BRONX COMMUNITY COLLEGE OF THE CITY UNIVERSITY OF NEW YORK

ARTICULATION AGREEMENT FORM

A. SENDING AND RECEIVING INSTITUTIONS

<u>Sending College</u>: **Bronx Community College of the City University of New York**

Department: Mathematics and Computer Science

Program: Mathematics

Degree: Associate in Science

<u>Receiving College</u>: **Bernard M. Baruch College of the City University of New York / Weissman School of Arts and Sciences**

Department: Department of Mathematics

Program: Actuarial Science

Degree: Bachelor of Art

B. ADMISSION REQUIREMENTS FOR SENIOR COLLEGE PROGRAM (e.g., minimum GPA, audition/portfolio):

- **BCC STUDENTS CONSIDERING THE MAJOR IN ACTUARIAL SCIENCE SHOULD CONSULT WITH AN ADVISOR THE MATHEMATICS DEPARTMENT (CPH, ROOM 315).**
- **Students are also encouraged to visit the Society of Actuaries web site at** http://www.soa.org/ as well as their site on becoming an actuary at http://www.beanactuary.org/

Actuarial Science:

The field of actuarial science applies mathematical principles and techniques to problems in the insurance industry. <u>Progress in the field is generally based upon completion of examinations given by the Society of Actuaries.</u> The Baruch College major is designed to prepare students to pass the first two exams of the Society of Actuaries year 2000 exam structure and to provide partial preparation for the third exam.

Prerequisites

Completion of the calculus sequence:
- MTH 2610 Calculus I
- MTH 3010 Elementary Calculus II

Admission into Baruch College:
- All students transferring within CUNY must fulfill the CUNY Basic Skills requirements before transferring.
- Students who wish to enter in the spring semester must file a transfer application by October 1; students who wish to enter during the fall semester must file a transfer application by March 1

Associate in <u>Science</u> Degree from Bronx Community College.

Bronx Community College graduates with the Associate Degree in <u>Mathematics</u> will receive 60 credits toward the Bachelor of <u>Art</u> in <u>Actuarial Science</u> at <u>Baruch</u> College. In addition, they will be deemed to have met all general education requirements at <u>Baruch</u> College.

Total transfer credits granted toward the baccalaureate degree: <u>60</u>

Total additional credits required at the senior college to complete baccalaureate degree: <u>60</u>

C. COURSE TO COURSE EQUIVALENCIES AND TRANSFER CREDIT AWARDED

Sending College		Receiving College Equivalent (Or Other Evaluation)		Transfer Credit Granted
Core Requirements				
Course & Title	Credit	Course & Title	Credit	
ENG 10 Written Composition and Skills Or ENG 11 Fundamentals of Written Composition I	3	ENG 2100 Writing I	3	3
CMS 11 Fundamentals of Interpersonal Communication	3	COM 1010 Speech Communication	3	3
HIS 10 History of the Modern World Or HIS 11 Introduction to the Modern World	3	HIS 1003 Themes in Global History Since 1500 C.E.	3	3
MTH 31 Calculus & Analytical Geometry I	4	MTH 2610 Calculus I	4	4
SCIENCE –A two-semester sequence in a laboratory science	8	*Fulfills Tier II Natural Science Courses*	8	8
			Subtotal	**21**

Required Areas of Study				
[Bronx Community College] Course & Title	Credit	[Baruch College] Course & Title	Credit	Transfer Credit Granted
ART 11 Introduction to Art Or MUS 11 Introduction to Music	3	*Fulfills Tier II Credit* MSC 1005 Principles of Music *Fulfills Tier II Credit*	3	3
ENGLISH *Select one course from:* ENG 12 Fundamentals of Written Composition II ENG 14Written Composition and Prose Fiction ENG 15 Written Composition and Drama ENG 16 Written Composition and Drama	3	ENG 2150 Writing II ENG 2150 Writing II ENG 2150 Writing II ENG 2150 Writing II	3	3
MODERN LANGUAGE	8	*Courses fulfill Tier I Communication and Quantitative Skills*		8
HISTORY or SOCIAL SCIENCE *Students are advised to complete:* POL 11 American National Government	3	POL 1101 American Government: Practices and Values *Above Courses fulfill Tier II Politics/Government credit*		3
			Subtotal	**9-17**

Specialization Requirements

[Bronx Community College] Course & Title	Credit	[Baruch College] Course & Title	Credit	Transfer Credit Granted
MTH 32 Analytic Geometry & Calculus II	5	MTH 3010 Elementary Calculus II	4	5
MTH 33 Analytic Geometry & Calculus III	5	MTH 3020 Intermediate Calculus	4	5
MTH 42 Linear Algebra	4	MTH 4100 Linear Algebra and Matrix Methods		4
RESTRICTED ELECTIVES: *Students are advised to complete MTH 34 and one other course* MTH 34 Differential Equations and Selected Topics in Advanced Calculus (4cr) MTH 44 Vector Analysis (4 cr) MTH 46 Abstract Algebra (4 cr) CSI 35 Discrete Mathematics II (3cr)	7-8	MTH 4110 Ordinary Differential Equations (3 Cr) *Mathematics Elective Credit* MTH 4210 Elements of Modern Algebra (3 cr) MTH 2300 Discrete Mathematics (3 cr)	7-8	7-8
			Subtotal	**21-22**

