

AGENDA  
Meeting of  
BOARD OF GOVERNORS FOR HIGHER EDUCATION  
Department of Higher Education  
Hartford, CT  
April 18, 2007

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## STAFF REPORT: ACADEMIC AFFAIRS AND PLANNING

Institution: Central Connecticut State University

Item: Licensure and Accreditation of a Master of Science degree program  
in Construction Management

### Executive Summary

Central Connecticut State University has applied to the Board of Governors for Higher Education for simultaneous licensure and accreditation of a Master of Science degree program in Construction Management. Building on an existing Bachelor degree program in Construction Management and a Construction track in the Master of Science in Technology Management program, the University is now proposing a Master's level program in order to respond to the growing recognition of the Master's degree as the entry level degree for practicing managers in the field. This would be the only program of its kind in the state.

The Advisory Committee on Accreditation, at its meeting on March 15, 2007, reviewed the program and found it to be in compliance with Board of Governors approval standards. The vote to recommend approval to the Board of Governors was all in favor, with Zdzislaw Kremens of Central Connecticut State University abstaining.

### Commissioner's Recommendation

It is recommended that the Board of Governors for Higher Education license and accredit a program in Construction Management, leading to the Master of Science (M.S.) degree offered by Central Connecticut State University for a period of time concurrent with institutional accreditation.

## Description

### Purpose and Objectives

Central Connecticut State University's School of Technology aspires to be recognized as the premier School of Technology in New England at both the graduate and undergraduate level. It is committed to educating students to be professional, contributing members of the technological society (including the construction profession) and to maintain quality programs responsive to industry's needs and the rapidly changing technologies.

The Construction Management program is designed to meet the standards of the American Council for Construction Engineering and provide advanced study to meet the technological and managerial needs of the individuals pursuing a construction management career. .

### Administration

The program would be located in the University's School of Technology and overseen by the department chairperson of the Manufacturing and construction Management Department. The chairperson will be supported by the Construction Management program coordinator who will be responsible for the day to day administration and scheduling of construction management courses.

### Curriculum

The proposed program has been designed to meet the accreditation criteria of the American Council for Construction Education. The thirty-three credit hour program consists of five core Construction Management courses, restricted electives and either a Capstone project or comprehensive examinations. A curricular outline appears in the Attachment.

### Admission and Enrollment

The program will utilize the University's general admissions requirements for its graduate programs along with at least two years of experience in the construction industry and an undergraduate degree in engineering, architecture re, or construction. If an otherwise qualified student does not have an undergraduate degree in the above areas, they may be admitted conditionally and be required to take and pass CM500 – Fundamentals of Construction Management with a grade of B or better.

The university anticipates 1 full and 10 part-time students in the first year; 2 full and 32 part-time students in the second year; and 2 full and 24 full-time students in the third year of operation

## Assessment of Need

### Labor Market

According to the U.S. Department of Labor's, Occupational Outlook Handbook: 2006-07 Edition (on-line):

Excellent employment opportunities for construction managers are expected through 2014 because the number of job openings will exceed the number of qualified individuals seeking to enter the occupation. This situation is expected to continue even as college construction management programs expand to meet the current high demand for graduates. . . . Employment of construction managers is projected to **increase about as fast as average** for all occupations through 2014.

. . .

The increasing complexity of construction projects is boosting the demand for management-level personnel within the construction industry. Sophisticated technology and the proliferation of laws setting standards for buildings and construction materials, worker safety, energy efficiency, and environmental protection have further complicated the construction process. Advances in building materials and construction methods; the need to replace portions the Nation's infrastructure; and the growing number of multipurpose buildings and energy-efficient structures will further add to the demand for more construction managers. More opportunities for construction managers also will result from the need for greater cost control and financial management of projects and to oversee the numerous subcontractors being employed.

According to the Connecticut Department of Labor's, Connecticut's Industries and Occupations: Forecast 2014 (Summer 2006):

Construction and extraction occupations are forecasted to grow by over 7% over the next ten years, at the rise of highway and commercial building construction offsets some of the initial job losses associated with residential construction. . . . These positive developments will provide a good-sized portion of the new construction manager [jobs] (140 total annual openings), . . . .

### Similar Programs

The proposed program will be the only Masters program of this type in Connecticut. The degrees conferred numbers for the Bachelors of Science program in Construction Management (accredited in 2002) are as follows:

		01-02	02-03	03-04	04-05
CCONN	BS Construction Mgt.	0	16	12	19

### Institutional Comments

No responses were reported to the circulation of the program summary.

### Resource Support

#### Faculty

Five full-time and two part-time faculty have been identified as supporting this program. All the faculty hold doctorates in appropriate fields and have related industry experience.

#### Library

The University reports that its library contains over 650,000 volumes and 2,700 periodicals, with 2,622 books and 53 periodicals on Construction topics; 11,421 books and 134 periodicals on Architecture and Engineering; and 7,133 books and 325 periodicals on Business and Management.

#### Facilities and Equipment

The courses in this program will utilize existing facilities. It is anticipated that some additional software will be purchased to support the new program.

Institution: Central Connecticut State University  
Program: MS in Construction Management (33 credit hours)

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I. Construction Management Core (15 credit hours)

CM 505 – Project Delivery Systems  
CM 515 – Construction Law  
CM 545 – Construction Risk Management  
CM 575 – Construction Financial Management  
IT 594 – Research Methods in Technology

II. Electives (15-18 credit hours)

a. 9 credit hours from the following:

CM 435 – Construction Superintendency  
CM 455 – Construction Project Management  
CM 525 – Construction Equipment Methods and Management  
CM 565 – Construction Labor Relations  
CM 596 – Topics in Construction Management  
CM 615 – Advanced Construction Law

b. 6 credit hours from the following:

AC 510 – Accounting and Control  
ETC 550 – Global Positioning Systems Applications  
ETC 556 – Architectural and Civil Engineering Technology  
Computer Aided Design  
ETC 578 – Value Engineering for AEC  
IT 502 – Human Relations and Behavior in Complex Organizations  
IT 521 – Computer Aided Design and Drafting  
IT 551 – Project Management  
MGT 553 – Human Resource Management

II. IT 595 – Applied Research Capstone Project (3)  
Or Comprehensive Examination



## STAFF REPORT: ACADEMIC AFFAIRS AND PLANNING

Institution: Fairfield University

Item: Modification of programs in Software Engineering, to establish a dual degree course of study, leading to the award of the Bachelor of Science (B.S.) and Master of Science (M.S.) degree

### Executive Summary

Fairfield University has submitted an application to the Board of Governors for Higher Education for approval to create a new degree structure in software engineering, a dual-degree five-year BS/MS course of study. The new dual degree program would combine the current curriculums of the Bachelor of Science program in software engineering, which was accredited by the Board of Governors for Higher Education in October 2001, and the Master of Science program in software engineering, which was accredited by the Board of Governors for Higher Education in December 1999.

The Advisory Committee on Accreditation at its meeting on March 15, 2007, reviewed the program and found it to be in compliance with Board of Governors approval standards. The vote to recommend approval to the Board of Governors was unanimous.

### Commissioner's Recommendation

It is recommended that the Board of Governors for Higher Education approve the modification of programs in Software Engineering at Fairfield University, to establish an accredited dual degree course of study, leading to the award of the Bachelor of Science (B.S.) and Master of Science (M.S.) degrees, for a period of time concurrent with institutional accreditation.

## Description

### Purposes and Objectives

The University notes that the need for software development to solve complex problems across all sectors of technology is increasing exponentially. The program will assist in the education of experts in the discipline, enabling students to enter graduate studies in software engineering in a timely manner so that they may then achieve positions of responsibility in their companies early in their careers.

The five-year approach to the BS/MS degree is relevant in this process because, the University notes, the body of knowledge necessary to practice engineering is beyond the traditional four-year bachelor's degree program. Additionally, there is momentum building nationally toward requiring education beyond the BS degree in order to become a Professional Engineer.

The University states that the program will not replace any existing program and will not drain students or resources from existing programs. Rather, the University believes that it will serve the needs of those students who choose software engineering as a course of study because, as a focused program, it will provide opportunities for student to gain deeper understanding of the nuts and bolts of software engineering as well as gain intensive research and development experience through the framework of the Capstone Project courses.

### Administration

The program will be administered by the Chair of the Software Engineering Department, who reports to the Dean of the School of Engineering, who oversees all graduate programs in Engineering.

### Admissions/Enrollment

The admission and graduation requirements for the program are consistent with requirements for admission into the University. Minimum requirements for admission into the program are an earned Bachelor of Science degree in engineering/technology or science/applied science, and a minimum of three-years' work experience in one of those areas.

