

BOARD OF HIGHER EDUCATION
REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Academic Affairs

NO.: AAC 13-26

COMMITTEE DATE: April 23, 2013

BOARD DATE: April 30, 2013

APPLICATION OF ENDICOTT COLLEGE TO AWARD THE BACHELOR OF FINE ARTS IN ART THERAPY, BACHELOR OF SCIENCE IN APPLIED MATHEMATICS AND BACHELOR OF SCIENCE IN MATHEMATICS

MOVED: The Board hereby approves the Articles of Amendment of the School of **Endicott College** to offer the **Bachelor of Fine Arts in Art Therapy, Bachelor of Science in Applied Mathematics and Bachelor of Science in Mathematics.**

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

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

BOARD OF HIGHER EDUCATION

Endicott College

Bachelor of Fine Arts in Art Therapy, Bachelor of Science in Applied Mathematics and Bachelor of Science in Mathematics.

INTENT

Endicott College, a private, New England Association of Schools and Colleges (NEASC) accredited, four-year institution, located in Beverly, Massachusetts, requests approval to offer the Bachelor of Fine Arts in Art Therapy, Bachelor of Science in Applied Mathematics and Bachelor of Science in Mathematics. The mission of Endicott College is to instill in students an understanding of and appreciation for professional and liberal studies. Deeply woven within this philosophy is the concept of applied learning. Linking classroom and off-campus work experience through required internships remain a distinguishing feature of the College. The College plans to increase its offerings in the arts and sciences with the proposed degrees, all of which include within their curriculum internships.

The proposed Bachelor of Science in Art Therapy is designed for artistically talented students who want to apply their creativity for the well-being and benefit of others and was designed based on the institution's current creative arts therapy concentration, which will be eliminated assuming the proposed program is approved by the Board. The program focuses on studio visual art experiences with options in dance, drama, music, and poetry. The field of art therapy requires individuals to hold a master's degree, and, as such, the proposed program is a pre-professional program. Students would be prepared for graduate studies in art therapy or a related field.

The proposed Bachelor of Science in Applied Mathematics and Bachelor of Science in Mathematics were developed based on the institution's current applied mathematics minor and in response to students' increased interest in advanced mathematics. The intent of the proposed mathematics programs at Endicott College is to prepare students for careers that require advanced quantitative skills by offering a progressive education in numerical and mathematical techniques with a comprehensive classical mathematics foundation. Applied mathematics students can choose between two tracks: statistics/actuary or general applied mathematics according to their interests and career goals. The Bachelor of Science in Mathematics is a pure mathematics program and prepares students for licensure to teach middle school or high schools mathematics.

Graduates of the proposed mathematics programs will find career opportunities in the fields of business, technology, engineering, economics, finance and education, as well as many other industries seeking graduates with strong and broad training in mathematics, statistics, computer science and physics. Between 2010 and 2020, the Bureau of Labor Statistics of the United States Department of Labor projects a 16 percent increase in employment and a need for mathematicians to analyze the increased amount of data that can be collected from technological advancements. In addition, there is currently a shortage of math instructors in Massachusetts and elsewhere.

The Board of Trustees approved the proposed programs on March 12, 2013

INSTITUTIONAL OVERVIEW

Endicott College was founded in 1939 as a private, two-year women's college by Dr. Eleanor Tupper and Dr. George Bierkoe. In 1944, it was officially approved by the Commonwealth for the granting of Associate in Arts and Associate of Science degrees. In 1988, the College applied for and earned status as a four-year institution and in 1993 transformed into a co-educational institution with the first co-ed class admitted in fall of 1994. In the spring of 1996, the College's first graduate degree program in education was approved. In June, 2001 the Massachusetts Board of Higher Education approved the petition of the College to offer a Masters of Business Administration. In July of 2001, the Massachusetts Board of Higher Education updated its approval to include the Bachelor of Science degrees in Interior Design, Visual Communications, Hospitality and Tourism Administration, Psychology, Entrepreneurial Studies, Nursing, Physical Education, Communications, Business Administration, Criminal Justice, and Information and Computer Technology. In addition, the Bachelor of Arts in Liberal Studies and the Honorary Doctor of Humane Letters were also authorized. In 2007, Endicott was granted approval to offer the Master of Science in Informational Technology and in 2009 the College was authorized to add the Master of Science in Nursing, Master of Arts in Interior Design and Master of Fine Arts in Interior Design. Most recently, the institution was approved to offer the Ed.D. in Educational Leadership in 2011 and the Master of Science in Homeland Security Studies in 2012. The institution now seeks the authority to offer the Bachelor of Fine Arts in Art Therapy, Bachelor of Science in Applied Mathematics and Bachelor of Science in Mathematics.

ACADEMIC AND RELATED MATTERS

Admission

First year and transfer students must submit the following: application, essay, high school transcript, high school diploma or equivalency, standardized test scores and a letter of recommendation.

Successful applicants to the proposed mathematics programs will be expected to have passed pre-calculus or calculus I in high school, with at least a grade of B, and demonstrate strong interest and skills in mathematics and computer science. In addition, students will be required to maintain a 2.5 in-major GPA to continue in the program.

The Bachelor of Fine Arts in Creative Arts Therapy will also be required to submit a portfolio of 20 digital images.

Transfer students are also required to submit college transcripts, statement of good standing, and to hold a minimum college GPA of 2.5.

Endicott does not have specific SAT/ACT or overall high school GPA requirements but does consider the high school GPA the greatest predictor of success. The average new Endicott student has a GPA of 3.2 out of 4.0. Standardized test scores (SAT, ACT) are also an important component of the admission decision. The average SAT scores of incoming first-time, first year students in fall 2012 is 1071.

Projected Enrollment

Based upon current enrollment in the concentration and minor programs upon which all three proposed programs are based and other indicators, the institution made the following enrollment projections.

