

**BOARD OF HIGHER EDUCATION**

**REQUEST FOR COMMITTEE AND BOARD ACTION**

**COMMITTEE:** Academic Affairs

**NO.:** AAC 14-15

**COMMITTEE DATE:** December 3, 2013

**BOARD DATE:** December 10, 2013

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**MOVED:** The Board of Higher Education hereby approves the Articles of Amendment of **Becker College** to award the **Bachelor of Arts in Interactive Media Design**.

Authority: Massachusetts General Laws Chapter 69, Section 30 et seq.

Contact: Shelley Tinkham, Assistant Commissioner for Academic, P-16 and Veterans Policy

## **BOARD OF HIGHER EDUCATION**

**December 2013**

### **Becker College Bachelor of Arts in Interactive Media Design**

#### **INTENT**

Becker College, a non-profit, NEASC-accredited institution located in Worcester, Massachusetts, requests approval to offer the Bachelor of Arts in Interactive Media Design. The proposed degree in Interactive Design began in 2005 under its original title: Bachelor of Arts in Interactive Entertainment and Game Design. This proposal seeks to correct the institution's mistaken belief that it was not required to have the authorization of the Board to offer the degree in 2005. The institution has also decided to change the name of the degree title to more accurately reflect today's industry.

The video game industry represents a rapidly growing and lucrative industry, creating a high demand for interactive media designers, who create visual graphics that allow user participation in a variety of electronic media such as websites, games, and cell phone applications. In addition, there is an array of other intersecting industries which utilize interactive media, such as in healthcare and education, in which students may seek employment.

Graduates of the proposed program are expected to be hired in a variety of positions, including programming, technical analysis, quality assurance testing, online testing, computer networking and technology education. Past graduates have secured employment in companies such as Harness IT, Oracle, Turbine/Warner Bros., UNUM Provident Insurance, Unregular Audio, Meditech and in several public schools. The institution reports an 87% employment rate (within one year of graduation) for 2011 graduates.

The institution's Board of Trustees approved the program on August 7, 2012.

#### **INSTITUTIONAL OVERVIEW**

Becker College is a small, private non-profit educational corporation, accredited by the New England Association of Schools and Colleges (NEASC). The College was incorporated originally by an act of the Massachusetts Legislature on December 4, 1940, as Becker School of Business Administration and Secretarial Science with the power to award the degree of Associate in Science, St. 1943, C. 555. In March 1977, the College acquired the Leicester campus and began offering courses in Leicester as well.

In 1990, an Act of the Legislature, amending the institution's charter, authorized a change of name to Becker College and award the Associate in Science degree in the following fields: liberal arts, business, secretarial science, education, health and animal sciences, technical studies, retailing and human services, environmental studies, law and criminal justice, communications, sports and recreation, travel, tourism and hospitality, and to offer any and all other courses or programs related or incidental thereto. In 1993 Becker filed Articles of Amendment pursuant to M.G.L.C. 69, s. 30 and came under the jurisdiction of the Board of Higher Education in May 1993 when it was authorized to award, in addition to its associate degree programs, the Bachelor of Science in Business Administration, Bachelor of Science in Legal Studies, and Bachelor of Arts in Psychology. In May 1996, the College was authorized to

award the degree, Bachelor of Science in Veterinary Science. In April 1997, Becker College was authorized to grant the degree, Bachelor of Science in Criminal Justice. In March 1998, the Board approved the Bachelor of Science in Kinesiology and two years later, in April 2000, the College was authorized to grant the Bachelor of Arts in Liberal Arts. In 2001, the Board of Higher Education approved the Bachelor of Arts in Design and in 2007, the Bachelor of Science in Nursing. The institution now requests the Bachelor of Arts in Interactive Media Design.

## **ACADEMIC AND RELATED MATTERS**

### *Curriculum (Attachment A)*

The proposed program integrates the College's liberal arts coursework with a foundation of game design skills and programming, reinforced with hands-on practical training. Students complete coursework in programming, visual arts, concept design, engine design, animation and rigging, script development, mobile and console application and computer graphics. In the junior and senior years, students can customize curricular with internship and free electives. The program includes two concentrations: game development and programming or game design. Game development and programming focuses on the technical aspects of game development, while game design concentrations focus more broadly on projects.