Free Electives

Students are advised to complete the following courses

[Bronx Community College] Course & Title	Credit	[Baruch College] Course & Title	Credit	Transfer Credit Granted
PSY 11 Psychology	3	PSY 1001 General Psychology *Above Courses fulfill Tier II Psychology credit*	4	3
ECO 11 Microeconomics	3	ECO 1001 Micro-Economics *Actuarial science majors are encouraged to take ECO 3100, Intermediate Micro-Economics; the above course is a prerequisite and fulfills a Tier II Social Science credit*	3	3
ANT 11 Introduction to Anthropology Or SOC 11 Introduction to Sociology	3	ANT 1001 Introduction to Cultural Anthropology SOC 1005 Introduction to Sociology *Above Courses fulfill Tier II Anthropology/Sociology credit*	3	3
			Subtotal	**9**

	TOTAL:	**60**

D. SENIOR COLLEGE UPPER DIVISION COURSES REMAINING FOR BACCALAUREATE DEGREE

Common Core Curriculum	*Credits*
Tier II: Arts and Sciences Humanities *Literature:* ENG/LTT 2800 Great Works of Literature I or ENG/LTT 2850 Great Works of Literature II	3

Tier III: Disciplinary and Interdisciplinary Concentrations / The Minor
As part of the requirements for a baccalaureate degree, all students must fulfill a Tier III concentration to graduate. The concentration requirement consists of three courses of study outside of students'majors. Of the three courses, two must be taken at the 3000 level or higher. Courses used to satisfy Tier II may not also be used to fulfill Tier III concentration requirements. The third course in Tier III is to be the 4000-, 5000-, or 6000-level capstone course created or designated by each department in the concentration. Capstone courses are research-oriented and communication-intensive courses. The capstone course can be taken only after students have completed two courses in their disciplinary concentration at the 3000 level or higher. Disciplinary concentrations are as follows:
    ▪ *Humanities Disciplines:* Art, Communication Studies, English, History, Literature, Mathematics, Modern Languages, Music, Philosophy, Theatre
    ▪ *Natural Science Disciplines:* Biology, Chemistry, Environmental Science, Physics
    ▪ *Social Science Disciplines:* Anthropology, Political Science, Psychology, Public Affairs, Sociology
    ▪ *Interdisciplinary Concentrations:* American Studies, Asian and Asian American Studies, Black and Hispanic Studies, Humanities with Honors, Latin American and Caribbean Studies
STUDENTS MAJORING IN ACTUARIAL SCIENCE SHOULD EXPLORE COURSES THAT BUILD COMMUNICATION AND WRITING SKILLS.
	9-12

Subtotal	**12-15**
Major Requirements	
Required Courses MTH 4120 Introduction to Probability MTH 4410 Theory of Interest FIN 3000 Principles of Finance FIN 3610 Corporate Finance	13

Electives
In addition, three courses must be chosen from the following list of electives:
    ▪ MTH 3300 Algorithms, Computers, and Programming I
    ▪ *MTH 4125 Stochastic Processes
    ▪ MTH 4130 Mathematics of Statistics
    ▪ MTH 4135 Methods of Monte Carlo Simulation
    ▪ MTH 4420 Actuarial Mathematics
    ▪ MTH 4421 Actuarial Mathematics II
    ▪ MTH 4451 Risk Theory
    ▪ *MTH 4500 Mathematical Finance
    ▪ *ECO 3100 Intermediate Micro-Economics
    ▪ ECO 3200 Intermediate Macro-Economics
*Actuarial science majors are encouraged to select these courses.
	11
	
	3
	4
	4
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	4
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	3
	3

Subtotal	**24**
Free Electives	**21-24**
TOTAL	**60**

E. Articulation Agreement Follow-Up Procedures
1. Procedures for reviewing, up-dating, modifying or terminating agreement:
Bronx Community College Mathematics Department Chair, Dr. Roman Kossak, and Baruch Mathematics Department Head, Dr. Warren B. Gordon, will review implementation of the agreement once a year to ensure that students are adequately informed of the program and to identify issues requiring attention.

2. Procedures for evaluating agreement, e.g., tracking the number of students who transfer under the articulation agreement and their success:
After transfer into the Baruch Actuarial Science major, the performance of Bronx Community College students will be tracked using the CUNY Institutional Research Data Base. Baruch will inform BCC about the academic progress of transfer students.

The Baruch College Actuarial Science major provides advisement to all students entering the major.

3. Sending and receiving college procedures for publicizing agreement, e.g., college catalogs, transfer advisers, Websites, etc.:
Notice of articulation will be placed in the respective catalogues, recruiting brochures, websites, and on the CUNY TIPPS website.

Respective transfer and academic advisers will be informed and provided with copies of this agreement.

The Baruch Department of Mathematics will coordinate efforts with Baruch's Admissions Office to make certain that materials are sent with recruitment officers for BCC's biannual Transfer Day event.

F. Additional Information

Effective Date: _____

Dr. George Sanchez
Bronx Community College Senior Vice
President for Academic Affairs

Dr. David Dannenbring
Provost and Vice President for Academic Affairs

_____
Date and Signature

_____
Date and Signature

Dr. Myna Chase
Dean of the Mildred and George Weissman School
of Arts and Sciences

_____
Date and Signature

Roman Kossak
Chairperson of the Mathematics and Computer
Science Department

Warren B. Gordon
Chairperson of the Department of Mathematics

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Signature of Sending College Department
Chairperson

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Signature of Receiving College Department
Chairperson