BFA in Art Therapy	# of Students Year 1	# of Students Year 2	# of Students Year 3	# of Students Year 4*
New Full Time	15	15	15	15
Continuing Full Time		12	23	36
New Part Time				
Continuing Part Time				
Totals	15	27	38	51

B.S. in Applied Mathematics	FY14	FY15	FY16	FY17
	Year 1	Year 2	Year 3	Year 4
Assumptions:				
Enrollment - Year One FTE	5	4	4	4
Enrollment - Year Two FTE		10	8	8
Enrollment - Year Three FTE			15	12
Enrollment - Year Four FTE				15
Total Enrollment	5	14	27	39

B.S. in Mathematics	FY14	FY15	FY16	FY17
	Year 1	Year 2	Year 3	Year 4
Assumptions:				
Enrollment - Year One FTE	5	4	4	4
Enrollment - Year Two FTE		10	8	8
Enrollment - Year Three FTE			15	12
Enrollment - Year Four FTE				15
Total Enrollment	5	14	27	39

Tuition and Fee Charges

The yearly tuition and fee charges for all three programs is \$28,166 based upon academic year 2012 assumptions.

Curriculum (Appendix B)

In order to meet, college-wide learning outcomes, students in all three proposed programs take coursework in the general education curriculum in each of eight categories: individual and society, moral and ethical reasoning, aesthetic awareness and creative expression, global issues, science and technology, world cultures, literary perspectives, and quantitative reasoning.

All students must complete three internships, including a full-semester internship in the senior year and two shorter internships in the student 2nd and 3rd year. The shorter internships provide opportunities to test developing skills and commitment to the field of study.

The proposed Bachelor of Science in Art Therapy requires 128 credits; 82 in the major; 43 in general education/core requirements; and 12 credits in creative arts therapy and art electives. Students have a wide variety of sites to choose from, including hospitals and psychiatric programs to camps for children with special needs. Semester-long internship students are expected to intern at organizations that provide therapeutic treatment through classes, therapy programs, or special workshops. Supervisors are expected to carry graduate level licenses and degrees with a strong preference for art therapy degrees and certification. Semester-long sites (of the current certificate in creative arts therapy) have included psychiatric programs, wellness programs, and other support programs at Massachusetts General Hospital, Shiner's Hospital for Children, ARTZ for Alzheimer's, Express Yourself, Inc., United South End Settlements, Windrush Farm, Yale New Haven Children's Hospital and Dana Farber Cancer Institute.

The curricula for the proposed mathematics degrees are designed to establish a solid basis in calculus, a foundation upon which much of each curriculum is based. Intermediate courses in linear algebra, mathematical reasoning and probability allow students to expand their math horizons. Interdisciplinary requirements in physics, business and computer science introduce students to adjacent fields. Upper level sequences in mathematical statistics, numerical analysis, differential equations, and abstract mathematics will prepare students with the knowledge needed for their senior internship and thesis experiences. Many of the sites that currently take Endicott students, or are targeted to take students, for internships in Biotechnology (Entagen, Daedalus, MIT), Environmental Science (Meridien), Computer Science (IBM, Google) would be potential sites for mathematics students.

The curriculum for the Bachelor of Science in Mathematics will follow a curriculum that leads to teaching licensure in the State of Massachusetts at the middle (5-8) and/or secondary (8-12) grade levels. In the senior year students participate in a required full semester student teaching experience that allows for application of acquired concepts and methodologies in the classroom. Jointly students participate in a classroom practicum supervised by a cooperating practitioner and a college supervisor.

As part of the college-and school-wide assessment program, writing samples from freshman and junior writing-designated courses, and final senior theses are reviewed using the Association of American Colleges and Universities (AACU) Written Communication and Inquiry Analysis Rubrics. Assessment of student learning outcomes will occur throughout the proposed programs.

Additionally, the School of Visual and Performing Arts has developed its own Portfolio Evaluation forms for each of its art and design programs.. The Mathematics and Computer Science Department has an existing Grade and Program Review Committee in place for assessment of the Computer Science program, and this committee will also assess the proposed mathematics programs.

RESOURCES AND BUDGET

Faculty and Staff (Appendix C)

The Department of Mathematics and Computer Science is headed by the Chair of Science, Math and Technology, who reports to the Dean of Arts and Sciences. The mathematics programs will be housed in the Department of Mathematics and Computer Science which has five full-time faculty and one extended adjunct faculty. Of the four full-time mathematics faculty who will teach in the mathematics programs, three hold Ph.Ds in mathematics and one holds an Ed.D in mathematics education. In addition, there is one extended adjunct faculty member who holds an M.S. in Applied Mathematics. The institution is committed to growing the faculty as the program grows. The current projection is for one new faculty member to be hired in year three or four. New full-time faculty would have a Ph.D. in mathematics, or a related field. The desired expertise areas for the first full-time hire would include mathematical modeling, numerical analysis and/or actuarial science.

The art therapy program will be administered by the Chair of Fine Arts and the Dean of Visual and Performing Arts. Of the eight full-time faculty members who will teach in the program course name, seven are terminally qualified (one professor holds a Ph.D and six professors hold a Master of Fine Arts) . and one professor holds a Master of Arts in Teaching. One faculty member is a certified licensed mental health counselor (LHMC) and a Board Certified Art Therapist (ATR-BC). These faculty currently teach in the creative arts therapy concentration.

The proposed programs administration will report to the Dean of the Undergraduate College.

Library Resources

Students and faculty in the proposed new program will be served by the Halle Library, the main library of Endicott College. In addition to hard copy holdings, the principal library resource relevant to the program will be accessible through numerous electronic data bases relevant to homeland security. The library has been expanding its subscriptions in this area in anticipation of initiation of the program. For example, it has added access to the Homeland Security Digital Library Collection, which includes over 77,500 documents related to homeland security policy, strategy, and organizational management. The college also has budgeted additional funds over the next three years for further library acquisitions in support of the homeland security program. Endicott College has cooperative arrangements with other institutions—especially with other academic and public libraries in the area north of Boston—for either borrowing or electronic reproduction of materials that the college's own library may not have.

