

QUEENSBOROUGH COMMUNITY COLLEGE

**CITY UNIVERSITY OF NEW YORK
CURRICULUM COMMITTEE**

To: Emily Tai, Academic Senate Steering Committee

From: Philip A. Pecorino, Chairperson, Committee on Curriculum

Date: August 28, 2012

Subject: Monthly Report for SEPTEMBER 2012

The Committee on Curriculum has acted to send the following recommendation to the Academic Senate.

1. **New Courses**
2. **Changes in Courses**

1. **NEW COURSES**

DEPARTMENT OF BIOLOGY (1)

BI-425 Pathophysiology 3 class hours; 3 credits
Prerequisites: BI 302 or 421

An introduction to the basic concepts of pathophysiology. Examination of the phenomena that produce alterations in human physiologic function and the resulting human responses. Emphasis will be placed on disease processes in the human body, including their primary and secondary effects, and their application to clinical practice across the life span.

Rationale: This course is desired by students with interest in continuing from the A.S. to B.S. in nursing. Many nursing programs are now requiring this course and an interest in Pathophysiology was also expressed from the QCC Nursing department, in which the course may facilitate an easier transfer to the B.S. nursing program at York College. Projected enrollment is 24 -30/semester, where courses will be accessible for both day and evening students.

DEPARTMENT OF CHEMISTRY (1)

CH-106 Chemistry and the Arts
3 class hours 2 laboratory hours 4 credits
Prerequisites: none

This course offers a general background in the application of Chemistry to Art. Topics include light absorption and emission; the nature of color; additive and subtractive color mixing; chromatographic separation of compounds; chemical properties, synthesis and use of dyes, paints and pigments; the chemistry of art preservation and authentication of art objects; the hazards of chemicals used by artists; and the principles of photography. Use of modern laboratory instrumentation will be used to examine the properties of art materials.

NOTES: Successful completion of CH-106 satisfies the Life and Physical Sciences General Educations Core Requirement. This course is required for students in programs offered by Gallery and Museum Studies and for students in programs offered by Digital Arts and Design. This course is not open to students who have completed CH-151, 152, 251, or 252.

Rationale: This course will be required by all Digital Arts and Design majors and for students in programs offered by

Gallery and Museum Studies and satisfies the Life and Physical Sciences General Education Common Core Requirement.

DEPARTMENT OF ENGLISH (1)

EN-230 Introduction to Literary Studies 3 class hours, 1 recitation hour, 3 credits

Prerequisites: EN-101, EN-102

An inquiry into what it means to study literature, involving close reading and critical analysis of a variety of prose fiction, drama, and poetry, and informed by an introduction to some of the theoretical issues currently debated in literary studies and a consideration of how such issues have evolved historically. In addition to works of literature, students will read critical and theoretical works, some of which they will identify through their own research. This course combines a study of literature with continued training in clear and effective writing.

Rationale: This course is required to be offered by the CUNY BOT Policy related to Pathways initiatives. It is part of the program for English Majors. It replaces EN 213.

DEPARTMENT OF ENGINEERING TECHNOLOGY (7)

ET 570 Creating Smartphone Apps 3 Class Hours/3 Credits

Prerequisites: none

This course introduces the use and features of smartphones in modern life and how to create working applications. Students will create apps using existing modules and building blocks. No prior programming knowledge is necessary. After this initial experience, basics of the Java programming language will be introduced along with a minimum of XML programming to introduce the student to the needs of more advanced apps. Software development kits (SDK), along with the development environment will also be covered. In addition, students will have the opportunity to distribute apps into the Marketplace

Rationale: Creating smartphone apps are not just for techies. Today, the best apps are as likely to be originated by a techie as by someone with little technical background so this course will be viable in many curricula. Smartphones, universally owned by our students, have become indispensable accessories in their lives. Each phone is individualized by the number and type of apps selected. Every user has an opinion on how their favorite app might be improved.

