and other areas. Prepares student for the Integrative Studio project proposal that focuses on the student-defined Specialty Area. Projects are designed to emphasize advanced, interdisciplinary concept modules.	10

Integrative Studio (30 credits) – Senior Year

- IMD 48X Integrative Studio – Concept Modules
- IMD 49X Integrative Studio – Process/Product   30

IMD 481/491	**Integrative Studio I: Design Processes** – Emphasis on the detailed design analysis and specification, prototyping, advanced project management related to the student defined specialty area. Content modules will focus on advanced design processes and procedures.	10
IMD 482/492	**Integrative Studio II: Production** – Using project-relevant production techniques and methodologies, students will examine domain-specific theories and concepts – and apply them to their final project. Students will evaluate their build processes based on contemporary approaches to media production. Advanced concept modules linked to production	10

	methods and processes will be covered.	
IMD 483/493	**Integrative Studio III: Implementation & Evaluation** – The final studio course requires completion, demonstration and evaluation of the final project using methods and approaches relevant to their Specialty Area as linked to the advanced Concept Modules. Final portfolio evaluations will occur as well as public presentation of the final project.	10
	Specialty Areas (15 credits) – Requires pre-approval from IMD *Note: These are sample specialty areas and requirements may vary depending on student background, satisfaction of course prerequisite requirements, instructor/program permission and/or availability of courses. Also see Appendix G and H for additional courses that may be taken to prepare students for math and computing specialties.*	15
	Geographic Information Systems	
	Mathematics	
	Data Analysis & Visualization	
	Physics	
	Database Programming	
	Art Studies	
	Film Studies	
	Diversity Studies	
	Business/Marketing	
	Media/Cultural Studies	
	2-D Graphics/3-D Graphics	
TOTAL IMD PROGRAM CREDITS (Junior/Senior-level)		**90**

IX. Infrastructure Requirements

UW Bothell has developed a solid infrastructure to support diverse student needs. The focus is to build shared programmatic services that also address unique program demands. This includes Counseling Services, Disabled Student Services, Library and Media Centers, Quantitative Skills Center, and Writing Center. The incremental increases in support needed for these shared resources are noted in the budget with special considerations noted below.

A. Media & Technology

A focus of the IMD degree is to increase digital literacy which involves expanding ways of thinking, seeing, and crafting narratives and arguments through a range of media rather than focusing on particular devices, and programs. However, the degree will explore the use emerging technologies for research, experimentation, problem-based learning, and creative work. Rapid advances in technology renders classrooms equipped with software and hardware obsolete. A strategic approach to insure appropriate resources for the IMD degree will be to incorporate technology and devices that students currently use and leverage cloud computing resources. Cloud computing allows access to web-based technologies, data storage, and access to a variety of software services and eliminates the need for hosting and other costly support.

B. Computing & Studio Facilities

These facilities will provide students with access to design workstations and meeting spaces required for a studio experience. Facilities will be used within the Center for Serious play – and additional space may be leased as needed for growth. Technology support services and studio personnel are included in the budget for this self-sustaining program. Students will have access to UW student licenses for academic use. Additional software will be obtained through UW licenses and support from industry sponsors. There is considerable interest from the community and industry in providing hardware and software technologies to enhance the student studio experience. Project-specific resources will be provided by project sponsors where appropriate. The AOC will provide oversight and guidance related to obtaining and managing technology resources for this program. Day-to-management of licenses and hardware will be the responsibility of the studio manager.

X. Faculty

The development of this degree program has involved faculty representing almost all programs at UW Bothell for more than two years. This degree program will combine expertise from existing UW Bothell programs such as Business, Computing and Software Systems, Education, Interdisciplinary Arts and Sciences, and Science and Technology with a core faculty with expertise central to the subject area.

Existing faculty will be supplemented with new faculty as the program develops. Faculty members will have share responsibility in the development of the IMD program including teaching core and elective coursework, building research programs, nurturing relationships with industry and community partners, and participating in program assessment.

A. Current Faculty

UW Bothell has current tenured and non-tenured faculty who may teach the core and elective coursework for this program including. These faculty members are currently teaching courses for the Interdisciplinary Arts and Sciences, Computing and Software Systems, Business, Center for University Studies and Programs, and Science and Technology programs. They also represent wide-ranging research and/or industry experience relevant to the program and its subject areas. The program also expects the participation of additional faculty from other programs for teaching, mentoring, and research as appropriate. The program will also have industry participation related to content module development and delivery. The Academic Oversight Committee (AOC) and other participating faculty currently include:

William Erdly (Chair, AOC) is a graduate of the University of Washington where he earned his Ph. D. in social/organizational psychology. He has been involved in the computing field since the mid-seventies, and his current teaching and work is in areas related to social network analytics, human computer interaction, database development, network design, game design, and workflow management/organizational analysis techniques. He now serves as the Associate Director of Graduate Studies for the Computing & Software Systems (CSS) program where he was also the founding director. He has extensive industry and research experience in health care, software engineering, network design, and in the game development industry where he currently serves as an engineering and game design consultant.

Constantin Behler (Member, AOC) is an Associate Professor in IAS. He has a B.A., Comparative History of Ideas, from University of Washington and a Ph.D., German Studies and Humanities from Stanford University. His research interests and teaching spans aesthetics, narratology, reception theory, and film studies. He has co-designed the Media and Communication degree program at UWB, for which he currently serves as faculty coordinator.

Mark Kochanski (Member, AOC) is a graduate of Purdue University where he studied both geology and computer sciences leading up to an M.S. in Economic Geology with a computer application-based thesis in 1984. Mark started working in the computing industry during high school in the mid-70s. From the mid-80s through early 90s,Mark worked in the petroleum industry developing application, enterprise, and industry-wide data models, databases, and user-friendly, data-oriented applications. In 1993, Mark started his successful independent consulting company, Albion Technology, which has provided technology expertise and IT support to a variety of business and organizations. In Mark's 25+ years in the computing field, he has provided computing expertise for a variety of companies from Exxon to startups, educational institutions, non-profit organizations, and the U.S. Government; worked in a variety of computing environments from palm to mainframe and from standalone to massively distributed; developed from device drivers, database engines, and middleware, to business and technical/scientific applications. Mark's industry background and on-going experience with clients reinforces Mark's desire to help train quality software developers who can grow into technical leads, software architects, and beyond. Mark's technical interests includes anything database, user-friendly applications, component-based systems, XML, and other technologies that lead to creative solutions to difficult real-world problems.

Wanda Gregory (Member, AOC) is a Lecturer in the Science and Technology Program and Director of the Center for Serious Play. Wanda has taught courses in game design, virtual worlds, and games for girls at UW Seattle and UW Bothell since 2005. She has extensive industry experience, having been Associate Producer for Edutainment Titles at Sierra Online, Senior Director of Online Media for Wizards of the Coast and Hasbro, Group Product Manager at Microsoft's Xbox.com, Executive Producer for Interactive Entertainment at Hidden City Games, and Vice President and Executive Producer for Flowplay overseeing the development of an MMO for tweens and teens. Wanda is a graduate of the UW, where she received a B.A. in English Literature, and her M.B.A. and M.A. in Communications. She is an Honorary Research Fellow at the University of Tasmania, Australia, where she previously lectured on game design in conjunction with the HitLab. She is currently pursuing her PhD through SMARTlab at the University College of Dublin, in Dublin, Ireland, focused on imagination and healing.