Physical and Information Technology Resources

The campus of Endicott College occupies approximately 235 acres located primarily in Beverly Massachusetts and houses fifty one buildings. Endicott has integrated technology throughout the campus to enhance teaching and learning strategies. The classrooms and other facilities are

equipped for the subject matter taught. Specialized classroom equipment is available from the Information Technology Help Desk and laptops are available for student use and to connect to the college network directly.

In 2009, the Center of the Arts facility was created with equipment in the visual and performing arts, it includes performance and gallery space, recording studios, several music practice rooms; sculpture, photography, ceramics, drawing, painting, printmaking, and design studios. Arts, graphic design and art therapy courses are taught in this building.

The Department of Mathematics and Computer Science will be moving into a new building that opens in summer 2013, housing the School of Business and the Science and Technology Center. The new building has two computer teaching labs in addition to traditional classroom and laboratory space. Software packages that are needed for specific courses (MathLab, Mathematica, etc.) will be purchased and installed on these lab computers, and key card access will be available to students for access to the computer labs when they are not otherwise in use.

Financial Resources (Attachment B)

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

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

Endicott's proposal was reviewed by a committee comprised of members: Ronald Sherwin, Associate Dean, Director of the School of Visual & Performing Arts, Anna Maria College; Julia Byers, Ed.D. Graduate Director of Art Therapy, Lesley University; Amanda Hattaway, Ph.D. Applied Mathematics Department Chair and Associate Professor, Wentworth Institute of Technology and Michael E. Adams, SUNY Distinguished Professor Emeritus, State University of New York.

The Visiting Committee reviewed the petition and appendices in preparation for the site visit, which took place December 14-15, 2012. During the visit, the Committee met with administrators, faculty, staff, and students; and toured 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).

Overall, the visiting committee expressed strong support for Endicott's proposal but also made recommendations for approval, mostly in the areas of degree nomenclature and curriculum. The institution originally requested the authority to offer a BFA in Creative Arts Therapy, rather than a BFA in Art Therapy. The visiting committee found that the curriculum did not match the original degree nomenclature. The BFA in Creative Therapy is a unique undergraduate offering and is used to identify an intermodal approach in using the wide array of the arts for treatment and application. The Art Therapy degree tends to be based on the sole approach of the modality of art therapy to address mental health issues. Since Endicott's program of study is predominantly based in the visual arts, the curriculum was reflective of arts therapy. The visiting committee suggested that the College change its curriculum to meet the expectations of a creative arts therapy degree by expanding requirements beyond the visual arts, or change the degree nomenclature to more accurately reflect the curriculum. Similarly, the institution requested the authority to offer the Bachelor of Science in Applied Mathematic with three

concentrations, including a secondary education track. Applied Mathematics denotes an entrepreneurial application of mathematics to the broader world, and yet the secondary education track coursework was primarily focused on pure mathematical skills. The visiting committee concurred that the two others tracks' curriculum were consistent with applied mathematics and recommended that the institution change the degree nomenclature for the secondary education track to reflect the pure mathematics curriculum.

The visiting committee observed with the development of more highly technical degrees—such as the Bachelor of Science in Applied Mathematics--comes the need for more upper-division courses and that may eventually become a challenge to balance with a heavy internship-based curriculum. The committee recommended that there needed to be additional upper division coursework for the two tracks of the Bachelor of Science in Mathematics.

Institutional Response

The College responded substantively and thoroughly to all of the visiting committee's recommendations. The institution concurred with the visiting committee and changed the degree title of the BFA in Creative Arts Therapy to its current title: the BFA in Arts Therapy and the secondary education track of the Applied Mathematics program was resubmitted as its own degree: the Bachelor of Science in Mathematics.

Furthermore, the institutions made changes to the curriculum of the Bachelor of Science in Applied Mathematics, now requiring two additional upper division courses: MTH 427, Mathematical Statistics and MTH 450, Modeling and Numerics II. The actuary/statistics track now included 45 upper division courses and the general track contains 39. The institution achieved this by moving previously required courses to elective offerings.

After reviewing the institution's response, the visiting committee members concurred that the institution responded substantively to their questions and concerns. The visiting committee recommends the proposed program for Board approval.

PUBLIC HEARING

The required public hearing will be held on April 17, 2012 at the Department of Higher Education, located at One Ashburton Place in Boston, Massachusetts.

STAFF ANALYSIS AND RECOMMENDATION

After a thorough evaluation of all documentation submitted, staff is satisfied that the proposal of Endicott College to award the **Bachelor of Fine Arts in Art Therapy, Bachelor of Science in Applied Mathematics and Bachelor of Science in Mathematics** meets the requirements set forth for NEASC-accredited institution outlined in the 610 CMR 2.08 in the Degree Granting Regulations for Independent Institutions of Higher Education. Recommendation is for approval.