The chart below lists graduates at both degree levels, separately, during the past five years. The University notes that the proposed program will bring a better balance between these two segments of education in software engineering at the University.

*MS and BS Graduates by Year*

	<u>Graduate Program</u>	<u>Undergraduate Program</u>
2001-02	41	4
2002-03	44	8
2003-04	49	7
2004-05	30	6
2005-06	30	5

Curriculum

Students will follow the standard undergraduate curriculum for the first three years, and then they will complete the BS degree requirements during their fourth year while taking graduate software engineering courses. During the fifth year, students take an additional eight courses to complete their MS degree. In addition, they participate in Software Engineering internships between their third and fourth years and will be directed to take one elective graduate course during the summer between the fourth and fifth year. Students will be awarded the BS and the MS degrees simultaneously. The University notes that ABET requires students to complete a senior design project, or a capstone project, as part of the BS curriculum. This requirement, the University adds, necessitates the simultaneous degree award at the end of the fifth year in the combined plan.

The program consists of 156 credit hours over the five-year span, as defined below.

<i>Year</i>	<i>Fall</i>	<i>Cred</i>	<i>Spring</i>	<i>Cred</i>
1	MA 125 - Calculus I	3	MA 126 - Calculus II	3
	PS 15 - Intro Physics I w/Lab	4	PS 16 - Intro Physics II w/Lab	4
	CS 131 - Comp. Programming I	3	CS 132 - Computer Programming II	3
	EG 31 - Fundamentals of Engr. I	3	EG 32 - Fundamentals of Engr. II	3
	EN 11 - Composition and Prose	3	EN 12 - Introduction to Literature	3
		<b>16</b>		<b>16</b>
2	MA 227 - Calculus III	3	CR245 Digital Design I	3
	MA 231 - Discrete Mathematics	3	CR245L Digital Design I Lab	1
	CS 232 - Data Structures	3	MA 321 – Differential Equations	3
	EC 11 - Intro to Microeconomics.	3	SCEL 1– Math or Science Elective	3
	RS 10 - Introduction to Religious Studies	3	III 30 – Europe & the World in Transition	3
			<b>15</b>	PH 10 Introduction to Philosophy
Summer	Internship in Software Engineering or related field – recommended			
	SW 355 - Database Concepts	3	SW 202 - Software Design II	3
	SW 201 - Software Design I	3	MA 351 – Prob. and Statistics I	3
	CS 331 - Operating Systems	3	SWE – UG Major Elective	3
	GEL1 – General Elective	3	SSEL - Social Science Elective	3

3	ENEL - English Elective HIEL - History Elective	3 3 <b>18</b>	RSEL - Religious Studies Elective AE - Applied Ethics Elective	3 3 <b>18</b>
Summer	Internship in Software Engineering –required			
4	CR 320 – Computer Networks SWE – UG Major Elective SWE - UG Major Elective SWE – Graduate Major Elective* AH 10 – Origins and Trans of Western Art	3 3 3 3 3 <b>15</b>	SW 304 – Web Development SWE – UG Major Elective SWE – Graduate Major Elective* GEL2 – General Elective VPEL - Visual or Performing Arts Elective PHEL - Philosophy Elective	3 3 3 3 3 3 <b>18</b>
Summer	Graduate Level Course Work or Internship in Software Engineering –required			
5	SWE – Graduate Major Elective* SWE – Graduate Major Elective* SWE – Graduate Major Elective* SW550 – Capstone	3 3 3 3 <b>12</b>	SWE – Graduate Major Elective* SWE – Graduate Major Elective* SWE – Graduate Major Elective* SW551 – Capstone II	3 3 3 3 <b>1</b>
The total number of credit-hours for the combined BS/MS degree is <b>156</b>				

### Educational Planning Context

The University states that the industrial and business environment, especially in Southern Connecticut, is favorable to jobs for graduates and internships for students in the software engineering programs at Fairfield University. The University believes that the proposed dual degree program will make deeper the pool of expert talent to satisfy the needs of social and economic institutions in Connecticut.

#### Comments from Other Institutions

No comments or questions about the program were received from other institutions at the time of application for licensure.

#### Similar Programs in Connecticut

There are no other dual degree programs in Software Engineering in Connecticut.

## Resource Support

### Faculty

The University lists fifteen faculty members who will teach in the program, five of them full-time and ten of them adjunct. All have appropriate credentials.

### Library and Learning Resources

Students use the resources of the DiMenna Nyselius Library, the University's principal library center. The Library subscribes to more than 100 engineering-related journals, and there are sufficient resources to satisfy the needs of the program. In addition, students will use the resources of the reading room of the School of Engineering library, which holds a spectrum of science, mathematics, and engineering journals and texts. The University also participates in iCONN.

### Facilities

The University has appropriate space for both teaching and research in the program, including dedicated laboratories in the School of Engineering equipped with leading-edge instrumentation.

The School of Engineering also has extensive computer resources, including six dedicated computer laboratories and seven instrumentation laboratories. The School of Engineering also has a network with its own servers and controls separate from the University network for the purposes of control, flexibility, and security.



## STAFF REPORT: ACADEMIC AFFAIRS AND PLANNING

Institution: Legion of Christ College of Humanities, Cheshire

Item: Accreditation of a College of Humanities offering an Associate in Arts (A.A.) degree program in Classical Humanities

### Executive Summary

The Legion of Christ, a religious congregation within the Roman Catholic Church, has applied to the Board of Governors for accreditation of the College of Humanities which offers an Associate of Arts (A.A) degree in Classical Humanities. The Legion has been operating a Novitiate in Cheshire, CT, since 1982, in order to provide initial training (or religious formation) for new entrants into the Congregation. The Legion of Christ College of Humanities and the program in Classical Humanities were licensed by the Board of Governors for Higher Education, without stipulations, in April 2003 until April 30, 2007.

### Commissioner's Recommendation

It is recommended that the Board of Governors for Higher Education accredit the Legion of Christ College of Humanities and the Associate of Arts (A.A.) program in Classical Humanities for a period of five years, until April 30, 2012.

## Description

### *Purpose and Objectives*

The objective of the College and of the program in Classical Humanities is to support the priestly formation of seminarians through a classical liberal arts curriculum in order to develop mental discipline, enlarge their social outlook, and lay a solid foundation upon which further studies in Philosophy and Theology can be built.

### *Administration*

The College is governed by a Board of Directors, who also represent the public interest. The Chancellor of the Board is the General Director of the Congregation. The Board of Directors exercises general oversight and sets College policy. A President, Vice President, Dean of Studies and other appropriate staff conduct the day-to-day operations of the College.

The current members of the board of directors are

Anthony Bannon. Ph D. in Philosophy, Gregorian University, Rome. S.T. Licentiate, Gregorian University, Rome. He was the Provincial superior of the Legion of Christ in North America from 1975 to 2004. Currently he is in charge of overseeing the observance of the religious life of the Legionary communities in New England and South East Canada.

Walter Schu. College professor of Theology, Latin, Greek and modern languages; B.A. in Philosophy, University of Dallas, Irving, TX, Ph. Licentiate, Gregorian University, Rome, Italy; S.T. Licentiate, Pontifical Athenaeum Regina Apostolorum, Rome, Italy, S.T.L., Pontifical Athenaeum Regina Apostolorum, Rome, Italy, Ph. D. In Theology candidate, Pontifical Athenaeum Regina Apostolorum, Rome, Italy  
José Antonio Alonso. Ph D in Philosophy, Gregorian University, Rome; S.T. Licentiate, Gregorian University, Rome. He is chaplain and professor of spirituality in the Maria Mater Ecclesiae college in Greenville, RI.

Juan Sabadell. Ph. D in Philosophy, Gregorian University, Rome. S.T.B, Pontifical Athenaeum Regina Apostolorum, Rome. He was the CFO of the Legion of Christ in North America from 1998 to 2005. He is currently pursuing a Licentiate in Theology.

John Heinen. BA in Business Management from St. John's University Collegeville, MN with a Spanish Minor. From 1991 to 2007 he was the Director of Planned Gift Planning for the Legion of Christ. He currently oversees Catholic youth pastoral and outreach programs in the New England Region.

Ignacio Bono. 2000-2002, Mercy College, Dobbs Ferry, NY, B.A., Organizational Management. 2004, Mercy College: White Plains, NY, Certification in Paralegal Studies, 2007: he is working towards obtaining ARM (Certificate in Risk Management offered by the Amercia Institute of Insurance). Work experience: April 2001– June 2005: CCAS, INC., Thornwood, NY, Paralegal/Project Coordinator, Trademark specialist, Copyright

specialist, Government/State corporate filings, July 2005- Present: CCAS, INC. Benefits manager, Risk Manager.