This course will teach our students the entire process of how an idea can be transformed into an app and how the app enters the marketplace to be freely distributed or sold. The process can be fun and intellectually rewarding and possibly a financial success. Soon not only phones, but computers will be driven by apps. Windows 8, which will be released soon, will be “app driven” with a built in market place to download all varieties of apps. Apps are now the new canvas for creative ideas and arts of all types and dimensions.

Credits for this course can be used to satisfy the Scientific World Common Core requirement in all programs with the CUNY Common Core or to satisfy the free elective requirements in any program having such.

ET 575 Introduction to C++ Programming Design and Implementation 3 Lecture Hours, 3 credits

Prerequisites (and/or) co-requisites: none

This foundation course provides a general understanding of the use and development of computer software applications in fields such as science, mathematics, and business using a high level computer language. The course will concentrate on assessing the practical requirements of a software package and developing applications in C++, which is a high level computer language that teaches the basic skills necessary for implementing it in a variety of real world applications. Topics include the analysis and use of concepts such as: primitive data types and their operators, basic I/O, control statements, decision making, looping, subprograms, arrays, strings and computer ethics. Each student will have a computer platform at his/her disposal from which he/she will design, develop, implement and test programs, while evaluating the interactions between a user and the computer.

Rationale : This foundation course is more than just a computer programming experience with the dominant computer language of the twenty first century “C++”. The proposed C++ course was developed and designed to fulfill the computer literacy requirements for the senior colleges and for those students wishing to make a smooth transition to studying

Computer Science and Object Oriented Programming. Students will use analytical reasoning and develop critical thinking skills by solving computer programming problems in realistic situations. Students will submit their applications and be provided with feedback based on their solutions and given the opportunity to modify and resubmit their applications. Students will apply written, oral and graphical arguments in both technical and nontechnical environments to support their conclusions. Each student will be exposed to computing profession ethics including the guarding against the privacy of confidential data and the protection of computer resources against harmful programs i.e. malware. Students will identify ethical misbehavior or situations and suggest appropriate courses of action.

Credits for this course can be used to satisfy the Scientific World Common Core requirement in all programs with the CUNY Common Core or to satisfy the free elective requirements in any program having such.

ET 821 Computers in the Modern Society 3 Class Hours/3 Credits

Prerequisites (and/or) co-requisites: none

This course examines the impact of computers on modern life by looking at how they work, what they do, where they can be used, what they are capable of, what happens when they fail, and how they are used – and misused. Among the many topics included are gaming, entertainment, communications and social networking, encryption and cryptography, data security, piracy and copyright, governmental regulation and related issues. Class demonstrations are used to illustrate the major points.

Rationale: At a time when almost every student carries a small yet powerful computer in his pocket (in the form of a smartphone), it behooves us to try to put the computer's utility into focus. This course shows students how this modern invention affects not just their lives, but the world around us, and tries to point out not just the good that they do, but also the bad that they can do.

The course examines how computers are used today, and the impact they have on society in general, as well as on us as individuals. It looks at computers from both the inside and the outside - the inside or technical viewpoint (how computers work, what they can and cannot do, how they can be used and abused, and how this affects various industries), and the outside or societal viewpoint (how individuals, corporations, industry, and government deal with these abilities.) The point is to reconcile what the computer can do with what it should do.

Credits for this course can be used to satisfy the Scientific World Common Core requirement in all programs with the CUNY Common Core or to satisfy the free elective requirements in any program having such.

ET 830 Technology and Society 3 Class Hours/3 Credits

Prerequisites (and/or) co-requisites: none

This course explores the effects of technology and engineering design in areas such as robotics, computers, internet, and energy sources on the past, present, and future of society. Topics include the 21st century emerging technologies as they relate to education, the environment, economy, industry, and social issues. Students are also introduced to the concepts of the development and use of robotics, computers, internet, and energy sources, along with the societal impact of such technologies

Rationale: Technology provides an understanding, and an appreciation for the world around us. Society also controls technology through the choices it makes. The course is designed to enable students to pursue three objectives:

1. To understand the central role of science and technology in contemporary society.
2. To examine how science and technology reflect their social, political, philosophical, economic and cultural contexts.
3. To explore the human, ethical and policy implications of current and emerging technologies.