### *Admission Requirements*

The minimum admission requirements is 2.0 high school GPA; however, given the high number of applicants to the program, applicants' average high school GPA is 3.5 and combined SAT is 1195.

### *Tuition and Fees*

Tuition for the program is \$30,000 per year. Annual fees are \$1,500.00. This information is for the 2013-14 academic year.

### *Projected Enrollment*

The enrollment table is based on several assumptions, including a first year retention of 80% and a second year retention of 60% with projected increase in these retention rates to 90% and 70% respectively over a five-year period, and a 5% increase in new students each year.

	<b># of Students Year 1 2012-13 actual</b>	<b># of Students Year 2 2013-14</b>	<b># of Students Year 3 2014-15</b>	<b># of Students Year 4 2015-16</b>
New Full-Time	123	110	116	121
Continuing Full-Time	178	244	251	248
New Part-Time	0	0	0	0
Continuing Part-Time	0	0	0	0
<b>Totals</b>	<b>301</b>	<b>354</b>	<b>367</b>	<b>370</b>

## **RESOURCES AND BUDGET**

### *Faculty and Staff*

The program has five full-time faculty in addition to full-time administrator and a full-time technical assistant. Each of the five faculty have specialized experience in different areas of the Interactive Media Industry. In addition, there are currently 15 part-time faculty who teach in the program. The institution is committed to hiring additional full-time faculty for the program.

### *Library Resources*

Becker College provides library services for both campus locations; Ruska Library in Worcester and Swan Library in Leicester. Both libraries hold 61,000 print volumes altogether. In addition, the libraries subscribe to 150 online/print journals and provide access to 1,000 full-text journals through database subscriptions. Becker College participates in the Academic and Research Collaborative (ARC), a group of central Massachusetts academic, public, and institutional libraries, which allows reciprocal borrowing for the College community and professional development for library staff.

### *Physical Resources*

The program utilizes media-enabled meeting rooms, in addition to five computer labs, a six-camera motion capture room and green screen, a 3D printing and large scale graphics printing facilities. There are 150 computers dedicated to the academic program. This reflects the addition of labs and computers in the 2013-14 academic year. Students are advised upon admission that they will need a high-end laptop and related software.

### *Budget (Attachment B)*

A multi-year budget projection has been developed for the proposed program.

## **EVALUATION**

### **External Review**

The proposed program was evaluated by an external evaluators; Dennis Hlynsky; Professor Rhode Island School of Design and Brandon Strathmann; Associate Professor, Lesley University College of Art and Design. The evaluators reviewed the petition in September 2013 but did not visit the campus. The criteria that guided the review were the standards currently utilized by the New England Association of Schools and Colleges, supplemented by the criteria of the Independent Institutions of Higher Education Standards, 610 C.M.R. 2.08 (3) (b) through(g).

The evaluators noted that the College demonstrated that it is providing its undergraduate students with a curriculum that is adequately diverse and well-designed to prepare them for a career in Interactive Media Design. While the evaluators determined that there is wide variety of qualified faculty, they expressed concern that the current number of five full-time faculty would be insufficient with anticipated growth and recommended that the institution move forward with plans to hire additional full-time faculty.

The institution responded by sending documentation that shows its plans to hire four new full-time faculty by 2016. This includes the hiring of two generalists, one each in 2014 and 2015 respectively, and then two game programming faculty in 2016. After reviewing the institution's response, the evaluators were satisfied with the institution's response.

### **PUBLIC HEARING**

The required public hearing was held on November 26, 2013 at the Department of Higher Education. No comments were offered in opposition to the proposed program.

### **STAFF ANALYSIS AND RECOMMENDATION**

After an evaluation of all documentation submitted, staff is satisfied that the proposed **Bachelor of Arts Interactive Media Design** meets the criteria set forth in 610 CMR 2.08 (3) in the Degree-Granting Regulations for Independent Institutions of Higher Education accredited by the New England Association of Schools and Colleges. Recommendation is for approval.