### *Curriculum*

The Associate in Arts (A.A.) degree in Classical Humanities consists of a minimum of 60 credit hours. The General Education component consists of 30 credit hours: 6 credits in Mathematics; 6 credits in Science; 6 credits in Fine Arts; 6 credits in Social Science and 6 credits in the Humanities. The major area of concentration consists of 18 credits in the Humanities (in addition to the 6 credits for General Education); 6 credits in Modern Language; and 6 credits of free electives.

The program's curriculum is as follows:

#### I. General Education Component\_(30):

##### Mathematics:

Euclidian Geometry (3)

Pre-Calculus (3)

##### Science:

Elements of Physics for the Liberal Arts I (3)

Elements of Physics for the Liberal Arts II (3)

##### Fine Arts:

Art History I (3)

Art History II (3)

##### Social Science:

Introduction to Human Psychology (3)

Psychology of Communications (3)

##### Humanities:

Two Humanities Electives (6)

#### II. Humanities Major Component (30):

##### Required Humanities Courses (18)

Courses in: Latin, Greek, Selections from Classical Literature, Readings in Patristic; Religious Studies; World History and English Composition.

##### Modern Language (6)

Spanish I (3)

Spanish II (3)

##### Free Elective (6)

Degree Requirement: 60 credits

### *Admission and Enrollment*

Admission to collegiate studies at the College is open only to members of the Congregation. A candidate must have completed high school (with at least a 2.0) [the average GPA of the current seminarians is 3.56] and have submitted his SAT scores [the

medium SAT scores are 615 Verbal and 590 Math] and the recommendation from his high school principal. The College will do testing for advanced placement and will accept transfer credit from other colleges.

The Congregation reports that there are 80 full-time seminarians taking non-credit courses in the Novitiate. By Congregation policy, the student body includes American and as well as some international students. After four years in Cheshire, the seminarians go on to earn Bachelor of Philosophy and Master of Theology degrees before their ordination as priests.

*Enrollment Status*

	2003-2004	2004-2005	2005-2006	2006-2007
Full time	51	50	33	57
Part-Time	34	42	55	49
Total	85	92	88	106

Faculty

The College’s faculty continue to be sufficient in number and qualified with appropriate credentials to teach their subject areas.

Educational Planning Context

Similar Programs

A review of the Department of Higher Education’s Degrees Conferred Data indicates that there are two institutions in Connecticut offering similar undergraduate programs as preparation for continued studies at the graduate level leading to eventual ordination as a Roman Catholic priest, Holy Apostles College and St. Basil’s College.

## UPDATE OF PLANS

The following are areas in which the Department of Higher Education made recommendations to the College. The Department asked the College to devote particular attention to these specifics during the licensure period and to update the Department and the Board of Governors as part of the accreditation application process. The College has addressed these areas satisfactorily, as described below.

### *A. Update on the College Library*

At this time the institutions has 25,000 books classified according to the Library of Congress call numbers. 20,000 of them have been entered in a computer database that is available to both faculty and students.

The institution has acquired more books to enrich the collections related with the subjects of the General Education Requirements. More concretely, the institution has acquired more books on Psychology, Sociology, Biology, and Mathematics.

### *B. Catalog*

Suggestions about revisions of the College's Catalogue were part of the recommendations made to the College during the licensure application process. During this period of licensure, the College has revised its Catalogue, as follows:

- The current catalog contains the names, positions and degrees of administrators and faculty members.
- The current catalog contains the schedule of classes.
- The current catalog contains descriptions of all course prerequisites.
- The current catalog contains the academic calendar.

## **ACADEMIC CALENDAR**

### **FALL 2006**

August 14-25	Registration
Monday, September 18	Classes start
Monday, September 25	Last day to Add/Drop
November 23-26	Thanksgiving Recess
Friday, December 22-January 6	Christmas Recess
Monday, January 8-26	Examinations

### **SPRING 2007**

Monday, January 29	Classes Start
Monday, February 5	Last day to Add/Drop
Thursday, April 5-15	Holy Week Recess

Monday, June 4-22  
Saturday, June 23

Examinations  
Commencement

### *C. Curriculum and Instruction*

Suggestions about General Education courses were made to the College as part of the licensure application process, particularly to include additional courses in the natural and physical sciences, mathematics and social sciences. During this period of licensure, the College has made several revisions to the framework of its curriculum, as follows:

- The institution has clarified the coursework for the General Education component specifying the intended courses for the A.A in Liberal Arts. More concretely, as the General Education Requirements stand now, the institution offers three courses on fine arts, four courses in history, two courses on Physics, two courses on Mathematics, two Social Sciences courses, and four fine art courses. Below is a table that visualizes this information.

The A.A. in Humanities consists in 60 credits of undergraduate work, at least 30 of which must be earned in our college.

\* General Education Requirements: (30 credits)

For an ample general education, half of the program's credits must come from the following fields: Mathematics 6 credits, Science 6 credits, Arts 6 credits, Social Sciences 6 credits, Humanities 6 credits. (The table below expresses the most likely combination of courses to fulfill the general education requirements).

### **GENERAL EDUCATION REQUIREMENTS**

<b>Course number</b>	<b>Course title</b>	<b>Credits</b>	<b>Term</b>
SS 101, SS 102	Psychology and Spiritual Life I, II	4	2 semesters
SS 102	Psychology and Communication	3	1 semester
SC 301, SC 302	Elements of Physics for Liberal Arts I, II	6	2 semesters
SC 303	Trigonometry and Calculus	3	1 semester
SC 305	Introduction to accounting	3	1 semester
H 100	Church Choral Music I and II	4	2 semesters
H 302, H 303	Art History I, II	4	2

			semesters
Variable	Humanities courses	6	Variable
		<b>Total:</b> <b>33</b>	

Specific Requirements

Humanities:	18 credits (in addition to the 6 required above)
Modern Languages:	6 credits
Electives:	6 credits

*D. Facilities and Equipment*

Suggestions about the College's facilities and equipment were made to the College as part of the licensure application process. During this period of licensure, the College has made several revisions to its facilities and particularly to its library, as follows:

- The lay out of the library has been modified to comply with the required 36 inch clearance within the stacks.
- The routes of egress are currently clearly identified with the appropriated lighted exit signs.
- Several fire extinguishers were added.
- While the institution finds a more permanent solution, it has arranged two halls adjacent to the library to serve as reading rooms.
- The institution acquired moveable lab bench and demonstration equipment.
- The library has acquired new book collections in the areas of mathematics, social sciences, earth sciences, physics, chemistry, psychology, biology, etc.
- The library has now an up-to-date data base (Athena) with searching capabilities. The database contains 20,000 books and it is available to both the faculty and the students.



## STAFF REPORT: ACADEMIC AFFAIRS AND PLANNING

Institution: The University of Rhode Island

Item: Re-licensure of a program in Chemistry, leading to the Master of Science (M.S.) degree, to be offered by the University of Rhode Island at Pfizer Central Research in Groton, Connecticut

### Executive Summary

The University of Rhode Island has applied to the Board of Governors for re-licensure of its program in Chemistry, leading to the Master of Science degree, offered at the Pfizer Central Research facility in Groton. The program was originally licensed by the Board of Governors in March 2001 and was relicensed in January 2005 until June 30, 2007.

The program has been offered through the University's Special Programs Office as part of an academic partnership that the University of Rhode Island has developed with Pfizer. That collaboration has included courses offered by the University at Pfizer over the years, with Pfizer employees matriculating at the University of Rhode Island in Kingston, Rhode Island, to complete the MS in Chemistry. The University's application now seeks authorization to continue offering the program on site in Groton. The goal of the program is to provide training in Chemistry to enhance the skill levels and competencies of Pfizer employees. The University believes that this program is consistent with the University's role as a land grant institution that is committed to providing high quality educational experiences for its students.

The Advisory Committee on Accreditation at its meeting on March 15, 2007, reviewed the program and found it to be in compliance with Board of Governors approval standards. The vote to recommend approval to the Board of Governors was unanimous.

### Commissioner's Recommendation

It is recommended that the Board of Governors for Higher Education license a program in Chemistry, leading to the Master of Science (M.S.) degree, offered by the University of Rhode Island at Pfizer Central Research in Groton, Connecticut, for a period of three years, until June 30, 2010.

## Description

### Purpose and Objectives

The Master of Science in Chemistry is designed for people working in jobs at Pfizer that require them to understand the principles as well as the applications of chemical processes and who are interested in applying that enhanced understanding to both personal and professional development within the Pfizer organization.