This course studies the cultural, economic, and political impacts of scientific innovation.

Credits for this course can be used to satisfy the Scientific World Common Core requirement in all programs with the CUNY Common Core or to satisfy the free elective requirements in any program having such.

ET 841 The Science of Energy and Power in the Modern World 3 Class Hours/3 Credits

Prerequisites (and/or) co-requisites: none

This course examines the science and technology of energy and how humans use it on a daily basis. Topics include: importance of energy in modern society; how energy is used in food production, materials, manufacturing, transportation, communications, lighting, heating and cooling ; the relationship between various forms of energy and greenhouse gases; individual and societal conservation methods and their economical and environmental impact; the laws of thermodynamics and equations relating energy, work and power; the electrical grid and elementary home and auto wiring; the pn junction and active and passive solar technology; wind, hydro, wave, geo and ocean thermal renewable energy schemes; the fuel cell and the new generation of electromechanical propulsion; Law of Conservation of Energy.

Rationale: Energy, like food and water, is a necessity of life. Most people aren't even aware that the availability of water and food are also heavily energy dependent. That makes understanding energy of top importance. Understanding what energy is, and how we use and consume it daily are important steps to teaching students conservation.

The way we acquire energy is getting more complex every year in terms of the technology, environmental impact and geopolitical wrangling. As fossil fuels become depleted, we will need to rely on renewable energy technologies. Renewable technologies have many scientific, technological, economic and environmental tradeoffs, so a good understanding of all the renewable energy technologies can make the educated student save lots of money over a lifetime

Credits for this course can be used to satisfy the Scientific World Common Core requirement in all programs with the CUNY Common Core or to satisfy the free elective requirements in any program having such.

ET 843 The Role of Energy in Society 3 Class Hours/3 Credits

Prerequisites (and/or) co-requisites: none

This course deals with the history of energy use and the societal changes that have resulted from these developments. Contemporary usage, resources, distribution, as well as the current and future impact on the quality of life for individuals and society are considered. Energy extracted from fossil fuels to other current and future forms of renewable energy are discussed along with their economic and environmental impact. The geopolitics of energy use around the world will be studied along with the role played by major industries in energy sourcing. Finally, students will consider the optimal choices regarding our energy future to affect the best long-term social, economic and environmental results.

Rationale: Not a day goes by today when the New York Times does not have an important article related to energy and how it may affect us in some way. Energy sources, delivery, and how and who are using it constitute the most important subjects today since it affects all nation's power, wealth and well being.

This course will prepare the student to better understand how energy and power impact their daily life. The politics of fossil fuel and all forms of renewable and nuclear energy will be addressed by this course. Upon completion of this course a student will be able to understand and more importantly play an active role in shaping this nations very important energy future. Following the correct long-term rather than expedient course can make a great difference for our future well-being.

Credits for this course can be used to satisfy the Scientific World Common Core requirement in all programs with the CUNY Common Core or to satisfy the free elective requirements in any program having such.

ET 880 Science and Technology In Modern Life 3 Class Hours/3 Credits

Prerequisites (and/or) co-requisites: none

Basic scientific principles that underlie and enable the conveniences and necessities we take for granted in our modern society will be introduced and studied. The science and technology underlying the electrical grid, power generation, automobile, aircraft, television, cell phones, solid state electronics, cat scans, MRI, molecular medicine, DNA, fission and fusion, LED lighting, photovoltaics, nano-materials, stem cells, heat pumps, fuel cells, artificial intelligence, robotics, GPS, WiFi, internet, sonar, radar, microprocessor and the PC.

Rationale: The concept of a liberal arts education dates to the Hellenistic period where a term was coined to represent the breadth of knowledge an educated citizen should exemplify. For 2 millennia, it has more or less included language, history, mathematics, arts and sciences. Late last century and now in this century, educators have been trying to broaden the scope of knowledge represented by the traditional liberal arts definition. Knowledge has exploded in the last century.