Erin Hill (Member, AOC) is an alumna of the University of Washington with a B.S. in physics, and a graduate of the University of California, Irvine where she earned her Ph.D. in physics with a focus on biophysics. She has been an Affiliate Faculty member with the Interdisciplinary Arts and Sciences school (IAS), and a part of the management of the Quantitative Skills Center (QSC) at UW Bothell for over 3 years, most recently becoming the Director of the QSC in 2011. In the same year, Erin became a Lecturer in UW Bothell's Science and Technology program (S&T). Her interests are in applications of physics to technology, biology, and medicine, and in quantitative literacy across all disciplines.

Robin Oppenheimer (Faculty) is an internationally recognized media arts historian, curator and scholar who worked in the field since 1980. She ran two media arts centers and is currently a Lecturer at the University of Washington Bothell, with a PhD in Interactive Arts and Technology. Her areas of research include creative collaboration, digital media literacy, and digital culture studies.

XI. Administration

The IMD program constitutes a cross-programmatic academic unit at UWB that will be administered jointly by the Office of the VCAA, the Program of Computing Software and Systems (CSS), and the School of Interdisciplinary Arts & Sciences (IAS) – sponsors of the degree. The UWB Science and Technology (S & T) Program also provides its support for IMD; although it will not sponsor specific courses, academic oversight or administrative suppport for IMD at this time.

Academic oversight of the IMD program is the responsibility of the IMD Academic Oversight Committee (AOC). The AOC will consist of at least three faculty members with at least one representative from each school or program involved in offering the degree. Each school or program faculty selects its representatives for staggered terms of up to three years. This policy was reviewed and approved by the UW Bothell GFO Executive Council on May 1, 2012.

The AOC will be responsible for:

- Approval of the new curriculum after original degree has been approved by IAS, S &T and CSS faculty and revision of existing curriculum;
- Assessment of curricular effectiveness;
- Working collaboratively with program curriculum committees on development of new courses;
- Develop job ads for full time faculty hiring;
- Provide consultation for P&T guidelines and criteria, as well as for faculty hiring.

Administrative management of the IMD degree (class scheduling, advising, budget, faculty appointment paperwork, etc.) will be the responsibility of a Program Coordinator and an Advisor located within proximity of the IMD studio classroom (initlally within the Center for Serious Play). This will enable the program to leverage The Center's computing, networking and physical resources to provide easy access and support to the students and faculty. The Program Coordinator and Advisor will work under the direction of the AOC in coordinating course offerings, determining the number of sections, and managing time schedules of classes between programs with respect to the additional demand created by the IMD degree.

XII. Students

Serving the needs of all students, including high-ability students, will help achieve our Country's aspiration for true equality of educational opportunity and will facilitate the development of the innovators of tomorrow who can lead the way forward. NSF Sep 2010

This degree program is designed for students entering as freshmen to UW Bothell as well as community / technical college transfer students and transfer students from other four year institutions. The program prerequisites are similar to other programs with respect to lower division coursework.

A. Diversity Plan

The proposed IMD program is committed to the principles of a diverse student population as articulated by the University of Washington and incorporated in UW Bothell's mission statement. The IMD program is committed to attracting underrepresented minorities and women and will seek applicants with a wide range of interests. We have designed a responsive curriculum to enhance the educational experience and world view of our students. Current demographics of UW Bothell and its undergraduate programs also ensure a robust mix of students with respect to individual characteristics, experiences, culture, ethnicity, and physical abilities.

Program initiatives:
1. Sponsor student initiatives to develop support structures that foster scholarship and mentoring opportunities.
2. Support student clubs and organizations that foster diversity in the discipline.

3. Participate in minority recruitment events and conferences.
4. Identify scholarship opportunities for underrepresented students like BAM (Microsoft).
5. Plan and schedule courses to provide flexibility to meet the demands of nontraditional students. This includes E-Learning formats.
6. Provide programming through the Center for Serious Play with opportunities for research, internships and collaboration with community & technical colleges, private institutions like Cornish College of the Arts, Digipen, and Lake Washington. (Developing a pre-quarter boot camp for September 2011 to include Lake Washington Institute of Technology)
7. Sponsor and promote conferences and events with regional, national and international themes.
8. Develop partnerships with regional High Schools to recruit students for weekend and summer themed workshops. (Summer Camp scheduled July 2011 for High School girls)
9. Encourage and support program faculty connections and partnerships with regional technology companies. This will create strong internship options for students seeking job experience and promote degree completion for employees who are already working in the industry.

XIII. Accreditation

UW Bothell is accredited by NWCCU. Specialized accreditation is not required for the proposed degree in Interactive Media Design.

XIV. Assessment

The Interactive Media Design program has broadly defined goals and learning objectives that require continuous evaluation to improve performance and adapt to evolving needs associated with fast-paced technology changes and emerging fields. The program intends to use several forms of assessment including:
- Standardized course evaluations
- Student exit and alumni placement surveys
- Student portfolios
- Community and industry feedback

A. Program

Students will routinely be asked to evaluate courses at the end of each term using standard OEA-sponsored surveys. The faculty and administrative leadership for the program will review the OEA results and student comments.

Students will be surveyed by the end of their final quarter before graduation with an exit survey. These surveys will be used as a tool in evaluating domain areas, career placement, and other program improvements. In a similar manner, alumni will be periodically surveyed with respect to their current work situation and the education background provided by the program. These alumni surveys in combination with the exit surveys will be used to assist in analysis of whether the program is meeting both entry-level and long-term career goals of graduates.

Students are required to participate in project-focused studio courses as part of the core curriculum. Each studio course sequence allows for students to participate in significant projects of scope and size similar to those found in capstone courses and internships associated with other degree programs. As part of the senior Concept Realization Studio, students will create a portfolio of their work accomplished within the program. As feasible, these student portfolios will be collected and archived to provide a historical data set that can be reviewed and analyzed for program assessment.

Community and industry feedback are important in determining whether or not the curriculum is meeting the needs associated with demand. This program may use a variety of methods for soliciting feedback such as periodic focus groups and surveys and/or advisory councils. Also, community and industry sponsorship of studio projects can be used to gauge interest in the program and provide confirmation of curriculum goals and objectives through types of projects requested and satisfaction with projects deliverables.

B. Student Assessment

Success of students enrolled in the program will be measured by a variety of methods to ensure that educational outcomes are being met. This program intends to use several forms of assessment including:

- Course outcomes (grades)
- Student graduation requirements audit
- Student project portfolio

Each core class delivered as part of the IMD program includes educational outcomes. Student must achieve a course grade of 2.0 or more in each core class to be accepted as completing the associated graduation requirement of the degree. The course grade of 2.0 or more should indicate that the student has satisfactorily completed the learning outcomes defined for that course. A combination of methods such as successful completion in subsequent coursework, quarterly course evaluations, classroom assessment, and student portfolio review will be used to improve course performance and monitor correlation between course grade and learning outcomes.