APPENDIX A: CURRICULUM OUTLINES

BFA IN ART THERAPY

BFA IN ART THERAPY		
Required Courses in the Major (Total # courses required = 25)		
Course Number	Course Title	Credit Hours
ART101	Visual Art and Cultural Values I: Prehistory to Early Fourteenth Century	3
ART102	Visual Art and Cultural Values II: Early Fourteenth Century to the Present	3
ART105	Drawing and Composition I	3
ART106	Drawing and Composition II	3
ART110	Cultural Perspectives in Creative Arts Therapy	3
ART115	Foundations of Design	3
ART121	Ceramics I	3
ART123	Foundation Seminar	3
ART201	Painting I	3
ART202	Painting II	3
ART205	Three Dimensional Design	3
ART209	Creative Arts Therapy Studio	3
ART238	Modern and Postmodern Art History	3
ART302	Portfolio	3
ART309	Creative Arts Therapy Studio II	3
ART311	Integrating Theory and Practice in Creative Arts Therapy	3
ART3XX	Upper Level Art History Requirement	3
ART480	Semester Internship	12
ART489	Senior Thesis I	3
ART490	Senior Thesis II	3
PHT116	Introduction to Photographic Methods	3
INT100	Internship I	2
INT200	Internship	2
PSY100	General Psychology	3
PSY310	Abnormal Psychology	3
	Sub Total Required Credits	82

Elective Courses (Total # courses required =4) (attach list of choices if needed)		
ART225	Carl Jung and Creative Arts Therapy	3
ART310	Cross Cultural Practices of Creative Arts Therapy	3
ART324	Music and Creative Arts Therapy	3
ART330	Dance / Movement and Creative Arts Therapy	3
ART331	Social Action in Art and Creative Arts Therapy	3
ARTXXX	Art Open Elective	3
	Sub Total Elective Credits	12
General Education Courses (Total # courses required = 15)		
Indicate Distribution of General Education Requirements Below		# of Gen Ed Credits
See Appendices for List of General Education Offerings (Course Numbers, Titles, and Credits)		
Aesthetic Awareness & Creative Expression		3
Global Issues		3
Individual & Society		3
Literary Perspectives		3
Quantitative Reasoning		3
Science & Technology		3
Values & Ethical Reasoning		3
World Cultures		3
General Education Open Elective		3
General Education Open Elective		3
General Education Open Elective		3
General Education Open Elective		3
EC101-Endicott Transitions		1
ENG101-College Writing Seminar		3
LST100-Seminar in Academic Inquiry		3
Sub Total General Education Credits		43
Curriculum Summary		
Total number of courses required for the degree		41
Total credit hours required for degree		128
Prerequisite, Concentration or Other Requirements:		

Bachelor of Science in Mathematics

Required (Core) Courses in the BS in Mathematics / Secondary Education Concentration (Total # courses required = 20)		
Course Number	Course Title	Credit Hours
CSC 101	Introduction to Computer Science	3
MTH 135	Calculus I	3
CSC 160	Introduction to Programming	3
MTH 136	Calculus II	3
MTH 265	Discrete Mathematics	3
MTH 225	Probability	3
INT 100	Internship I	2
MTH 237	Calculus III	3
MTH 310	Linear Algebra	3
MTH 210	Mathematical Reasoning	3
MTH 330	Ordinary Differential Equations	3
INT 200	Internship II	2
MTH 327	Mathematical Statistics I	3
MTH 350	Mathematical Modeling and Numerical Analysis I	3
PHY 107	Physics I	4
MTH 410	Abstract Algebra	3
MTH 415	Advanced Geometry	3
ED 400	Practicum and Seminar in Ed.	12
MTH 489	Senior Thesis I	3
MTH 490	Senior Thesis II	3
	Sub Total Required Credits	68
Elective Courses (Total # courses required = 7) (attach list of choices if needed)		
ED 010	Communication Literacy Lab	0
ED 030	Subject Matter Lab	0
ED 101	Introduction to Education	3
ED 203	Introduction to Children with Special Needs	3
ED 240	Literacy in the Content Areas	3
ED 330	Issues and best Practices in ELL	3

ED 339	Classroom Assessment	3
ED 380	Secondary Education Teaching Methods	3
PSY 200	Child and Adolescent Psychology	3
Free Elective		3
	Sub Total Elective Credits	24
General Education Courses (Total # courses required = 12)		
Indicate Distribution of General Education Requirements Below Attach or Insert Link to List of General Education Offerings (Course Numbers, Titles, and Credits)		# of Gen Ed Credits
ENG 101 – College Writing Seminar		3
LST 100 – Seminar in Academic Inquiry		3
EC 101 – Endicott Transitions		1
Thematic, Interdisciplinary Categories http://www.endicott.edu/Academics/~media/Registrar/Forms/pdf/GeneralEducationWDCourses20122013.aspx		36
Sub Total General Education Credits		43
Curriculum Summary		
Total number of courses required for the degree		40
Total credit hours required for degree		126
Prerequisite, Concentration or Other Requirements: Three writing designated courses that can include ENG 101 with one at the 300-level (ED 380) and can be used to simultaneously complete another course requirement.		

Bachelor of Science in Applied Math

Required (Core) Courses in the Applied Math Major (Total # courses required = 20)		
Course Number	Course Title	Credit Hours
MTH 135	Calculus I	3
CSC 160	Introduction to Programming	3
MTH 136	Calculus II	3
MTH 265	Discrete Mathematics	3
INT 100	Internship I	2
MTH 237	Calculus III	3
MTH 310	Linear Algebra	3
MTH 210	Mathematical Reasoning	3
MTH 330	Ordinary Differential Equations	3
INT 200	Internship II	2
MTH 327	Mathematical Statistics I	3
MTH 350	Mathematical Modeling and Numerical Analysis I	3
MTH 427	Mathematical Statistics II	3
PHY 107	Physics I	4
PHY 108	Physics II	4
MTH 450	Mathematical Modeling and Numerical Analysis II	3
MTH 480	Semester Internship	12
MTH 489	Senior Thesis I	3
MTH 490	Senior Thesis II	3
MTH 431	Partial Differential Equations	3
	Sub Total Required Credits	69
Elective Courses (Total # courses required = 6) (attach list of choices if needed)		
MTH XXX	300 or 400 Level Math Elective	3
CSC XXX	Computer Science Elective I (see list below)	3
CSC XXX	Computer Science Elective II (see list below)	3
	<p>Computer Science Electives (CSC XXX) can be any of the following:</p> <p>CSC 101 - Introduction to Computer Science CSC 160 - Introduction to Programming CSC 161 - Data Structures and Algorithms CSC 170 - Computer Architecture CSC 200 - Website Development and Programming</p>	