Recent technology has profoundly changed the way we live and behave. To be intellectually comfortable and to have the sense of being in control of our lives in the midst of ubiquitous technology requires a rethinking of what a person needs to know today to be considered both well-educated and prepared to deal with the world.

Currently students are not required to take a course that will teach them about the technology they take for granted every day, like cell phones and television. ET880 represents the type of course all college students worldwide need to take today to better understand the world around them and to help them navigate better and healthier lives.

Credits for this course can be used to satisfy the Scientific World Common Core requirement in all programs with the CUNY Common Core or to satisfy the free elective requirements in any program having such.

DEPARTMENT of HEALTH , PHYSICAL EDUCATION and DANCE (3)

HE-114 Foundations of Health Promotion and Disease Prevention 3 class hours, 3 credits

Prerequisites (and/or) co-requisites: none

This foundation course will provide perspectives on health promotion and disease prevention. This course will introduce students to different, social, political, cultural and economic dimensions of health and illness. Students will examine the meaning of health and illness and how they vary culturally and historically. Students will also learn of the health promotion professions (health education, dietetics, cardiac rehab, exercise physiologist...) and an overview of the skills and models commonly utilized by such professionals.

Rationale: This course will provide students of health education with a historical overview of the influences that have stimulated the increased societal interest in health promotion and disease prevention. This class is different and unique because key historical developments in the evolution of health promotion and disease prevention will be examined. In order to become a certified health educator specialist (C.H.E.S) - an understanding of such key historical events in the health field and an understanding of the broader model of health promotion and disease prevention is necessary.

Credits for this course can be used to satisfy the II B (U.S. Experience in its Diversity) Common Core requirement in all programs with the CUNY Common Core or to satisfy the requirement for HE-114 in the AA (LA1) Program with concentrations in Nutrition or Health Promotion and Disease Prevention or to satisfy the free elective requirements in any program having such.

PE 815 Foundations of Physical Education 3 class hours, 3 credits

Prerequisites (and/or) co-requisites: none

This course introduces the discipline of physical education teacher education (PETE) to the future practitioner, providing theory, issues, and methods of current physical education practices as well as opportunities to observe these practices in K-12 schools.

Rationale: An introductory course in Physical Education is the centerpiece of most beginning level Physical Education Teacher Education programs. Not only does it introduce the subject in detail, it allows students to explore the current issues and philosophies of the profession, observe PE teaching and organization in the field, demonstrate understanding of the basic components of lesson planning, content standards and assessment, and practice teaching.

This course is intended to be included in the concentration of the AA (LA1) program in Physical Education and available to students majoring in Physical Education and Childhood Education.

PE 825 Introduction to Exercise Science 3 class hours, 3 credits

Prerequisites (and/or) co-requisites: none

A comprehensive review of the field of exercise science including: scope of practice, career opportunities, critical issues, foundations of exercise physiology and biomechanics, and behavioural and social dimensions of exercise. In-class lectures will be augmented with performance lab work, multi-media presentations, guest professionals, and opportunities to observe practices in the field.

Rationale: An introduction to exercise science course would be a foundations course for any student pursuing a degree in the health sciences such as exercise physiology, athletic training, health promotion, physical therapy, physical education, sports medicine, cardiac rehabilitation, etc.

This course is intended to be included in the concentration of the AA program in Exercise Science and offered to students majoring in Exercise Science, Physical Education and Health Promotion.

DEPARTMENT OF PHYSICS (1)

PH-111 Space, Astronomy, and our Universe 2 hours lecture, 1 hour recitation, 2 hours lab, 3 credits

Prerequisites (and/or) co-requisites: none

"Space, Astronomy, and our Universe" discusses topics related to space and astronomy, beginning with our planet and our Moon, and extending to stars, galaxies, and the Universe as a whole. This course will explore physical processes and laws that govern the motion and evolution of all objects in the Universe, including meteors, asteroids, planets, and stars.

Rationale: The course will satisfy a lab science common core course.