The student graduation requirements audits show a student's progress in fulfilling degree requirements with respect to satisfactorily completed courses. The tool will help in planning and directly students in their schedules for coursework, as well as identify potential areas that may require special considerations. The tool can help faculty identify common areas of interest of students that can aid in the development of new courses and concentrations.

Students will create a project portfolio as part of the Concept Realization Studio course sequence. In creating the individual student portfolios, students will be asked to include project artifacts and document how they demonstrate their mastery of the educational objectives expected of the IMD program. Student portfolios will be assessed by a combination of faculty review, sponsor feedback, and public comments based on student portfolio presentations. The IMD program will collect and archive the student portfolios, where feasible, to provide a repository that can be useful for defining a baseline to assess satisfactory student performance and as a reference for students interested and/or enrolled in the program.

XV. Appendices

A. Catalyst Student Survey Results

			%
1	**Please select the response that best describes your interest in UW Bothell.**		
		I am planning on enrolling at UW Bothell as a freshman.	7%
		I am currently enrolled at UW Bothell.	14%
		I am planning to transfer to UW Bothell from a community or technical college.	48%
		I am planning to transfer from another 4 year institution.	13%
		I am undecided at this time.	18%
2	**Are you interested in pursuing a BA in Interactive Media Design?**		
		Yes	85%
		No	1%
		Uncertain	14%
3	**How important is it to your decision to enroll at UW Bothell or to remain at UW Bothell if a BA in Interactive Media Design is not available.**		
		Very important	68%
		Somewhat important	17%
		Not important	10%
		No opinion	5%
4	**If the start of the BA in Interactive Media Design was delayed by one year would you:**		
		Pursue the degree at UW Seattle.	32%
		Pursue the degree at another Washington public institution.	33%
		Pursue the degree at a Washington private college.	8%
		Pursue a different degree at UW Bothell.	27%
5	**What is your age?**		
		Less than 20 years	36%
		21 - 25	23%
		26 - 30	13%
		31 - 40	15%
		40+	13%
6	**Please indicate the county where you live.**		
		King County	45%
		Snohomish County	43%
		Other:	12%

B. UW Continuing & Professional Education Survey

1. Institution for Winter Quarter 2011 Registration

	Current Students	Prospective Students
	%	%
UW Seattle	2.30%	8.80%
UW Bothell	91.60%	29.40%
BCC	0.00%	5.90%
CCC	0.00%	8.80%
SCC	0.00%	8.80%
Other CC	0.00%	5.90%
Won't register this year	3.30%	29.40%
Other CC*	1.40%	2.90%
Just graduated	1.40%	0.00%
Total	100.00%	100.00%

2. Intended Major

	Current Students	Prospective Students
	%	Count
Computing and Software Systems	20%	11%
Business Administration	10%	26%
IAS: Media and Communications	16%	4%
Nursing	5%	19%
Community Psychology	9%	0%
Society, Ethics, and Human Behavior	7%	0%
2 % or less in all other majors	12%	23%
Don't know	21%	18%
Total	100%	100%

3. Likelihood of Applying to UW Bothell Interactive Media Degree

	Current Students	Prospective Students
	%	%
Very likely	21.60%	4.80%
Somewhat likely	24.30%	23.80%
Uncertain	21.60%	28.60%
Somewhat unlikely	8.10%	0.00%
Very unlikely	24.30%	42.90%
Total	100.00%	100.00%

4. Preferred Location

	Current Students	Prospective Students
	%	%
Classroom at UW Bothell	88.00%	36.40%

Classroom at Bellevue	4.00%	18.20%
Mostly online	0.00%	9.10%
Combo of classroom and online	8.00%	36.40%
Total	100.00%	100.00%

C.   Center for Serious Play

The purpose of the Center for Serious Play (CSP) is to transform education and foster community development by bridging the gaps between innovative design, development, teaching and application of interactive media technologies. Building on UW Bothell's signature strengths in interdisciplinary inquiry and hands-on learning, CSP aims to bring together faculty, students, and industry partners to make a serious impact in diverse fields such as P-12 and higher education, health care, and sustainable environments. The goal of the CSP is to foster the development of innovative products, services and processes through team-based projects and partnerships with industry and educational communities.

In congruency with the IMD program the CSP links the design and development of interactive media with both the educational and business communities. The resulting synergy will build a dynamic learning community, where students can work with industry mentors in creating virtual worlds, educational games or other tools and innovations with real-world purposes. This will provide a rich environment for outreach and collaboration with P-12 educators and students, which in turn can build student interest and college-readiness skills in areas related to regional needs and opportunities.

CSP supports the overall mission of UW Bothell by encouraging and supporting collaborative, interdisciplinary, and cross-program initiatives, as well as by fostering productive relationships with the employment community and promoting a strong public service commitment. CSP supports UW Bothell's goals not only by connecting students with industry and educators but also by encouraging innovative commercial applications and entrepreneurial ventures. CSP will be able to leverage the faculty, courses, infrastructure and industry support that will be assembled through the development of the Interactive Media Design degree to help build a campus and regional resource.

D.   National & International Programs

1.   California State University, Monterey Bay BS, Information Technology and Communication Design (ITCD)

The BS ITCD degrees provide a broad-based understanding of current technologies and applications of media arts, web design, animation design and game design. Students combine this technological knowledge with design, communication, and management skills in the development of customized university experiences pertinent to their career interests and ambitions and to the needs of a global, multicultural society. The BS ITCD program produces graduates that cross boundaries as individual contributors and who are uniquely qualified for collaborative projects in design and high-tech industries.

2.   Carnegie Mellon

Carnegie Mellon hosts undergraduate and graduate programs that are nationally recognized as top programs in the country. The undergraduate programs include Communications Design (CD) in the School of Fine Arts and Human Computer Interaction (HCI) housed in the School of Computing Science. The HCI program is currently offered as a second major only.

> *HCI Program* is devoted to the design, implementation, and evaluation of interactive computer-based technology. Examples of HCI products include intelligent computer tutors, wearable computers, and highly interactive web sites. Constructing an HCI product is a cyclic, iterative process that involves at least three stages.

40

The Design stage involves principles of design and human behavior, the Implementation stage principles of computer science, and the Evaluation stage empirical research methods common to several disciplines. There are thus four topical areas to cover in this major: Human Behavior, Design, Implementation, and Evaluation. In slightly more detail, each of the stages in the picture above involves the following sorts of knowledge and skill:

Design
- Eliciting from the client, formulating, and articulating functional specifications
- Knowing how human factors and cognitive models should inform design
- Knowing the principles of, and having experience with, communication design
- Understanding how implementation constraints should inform design
- Incorporating evaluation results into iterated designs

Implementation
- Programming skills
- Familiarity with standard languages - e.g., C++, Java, HTML
- Rapid prototyping skill (e.g., Flash)
- Computational literacy, i.e., knowledge sufficient for effective communication and decision making about interface construction tools and languages - e.g., Ruby on Rails, Swing, Java
- Multimedia authoring tools - e.g., Director, Premiere
- Data structures and algorithms operating systems, platforms, etc.