### Administration

The University of Rhode Island oversees all academic and student services associated with the program. The Director of the University's Office of Special Programs, Graduate Professional Center and Distance Learning, oversees all of the University's external programs. The Office of Special Programs is a constituent unit of the University's College of Continuing Education. The Master of Science in Chemistry program at Pfizer is supervised by a professor in the University's Chemistry Department. A Program Coordinator handles on-site advising, assists students in selecting a major professor, and provides other necessary coordination duties for the program.

### Admissions/Enrollment

When the program was initially licensed, the University stated that admission to the program would be limited to employees of Pfizer. The process of admission – admissions requirements, policies regarding requirements for academic achievement, and requirements for good standing -- are the same as those for other graduate students enrolled in programs of the University of Rhode Island. Preference for admission is given to candidates with undergraduate majors in chemistry or chemical engineering with mathematics through calculus. The University anticipated that up to 25 students would pursue the degree program at any given moment.

Twenty-one students have completed the program and received the degree since it was originally licensed. There are currently eleven students enrolled in the program.

### Curriculum

The Department of Chemistry at the University of Rhode Island is organized into four areas: Analytical Chemistry, Inorganic Chemistry, Organic Chemistry, and Physical Chemistry. Students must declare a divisional major from one of these four areas. They are guided by the Program Coordinator in that selection process and are advised on the appropriate curriculum for the degree sought. The degree program must be completed

within seven years of the time a student initially matriculates. Minimum requirements for the degree include the following: 18 credits of core courses, which will include at least one core course from three of the four areas and both core courses in the student's Divisional Major; a minimum of 6 additional credits of classroom course work; successful passing of a comprehensive examination; completion of a seminar in a subject of current chemical interest unrelated to the student's area of research with source material coming mainly from primary chemical journals; and completion of five credit hours of directed research, including a major paper describing the results and implications of the research, directed by the student's major professor from the University of Rhode Island and possibly conducted in conjunction with a supervisor from Pfizer.

Advising of students takes place using face-to-face visits, e-mail, and telephone discussions. Pfizer students, the University reports, have ready access to University faculty and mentors. Pfizer students also visit University faculty on the Kingston campus and interact with other graduate students on the main campus.

All Chemistry students at the University – including Pfizer students – are required to present a seminar to the entire Department on a literature topic unrelated to their research area. Students therefore have an opportunity to meet with everyone in the Chemistry Department.

Pfizer students use the research facilities on the Kingston campus as well as those available at Groton. This provides opportunities for students to interact with faculty and students in Kingston.

The University has offered the following courses at Pfizer since the program was licensed: Advanced Physical Chemistry I, Advanced Organic Chemistry I, Advanced Organic Chemistry II, Interpretation of One-Dimensional and Two-Dimensional NMR Spectra, Metals in Organic Chemistry, Advanced Analytical Chemistry I, Advanced Analytical Chemistry II, Advanced Inorganic Chemistry I, and Advanced Physical Chemistry I.

Attachment A lists the graduate courses offered by the University's Chemistry Department.

#### Assessment of Need

The M.S. in Chemistry program seeks to address a need at Pfizer Central Research for the enhancement of relevant scientific skills and the personal and professional development of the company's employees.

#### Other Master of Science in Chemistry Programs in Connecticut

Graduate degrees in Chemistry in Connecticut are offered by seven Connecticut universities, which in 2006 awarded a total of 48 Master's degrees in Chemistry.

## Resource Support

### Faculty

At the time of licensure, the University stated that fifteen full-time University Chemistry Department faculty will teach all of the courses in the program at Pfizer. The Director of the University's Nuclear Magnetic Resonance faculty also teaches in the program. The University stated that it would not be hiring new faculty for the program. Faculty members are available to students in faculty offices in Kingston, before or after classes at Pfizer, by telephone, and by e-mail. Some of the courses have established *listservs* for additional student access to faculty. The Program Coordinator is available to students in the same way.

The University affirms that all of the faculty teaching in the program at Pfizer are full-time members of the University of Rhode Island faculty.

### Library and Learning Resources

Primary library support for the program is provided through the University of Rhode Island Library. Library holdings total more than 1.1 million volumes and more than 300,000 bound periodicals. Each academic program at the University is assigned to a professional librarian who works with designated department faculty to ensure that available resources are spent wisely and meet the needs of teaching and research in each department. The University's Library has a media room with access to video, CD-ROM, audio tapes, and more traditional media materials. In addition, the Library subscribes to more than 9,000 current serials and has all of the journals required for program accreditation by the American Chemical Society. The University has spent more than \$2,000,000 each year for new acquisitions over the past five years.

Students in the Pfizer program also have access to materials in the Pfizer Central Research Library, including more than 1,000 serials.

### Facilities

The M.S in Chemistry is made available at the facilities of Pfizer Central Research in Groton.

## Attachment A

The program's core courses are: Analytical: CHM 511, CHM 512 Inorganic: CHM 501, CHM 502 Organic: CHM 521, CHM 522 Physical: CHM 531, CHM 532

### Courses:

Course Number credits	Course Title	Brief Description
CHM 501 (3)	Advanced Inorganic Chemistry I	Systematic analysis of bonding schemes and structural aspects of inorganic chemistry. Special emphasis on electron density distributions, physical methods of analysis, and practical applications of quantum mechanics.
CHM 502 (3)	Advanced Inorganic Chemistry II	Modern inorganic chemistry approached from experimental, theoretical, and descriptive points of view. Includes electronic structure, topology, thermodynamics of complex formation, mechanisms, lanthanides, and actinides.
CHM 511 (3)	Advanced Analytical Chemistry I	Fundamentals of electrochemistry, including a review of electricity and how it passes through conductors, electrochemical cells, electrode reactions, ionic solutions, polarization, transport mechanisms, voltammetry. Statistical treatment of experimental data.
CHM 512 (3)	Advanced Analytical Chemistry II	Fundamentals of chromatographic and electrophoretic separations and major spectroscopic techniques. Basic theory, instrumentation, advantages, limitations, and applications of these techniques as well as new instrumental methods are discussed.
CHM 519 (3)	Theoretical Concepts in NMR	The physical concepts of NMR phenomena are presented, beginning with signals generated in the probe, carried through the spectrometer console, into the computer, and finally represented as a spectrum.
CHM 520 (3)	Interpretation of One-Dimensional and Two-Dimensional NMR Spectra	Uses of chemical shifts and coupling constants are presented for one-dimensional (1D) and two-dimensional (2D) proton and carbon spectra. Includes relaxation time measurements, decoupling and simple 2D interpretation.
CHM 521 (3)	Advanced Organic Chemistry I	Emphasis on fundamental organic structure theory and reaction mechanisms.
CHM 522 (3)	Advanced Organic Chemistry II	Modern synthetic reactions and their applications to such areas as natural products.
CHM 524 (3)	Interpretation of Two-Dimensional NMR Spectra	Covers the theoretical and practical aspects of two-dimensional (2D) NMR. Includes pulse sequences, instrument setup, and chemical applications.

CHM 531 (3)	Advanced Physical Chemistry I	Principles and applications of chemical thermodynamics and chemical statistical thermodynamics. Includes the three laws of thermodynamics, statistical distributions, statistical thermodynamic ensembles and fluctuations. Applications to ideal gases and crystals, real fluid, and chemical equilibrium.
CHM 532 (3)	Advanced Physical Chemistry II	Principles and applications of quantum chemistry. Includes formal development of quantum theory and applications to electronic structure as well as other problems of chemical interest.
CHM 551/552 (3/2)	Nonthesis Master's Research	Research on original problem for fulfillment of research requirement for non-thesis master's degree. Literature survey, laboratory work, and detailed report required.
CHM 608 (3)	Inorganic Reaction Mechanisms	Kinetics and mechanisms of reactions in aqueous solution: techniques, results, and theoretical interpretation. Instrumentation for studying rapid reactions in solution, relaxation methods, electron transfer rates, hydrolytic and solvolytic reactions, metal ion complexation, reactions of biochemical significance.
CHM 616 (3)	Applied Analytical Techniques	Application of analytical instrumentation and techniques to practical problems. Limitations and specific difficulties of analyzing complex matrices in practical research. Problem-oriented presentation.
CHM 618 (3)	Theory of Separations	In-depth presentation of theory of separation processes. Emphasis on methods development, advanced topics, and current advances using gas and liquid chromatography.
CHM 621 (3)	Advanced Topics in Physical Organic Chemistry	Mechanistic aspects of organic chemistry: molecular orbital theory, thermal and photochemical cycloadditions and rearrangements. Consideration of carbenes, nitrenes, and free radicals. Evaluation of steric, stereoelectronic, and secondary orbital effects.
CHM 623 (3)	Advanced Topics in Synthetic Organic Chemistry	Advanced topics in the synthetic aspects of organic chemistry. Synthetic reactions and techniques, strategies and design. Conformational and stereochemical analyses, asymmetric synthesis, and natural product syntheses.
CHM 642 (1)	Seminar	Results of detailed literature surveys are presented orally.
CHM 691 (3)	Special Topics	Covers special research topics of current interest

## STAFF REPORT: ACADEMIC AFFAIRS AND PLANNING

Institution: Tunxis Community College

Item: Licensure and Accreditation of a program in Honors Computer Science/Mathematics, leading to the Associate of Science (A.S.) degree

### Background

Tunxis Community College has applied to the Board of Governors for Higher Education for licensure and accreditation of a program in Honors Computer Science/Mathematics, leading to the Associate of Science (A.S.) degree. The College campus is in Farmington, and serves approximately 4,800 part-time and full-time students each semester. The College is in its first phase of an expansion project that provides a new building that will house a new library, science and technology classrooms and labs, a larger academic support center, dental hygiene lab and classrooms, art and graphics studios and an art gallery. Completion of this project is estimated for July 2007.