DEPARTMENT OF SPEECH and THEATRE ARTS (1)

SP 230 Video Production I 2 class hours, 2 lab hours, 3 credits

Prerequisites or Corequisites: BE112 OR BE205 & BE122 OR BE226

Video Production I is an introductory class in the creation and aesthetics of video production with lecture and lab sections where students will critically examine, analyze and create the visual, auditory and narrative components of digital media. Students will apply concepts from lectures as they learn basic techniques of practical media production incorporating mediums such as photography, video, and audio. Students will utilize computer-based video editing, audio and imaging programs to create a variety of short narrative and documentary projects. This class will also have screenings of various short films and videos in class as well as additional assigned readings.

RATIONALE:

Video Production I will be a course designed for those students who desire to gain practical experience in video and audio production as well as further their understanding of culture and media. This course will also serve those students who will be continuing their study of media at four-year institutions. Media and Journalism-related majors are some of the most popular majors nationwide and this course of study operates at peak enrollment at other institutions in the CUNY system at both 2-year and 4-year institutions. This course would be the beginning of the development a degree program in Media Studies within the Visual and Performing Arts Academy, which would put Queensborough in a unique position as the only public institution in the immediate area to offer this type of program. The course also has great potential as an inter-disciplinary elective as digital design and implementation skills are a necessity in majors such as business and computer science. The New Media Technology and Music Program have also expressed interest in this course as an elective for their students. The additional lab hour will reflect the amount of work involved in preparing class assignments in the Media Lab. The course will be offered each semester and enrollment will be capped at 16 as this number corresponds to available work-stations in the Media Lab.

2. Changes in Courses

DEPARTMENT of FOREIGN LANGUAGES and LITERATURE (9)

LF-213 Intermediate French I

From: LF-213 Intermediate French I 3 class hours 3 credits

General review of grammar, readings and discussion in French

TO: FREN 213 Intermediate French I 3 class hours, 3 credits

This third-semester course will continue to develop students' communicative competence through the study of grammar.

acquisition of new vocabulary, and practice of the four language skills – listening, speaking, reading and writing. Level-appropriate cultural information will be presented to promote the students' understanding of the French-speaking world.

Rationale: It fulfills a graduation requirement for the Associate degree in Liberal Arts and Sciences as well as the QCC/John Jay Dual/Joint Criminal Justice A.S./B.A. Program. It fulfills the Flexible Core requirement in World Cultures and Global Issues. It will be offered every semester.

Rationale. The revision of the course description reflects more accurately the learning objectives that align with the CUNY Pathways learning outcomes under II.A. World Cultures and Global Issues. The prerequisite has been rewritten for more accuracy and clarity.

LF 214 Intermediate French I

From: LF-214 Intermediate French I 3 class hours 3 credits

General review of grammar, readings and discussion in French]

TO: FREN 214 Intermediate French I

3 class hours, 3 credits

The focus of this fourth-semester course is to continue improving students' oral communication skills, along with reading, writing and grammar. Students will expand their vocabulary and study more complex grammatical structures. Aspects of French-speaking cultures will be integrated through readings, films, discussions and Internet-related activities.

Rationale: It fulfills a graduation requirement for the Associate degree in Liberal Arts and Sciences as well as the QCC/John Jay Dual/Joint Criminal Justice A.S./B.A. Program. It fulfills the Flexible Core requirement in World Cultures and Global Issues. It will be offered every semester.

The revision of the course description reflects more accurately the learning objectives that align with the CUNY Pathways learning outcomes under II.A. World Cultures and Global Issues. The prerequisite has been rewritten for more accuracy and clarity.

LG 213 Intermediate German I

From: [LG-213 Intermediate German I 3 class hours 3 credits

Intensive review of German grammar through Practice of the phonological and grammatical structure of German orally and in writing. Selected readings in contemporary German prose.]