	CSC 255 - Programming for Games and Interactive Technologies CSC 260 - Visual Programming I CSC 261 - Visual Programming II and Object-Oriented Design CSC 270 - Software/Systems Quality Assurance CSC 301 - Information Systems Analysis and Design CSC 320 - Project Management CSC 335 - Mobile Application Programming and Design CSC 340 - Database Management CSC 350 - Network Operations Management CSC 380 - Operating Systems CSC 390 - Cyber Threats and Security CSC 401 - Web Programming II - Interactive Web Applications CSC 450 - Telecommunications and Wide-Area Networking	
Free Elective	Free Elective (choose any three credit course offered in the current semester in which you meet pre and co requisites https://cars.endicott.edu/FA-2013-DAY.html)	3
Free Elective	Free Elective (choose any three credit course offered in the current semester in which you meet pre and co requisites https://cars.endicott.edu/FA-2013-DAY.html)	3
Free Elective	Free Elective (choose any three credit course offered in the current semester in which you meet pre and co requisites https://cars.endicott.edu/FA-2013-DAY.html)	3
Free Elective	Free Elective (choose any three credit course offered in the current semester in which you meet pre and co requisites https://cars.endicott.edu/FA-2013-DAY.html)	3
	Sub Total Elective Credits	21
General Education Courses (Total # courses required = 12)		
Indicate Distribution of General Education Requirements Below Attach or Insert Link to List of General Education Offerings (Course Numbers, Titles, and Credits)		# of Gen Ed Credits
ENG 101 – College Writing Seminar		3
LST 100 – Seminar in Academic Inquiry		3
EC 101 – Endicott Transitions		1
Thematic, Interdisciplinary Categories http://www.endicott.edu/Academics/-/media/Registrar/Forms/pdf/GeneralEducationWDCourses20122013.aspx		36
Sub Total General Education Credits		43
Curriculum Summary		
Total number of courses required for the degree		40
Total credit hours required for degree		127
Prerequisite, Concentration or Other Requirements: Three writing designated courses that can include ENG 101 with one at the 300-level and can be used to simultaneously complete another course requirement.		

Bachelor of Science in Applied Math/ Actuary and Statistics Concentration

Required (Core) Courses in the Applied Math Major/Actuary and Statistics Concentration (Total # courses required = 20)		
Course Number	Course Title	Credit Hours
MTH 135	Calculus I	3
CSC 160	Introduction to Programming	3
MTH 136	Calculus II	3
MTH 225	Probability	3
INT 100	Internship I	2
MTH 237	Calculus III	3
MTH 310	Linear Algebra	3
MTH 210	Mathematical Reasoning	3
MTH 330	Ordinary Differential Equations	3
INT 200	Internship II	2
MTH 327	Mathematical Statistics I	3
MTH 350	Mathematical Modeling and Numerical Analysis I	3
PHY 107	Physics I	4
MTH 400	Actuarial Science	3
MTH 427	Mathematical Statistics II	3
MTH 450	Mathematical Modeling and Numerical Analysis II	3
MTH 480	Semester Internship	12
MTH 489	Senior Thesis I	3
MTH 490	Senior Thesis II	3
	Sub Total Required Credits	65
Elective Courses (Total # courses required = 6) (attach list of choices if needed)		
MTH XXX	300 or 400 Level Math Elective	3
ECN 201	Microeconomics	3
ECN 202	Macroeconomics	3
BUS 210	Finance	3
ACC 175	Financial Accounting	3
ACC 185	Managerial Accounting	3
BUS 375	Financial Modeling	3

Free Elective	Free Elective (choose any three credit course offered in the current semester in which you meet pre and co requisites https://cars.endicott.edu/FA-2013-DAY.html)	3
	Sub Total Elective Credits	24
General Education Courses (Total # courses required = 12)		
Indicate Distribution of General Education Requirements Below Attach or Insert Link to List of General Education Offerings (Course Numbers, Titles, and Credits)		# of Gen Ed Credits
ENG 101 – College Writing Seminar		3
LST 100 – Seminar in Academic Inquiry		3
EC 101 – Endicott Transitions		1
Thematic, Interdisciplinary Categories http://www.endicott.edu/Academics/~media/Registrar/Forms/pdf/GeneralEducationWDCourses20122013.aspx		36
Sub Total General Education Credits		43
Curriculum Summary		
Total number of courses required for the degree		40
Total credit hours required for degree		126
Prerequisite, Concentration or Other Requirements: Three writing designated courses that can include ENG 101 with one at the 300-level and can be used to simultaneously complete another course requirement.		