The Advisory Committee on Accreditation, at its meeting on March 15, 2007, reviewed the program and found it to be in compliance with Board of Governors quality standards. The vote to recommend approval to the Board of Governors was all in favor.

### Commissioner's Recommendation

It is recommended that the Board of Governors for Higher Education license and accredit a program in Honors Computer Science, leading to the Associate of Science (A.S.) degree, offered by Tunxis Community College, for a period of time concurrent with institutional accreditation.

## Description

### Purpose and Objectives

The Honors Computer Science/Mathematics program is intended to prepare students to either graduate and enter the workforce as entry level computer support specialists, or to initiate an intended major at the baccalaureate level. There is a signed articulation agreement between the Departments of Mathematics and Computer science at Central Connecticut State University and Tunxis Community College, providing students with initial preparation for the Bachelor of Science in Mathematics for Secondary Teaching Certification, the Bachelor of Science in Computer Science Honors Program and the Bachelor of Science in Computer Science Alternative Program without loss of credit. This preparation may also initiate study for a career as a software engineer.

The signed articulation agreement between Tunxis and CCSU provides that a graduate from the Honors Computer Science/Mathematics program must meet minimum requirements for transfer, including a minimum grade point average of 2.7, completion of the required admissions process and space availability.

Central Connecticut State University currently offers an Honors Bachelor of Science program in Computer Science, which is accredited by Computing Accreditation Commission of the American Board of Engineering Technology. This is the highest level of accreditation which may be obtained by a Computer Science program. The articulation agreement provides for students to move into this program from Tunxis Community College at the Junior, or third year level.

The proposed program is designated as Honors because of the articulation with the baccalaureate program, and because of the special admissions requirements into the program. Students are required to have higher level math, science and programming knowledge than the standard open admissions policy at the community college. In addition, Tunxis students transferring to the Honors program at CCSU will participate in Honors seminars as will CCSU's native students.

The Academic Deans of the community college system viewed the proposal with favor and applauded the effort to respond to the shortage of secondary mathematics teachers and computer science specialists. The Board of Trustees of the Connecticut Community Colleges praised the collaboration with CCSU and the program-to-program full articulation agreement, as well as their addressing the workforce areas of critical need in Connecticut.

The program is being considered for simultaneous licensure and accreditation because all courses in the program are currently offered and all faculty who will teach in the program currently teach these courses. This is a rearrangement of existing resources to address a missing need and to advance an articulation and transfer arrangement between these two institutions.

## Administration

The program will be under the direction of a full-time professor in Computer Information Systems at Tunxis Community College.

## Curriculum and Instruction

The curriculum consists of 63 credits, distributed as follows:

- General Education Requirements, 23 credits
- Program Requirements, 40 credits

### *General Education Courses:*

ENG 101	Composition	3
	Humanities Elective	3
	Humanities Elective	3
	Fine Arts Elective	3
	Social Science Elective	3
MAT 186	Precalculus	4
CHE 121 or PHY 221	General Chemistry I Calculus-Based Physics I	4

### *Program Requirements and Electives:*

CSC 210	C Programming	3
CSC 214	Advanced C++ Programming	3
CSC 220	Object Oriented Programming Using Java	3
CSC 221	Advanced Java Programming I	3
MAT 254	Calculus I	4
MAT 256	Calculus II	4
MAT 268	Calculus III: Multivariable	4
CHE 122	General Chemistry II or	4
PHY 222	Calculus-Based Physics II	4
ENG 102	Literature and Composition	3

### *Directed Electives:*

Principles of Microeconomics <i>or</i> Principles of Macroeconomics	3
Intro. to Anthropology, Gen. Psych. I, Prin. of Soc., <i>or</i> Social Prob.	3
Public Speaking <i>or</i> Interpersonal Communication	3

Admissions and Enrollment

The College anticipates enrolling 64 full-time and part-time students in the first year, which includes a large number of internal transfer students, and 52 full- and part-time students by year three with the number of internal transfers leveling off.

This is a special admission program. Students must have completed or tested out of the following courses prior to acceptance into the Honors Computer Science/Mathematics program.

CSC 101	Introduction to Computers	3
CSC 105	Programming Logic	3

Assessment of Need

Currently, there are no other programs in Honors Computer Science/Mathematics leading to an Associate in Science degree in Connecticut. Gateway Community College offers a Natural Sciences and Mathematics program, and requires courses in College Algebra and Trigonometry, Pre-Calculus and Statistics with Technology. Calculus I, II and III are directed electives in this program, whereas Tunxis plans to require these Calculus courses in their program.

The Connecticut Department of Labor projects that through the year 2014, the demand for Computer Support Specialists will be exceeded only by the demand for Registered Nurses. Connecticut’s Industries and Occupations Forecast 2014 stated “employment in Computer and Mathematical occupations is forecasted to be one of the State’s strongest drivers of job creation”. There is a critical shortage of teachers in Mathematics, which is a major concern to the State of Connecticut. This program, because it articulates with the four-year teacher preparation program of CCSU, will provide an avenue for community college students to help address the shortage of mathematics teachers.

The Tunxis Department of Institutional Research reported that 84% of their graduates plan to continue their education and 45% of this group plan to enroll at Central Connecticut State University.

Resource Support

Faculty

Tunxis has listed seven full-time professors who would support and teach in this program. The College has stated that no additional resources will be necessary to run this program outside of marketing.

### Library and Learning Resources

The library on the Tunxis Community College campus consists of over 60,000 items and subscribes to over 240 periodicals and journals. They are a member of LIBRIS, which is an online catalog providing access to the Tunxis library collection as well as the holdings at the other Connecticut Community Colleges and other public and academic libraries. Interlibrary loan service is available. The College also participates in iCONN.

There are 795 Computer/Computer Science books and 368 Mathematics books. There are 7 Computer periodical subscriptions.

### Facilities

Four computer classrooms exist, each housing 24 computers. An additional general lab area houses 37 computers.



## STAFF REPORT: COMMISSIONER'S CONSENT CALENDAR

Institution: Fairfield University

Item: Accreditation of a program, called the Individually Designed Major, leading to a Bachelor of Arts (B.A.) or to a Bachelor of Science (B.S.) degree

### Executive Summary

Fairfield University has submitted an application to the Board of Governors for accreditation of a program, the Individually Designed Major, leading to a Bachelor of Arts (B.A.) degree or Bachelor of Science (B.S.) degree. The program was licensed, without stipulations, in December 2003 for a period of three years, until December 31, 2006.

The Advisory Committee on Accreditation at its meeting on March 15, 2007, reviewed the program and found it to be in compliance with Board of Governors approval standards. The vote to recommend approval to the Board of Governors was unanimous.

### Commissioner's Recommendation

It is recommended that the Board of Governors for Higher Education accredit the Individually Designed Major, leading to a Bachelor of Arts (B.A.) or to the Bachelor of Science (B.S.) degree, offered by Fairfield University, for a period of time concurrent with institutional accreditation.

## Description

### Purposes and Objectives

The program provides opportunities for students to design and pursue interdisciplinary majors in areas where a formal major does not currently exist at the University. Students who become deeply interested in a particular topic or field – for example, Classical Studies – which is also an area of expertise of a given member or members of the faculty, have the opportunity, through the major, to have what the University calls an “immersive experience” which will often be more refined or more interdisciplinary than what is available through the University’s standard majors. The major also provides the College of Arts and Sciences with a mechanism for supplementing the range of majors presently available to its students.

### Administration

The program is administered by the Associate Dean of the College of Arts and Sciences. He oversees the faculty committee that evaluates student applications for the major and approves each application.