To: GERM 213 Intermediate German I 3 class hours, 3 credits

This third-semester course will continue to develop students' communicative competence through the study of grammar, acquisition of new vocabulary, and practice of the four language skills – listening, speaking, reading and writing. Level-appropriate cultural information will be presented to promote students' understanding of German speaking countries.

Rationale: It fulfills a graduation requirement for the Associate degree in Liberal Arts and Sciences as well as the QCC/John Jay Dual/Joint Criminal Justice A.S./B.A. Program. The revision of the course description reflects more accurately the learning objectives that align with the CUNY Pathways learning outcomes under II.A. World Cultures and Global Issues. The prerequisite has been rewritten for more accuracy and clarity. It will be offered every semester.

LG 401 Cultures of German Speaking Countries Today

From: LG-401 [Students will be exposed to and discuss cultural developments in German-Speaking including their role the European Union. They will read English translations of contemporary writings and apply an interdisciplinary approach to texts, films, and music, focusing on various facets of life and culture.] Students will also attend cultural events in New York City.]

To: GERM 401 In this course, students will examine literary and other texts and media from cultures in the German-speaking countries, including film, art, music, and performance. Through discussion of selected cultural artifacts and issues related to art, history, politics and traditions, students will analyze the distinguishing features of these cultures. As an integral part of the course, students will be expected to conduct research on selected topics. Students will also attend cultural events in New York City. The course will be taught in English as WI.

Rationale: It is a Writing Intensive course and fulfills a graduation requirement. The revision of the course description reflects more accurately the learning objectives which align with the CUNY Pathways learning outcomes under II.D. Individual and Society.

LH 213 Intermediate Hebrew

From: LH-213 Intermediate Hebrew I

3 class hours 3 credits

General review of grammar covered in Hebrew I (LH-111) and Hebrew II (LH-112); readings, short stories, reports, and discussions in the language.

To; HEBR 213 Intermediate Hebrew I 3 class hours, 3 credits

This third-semester course will continue to develop students' communicative competence through the study of grammar, acquisition of new vocabulary, and practice of the four language skills – listening, speaking, reading and writing. Level-appropriate cultural information will be presented to promote students' understanding of Jewish culture

Rationale. The revision of the course description reflects more accurately the learning objectives that align with the CUNY Pathways learning outcomes under II.A. World Cultures and Global Issues. The prerequisite has been rewritten for more accuracy and clarity.

LI 213 Intermediate Italian I

From: LI-213 Intermediate Italian I 3 class hours 3 credits

General review of grammar, readings and discussion in Italian]

To: ITAL 213 Intermediate Italian I 3 class hours, 3 credits

This third-semester course will continue to develop students' communicative competence through the study of grammar, acquisition of new vocabulary, and practice of the four language skills – listening, speaking, reading and writing. Level-appropriate cultural information will be presented to promote students' understanding of Italian civilization.

Rationale. The revision of the course description reflects more accurately the learning objectives that align with the CUNY Pathways learning outcomes under II.A. World Cultures and Global Issues. The prerequisite has been rewritten for more accuracy and clarity.

LS 213 Intermediate Spanish I

From: LS-213 Intermediate Spanish I 3 class hours 3 credits

Review of Spanish grammar with intensive aural-oral practice, through the use of videotapes and selected readings.

To: SPAN 213 Intermediate Spanish I 3 class hours, 3 credits

This third-semester course will continue to develop students' communicative competence through the study of grammar, acquisition of new vocabulary, and practice of the four language skills – listening, speaking, reading and writing. Level-appropriate cultural information will be presented to promote students' understanding of the Spanish-speaking world.

Rationale. The revision of the course description reflects more accurately the learning objectives that align with the CUNY Pathways learning outcomes under II.A. World Cultures and Global Issues. The prerequisite has been rewritten for more accuracy and clarity.

LS 214 Intermediate Spanish II

From: LS-214 Intermediate Spanish II 3 class hours 3 credits

Emphasis on written composition. Selections from Spanish and Spanish-American literature read and analyzed.