Evaluation
- Experimental design
- Survey methods
- Usability testing (Cognitive Walkthroughs, Heuristic Evaluation, GOMS)
- Statistical Analysis
- There are over 50 courses relevant to these areas that are now offered by eight different departments in four different colleges at CMU (the College of Humanities and Social Sciences, the School of Computer Science, the College of Fine Arts, and the School of Industrial Administration).

CD Program The program focus is to explore principles of communication across different media. The goal of the Communication Design (CD) program is understanding and mastery of communication design principles, theories, and skills. Communication design is defined in broad terms, ranging from printed work to interactive displays, all in the service of informing, educating, and delighting people. The CD program teaches a problem-solving approach to communication, with a special concern for the people affected by any designed communication. The sequence begins with Basic Typography, which explores typographic form in space and time. This is followed by Intermediate Typography, which is concerned with meaning in visual combinations of words and images, and Advanced Typography, which explores the personal voice in visual communication. The final course, Information Design, addresses the problems of communicating complex information in both physical and digital environments.

Elective topics may include digital imaging, journal design, kinetic maps, narrative structures in video, kinetic typography, and interface and interaction design. The design studies sequence of courses covers design history, design and social change, design and perception, and aesthetics. In general, topics will change based on faculty research and the specializations of visiting designers.

3.   DePaul University - BS in Computer Games Development (2009), BS in Animation

DePaul's Game Dev program, founded in 2004, was the first Bachelor of Science degree program at a Liberal Arts university. It emphasizes a team-based multidisciplinary approach to game development. *There are three areas of concentration: game production and design, game programming, and animation.* Students in all three areas share core

Game Dev courses, culminating in the two-quarter Senior Capstone game project. By working together on game development teams, students gain a valuable experience that prepares them for the unique nature of the profession.

Both computer science and animation are central to the game development industry, and at DePaul neither area is an afterthought. The Programming concentration is built on the foundation of DePaul's twenty-year-old Computer Science program, one of the largest in the country.

BS in Computer Games Development
The BS in Computer Games Development prepares students to work in the multi-disciplinary field of computer gaming and interactive media. This program also requires strong mathematical and programming skills.

The BS in Computer Games Development offers a concentration in **Production and Design and** a **Concentration in Game Programming.** This program was created in consultation with a Game Dev Industry Advisory Board, and is the result of input from many of the game programmers, producers and designers in the Chicago area.

Students in the Production and Design concentration receive an education in all areas of game development, including game design, programming and animation, but also the basic business skills of project management, budgeting, contract negotiation, marketing and quality assurance.

Students in the Game Programming concentration engage in the rigorous study of computer science basics, and then apply this knowledge to the demanding specialization of game programming. Areas of study include computer graphics development, computer science, linear algebra, game physics, and artificial intelligence programming.

4. New York University BS in Digital Communications and Media

Linking education with real-world experience is the guiding principle behind New York University's bachelor's degree programs. Students learn theory and practice from the nation's top industry leaders and innovators, who weave professional experiences and firsthand knowledge into an academically rigorous curriculum.

The B.S. in Digital Communications and Media addresses the need for professionals who understand the complex and fast-changing environment created by technology in the workplace. Students acquire state-of-the-art knowledge in a variety of digital and media formats as applied to the film, video, telecommunications, and communications industries. Students select from one of the following concentrations: Digital Broadcasting and Telecommunications; Computer Animation and Visual Effects; Media Production: Film and Digital Video; Digital Game Production; or Web Production.

5. Parsons School of Design- BFA Communication Design and Technology
The Department of Communication Design and Technology (CD+T) houses three degree programs: an undergraduate program in Communication Design (BFACD), an undergraduate program in Design and Technology (BFADT), and a graduate program in Design and Technology (MFADT). These are one of the largest departments at Parsons, with over 150 faculty members, 560 students and a wide array of courses from "Experimental Typography" to "Geek Graffiti", "Transmedia Design" to "Games, Mods and Code". Students study in pathways such as Game Design, Animation and Motion Graphics, Information Design, Publication, Advertising and Persuasion, Physical Computing and Interaction Design or create their own hybrid curriculum.

Unlike traditional design disciplines, Design+Technology defies simple definitions. Instead, practitioners of new media tend to recombine various areas of focus in a generative and iterative mode of creative discourse. They open students to divergent and emergent design and art forms, including programming, digital film-making, game design, motion graphics, physical computing and the documentary.

6. PENN Digital Media Design - BSE

Computer-generated imagery is transforming communication — from educational software and motion picture special effects to architectural simulations and medical visualizations. With these new technologies come new questions about the creation and design of virtual environments and their impact upon society.

To address these questions, Penn Engineering, in collaboration with the University's Annenberg School for Communication and the School of Design created the Digital Media Design (DMD) program, an elite BSE degree program for a limited number of students.

The curriculum gives students a foundation in three areas: 1) computational basis for the creation of digital media imagery, including simulation of 3D environments; 2) informed understanding of the aesthetic aspects of digital media design; and 3) theory and research concerning viewers' psychological responses to, and uses of, visual media as well as broader socio-cultural effects. Students in the program are expected to participate in one or two summers of real-world experience in a major multimedia industry.

7. Rensselaer Polytechnic Institute BS Games & Simulation Arts and Sciences

Rensselaer's new Games and Simulation Arts and Sciences (GSAS) Major, formally announced as a B.S. degree with enrollment beginning in **Fall 2007**, is among a handful of such programs in the country and is designed to educate students for early career positions, in addition to providing them with the technical, communication, and leadership skills needed to help shape an industry emerging out of the "games" phenomenon.

Game Design Studies: An Interdisciplinary Approach

Rensselaer's Games and Simulation Arts and Sciences program, like the existing Game Design Studies Minor, is a second-generation program intended (1) to educate students for early career positions and (2) to provide them with the technical, communication, and leadership skills needed to help shape an industry emerging out of the "games" phenomenon.

BS in Games & Simulation Arts and Sciences

The program in Games and Simulation Arts and Sciences (GSAS) has two components. The first component is a program leading to the games and simulation arts and sciences B.S. degree. It is designed to ensure that every graduate has a suite of integrated skills that external reviewers and our faculty working group have identified as important for leaders in the field: experience working in interdisciplinary teams, proven abilities in producing work (as demonstrated by having a portfolio in hand at graduation), analytical and communication skills, and experience pushing the boundaries of present-day genres and technologies through research.

Minor in Game Design Studies

This interdisciplinary minor is housed in Humanities and Social Sciences, and is comprised of courses offered within the Departments of Cognitive Science; Arts; and Language, Literature, and Communication.

8. Simon Fraser University BA or BSc Interactive Arts and Technology

The School of Interactive Arts + Technology (SIAT) at SFU is an interdisciplinary research focused school where technologists, artists, designers and theorists collaborate in innovative research and immersive study.