### Admissions/Enrollment

The admission and graduation requirements for the program are consistent with requirements for admission and graduation at the University. To be eligible for the program, students must have a GPA of at least 3.0 at the time of application, which is usually in their second year. When the program was licensed, the University anticipated that two to four students per academic class would elect the new major. There are currently six students in the class of 2007 and one student in the class of 2008 enrolled in the major.

### Curriculum

The program is a major designed by a student. The University affirms that it is a true major, with a progression of courses, including an appropriate number of advanced courses as approved by the review panel. It is not a simple collection of introductory courses in several disciplines.

The major requires a minimum of 10 courses out of the minimum of 38 3-credit or 4-credit courses and 120 credits for a student to graduate. The major is interdisciplinary: at least four of its courses must be taken outside of the primary department. It requires a

senior project (seminar, capstone course, supervised lab, or whatever is appropriate for the relevant disciplines). It also requires each student to maintain a portfolio for the purpose of a reflective review and self-assessment of the progress and changes in direction, if any, of the major.

Some though not all, of the courses in the major may also count toward the general education core requirements: 3 courses in English, 2 in Mathematics, 2 in a natural science, 2 in History, 2 in social and behavioral sciences, 2 in Visual and Performing Arts, 5 in Philosophy and Religious Studies, and 2 at the intermediate level in a foreign language. The core requirements also include at least one course with an emphasis on diversity in the United States and at least one world diversity course.

Students enrolled in the major develop mentor relationships with members of the faculty and engage in intense and individualized work, effort which will also prepare students for particular graduate programs.

### Educational Planning Context

When it applied for licensure of the program, the University stated that it strives to offer a broad array of opportunities to its students as part of its educational mission. The University seeks, too, to accompany breadth of learning – as imparted through the Jesuit liberal arts tradition – with a corresponding depth of learning. The major seeks to do so especially for students with deep interests in fields not currently offered as majors by the University but in which there is faculty interest and strength.

### Comments from Other Institutions

No comments or questions about the program were received from other institutions.

### Resource Support

#### Faculty

The University affirms that no new faculty will be required for the major. All courses are taught by current faculty and advising of students is part of normal faculty responsibilities.

#### Library and Learning Resources

Students use the resources of the DiMenna Nyselius Library, the University's principal library center.

Facilities

The University has appropriate space for both teaching and research in the program, and no new specialized facilities or equipment are necessary.

## STAFF REPORT: COMMISSIONER'S CONSENT CALENDAR

Institution: Fairfield University

Item: Modification of the University's Accredited Bachelor of Arts and Bachelor of Science Degree Completion Program, to add an online option

### Executive Summary

Fairfield University has submitted an application to the Board of Governors for the modification of the University's currently accredited Bachelor of Arts and Bachelor of Science Degree Completion program. The modification will now enable the program to include an option for students to complete their degrees online.

The Degree Completion Program was accredited in March 1985 as the Bachelor of General Studies. The name of the program was changed in October 2000 to the Bachelor of Professional Studies, in order to make explicit the focus on meeting the needs of working adults.

The Advisory Committee on Accreditation at its meeting on March 15, 2007, reviewed the program and found it to be in compliance with Board of Governors approval standards. The vote to recommend approval to the Board of Governors was unanimous.

### Commissioner's Recommendation

It is recommended that the Board of Governors for Higher Education approve the modification of the accredited Bachelor of Arts (B.A.) and Bachelor of Science (B.S.) degree completion program, offered by Fairfield University, to add an online option, and accredit the online program option for a period of time concurrent with institutional accreditation.

## Description

### Purposes and Objectives

The proposed online program, which is within the institution's University College, has the same purposes and objectives as the on-ground program. That is, it seeks to provide opportunities for adult students seeking an individualized, interdisciplinary and flexible curriculum which accommodates students with previous college credit and professional experience while providing comprehensive academic counseling, several options for curricular concentration, and a wide variety of semester formats. The program provides students with an educational experience that can be applied to their personal and professional lives. The University states also that the online degree completion option will continue to fulfill Fairfield University's mission and commitment to life-long learning.

### Administration

The online program will be part of the programmatic offerings of University College.

### Admissions/Enrollment

University College serves a predominantly adult, part-time student population. Its target populations will include adults who are returning to college to finish what they have begun, community college students seeking a Bachelor's degree, working students who are looking to advance their careers, and students who need to complete their degrees to advance to a graduate program.

Before taking courses, all students must complete an application indicating academic goals and meet with a University College counselor to discuss program expectations and curricular tracks within the major (please see the section on curriculum, below). After completing four courses over two semesters, students are expected to apply for matriculation. Transcripts are then evaluated and transfer credit is awarded (up to 75 credits).

The University notes that degree completion programs have become a priority for University College's marketing and advertising initiatives. Consequently, the University also states, the number of inquiries into the Bachelor of Professional Studies from this current fiscal year has increased threefold over previous years, thereby assuring the University that there is a strong demand in the marketplace for the degree completion program.

### Curriculum

Students enrolling in the Degree Completion Program typically choose curricular tracks, such as liberal studies, organizational leadership, professional communications, behavioral science, and information technology. Students who matriculate into the Degree Completion Program must complete a minimum of 120 credits, 45 of which must be from Fairfield University. They must also maintain a GPA of 2.0 or better. Courses in the program offered online are listed in Attachment A.

The University states that students participating in online courses will receive support services equal to those provided to resident students. For example, the University provides technical and help desk support via e-mail and telephone; dedicated advising for students via e-mail, telephone, and in person; library databases available on-line as well as in-person, along with reference librarian assistance 24/7 via e-mail and phone; registration; tutoring available through CTDLC; student course evaluations; bookstore; and accommodations for students with disabilities.

### Educational Planning Context

The University states that its program enables adult students to complete a Bachelor's degree, and thereby take advantage of a highly flexible schedule of part-time day, evening, weekend, intersession, and on-line courses. The University notes that the number of inquiries from prospective students has continued to increase, proving that there is a strong demand in the marketplace for the program.

The University refers to a study reported in The Chronicle of Higher Education (August 2006) that indicates that online course enrollments are predicted to grow by 20% a year for the next few years. In University College, that growth has been between 25% and 30% each year: enrollment in online courses at the University was 774 students in 2005-06, with more than 60 courses reformatted for online presentation.

### Comments from Other Institutions

No comments or questions about the program were received from other institutions.

### Similar Programs in Connecticut

Institution	Program name	Degree	# of Degrees Awarded				
			02-03	03-04	04-05	05-06	
AMAGS	240102	General Studies	BA	6	3	4	3
ECONN	240102	General Studies	BGS	48	56	57	61
FRFLD	240102	Professional Studies	BA/BS	3	3	10	7
SAHRT	240102	General Studies	BA/BS	22	11	18	16

TPOST	240102	General Studies	BS	30	21	22	14
UBRIG	240102	General Studies	BS	42	55	42	49
UBRIG	240102	General Studies, on-line	BS				0
UCONN	240102	General Studies	BGS	292	291	318	334
UCONN	240102	General Studies, on-line	BGS			0	0
UHTFD	240102	University Studies	BA	5	15	11	22
<b>TOTAL</b>				<b>448</b>	<b>455</b>	<b>482</b>	<b>506</b>

### Resource Support

#### Faculty

The University indicates that no new faculty will be required for the major. All courses will be taught by current faculty and advising of students will be part of normal faculty responsibilities.

#### Library and Learning Resources

Students will use the resources of the DiMenna Nyselius Library, the University's principal library center, through on-ground and on-line services.

#### Facilities

The University relies on two consortium partnerships in the delivery of on-line programming: The Connecticut Distance Learning Consortium (CTDLC) and JesuitNET, which is a consortium of Jesuit colleges and universities that offer opportunities for benchmarking and collaboration with Jesuit schools in the United States and abroad. JesuitNET supports faculty in online course design and collaborative grant funding.

## STAFF REPORT: COMMISSIONER'S CONSENT CALENDAR

Institution: Fairfield University

Item: Accreditation of a program in Taxation, leading to a Master of Science (M.S.) degree

### Executive Summary

Fairfield University has applied to the Board of Governors for Higher Education for accreditation of a program in Taxation, leading to a Master of Science degree. The program was licensed by the Board of Governors, without stipulations, from May 1, 2005 through April 30, 2007. At the time of licensure, the University stated that the program is consistent with its mission of providing educational programs to serve the needs of its students and the needs of the community.

The Advisory Committee on Accreditation at its meeting on March 15, 2007, reviewed the program and found it to be in compliance with Board of Governors approval standards. The vote to recommend approval to the Board of Governors was unanimous.