APPENDIX B: BUDGETS

Creative Arts Therapy Proforma Budget					
		Revenue			
		FY14	FY15	FY16	FY17
		Year 1	Year 2	Year 3	Year 4
Assumptions:					
Enrollment - YearOne FTE		15	12	11	11
Enrollment - Year Two FTE			15	12	11
Enrollment - Year Three FTE				15	14
Enrollment - Year Four FTE					15
Total Enrollment		15	27	38	51
Annual FT Tuition Rate		\$ 27,666	\$ 28,496	\$ 29,351	\$ 30,231
Fees		\$ 500	\$ 500	\$ 500	\$ 500
Tuition And Fees		\$ 28,166	\$ 28,996	\$ 29,851	\$ 30,731
Total Revenue		\$ 422,490	\$ 782,891	\$1,146,273	\$1,582,052
		Program Costs			
		FY14	FY15	FY16	FY17
		Year 1	Year 2	Year 3	Year 4
Salaries and Benefits:					
Administration					
.25 FTE Chair Fine Arts		\$ 20,550	\$ 21,167	\$ 21,801	\$ 22,456
.05 FTE Dean Arts		\$ 5,882	\$ 6,059	\$ 6,241	\$ 6,428
.05 FTE Admin Asst		\$ 2,425	\$ 2,498	\$ 2,573	\$ 2,650
Admin Fringe Benefits		\$ 8,657	\$ 9,090	\$ 9,545	\$ 10,022
Admin Salary & Benefits		\$ 37,515	\$ 38,814	\$ 40,160	\$ 41,556
Instruction					
Full-time Faculty		\$ 258,456	\$ 266,209	\$ 274,196	\$ 282,422
Full-time Faculty Benefits		\$ 77,537	\$ 81,414	\$ 85,484	\$ 89,758
Fulltime Faculty Salary & Benefits		\$ 335,992	\$ 347,623	\$ 359,680	\$ 372,180
Adjunct Salary per course		\$ 3,100	\$ 3,100	\$ 3,200	\$ 3,200
Number of Sections		16	24	32	40
Adjunct Professors Salaries		\$ 49,600	\$ 74,400	\$ 102,400	\$ 128,000
Fringe Benefits		\$ 4,960	\$ 7,440	\$ 10,240	\$ 12,800
Adjunct Faculty Salary & Benefits		\$ 54,560	\$ 81,840	\$ 112,640	\$ 140,800

	Total Salaries & Benefits	\$ 428,068	\$ 468,277	\$ 512,480	\$ 554,536
		FY14	FY15	FY16	FY17
	Supplies and other expenses:	Year 1	Year 2	Year 3	Year 4
	<u>General Administrative Costs</u>				
	Supplies	\$ 5,000	\$ 5,200	\$ 5,408	\$ 5,624
	Travel/Conferences	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125
	Printing	\$ 3,000	\$ 3,120	\$ 3,245	\$ 3,375
	Postage	\$ 3,000	\$ 3,120	\$ 3,245	\$ 3,375
	Telephone	\$ 500	\$ 520	\$ 541	\$ 562
	Duplicating	\$ 400	\$ 416	\$ 433	\$ 450
	Memberships	\$ 1,500	\$ 1,560	\$ 1,622	\$ 1,687
	Publications	\$ 100	\$ 104	\$ 108	\$ 112
	<i>Sub-total</i>	\$ 14,500	\$ 14,976	\$ 15,575	\$ 16,198
	<u>Instructional Materials</u>				
	Library Acquisitions	\$ 5,000	\$ 5,200	\$ 5,408	\$ 5,624
	Instructional Enhancement	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125
	<i>Sub-total</i>	\$ 6,000	\$ 6,240	\$ 6,490	\$ 6,749
	<u>Marketing</u>				
	Advertising	\$ 8,000	\$ 8,320	\$ 8,653	\$ 8,999
	<i>Sub-total</i>	\$ 8,000	\$ 8,320	\$ 8,653	\$ 8,999
	<u>Other</u>				
	Accreditation Expense	\$ 2,000	\$ 2,080	\$ 2,163	\$ 2,250
	Professional Development	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125
	Special Events	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125
	Food	\$ 200	\$ 208	\$ 216	\$ 225
	<i>Sub-total</i>	\$ 4,200	\$ 4,368	\$ 4,543	\$ 4,724
	Total Supplies and Expenses	\$ 32,700	\$ 33,904	\$ 35,260	\$ 36,671
	TOTAL SALARIES & EXPENSES	\$ 460,768	\$ 502,181	\$ 547,740	\$ 591,206
	NET REVENUE	\$ (38,278)	\$ 280,711	\$ 598,533	\$ 990,846

Mathematics Proforma Budget (BS IN APPLIED MATH; MS IN MATH)

	Revenue			
	FY14	FY15	FY16	FY17
	Year 1	Year 2	Year 3	Year 4
Assumptions:				
Enrollment - YearOne FTE	5	4	4	4
Enrollment - Year Two FTE		10	8	8
Enrollment - Year Three FTE			15	12
Enrollment - Year Four FTE				15
Total Enrollment	5	14	27	39
Annual FT Tuition Rate	\$27,666	\$ 28,496	\$ 29,351	\$ 30,231
Fees	\$ 500	\$ 500	\$ 500	\$ 500
Tuition And Fees	\$ 28,166	\$ 28,996	\$ 29,851	\$ 30,731
Total Revenue	\$ 140,830	\$ 410,293	\$ 813,212	\$ 1,200,994

	Program Costs			
	FY14	FY15	FY16	FY17
	Year 1	Year 2	Year 3	Year 4
Salaries and Benefits:				
Number of Full-Time Faculty	4	4	5	5
Full-time Faculty	\$ 350,700	\$ 361,221	\$ 438,558	\$ 451,714
Full-time Faculty Benefits	\$ 105,210	\$ 110,471	\$ 115,994	\$ 121,794
Fulltime Faculty Salary & Benefits	\$ 455,910	\$ 471,692	\$ 554,552	\$ 573,508
Adjunct Salary per course	\$ 3,200	\$ 3,200	\$ 3,300	\$ 3,300
Number of Sections	1	1	1	1
Adjunct Professors Salaries	\$ 3,200	\$ 3,200	\$ 3,300	\$ 3,300
Fringe Benefits	\$ 320	\$ 320	\$ 330	\$ 330
Adjunct Faculty Salary & Benefits	\$ 3,520	\$ 3,520	\$ 3,630	\$ 3,630
Total Salaries & Benefits	\$ 459,430	\$ 475,212	\$ 558,182	\$ 577,138

	FY14	FY15	FY16	FY17
Supplies and other expenses:	Year 1	Year 2	Year 3	Year 4
<u>General Administrative Costs</u>				
Supplies	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125
Travel/Conferences	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125
Printing	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125