A degree in Interactive Arts and Technology prepares students to play a leading role in the conception of new media and the design of inventive technologies. A SIAT education combines the science of human experience, the analysis of media and culture, the creation of original and experimental works of art, and the implementation of new technologies. They bring these resources to bear on the most vital and innovative sectors of the economy, building the technologies and experiences that increasingly shape our lives.

BA or BSc in Interactive Arts and Technology
SIAT offers three (3) concentrations of undergraduate study: Informatics, Design and Media Arts. All share a fundamental concern with how people use technology in their lives. There is flexibility to pursue a BA or BSc Degree.

·All SIAT students complete a common set of first and second year courses. Then, in their third and fourth year, students will complete one (or more) concentration(s) in Informatics, Design, or Media Arts. This flexibility allows students to explore courses across the concentrations, while earning a degree that suits your individual strengths and goals.

9. University of Southern California Bachelor of Arts Interactive Entertainment

The B.A. in Interactive Entertainment combines a broad liberal arts background with a specialization in game design & development, interactive media and traditional media production skills.

Minor
The Minor in Video Game Design and Management integrates theoretical concepts and practical skills to prepare students for a career in interactive entertainment, specifically the video game industry.
Research
The Interactive Media Division focuses its research in the areas of games, immersive and mobile media.

10. University of Denver, BA, BS in Game Development

School of Engineering & Computer Science Game Development is the academic field focused on the creation of electronic games. The field includes interactive graphics/animation programming, fundamental computer science, game design, studio art, electronic art, narrative storytelling, and critical game studies. The field is concerned with both entertainment and serious games. They not only teach creation of games for the entertainment industry, but also focus on **Humane Games.** We have coined the term Humane Games to encompass three sub-fields: 1) Games for Education; 2) Games for Medicine and Health; and 3) Socially Conscious Games. DU's faculty and graduate students are engaged in research and scholarship in each of these three areas. DU believes that games have the potential to improve society as well as provide entertainment

The BA requires of minimum of 12 four-credit Computer Science (COMP) or Digital Media Studies (DMST) classes and the first two quarters of calculus. Of these 12 COMP/DMST classes, 9 are required and 3 are electives.

The BS requires a minimum of 13 four-credit COMP/DMST classes, a minor in mathematics, a second minor of your choices, and a cognate of 5 approved allied field classes from Art, EMAD, and DMS. The BS requires more mathematics and more required COMP class than the BA and is balanced with fewer classes in the allied fields.

E. Studio Elements (300-level) and Integrative Studio (400-level): Guiding Principles

1. Guiding Principles

The following are guiding principles for the design and development of the IMD, multi-quarter studio experience:

1) Emphasize how to build quality into a product, which always ends up being shortchanged in a (short) quarter when the goal is to produce a functional deliverable.
2) Have a longer project in order to be able to develop more media projects.
3) Use iteration within the quarter in addition to iterations across quarters to provide feedback, to help motivation, and to demonstrate progress.
4) Use project work as basis for more in-depth discussion of theories / concepts.
5) Use project and team work to provide "real-world experience" to students.
6) Take product design all the way from concept through to implementation, so that students see how well their analysis and design work.
7) Provide materials/tangible outcomes that students can use for their own portfolio and resume.
8) Provide opportunities to reflect on connections between projects and concepts / theories.
9) Allow student-driven exploration with respect to depth of topics
10) Use "learning (b)logs" as part of individual student experience / assessment.

2. Content-Specific Goals / Objectives

A key feature of the IMD studio courses is that "students demonstrate theory... in practice." For each concept module the student and team must demonstrate through their studio projects their ability to understand and demonstrate each of the core competencies covered in the content modules. It is critical that students demonstrate the ability to understand the theoretical foundations of their work – and make the connection between "practice" and "concepts."

Below are samples of specific goals and objectives that will be incorporated into the IMD studio experience:

1) Students demonstrate team work in practice.
2) Teams have their own "charter" / "roles."
3) Team performs self-assessment / performance appraisals
4) Team uses effective decision making / conflict resolution / negotiation techniques.
5) Team uses creativity / innovation / problem-solving methods.
6) Team demonstrates self-management practices.
7) Team assesses whether or not they are using practices associated with "high performance" teams.
8) Students perform workflow / lifecycle / project management.
9) Team always has plan for current sprint (detailed) and future sprints (general).
10) Team estimates "cost" of tasks / allocates effectively.
11) Team uses "daily standup" and / or other micro incremental methods.
12) Team manages project change -- whether self-imposed or from outside.
13) Team defines and documents its own lifecycle policies / procedures.
14) Team manages their time and resources -- including meeting management.

15) Students identify and analyze project scope / objectives / requirements.
16) Team elicits requirements from all appropriate stakeholders.
17) Requirements include functional, non-functional, and constraints.
18) Teams analyze project feasibility.
19) Students demonstrate the "interactive experience."
20) Experiences are "visual" (such as concept drawings, storyboards, wireframes, etc.).
21) Experience may be "prototypes" / interactive "mock-ups."
22) Experience may be "physical" emulation (such as board /card game, 3-D art).
23) Students validate ideas / needs with stakeholders / audiences.
24) Validation included "play testing" / "usability testing" rather than just walkthroughs reviews only – link to core human-computer-technology interaction theoretical principles.
25) Requirements identify "vision" beyond initial release.
26) Students manage quality of processes and deliverables in practice.
27) Projects have "acceptance" criteria that determine when a version is "complete."
28) Team can demonstrate the notion of "traceability."
29) Teams perform retrospectives with regards to iterations / sprints.
30) Students use configuration management throughout lifecycle in practice.
31) All appropriate artifacts are dated and versions.
32) Team manages all projects assets.
33) Team manages linkages between artifacts.
34) Students communicate to audiences beyond their team.
35) Team can "sell" their project to non-technical audiences using multiple modes and constraints on communication (e.g., "elevator pitch", written business plan, presentation, and video).
36) The technical design can be reviewed by an external team.
37) Team can communicate "resource needs" to instructors / IT as appropriate.
38) Team provides regular "status" to "management" (instructors).
39) Team can provide "technical support" to users / operations as needed.
40) Team can be communicated to as an "entity" -- information flows appropriately.
41) Students manage ethics / security / privacy / psychological / addiction concerns.
42) Team creates artifacts that can be subject to "audit" by external review.

3. Studio Process Considerations

When teaching the IMD studio sequences, the following general process considerations will be used:

1) Use iterative design/development processes (such as multiple sprints linked to Content Modules) within each quarter. Iteration is key; the reason is that students do fail, and it's important for them to fail early and have time and opportunities to try again, do better, and gain/regain /build their confidence.
2) Using collaboration tools to support the students' work. Use "real world" projects for the students whether sourced from community, industry or internal UW sponsors -- driven by student entrepreneurship.
3) Allow students to explore application / usefulness of concepts / methods -- maybe use a "sell" approach rather than "tell" approach.
4) Student teams should be 3-5 members – consistent with what they might experience in the workplace.
5) Use "learning (b)logs" as part of individual student experience / assessment
6) Help students understand how to codify their own team expectations.