To: SPAN 214 Intermediate Spanish II 3 class hours, 3 credits

The focus of this fourth-semester course is to continue improving students' oral communication skills, along with reading, writing and grammar. Students will expand their vocabulary and study more complex grammatical structures. Aspects of Spanish-speaking cultures will be integrated through readings, films, discussions and Internet-related activities.

Rationale. The revision of the course description reflects more accurately the learning objectives that align with the CUNY Pathways learning outcomes under II.A. World Cultures and Global Issues. The prerequisite has been rewritten for more accuracy and clarity.

LS 402 Latin American and Caribbean Cultures

FROM :LS 402 Latin American and Caribbean Cultures A journey into contemporary Latin American and Caribbean Cultures through the reading and discussion of politics, customs, art, music and cinema. The course will be taught in English

To: SPAN 402 Latin American and Caribbean Cultures In this course, students will examine literary and other texts and media from Latin American and Caribbean cultures, including film, art, music, and performance. Through discussion of selected cultural artifacts and issues related to art, history, politics and traditions, students will analyze the distinguishing features of these cultures. As an integral part of the course, students will be expected to conduct research on selected topics. Students will also attend cultural events in New York City. The course will be taught in English as WI.

Rationale: The revision of the course description reflects more accurately the learning objectives which align with the CUNY Pathways learning outcomes under II.D. Individual and Society.

DEPARTMENT of MATHEMATICS and COMPUTER SCIENCE (3)

MA 301 Foundations of Mathematics

Change in title:

From: [Foundations of Mathematics] 3 Class Hours 3 Credits

To: Mathematics for the Liberal Arts 3 Class Hours 3 Credits

Rationale: The new title is more appropriate for the purpose and content of the course.

Change in Course description for the College Catalog:

From: [Designed to provide students with the mathematical literacy that is necessary to understand contemporary issues in today's technological society. Students will obtain hands-on-experience in solving realistic problems in discrete mathematics, exponential modeling, statistics and probability. Graphing calculators will be used throughout the course.]

To: Designed to provide students with an understanding of how mathematics relates to the humanities, social and natural sciences. Students will obtain experience in solving realistic questions and applications using discrete mathematics, modeling, statistics and probability.

Rationale: The description differentiates this course from MA-321 which is more computational in substance. This course places stress on the connections between mathematics and the other arts and sciences.

Change in Prerequisites and/or co-requisites:

From: MA-010 OR MA-013 OR SATISFACTORY SCORE ON [CMAT OR COMPASS EXAMS]

To: MA-010 OR MA-013 OR SATISFACTORY SCORE ON THE MATHEMATICS PLACEMENT TEST

Rationale: CMAT is obsolete. This wording more easily allows changes to testing procedures.

MA 303 NUMBER SYSTEMS Hours: 3 Class Hours 1 Recitation Hour 3 Credits

Change in Prerequisites and/or co-requisites:

FROM: Pre-requisite: MA-120 or permission of the Department.

TO: Pre-requisite: MA-119 (with a grade of C or better) or permission of the Department.

Change in Course description for the College Catalog:

FROM: This course is designed to instruct students in areas of mathematics that are related to the elementary school curriculum, to clear up common misunderstandings of mathematical concepts, and to use current computer technologies with the concepts developed in the course as tools for solving problems. Topics covered will be chosen from numeration systems, number theory, mathematical systems, statistics and geometry. Recommended for future teachers.

TO: This course is designed to instruct students in areas of mathematics that are related to the elementary school curriculum, to enhance understanding of fundamental concepts, and to use current computer technologies with the concepts developed in the course as tools for solving problems. Topics covered will be chosen from numeration systems, number theory, mathematical systems, statistics and geometry. Recommended for future teachers.

Rationale: The new description will allow the course to be given to a wider range of students.

MA 315 Topics in Mathematics

Change in Course description for the College Catalog:

From: [Topics, emphasizing the nature of proof and problem-solving, include Euclidean and non-Euclidean geometries, abstract algebraic systems, number theory, graph theory, and mathematical logic.]