**Attachment A: Curriculum Outline**

**Game Design Concentration**

<b>Required (Core) Courses in the Major (Total # courses required = 12)</b>		
<b>Course Number</b>	<b>Course Title</b>	<b>Credit Hours</b>
GAME 1001	History of Game Development	3
GAME 1120	Introduction to Game Design	3
GAME 2120	Intermediate Game Development	3
GAME 3111	Computer Illustration for Game Design	3
GAME 3120	3D Modeling	3
GAME 3150	Level Design	3
GAME 3130	3D Animation	3
GAME 3170	Game Production and Prototyping	3
GAME 4510	Senior Game Project I	3
GAME 4400	Advanced Topics in Game Development	3
GAME 4520	Senior Game Project II	3
GAME 4610	Portfolio	3
	<b>Sub Total Required (Core Courses) Credits</b>	<b>36</b>

<b>Other Required Courses in Related Subject Areas (Total # courses required = 7)</b>		
Course Number	Course Title	Credit Hours
ACAD 1001	First Year Experience	2
ARTS 1100	Principles of Drawing	3
ARTS 2800	Life Drawing	3
CPTR 1100	Introduction to Programming	3
CPTR 1400	Programming in C++	3
GRPH 2130	Techniques of Raster Imaging	3
GRPH 2120	Techniques of Vector Imaging	3
	<b>Sub Total Required Courses in Related Subject Areas Credits</b>	20
<b>Elective Courses (Total # courses required = 7)</b>		
Course Number	Course Title	Credit Hours
Open Elective	2 Open Electives – Students may pick any two courses to fulfill this requirement. There are no restrictions. Examples of popular electives include the following: GOVT 1108 American Government SPAN 1001 Conversational Spanish PHIL 1001 Introduction to Philosophy	6
Program Elective	Career Internship or GAME/GRPH/INDS Elective	3
Program Elective	4 Game Design Program Electives	12
	<b>Sub Total Elective Credits</b>	21
<b>General Education Courses (Total # courses required = 15)</b>		
<b>Distribution of General Education Requirements</b>		Credit Hours
Links to list of General Education Offerings and Electives: <a href="http://www.becker.edu/academics/general-education">http://www.becker.edu/academics/general-education</a> <a href="http://www.becker.edu/academics/electives">http://www.becker.edu/academics/electives</a>		
Arts and Humanities, including Literature and Foreign Languages: ENGL 1001 – English Composition – 3 credit hours ENGL 1003 – Writing About Literature – 3 credit hours ENGL 2003 – Public Speaking – 3 credit hours Humanities Elective – 3 credit hours History Elective – 3 credit hours Global Awareness and Diversity Elective – 3 credit hours		18
Mathematics, Science, and Technology: INFO 1001 – Technology and Society – 3 credit hours MATH Elective – 3 credit hours		16

MATH 2000+ Elective – 3 credit hours	
Science with Lab Elective – 4 credit hours	
Science Elective – 3 credit hours	
Social Sciences: SOCL 1001 – Introduction to Sociology – 3 credit hours Social Science/Humanities Elective – 3 credit hours Social Science Elective, Non-Sociology – 3 credit hours	9
Health Education: Health Education Elective – 3 credit hours	3
<b>Sub Total General Education Credits</b>	46
<b>Curriculum Summary</b>	
Total number of courses required for the degree	41
Total credit hours required for degree	123
<b>Prerequisite or Other Requirements: None</b>	

### Game Development and Programming Concentration

<b>Required (Core) Courses in the Major (Total # courses required = 14)</b>		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
GAME 1001	History of Game Development	3
GAME 1120	Introduction to Game Design	3
GAME 2120	Intermediate Game Development	3
GAME 3120	3D Modeling	3
GAME 3135	Game Programming I	3
GAME 3150	Level Design	3
GAME 3130	3D Animation	3
GAME 3145	Game Programming II	3
GAME 3170	Game Production and Prototyping	3
GAME 4115	Artificial Intelligence	3
GAME 4510	Senior Game Project I	3
GAME 4400	Advanced Topics in Game Development	3
GAME 4520	Senior Game Project II	3
GAME 4610	Portfolio	3
	<b>Sub Total Required (Core Courses) Credits</b>	42