### Commissioner's Recommendation

It is recommended that the Board of Governors for Higher Education accredit a program in Taxation, leading to the Master of Science (M.S.) degree, offered by Fairfield University, for a period of time concurrent with institutional accreditation.

## Description

### Purpose and Objectives

When it applied for licensure of the program, the University stated that the program provides students with core competencies developed and recommended by the American Institute of Certified Public Accountants (AICPA) and the Association to Advance Collegiate Schools of Business International (AACSB International) for all new entrants into the profession, including ethical training, critical thinking, relevant research, problem solving and decision making, leadership and team building, written and oral communication, information technology, international perspective, and legal/regulatory perspective.

The University stated then, too, that the program is designed to meet the needs of accounting taxation professionals because it addresses the regulatory education requirements established by most states in the United States. That is, individuals seeking accounting certification need 150 credit hours of college education, with 36 of these credit hours in accounting. Combined with the appropriate prerequisites, the University maintains that the program fulfills the legislated education requirements of most states.

The University indicated that its successful graduates will be prepared to get jobs in public accounting firms, and in the accounting departments of private industry, government agencies and not-for-profit entities.

### Administration

The program is supervised by the Chair of the Accounting Department, and the Assistant Dean/ Director of Graduate Programs of the School of Business. They all report to the Dean of the School of Business.

### Accreditation

The School of Business is accredited by the Association to Advance Collegiate Schools of Business (AACSB) International.

### Admissions/Enrollment

When it applied for licensure of the program the University indicated that there would be no additions to or variances from the general admission requirements. Students applying to this program must hold an undergraduate degree in Accounting or the equivalent from a regionally accredited college or university (or international equivalent). In addition, graduate student applicants must meet the minimum criteria of a formula score of 1100. The formula score is the result of multiplying an applicant's grade point average (GPA) by 200 and adding that product to his or her GMAT score. In most cases this requires an undergraduate GPA of at least 3.00 accompanied by a GMAT score of at least 500.

The University anticipated 6 part-time students during the first year after the program is licensed; 8 new, part-time students during the second year; and 10 part time students in the third year.

Currently, the program enrollment is as follows:

2005-2006	3 Part-time students.
2006-2007	7 Part-time students.

## Curriculum

The University requires students to have a baccalaureate degree in accounting, finance or the equivalent coursework before beginning the Taxation program. Their prerequisite coursework must include AC343 Federal Income Taxation I, or equivalent.

Category	Course Number	Course Title	Existing MBA Course	Credits
<b>Required Courses</b>	TX500	Tax Research	No	3
	TX501	Tax Accounting	No	3
	TX502	Taxation of Property Transactions	No	3
	TX510	Corporate Income Taxation	Yes	3
	TX530	Partnership Taxation	No	3
	TX540	State and Local Taxation	No	3
	TX550	Tax Planning	Yes	3
<b>Subtotal</b>				<b>21</b>
Electives (Choose any	TX520	Estate and Gift Taxation	Yes	3
	TX522	Income Taxation of Estates and Gifts	Yes	3
	TX532	Taxation of Flow-Through Entities & Closely-Held Businesses	No	3
<b>three)</b>	TX545	Deferred Compensation	No	3
	TX512	Corporate Income Taxation II	No	3
	TX542	International Taxation	No	3
	TX548	Tax Practice and Procedures	No	3
	MG512	The Law of Financial Transactions and Forms of Organizations	No	3
	(Various)	(Any Other Graduate Accounting or Law Course)	Yes	3
<b>Subtotal</b>				<b>9</b>
<b>Total</b>				<b>30</b>

### Educational Planning Context

When it applied for licensure of the program, the University stated that its current students are meeting the new Connecticut certification requirements through the University's existing MBA program. It stated, too, that, by offering this new program, it was responding to the expressed needs of public accounting firms, which employ most of the students who complete the program. Furthermore, the University stated that it was responding to the needs of students and their parents for a cost-effective way to fulfill the 150- hour requirement.

### Other Programs in Connecticut

At the time of licensure, no similar program existed at any Connecticut institution of higher education, public, independent, or proprietary. However, the University of Hartford then offered a tax concentration in its MSAT program and the University of Connecticut offered a tax concentration

in its online MS in Accounting program. The University of Hartford and the University of Connecticut continue to offer their master's degree programs with concentrations in taxation. In addition, the University of New Haven now offers an MS-Taxation degree.

#### Comments from Other Institutions

There have been no comments or questions received from other institutions about the program.

### Resource Support

#### Faculty

The Chair of the Accounting Department is a CPA and holds a Ph.D. in Accounting. The other two full-time faculty members in the Department who may be called upon to teach in the program hold terminal degrees and are CPAs. The University believes that no additional full-time faculty resources are needed for the program as part-time faculty with specialized experience will be used to teach courses in areas matching their areas of expertise.

#### Library and Learning Resources

The University believes that no new resources are needed for the library or computer labs. Both are continually updated to support other ongoing programs. The DiMenna-Nyselius Library houses a total of 342,000 volumes in open stacks, 6,000 e-books, the equivalent of 106,000 volumes in microfilm, and 1,614 current print subscriptions to journals and newspapers. The library also provides access to over 15,500 e-journals. Of the 2,940 journals in business and economics, 105 journals are specific to accounting. The reference department offers interlibrary loans, over 140 on-line subscription databases, access to the Internet, e-mail and MS Office applications. The Library's media department contains audio and video cassettes, compact disks, DVDs and other audiovisual materials. The library remains open for 105 hours per week. A 24/7 computer lab and cafe/study area is also available.

Students and faculty members have access through the DiMenna-Nyselius Library home page, whether off campus or on. A variety of services is available 24/7 including electronic reserves, professional research assistance and electronic resources. Subscriptions are maintained for the online resources ABI/Inform, Mergent Online, FARS, Business & Company Resource Center and for RIA Checkpoint. The University also participates as a member of iCONN, the Connecticut Digital Library.

#### Facilities and Equipment

No new facilities or equipment are required for the program.

## STAFF REPORT: COMMISSIONER'S CONSENT CALENDAR

Institution: Goodwin College

Item: Accreditation of a program in Early Childhood Education, leading to the Associate in Science degree and Certificate in Early Childhood Education

### Executive Summary

The Early Childhood Education program is geared towards students seeking entry to mid-level opportunities in childcare and early learning settings including childcare centers, School Readiness programs, public school pre-Kindergarten, nursery school, and other various private/not-for-profit organizations. The Certificate program is intended to meet all the requirements to allow graduates to apply to the Council for Professional Recognition for the Child Development Associate (CDA) certificate.

The Board of Governors licensed the program without any stipulations in 2005.

The Advisory Committee on Accreditation, at its meeting on March 15, 2007, reviewed the program and found it to be in compliance with the Board of Governors' approval standards. The vote to recommend approval to the Board of Governors was unanimous.

### Commissioner's Recommendation

It is recommended that the Board of Governors accredit a program in Early Childhood Education, leading to the Associate in Science degree and Certificate, to be offered by Goodwin College, for a period of time concurrent with institutional accreditation.

## Description

### Purpose and Objectives

The College indicates that upon successful completion of the program, graduates will be able to: show an understanding of and commitment to the values of early childhood education professionals; demonstrate a commitment to life long learning for themselves and those whom they serve; exemplify competence as skilled providers in the field of early childhood education; utilize critical thinking skills to assess children's needs, possible interventions, and community resources in a comprehensive fashion while taking into consideration individual, family, and/or community values, practices, and beliefs; demonstrate knowledge of curriculum planning and evaluation necessary to be effective with young children; utilize the process of observation and assessment techniques and strategies as applied to teacher and classroom practices; serve as a positive role model within early childhood education settings and the community; utilize a process of self-evaluation that fosters personal and professional growth and contributes to life-long learning; demonstrate effective written and verbal communication skills that represent competence and professionalism in the field of early childhood education; apply knowledge of computer applications including basic word processing, spreadsheets, internet and e-mail and other software related to the field; and perform mathematics related to the field of study including applied business mathematics, budgeting, and other related skills.

### Administration

A full-time Program Director coordinates the day to day operations of the program. The duties of the Director include the following: assist in recruiting new faculty; oversee the development and evaluation of curriculum; assist in establishing articulation agreements; and assist in advising students. The Director reports to the dean of Academic Affairs.

### Curriculum

The associate degree program consists of between 61-65 credits and the certificate program is 24 credits. The curriculum has been designed to conform to NAEYC standards and the Connecticut Early Childhood Articulation Guidelines. A copy of the curriculum is attached.

### Enrollment

The College projected an enrollment of 45 part-time students in the first year an 17 full-time and 60 part-time students by year three.