4. Studio Manager and Content Module Instructors Coordination

When teaching the IMD studio sequences, the IMD studio manager and the instructors for each of the Content Modules must be well-coordinated. The following are some items that should be outlined as the IMD studios are finalized:

1) Provide an optimized design that will achieve the learning goals, supporting as much student-centered learning as possible, and ensure consistency in the studio experience.
2) Identify/provide an "artist" to help with conceptualization and implementation of project. How will teams have access to expertise / resources?
3) Minimize the chance of people being stuck in poor teams.
4) Determine how to identify and manage individual "poor" performers / problems – particularly across quarters – perhaps implement "360 degree" reviews at the end of each iteration or quarter.
5) Determine expectations/processes for division of labor/accountability for teams. Identify expectations for teams of different sizes.
6) Identify methods for encouraging creativity as applied to the implementation of content modules in projects while maintaining a connection to the learning objectives.
7) Calculate the expectations related to individual, team, studio manager and instructor burden to ensure project scope is realistic – and consistent.
8) Determine processes for changing team structures/membership due to unforeseen circumstances – this, of course, is common to real-world teams as well.
9) Determine effective studio scheduling and access to needed technologies, resources, data, content module (and associated faculty members) and other resources.
10) Ensure consistency in grading methods, rubrics, self-assessments, team assessments, etc.
11) Ensure processes are in place related to any "intellectual property" issues related to projects (student- and/or community/industry focused).
12) Ensure that proper technologies, tools, support services are determined prior to the studio course/project queue.
13) Determine methods for student team creation, changing membership, conflict resolution, etc.
14) Identify methods for sharing of projects within and outside of the campus community – forums, presentations, web presence, videos, etc.
15) Create an "end of studio" sequence event/celebration. Are there awards of any type related to projects – creative, innovative, "best project," categories (e.g., industry, community, individual, team, by type of project)?
16) Identify methods for student interfaces with external projects – technology access, travel (when needed), confidentiality/non-disclosure requirements, etc.

F.   Additional Math Options for IMD Students

Students will also be encouraged to take additional math courses currently offered at UWB to prepare them for specialty areas of study in the STEM-related fields. Suggested courses to be taken during the 1st and 2nd years of study may include:

B CUSP 122 Introduction to Elementary Functions (5)
Covers college algebra with an emphasis on polynomial, rational, logarithmic, exponential, and trigonometric functions. Offered: AWSp.
Instructor Course Description: *Bilin Z Stiber Barry Minai*

B CUSP 123 Functions, Models, and Quantitative Reasoning (5) NW,QSR
Explores the concept of a mathematical function and its applications. Explores real world examples and problems to enable students to create mathematical models that help them understand the world in which they live. Each idea will be represented symbolically, numerically, graphically, and verbally. Prerequisite: minimum grade of 2.0 in B CUSP 122 or sufficient score on UWB Math Assessment. Offered: AWSp.
Instructor Course Description: *Andrew Moushegh Abian Alla Genkin Bilin Z Stiber Katherine Ann Cook Nicole A Hoover Carol Zander*

B CUSP 124 Calculus I: Origins and Early Developments (5) NW,QSR
Develops modern calculus by investigating the questions, problems, and ideas that motivated its discovery and practice. Studies the real number system and functions defined on it, focusing on limits, area and tangent calculations, properties and applications of the derivative, and the notion of continuity. Emphasizes problem-solving and mathematical thinking. Prerequisite: minimum grade of 2.0 in B CUSP 123 or equivalent, or score of 70-100 on the MPT-A assessment test. Offered: AWSp.
Instructor Course Description: *Alexandre Barchechat Peter J. Littig Nicole A Hoover Michael D Stiber*

B CUSP 125 Calculus II: Foundations and the Emergence of Modern Analysis (5) NW,QSR
Focuses on the historical emergence of modern calculus, the Fundamental Theorem, area, volume, and area length calculations, properties and applications of the integral, infinite series, Taylor and Fourier expansions, and the Weierstrass definition of limit. Emphasizes problem-solving and mathematical thinking. Prerequisite: minimum grade of 2.0 in B CUSP 124, score of 3 on AP MAB or AP MBC exams. Offered: AWSp.
Instructor Course Description: *Peter J. Littig Eric P. Salathe*

B CUSP 126 Calculus with Analytic Geometry III (5) NW
Third quarter in calculus sequence. Introduction to Taylor polynomials and Taylor series, vector geometry in three dimensions, introduction to multivariable differential calculus, double integrals in Cartesian and polar coordinates. Prerequisite: either 2.0 in MATH 125, 2.0 in MATH 145, 2.0 in MATH 146, 2.0 in B CUSP 125, score of 5 on AB advanced placement test, or score of 4 on BC advanced placement test. Offered: AWSp.
Instructor Course Description: *Bilin Z Stiber*

B CUSP 127 Learning Strategies in Mathematics (2)
Explores applications of formulae, computational skills, and interpreting certain quantities. Reviews study techniques to enhance course comprehension, and the pros and cons of the use of calculators in a math class. Credit/no credit. Offered: concurrently with B CUSP 123; AWSp.
Instructor Course Description: *Katherine Ann Cook*

B CUSP 200 Introduction to Microeconomics (5) I&S, QSR
Analysis of markets: consumer demand, production, exchange, the price system, resource allocation, government intervention. Recommended: B CUSP 123. Offered: AWSp.
Instructor Course Description: *David A. Conners Daniel F. Jacoby Philip J Palm*

B CUSP 201 Introduction to Macroeconomics (5) I&S, QSR
Analysis of the aggregate economy: national income, inflation, business fluctuations, unemployment, monetary system, federal budget, international trade and finance. Prerequisite: B CUSP 200; recommended: B CUSP 123.

Offered: AWSp.
Instructor Course Description: _David A. Conners_ _Robert Francis_
BIS 230 Mathematical Thinking for the Liberal Arts (5) NW/QSR
Develops mathematics from historical, intellectual, and applied perspectives. Designed to broaden concepts of the meaning of mathematics, develop mathematical thinking, and encourage the use of mathematics in meaningful applications.
Instructor Course Description: _John Rasmussen_
BIS 231 Linear Algebra With Applications (5) NW,QSR _Hillyard, Littig_
Introduction to linear algebra (i.e., concepts, tools, and operations related to matrices and vectors) with emphasis on interdisciplinary applications. Provides an introduction to the mathematical concepts, arguments, and proofs that occur in linear algebra. Prerequisite: B CUSP 124.
Instructor Course Description: _Peter J. Littig_
BIS 232 Using, Understanding, and Visualizing Quantitative Data (5) NW/QSR _Hillyard, Littig_
Introduces descriptive statistics and visual representations of quantitative data. Examines data sets using graphing and statistical software packages. Demonstrates how to present data in ways that are accurate, effective, and visually appealing.
Instructor Course Description: _Cinnamon Hillyard_
BIS 315 Understanding Statistics (5) I&S/NW/QSR
Presentation of key concepts for understanding and judging reports of statistical analyses and for performing and reporting valid statistical analyses using a limited set of measures and tests.
Instructor Course Description: _Katherine Ann Cook_ _Cinnamon Hillyard_ _John Rasmussen_ _Peter L Nye_ _Rubye Elizabeth Thomas_ _Andrea L Stone_
BIS 329 Topics in Mathematics Across the Curriculum (5, max. 10)
Examines mathematical theories and concepts within their historical and cultural contexts. Topics vary with instructor and may include mathematical symmetries, the organization and modeling of space, cryptology, mathematical models of social decision making, and/or theories of change and strategy.
Instructor Course Description: _Alexandre Barchechat_ _Cinnamon Hillyard_ _John Rasmussen_ _Peter J. Littig_
BST 390 Probability and Statistics in Engineering (5) NW
Covers concepts of probability and statistics; conditional probability, independence, random variable, and distribution functions; descriptive statistics, transformations, sampling errors, confidence intervals, least squares, and maximum likelihood; and exploratory data analysis and interactive computing. Prerequisite: B CUSP 12