Postage	\$ 500	\$ 520	\$ 541	\$ 562
Telephone	\$ 500	\$ 520	\$ 541	\$ 562
Duplicating	\$ 3,000	\$ 3,120	\$ 3,245	\$ 3,375
Memberships	\$ 1,500	\$ 1,560	\$ 1,622	\$ 1,687
Publications	\$ 100	\$ 104	\$ 108	\$ 112
<i>Sub-total</i>	\$ 8,600	\$ 8,840	\$ 9,194	\$ 9,561
 <i>Instructional Materials</i>				
Software Purchase	\$ 7,000	\$ 7,000		
Library Acquisitions	\$ 5,000	\$ 5,200	\$ 5,408	\$ 5,624
Instructional Enhancement	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125
<i>Sub-total</i>	\$ 13,000	\$ 13,240	\$ 6,490	\$ 6,749
 <i>Marketing</i>				
Advertising	\$ 8,000	\$ 8,320	\$ 8,653	\$ 8,999
<i>Sub-total</i>	\$ 8,000	\$ 8,320	\$ 8,653	\$ 8,999
 <i>Other</i>				
Professional Development	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125
Special Events	\$ 1,000	\$ 1,040	\$ 1,082	\$ 1,125
Food	\$ 200	\$ 208	\$ 216	\$ 225
<i>Sub-total</i>	\$ 2,200	\$ 2,288	\$ 2,380	\$ 2,475
Total Supplies and Expenses	\$ 31,800	\$ 32,688	\$ 26,716	\$ 27,784
 TOTAL SALARIES & EXPENSES				
	\$ 491,230	\$ 507,900	\$ 584,897	\$ 604,922
 NET REVENUE				
	\$(350,400)	\$(97,606)	\$ 228,315	\$ 596,072

APPENDIX C: FACULTY

Summary of Faculty Who Will Teach in BFA IN ART THERAPY							
Name of faculty member (Name, Degree and Field, Title)	Check if Tenured	Courses Taught Put (C) to indicate core course. Put (OL) next to any course currently taught online.	Number of sections	Division of College of Employment	Full- or Part-time in Program	Full- or part-time in other department or program (Please specify)	Sites where individual will teach program courses
Albers, Alefiya Ph.D., Philosophy Assistant Professor	<input type="checkbox"/>	•PSY100-General Psychology	(1)	Day	Full-time	Yes Arts& Sciences	• Main Campus
Burgess Maier, Barbara M.A.T., Fine Arts Professor	<input type="checkbox"/>	•ART105-Drawing & Composition I •ART106-Drawing & Composition II •ART123-Foundation Seminar •ART201-Painting I •ART250-Printmaking •ART323-Media & Metaphor	(1) (1) (1) (1) (1)	Day	Full-time	No	• Main Campus
Caterina, Gianluca Ph.D., Mathematics Assistant Professor	<input type="checkbox"/>	•MTH126-Applied Statistics	(1)	Day	Full-time	Yes Arts & Sciences	• Main Campus
Desmond, Kathleen M.F.A./Ph.D. Candidate, Graphic Design & Aesthetics Professor	<input type="checkbox"/>	•ART230-Time-Based Art Media •ART303-Theory & Research in Visual Design	(1) (1)	Day	Full-time	No	• Main Campus
Gilby, Dena Ph.D., Art History Professor	<input type="checkbox"/>	•ART101-Visual Art & Cultural Values I •ART266-Writing in the Arts Seminar •ART315-Women & The Arts •ART322-Contemporary Art in Global Context	(4) (1) (1) (1)	Day	Full-time	No	• Main Campus

Malis, Denise M.F.A./Ph.D. Candidate, Creative Arts Therapy & Fine Arts Assistant Professor	<input type="checkbox"/>	<ul style="list-style-type: none"> •ART106-Drawing & Composition II •ART110-Cultural & Historic Perspectives in Creative Arts Therapy •ART209-Creative Arts Therapy Studio I •ART210-Integrating Theory & Practice in Creative Arts Therapy •ART309-Creative Arts Therapy Studio II •ART310-Cross Cultural Practices of Creative Arts Therapy 	(2) (1) (1) (1) (1) (1)	Day	Full-time	No	• Main Campus
Miller, Michael M.A., Photography & Digital Media Assistant Professor	<input type="checkbox"/>	•PHT116-Introduction to Photographic Methods	(1)	Day	Full-time	No	• Main Campus
Pelletier, Carol M.F.A., Fine Arts Chair, Associate Professor	<input type="checkbox"/>	<ul style="list-style-type: none"> •ART202-Painting II •ART215-Advanced Drawing I •ART304-Advanced Painting 	(1) (1) (1)	Day	Full-time	No	• Main Campus
Roberts, Cynthia M.F.A., Fine Arts Assistant Professor	<input type="checkbox"/>	<ul style="list-style-type: none"> •ART115-Foundations of Design I •ART123-Foundations Seminar •ART201-Painting I •ART302-Portfolio 	(2) (1) (1) (1)	Day	Full-time	No	• Main Campus
Towner, Mark M.F.A., Fine Arts & Creative Arts Therapy Dean, Professor	<input type="checkbox"/>	<ul style="list-style-type: none"> •ART489-Senior Thesis I •ART490-Senior Thesis II 	(1) (1)	Day	Full-time	No	• Main Campus
Volk, Lawrence M.F.A., Photography Associate Professor	<input type="checkbox"/>	•ART302-Portfolio	(1)	Day	Full-time	No	• Main Campus