There are currently 40 students enrolled in the associate's degree program and 6 students in the certificate program.

## Resource Support

### Faculty

The College lists one full-time faculty member, who will serve as Program Director, and five adjunct faculty members whom hold Master's degrees teach in the program. The College plans to hire another full-time faculty member in Fall 2007.

Faculty who currently teach courses in the Early Childhood Development option in the Human Services program teach some of the specialized courses. Additional faculty holding master's degree in early childhood education will be hired to teach some of the specialized courses.

### Library and Learning Resources

The College has identifies nine periodical subscriptions and students have access to a number of full texts journals in INFOTRAC and other electronic databases. The College plans to expand the collection that currently supports the early Childhood Development option with an initial allocation of \$20,000 over the next three years. Videos, text books, and children's books have been identified for purchase.

### Facilities and Equipment

Other than consumables, no specialized facilities or capital equipment is needed for the program.

### Advisory Committee on Accreditation

The Advisory Committee on Accreditation, at its March meeting, found the program to be in compliance with the Board of Governors' approval standards.

## Associate in Science in Early Childhood Education

### General Education Requirements

FS 101	Freshman Seminar	1
ENG 101	English Composition	3
ENG 201	Introduction to Literature	3
MATH	Math 101 or higher	3
COM 101	Public Speaking	3
	Humanities Elective or	
ECE 220	Multicultural Aspects of Early Childhood	3
PSY 112	Introduction to Psychology	3
SCI	Physical or Natural Science Elective	3-4
CAP 101	Computer Literacy	3
	Total General Education Credits	25-26

### Related General Education

PSY 115	Child Development	3
PSY 220	The Social & Emotional Young Child	3
		6

### Core Requirements

ECE 101	Introduction to Early Childhood	3
ECE 102	Health, Safety, and Nutrition	3
ECE 110	Creativity and the Young Child	3
ECE 120	Math and Science for Young Children	3
ECE 201	The Exceptional Child and Learner	3
ECE 210	Observation and Assessment	3
ECE 231	Early Language and Literacy Development	3
ECE 250	Student Teaching	6
		27
	Electives	3-6
	Total Credits in Program	61-65

### CDA Certificate Program

This program meets all the requirements to allow graduates to apply to the Council for Professional Recognition for the Child Development Associate (CDA).

#### 1<sup>st</sup> Semester

ECE 101*	Introduction to Early Childhood	3
PSY 112	Introduction to Psychology	3
ECE 140*	Practicum I	6

#### 2<sup>nd</sup> Semester

ECE 102*	Health, Safety, and Nutrition for early Childhood Programs	3
PSY 115	Child Development	3
ECE 141*	Practicum II	6
	Total Credits	24

## STAFF REPORT: COMMISSIONER'S CONSENT CALENDAR

Institution: Quinebaug Valley Community College, Danielson

Item: Accreditation of a program in Early Childhood Education, leading to an Associate in Science (A.S.) degree, or an Early Childhood Education Certificate

### Executive Summary

Quinebaug Valley Community College has applied for accreditation of a program in Early Childhood Education, leading to an Associate in Science degree and an Early Childhood Education Certificate.

The College indicates that its program graduates will be qualified to seek employment in day care centers, preschool programs, and Head Start programs. In addition, students may transfer to a four-year institution for further study.

Following a successful evaluation visit, the Board of Governors licensed the program with the stipulations that, by the time of accreditation, the College submit evidence to demonstrate that it has reached a reasonable ratio of experienced and knowledgeable full-time and part-time faculty members, and has hired a full-time program coordinator with substantial knowledge and scholarship in the field of early childhood education.

The College has met the stipulations of the Board of Governors as summarized in sections on administration and faculty below.

The Advisory Committee on Accreditation, at its meeting on March 15, 2007, reviewed the program and found it to be in compliance with the Board of Governors' approval standards. The vote to recommend approval to the Board of Governors was unanimous.

### Commissioner's Recommendation

It is recommended that the Board of Governors for Higher Education accredit a program in Early Childhood Education, leading to the Associate in Science (A.S.) degree and to a Certificate, offered by Quinebaug Valley Community College, for a period of time concurrent with institutional accreditation.

## Description

### Purpose and Objectives

The program is designed for students who wish to enter the field of early childhood education or who are already employed in the field and wish to earn a credential by expanding their knowledge and competency in working with children from birth to adolescence. The program provides students with the skills and knowledge to develop competency in working with children. Courses such as Observation & Assessment and a Practicum will provide the practical experience necessary for students to succeed in a variety of educational settings, including the College's own Steppingstones child care facility.

### Administration

The College has appointed a Program Coordinator who reports to the Dean of Learning and Student Development. That person also serves as a full-time faculty member.

### Curriculum

The Associate in Science degree program is offered along with a Certificate program. The College maintains that the curriculum provides a balanced theoretical and practical approach in key areas including the social and emotional growth of children, language and literacy, nutrition and health and safety, and creative activities.

The program courses are adopted from the "common courses" in the existing Early Childhood Education programs at the other Connecticut Community Colleges. The group worked with an Early Childhood Education professor from Eastern Connecticut State University (ECSU) to align the community college courses with those at ECSU and other Connecticut State Universities.

The College notes that course content and program design are appropriate as such common courses will be accepted as equivalent course transfers to prospective four year Early Childhood Education programs at the Connecticut State University System campuses and Saint Joseph College, and the Family Studies program at the University of Connecticut, through established articulation agreements.

The College will work towards program accreditation by the National Association of Education for Young Children (NAEYC).

A listing of courses is included in the attachment.

### Admissions/Enrollment

The College states that there is no selective admission plan. The college's regular procedures apply. Any student possessing a high school diploma or GED is eligible for enrollment. Students could enroll as either full-time or part-time students. The College anticipates the program's enrollment will be seven full-time and 34 part-time students during the first year, 10 full-time and 45 part-time students during the second year, and 10 full-time and 40 part-time students in the third year.

There are currently 70 students in the program.

### Resource Support

#### Faculty

The College lists one full-time faculty with a Master's degree in Early Childhood Education and 29 years experience in the field. Of the seven part-time faculty members, six hold the Master's and one the Ph.D. and all have appropriate credentials to the field.

#### Library and Learning Resources

The library has systematically expanded its resources to accommodate the greater emphasis on Early Childhood Education. The College has increased its holdings in the field. A \$2,200 grant from the Jewett City Savings Bank was given to be used exclusively for children's books. Since the program began, the College has purchased 51 books, 26 electronic books and 6 videos.

#### Facilities and Equipment

The College reports that it does not need any additional facilities and equipment for the program.

#### Advisory Committee on Accreditation

The Advisory Committee on Accreditation, at its March meeting, found the program to be in compliance with the Board of Governors' approval standards.

Requirements for the A. S. degree and certificate programs

Category	Course Number (Community College Common Course)	Title	Credits	A.S. Degree	Early Childhood Education Certificate
<b>General Education Core</b>	ENG 101	Expository Writing	3	X	X
	ENG 211	Children's Literature	3	X	X (Choose one)
	Art Elective	Fine Arts or Music Appreciation	3	X	
	COM 101	Introduction to Speech Communication	3	X	
	MATH 121	Intermediate Algebra (or higher)	3	X	
	SCI Elective	Science Elective (with or without lab)	3-4	X	
	PSY 102	Introductory Psychology: Cognitive and Social	3	X	X
	ANTH 105	Cultural Anthropology	3	X	X
	CSC 101	Computers I: Introduction to Computers	3	X	
	<b>Subtotal</b>		<b>27-28</b>		
<b>Program Requirements</b>	EDUC 1XX (ECE 101)	Introduction to Early Childhood Education*	3	X	X
	EDUC 1XX (ECE 103)	Creative Experiences for Children*	3	X	X
	EDUC 1XX (ECE 176)	Health, Safety and Nutrition*	3	X	X
	EDUC 1XX (ECE 109)	Science and Mathematics for Children*	3	X	
	EDUC 1XX (ECE 180)	Child Development Associate Credential Preparation*	3		
	EDUC 110 (ECE 182)	Child Development**	3	X	X
	EDUC 2XX (ECE 210)	Observation and Participation*	3	X	X
	EDUC 150 (ECE 215)	The Exceptional Learner**	3	X	
	EDUC 210 (ECE 231)	Early Language and Literacy Development**	3	X	X
	EDUC 2XX (ECE 295)	Student Teaching*	6	X	
		<b>Subtotal</b>		<b>30</b>	
<b>Open Electives</b>	Electives	Open	3	X	
<b>Total Credits</b>			<b>60-61</b>		<b>30</b>

\* New course for the College

\*\* Modified courses for the College

Source: *Quinebaug Valley Community College.*