To: Topics emphasizing a fundamental understanding of mathematical concepts and problem solving may include ratio, proportion, number theory, concepts in mathematics from a historical point of view, logic, advanced topics in mathematics.

Rationale: The new description will allow the course to be given to a wider range of students.

Change in Prerequisites and/or co-requisites:

From: [MA-301 or MA 303]

To: MA-301 or MA-303 or permission of the department

Rationale: The new description will allow the course to be given to a wider range of students.

DEPARTMENT of PHYSICS (4)

PH-120 Introduction to Meteorology 3 class hours, 3 credits

Prerequisites & Co-req: None

Change in Course Description:

FROM: Introduces students to Meteorology and Atmospheric Sciences. The course presents basic scientific principles and how they apply to atmosphere and ocean. [Fulfills the science requirement without lab (or with lab when taken in conjunction with PH-121)]

TO: Introduces students to Meteorology and Atmospheric Sciences. The course presents basic scientific principles and how they apply to atmosphere and ocean.

Rationale: The catalog description needs to be changed so as to be consistent with the Pathways 2E requirement.

PH-201 General Physics I

Change in Hours or credits:

From: 3 lecture hours, 2 lab hours, 4 credits

Prerequisites: MA-114 or MA-120 or the equivalent, or satisfactory score on the Mathematics Placement Test (Level II MA-120)

To: 3 lecture hours, 1 recitation hour, 2 lab hours, 4 credits

Prerequisites: MA-114 or MA-120 or the equivalent, or satisfactory score on the Mathematics Placement Test (Level II MA-120)

Rationale: The addition of 1 recitation hour will match its equivalent course at City Tech such that QCC students will receive the same number of contact hours. City Tech PH1433 has a 6-hr 4-credit structure. Additional use of computational software such as Matlab in PH-201 will strengthen our students' preparation. NY City Tech is the CUNY college that offers the bachelor of technology degree. Technology students who transfer to 4 year technology programs overwhelmingly transfer to City Tech.

PH 202 General Physics I

Change in Hours or credits

From: 3 lecture hours, 2 lab hours, 4 credits

Prerequisites: PH-201 (with a grade of C or better)

To: 3 lecture hours, 1 recitation hour, 2 lab hours, 4 credits

Prerequisites: PH-201 (with a grade of C or better)

Rationale – The addition of 1 recitation hour will match its equivalent course at City Tech such that QCC students will receive the same number of contact hours. City Tech PH1434 has a 6-hr 4-credit structure. Additional use of

computational software such as Matlab in PH-202 will strengthen our students' preparation. NY City Tech is the CUNY college that offers the bachelor of technology degree. Technology students who transfer to 4 year technology programs overwhelmingly transfer to City Tech.

PH-240 Computerized Physical Measurement Using Graphical Programming

Change in Prerequisites and/or co-requisites:

From: PH-240 Computerized Physical Measurement Using Graphical Programming

2 lecture hours, 3 lab hours, 3 credits

Prerequisites: [Permission of the department based on one laboratory science or technology; MA-114, MA-120 or the equivalent; ET-501, PH-303, BU-500 or the equivalent]

To: PH-240 Computerized Physical Measurement Using Graphical Programming

2 lecture hours, 3 lab hours, 3 credits

Prerequisites: MA-440 or the equivalent

Rationale: There is no longer a need to require a formal computer course to ensure students have some computer experience as all come to the college with computer experience. While it is helpful if students have experience with making measurements in a laboratory setting, it is not necessary for success in the course, so the laboratory course requirement is being dropped. The mathematics level of the course is extremely challenging for students without better math preparation, so increasing the prerequisite level of mathematics will make it easier for students to be successful in the course.

DEPARTMENT of SOCIAL SCIENCES (3)

The changes in the following Social Science course prefixes were approved.

From: -- To:

SS901 □ **UBST101**

SS902 □ **UBST201 (because of the UBST101 pre-req)**

SS911 □ **UBST102**

Rationale: All courses in the department are having their prefix code changed using 4 letter prefixes common throughout CUNY. Other courses have been previously changed. These were omitted in previous listing.