<b>Other Required Courses in Related Subject Areas (Total # courses required = 7)</b>		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
ACAD 1001	First Year Experience	2
ARTS 1100	Principles of Drawing	3
CPTR 2300	Data Structures	3
CPTR 1100	Introduction to Programming	3
CPTR 1400	Programming in C++	3
GRPH 2130	Techniques of Raster Imaging	3
GRPH 2120	Techniques of Vector Imaging	3
	<b>Sub Total Required Courses in Related Subject Areas Credits</b>	20
<b>Elective Courses (Total # courses required = 6)</b>		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
Open Elective	Open Electives – Students may pick any course to fulfill this requirement. There are no restrictions. Examples of popular electives include the following: GOVT 1108 American Government SPAN 1001 Conversational Spanish PHIL 1001 Introduction to Philosophy	3
Program Elective	Career Internship or GAME/GRPH/INDS Elective	3
Program Elective	4 Game Design Program Electives	12
	<b>Sub Total Elective Credits</b>	18
<b>General Education Courses (Total # courses required = 15)</b>		
<b>Distribution of General Education Requirements</b>		<i>Credit Hours</i>
Links to list of General Education Offerings and Electives: <a href="http://www.becker.edu/academics/general-education">http://www.becker.edu/academics/general-education</a> <a href="http://www.becker.edu/academics/electives">http://www.becker.edu/academics/electives</a>		
Arts and Humanities, including Literature and Foreign Languages: ENGL 1001 – English Composition – 3 credit hours ENGL 1003 – Writing About Literature – 3 credit hours ENGL 2003 – Public Speaking – 3 credit hours Humanities Elective – 3 credit hours History Elective – 3 credit hours Global Awareness and Diversity Elective – 3 credit hours		18
Mathematics, Science, and Technology: INFO 1001 – Technology and Society – 3 credit hours MATH Elective – 3 credit hours MATH 2000+ Elective – 3 credit hours PHYS 2001 – Physics I – 4 credit hours Science Elective – 3 credit hours		16

Social Sciences:		
SOC 1001 – Introduction to Sociology – 3 credit hours		9
Social Science/Humanities Elective – 3 credit hours		
Social Science Elective, Non-Sociology – 3 credit hours		
<b>Sub Total General Education Credits</b>		<b>43</b>
<b>Curriculum Summary</b>		
Total number of courses required for the degree		41
Total credit hours required for degree		123
<b>Prerequisite or Other Requirements: None</b>		

**Attachment B: Budget**

<i>One Time/ Start-Up Costs</i>		<i>Annual Expenses</i>			
	<i>Cost Categories</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>
	Full Time Faculty (Salary & Fringe)	\$440,000	\$540,000	\$640,000	\$640,000
	Part Time/Adjunct Faculty (Salary & Fringe)	\$72,000	\$102,000	\$132,000	\$147,000
	Staff	\$144,000	\$184,000	\$219,000	\$219,000
	General Administrative Costs	\$15,000	\$15,000	\$15,000	\$15,000
	Instructional Materials, Library Acquisitions	\$34,500	\$37,500	\$40,800	\$44,430
\$158,000	Facilities/Space/Equipment	\$191,000	\$175,000	\$175,000	\$185,000
	Field & Clinical Resources	\$87,000	\$104,400	\$125,280	\$150,336
	Marketing	\$45,500	\$45,500	\$45,500	\$45,500
	Other (Specify)				
	<b>TOTALS</b>	\$1,029,000	\$1,203,400	\$1,392,580	\$1,446,266

All expenses are based on current salaries and costs as of 2012-13 academic year.

<i>One Time/Start-Up Support</i>		<i>Annual Income</i>			
	<i>Revenue Sources</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>
	Grants				
	Tuition (net of discount rate)	\$5,167,320	\$6,138,360	\$6,363,780	\$6,398,460
	Fees	\$578,120	\$686,760	\$711,980	\$715,860
	Departmental				
	Reallocated Funds				
	Other (specify)				
	<b>TOTALS</b>	\$5,745,440	\$6,825,120	\$7,075,760	\$7,114,320

All revenues are based on tuition, fees, and discount rates as of 2012-13 academic year.