G.   Additional Computing Options for IMD Students

Students within the IMD degree program will often have an interest in programming techniques relevant to building media applications. Students may wish to leverage the many programming- and general computing courses that are available to them. Some of the possible IMD Specialty Areas may require advanced knowledge of programming; if so, it is advised that students take programming courses during their freshman/sophomore years.

Suggested essential programming courses include:

CSS 161 Fundamentals of Computing (5) NW,QSR
Introduction to programming concepts within social, cultural, scientific, mathematical, and technological context. Topics include programming fundamentals (control structures, data types and representation, operations, functions and parameters), computer organization, algorithmic thinking, introductory software engineering concepts (specifications, design, testing), and social and professional issues (history, ethics, applications).

CSS 162 Programming Methodology (5) NW,QSR
Transition from basic programming skills to a rigorous process of software development. Familiarization with higher level programming techniques (recursion, generic programming) and constructs (object-orientation, lists, stacks, queues, searching, sorting). Emphasizes connection between mathematical/algorithmic thought (logic, sets, functions, number bases) and implementation. Prerequisite: minimum grade of 2.7 in CSS 161.
Instructor Course Description: _Michael D Stiber_

CSS 263 Programming and Discrete Mathematics (5)
Abstract representation as tools for software design. Fundamentals of mathematical thinking (predicate calculus, functions, relations, proofs, computational complexity) applied to abstract data types (lists, stacks) queues) and algorithmic strategies (divide-and-conquer, grey). Pointers and memory management in programming languages. Prerequisite: minimum grade of 2.5 in both CSS 162 and B CUSP 124.
Instructor Course Description: _Michael D Stiber_
Advanced Programming Courses (to qualify for advanced studies in 2-D, 3-D graphics, networking, database management or other courses) include:

CSS 341 Fundamentals of Programming Theory and Applications (5)
Fundamental concepts and techniques for analysis, design and implementation of computer programming. Prerequisite: CSS 161; may not be repeated.
Instructor Course Description: _Charles F Jackels_

CSS 342 Mathematical Principles of Computing (5)
Integrating mathematical principles with detailed instruction in computer programming. Explores mathematical reasoning and discrete structures through object-oriented programming. Includes algorithm analysis, basic abstract data types, and data structures. Prerequisite: minimum grade of 2.5 in CSS 162; B CUSP 124; may not be repeated.
Instructor Course Description: _Michael D Stiber_ _Valentin N. Razmov_

CSS 343 Data Structures and Algorithms (5) _Stiber, Zander_
Develops competencies associated with problem-solving, algorithms, and computational models. Covers abstract data types and data structures, efficiency of algorithms, binary tree representations and traversals, searching, dictionaries, priority queues, hashing, directed graphs and graph algorithms, and language grammars. Prerequisite: minimum grade of 2.0 in CSS 301; minimum grade of 2.0 in either CSS 263 or CSS 342; minimum grade of 2.0 in either B CUSP 125 or MATH 125; may not be repeated.
Instructor Course Description: _Michael D Stiber_ _Carol Zander_

XVI. Addendum I – Protocol for Approval of Shared Degree Programs

**Source: UW Seattle Graduate School**
Proposals for new degree programs may be submitted by any of the following:
1. Academic Units
2. Chancellor
3. Vice Chancellor, Academic Affairs

<u>**Administration of co-housed programs**</u>
Interdisciplinary programs should be run by a committee that gets approved by VC of Academic Affairs. There needs to be a faculty steering committee, so that there is assurance that regular faculty are overseeing the program. But there is an administrative component that they do not approve, particularly if faculty will have appointments in that program.

Figure 1: IMD Program Structure
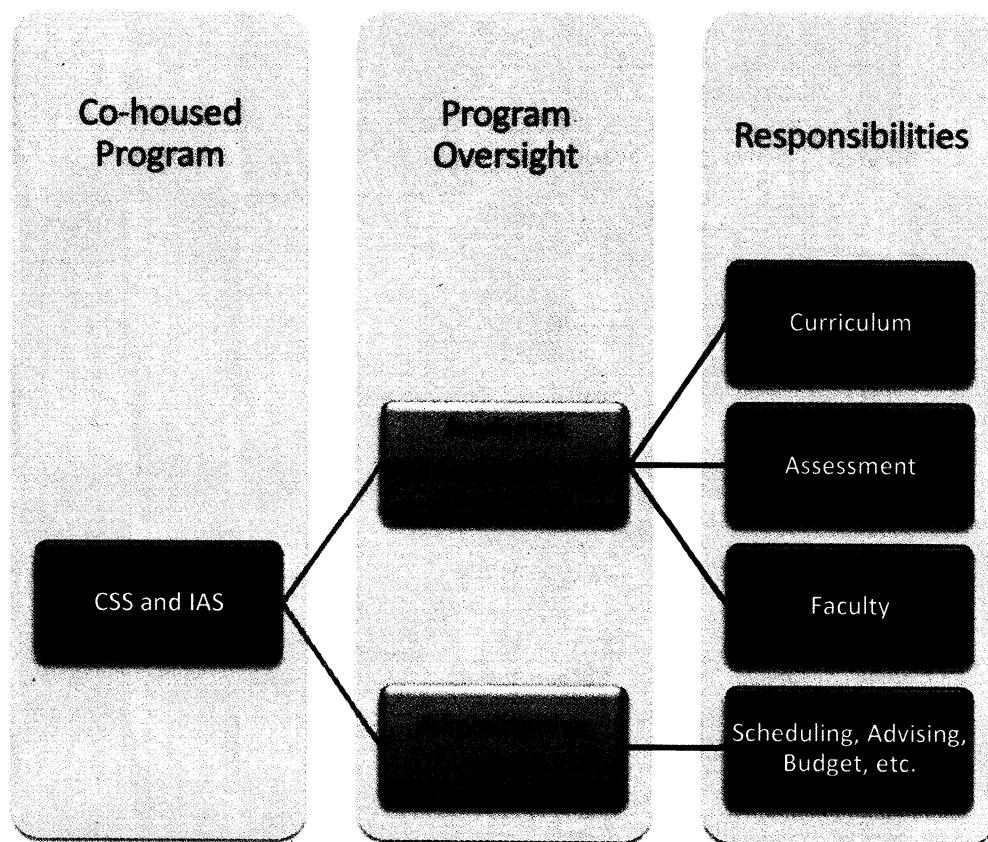
Bothell: Bachelor of Arts degree in Interactive Media Design (BIMD-20120503)

uwcr
uwcr
Board owner

Posted May 17, 2012 2:42 PM

Please review the attached 1503 pdf requesting to establish a Bachelor of Arts degree in Interactive Media Design at the Bothell campus and post comments by 5:00 pm on Friday, June 1st.