Black, Margaret Ph.D., Aesthetics, Art History Adjunct Lecturer	<input type="checkbox"/>	•ART102-Visual Art & Cultural Values II •ART300-Problems of Aesthetics	(2) (1)	Day	Part-time	No	• Main Campus
Cusumano, Maria M.F.A., Fine Arts & Creative Arts Therapy Adjunct Lecturer	<input type="checkbox"/>	•ART105-Drawing & Composition I •ART225-Jung & Creative Art Therapy •ART241-Figure Drawing	(1) (1) (1)	Day	Part-time	No	• Main Campus
Demaine, Krystal M.Ed./Ph.D. Candidate, Expressive Therapies Adjunct Lecturer	<input type="checkbox"/>	•ART324-Music & Creative Arts Therapy	(1)	Day	Part-time	No	• Main Campus
Edwards, Karen Ph.D., Psychology Professor	<input type="checkbox"/>	•PSY310-Abnormal Psychology •PSY335-Theories of Counseling	(2) (1)	Day	Part-time	Yes Arts& Sciences	• Main Campus
Elsbecker, Jeffrey M.F.A., Fine Arts Adjunct Lecture	<input type="checkbox"/>	•ART205-Three Dimensional Design	(1)	Day	Part-time	No	• Main Campus
Giardi, Diane M.F.A., Ceramics Adjunct Lecturer	<input type="checkbox"/>	•ART121-Ceramics I •ART222-Ceramics II	(1) (1)	Day	Part-time	No	• Main Campus
Gill, Robert M.F.A., Photography Adjunct Lecturer	<input type="checkbox"/>	•PHT116-Introduction to Photographic Methods	(2)	Day	Part-time	No	• Main Campus
Harnisch, Taylor M.F.A., Fine Arts Adjunct Lecturer	<input type="checkbox"/>	•ART106-Drawing & Composition II •ART115-Foundations of Design I •ART207-Color Theory & Light	(1) (1) (1)	Day	Part-time	No	• Main Campus
Haynes, Ric M.F.A., Creative Arts Therapy & Fine Arts Adjunct Lecturer	<input type="checkbox"/>	•ART255-Creative Bookmaking	(1)	Day	Part-time	No	• Main Campus

LaVallee, Audrey M.A., Dance Therapy Adjunct Lecturer	<input type="checkbox"/>	•ART330-Dance Movement & Creative Arts Therapy	(1)	Day	Part- time	No	• Main Campus
Lithimane, Amy M.F.A., Graphic Design Adjunct Lecturer	<input type="checkbox"/>	•VC105-Introduction to Computer Graphics	(1)	Day	Part- time	No	• Main Campus
Musial, Stephanie M.A., Creative Arts Therapy Adjunct Lecturer	<input type="checkbox"/>	•ART480-Semester Internship	(1)	Day	Part- time	No	• Main Campus
Solias, Kristin M.A., Art History Adjunct Lecturer	<input type="checkbox"/>	•ART101-Visual Art & Cultural Values I •ART102-Visual Art & Cultural Values II	(1) (1)	Day	Part- time	No	• Main Campus
Wang, Yan Ph.D., Human Development & Family Studies Assistant Professor	<input type="checkbox"/>	•PSY200-Child & Adolescent Psychology	(1)	Day	Part- time	Yes Arts & Sciences	• Main Campus

Summary of Faculty Who Will Teach in BS IN APPLIED MATH AND BS IN MATH

Name of faculty member (Name, Degree and Field, Title)	Check if Tenured	Courses Taught Put (C) to indicate core course. Put (OL) next to any course currently taught online.	Number of sections	Division of College of Employment	Full- or Part- time in Program	Full- or part-time in other department or program (Please specify)	Sites where individual will teach program courses
Diehl, Mike PhD in Mathematics Assistant Professor	<input type="checkbox"/>	<ul style="list-style-type: none"> • Calculus I (C) • Probability (C) • Discrete Mathematics (C) • Introduction to Programming (C) • Data Structures and Algorithms • Mathematical Statistics I (C) 	(1) (2) (1) (1) (1) (1)	Department of Mathematics & Computer Science	Full-time	No	• Main campus
Beckett, Terri EdD in Math Education Professor	<input type="checkbox"/>	<ul style="list-style-type: none"> • Applied Statistics (OL) • Advanced Statistics • Introduction to Computer Science (OL, C) 	(1) (4) (3)	Department of Mathematics & Computer Science	Full-time	No	• Main Campus
Caterina, Gianluca PhD in Mathematics Assistant Professor	<input type="checkbox"/>	<ul style="list-style-type: none"> • Calculus I (C) • Calculus II (C) • Calculus III (C) • Mathematical 	(2) (1) (1) (1)	Department of Mathematics & Computer	Full-time	No	• Main Campus

		Reasoning (C) • Abstract Algebra • Partial Differential Equations (C) • Math of Music	(1) (1) (1) (1)	Science			
McDaniel, Chris PhD in Mathematics Assistant Professor	<input type="checkbox"/>	• Analysis of Functions • Applied Statistics • Calculus I (C) • Ordinary Differential Equations (C) • Advanced Geometry • Linear Algebra (C)	(2) (2) (1) (1) (1) (1) (1)	Department of Mathematics & Computer Science	Full-time	No	• Main Campus
Nichol, Jason W. PhD in Bioengineering Chair of Science, Math and Technology Assistant Professor	<input type="checkbox"/>	• Physics I (C) • Physics II (C) • Semester Internship (C)	(1) (1) (1)	Division of Sciences	Full-time	Yes Chair or all Sciences, including Mathematics & Computer Science and Biological Sciences	• Main Campus
Ocean, Michael PhD in Computer Science Assistant Professor		• Introduction to Computer Science (C) • Introduction to Programming (C) • Senior Thesis I (C) • Senior Thesis II (C)	(2) (2) (1) (1)	Department of Mathematics & Computer Science	Full-time	No	• Main Campus
Redman, Dolores MS in Applied	<input type="checkbox"/>	• Analysis of Functions	(2) (1)	Department of	Part-time	No	• Main campus

Mathematics Adjunct Faculty		<ul style="list-style-type: none"> • Principles of Math for Educators I • Principles of Math for Educators II • Principles of Math for Educators III 	(1) (1)	Mathematics & Computer Science			
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