If you have any problems viewing the attachment or need disability accommodations, please contact the University Curriculum Office at uwcr@uw.edu.

Attachments:

- BIMD-20120503.pdf 50.9M Download View

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wellsbil
WILLIAM L. WELLS

Expansion assumes financial support. In these times, that premises is debatable. Thus. Good idea, bad timing. A vote against

---

d6423
DONALD J. JANSSEN

Since the proposed program is fee-based, it should be self-supporting and the issue of central financial support shouldn't really exist.

However, I am having a problem with the fact that 60 of the credits in the last two years are coming from only six 10-credit design studios. I would feel much more comfortable if each of those 10-credit design studio courses was broken down into at least two separate courses - an instructional course with new content delivered and a studio course with supervised exploration of the use of the content.

Sept 12, 2012

To: Pamela Joseph, Ph. D.
        Chair, General Faculty Organization

From: Bill Erdly, Ph. D.
        Chair, IMD Academic Oversight Committee

RE: Responses to Tri-Campus Review Comments for the IMD Degree Proposal

Below are responses to the two comments received during the tri-campus review of the Interactive Media Design (IMD) degree. Should you have any further comments as you complete the Post Tri-Campus Approval that ensures all comments were addressed, please let me know.

Comment 1: (William L. Wells) – The comment that this degree is a "good idea" is consistent with the demand data and general response from students, faculty and prospective employers. The concern about "bad timing" related to funding Is correctly addressed by the follow-up comment by Donald J. Janssen. The IMD degree is indeed a self-sustaining degree and is supported by a development budget provided by UWEO – and ultimately funds derived from the delivery of the degree as it transitions to a steady state of operation. This degree is not supported by state funds.

Comment 2: (Donald J. Janssen) – There was a suggestion that the 10-credit studio courses be broken down into two smaller courses – one being focused on the delivery of new content and the second being a studio course with supervised exploration of the use of the content. We agree completely with this recommendation – and it is already indicated in the proposal. Each studio course does have two numbers (as depicted in Section VII, pp. 30 – 32) such as IMD 351/361, IMD 352/362 and IMD 353/363 for the Junior-level studio sequence – with a similar structure for the senior-level studio series. Details describing the components are included on page 18 of the proposal and are also provided below:

> *Each studio elements course comprises two critical components for assessment – the first is based upon mastery/knowledge of academic content in specific knowledge domains (IMD 35X); the second is based process/product elements (IMD 36X). Students will be required to maintain a portfolio of all work that will be evaluated as part of the IMD 36X assessments.*

A similar description is included for the senior-level studio course (see page 19 of the proposal):

> *The Integrative studio courses require students to successfully complete a series of Advanced Content Modules (IMD 48X) and the Advanced Studio production components (IMD 49X). The Advanced Studio production components will be evaluated based on product development, integration of specialty area knowledge into the student's final portfolio, documentation & evaluation of product impact and criteria related to the synthesis of content modules into the integrated final project. Students will be required to maintain a portfolio of all work that will be evaluated as part of the IMD 49X assessments.*

Further details of each of the studio courses will be provided during the course approval process and documentation. New course proposals will be completed during the 2012/2013 academic year in preparation for the degree start date in autumn 2013.

W UNIVERSITY *of* WASHINGTON | BOTHELL

Office of the General Faculty Organization

To: Faculty Council on Tri-Campus Policy

From: Kari Lerum, Chair, Executive Council of the General Faculty Organization, University of Washington Bothell

Date: October 9, 2012

Re: Executive Council Approval of BA in Interactive Media Design

The Executive Council (EC) of the General Faculty Organization of University of Washington Bothell reviewed the responses from the tri-campus review of the proposal for the BA in Interactive Media Design at its October 9, 2012 meeting. The EC has determined that the proposing faculty in the Interactive Media Design Program have duly considered and responded to the comments posted by faculty from across the three campuses during the tri-campus review period.

Please let me know if you need any additional information.

UNIVERSITY CAMPUSES UNDERGRADUATE PROGRAM REVIEW PROCEDURES*

CHECKLIST

Title of Proposal: Bachelor of Arts degree in Interactive Media Design (BIMD-20120503)

Proposed by (unit name): Computing & Software Systems & Interdisciplinary Arts & Sciences (Joint degree)

Originating Campus:

       ___UW, Seattle

       _X_UW, Bothell

       ___UW, Tacoma

I. **Phase I. Developed Proposal Review** (to be completed by Originating Campus' Academic Program Review body)

    A. Review Completed by: (list name of program review body)

     Chaired by:

     05/10/12 Date proposal received by originating campus's review body

     05/15/12 Date proposal sent to University Registrar

     05/17/12 Date proposal posted & email sent to standard notification list

     10/15/12 Date of originating campus's curriculum body approval
             (Note: this date must be 15 business days or more following date of posting)

    B. __2___ Number of comments received. Attach the comments and a summary of the

consideration and responses thereof : (1-2 paragraphs)

II. **Phase II. Final Proposal Review** (to be completed by FCTCP)

    A. Review Completed by:
     X FCTCP subcommittee
     ___ FCTCP full council
     Chaired by: Kyle Crowder (sub-committee lead) – Note: The FCTCP Chair (Erdly)
     recused himself of this review due to his involvement in creating the IMD degree proposal
     and responses.

10/31/12 Date request for review received from University Registrar
11/15/12 Date of FCTCP report

B. Review (attached)

YES NO
_x_ ___ Was notice of proposal posted on UW Website for 15 business days?
_x_ ___ Was notice of proposal sent to standard mailing list 15 business days in advance of academic program review?
_x_ ___ Were comments received by academic program review body?
_x_ ___ Was response to comments appropriate? (explain, if necessary)
_x_ ___ Was final proposal reviewed by FCTCP within 14 business days of receipt?
_x_ ___ Was there adherence to the University Campuses Undergraduate Program Review Process? (explain, if necessary)

C. Recommendation

_x_ Forward for final approval
___ Forward to Provost because of University issues (Explain)
___ Return to campus council because of insufficient review (Explain).

**Endorsed by Faculty Senate Executive Committee, 1/10/05, modified 1/31/06; These procedures apply to new undergraduate degrees, majors, minors (and certificates) and substantive changes to same