#### QUEENSBOROUGH COMMUNITY COLLEGE

The City University of New York

# Agenda

for the

# Academic Senate Meeting

<u>Date</u>: Tuesday, March 8, 2005 <u>Time</u>: 3:00 p.m. <u>Location</u>: Room M-136

- I. Attendance
- II. Consideration of minutes of the February 8, 2005 meeting (Attachment A)
- III. Communications from:
  - President Eduardo J. Martí (Attachment B)
  - Guest: Dr. Susan O'Malley, member of CUNY Board of Trustees, Chair, University Faculty Senate
  - Senate Steering Committee (Attachment C)
  - UFS Representative (no report this month)
- IV. Reports of Academic Senate Standing Committees
  - Committee on Bylaws– (Attachment D) (**RESOLUTION**)
  - $\bullet \quad \text{Committee on Curriculum via Steering Committee} (Attachment \ E \ ) \ (\textbf{RESOLUTION on WID WAC Committee})$
  - Committee on Curriculum (Attachment F ) (**RESOLUTION**)
- V. Unfinished Business
- VI. New Business

Kenneth Pearl Secretary

# **Queensborough Community College**

The City University of New York

# MINUTES of the February 8, 2005 meeting of the Academic Senate

President Eduardo J. Martí called the fifth regularly scheduled meeting of the Academic Senate to order at 3:10 p.m.

#### I. Attendance:

The complete Senate roster is available at <a href="http://www.qcc.cuny.edu/Governance/AcademicSenate/academic senate roster.asp">http://www.qcc.cuny.edu/Governance/AcademicSenate/academic senate roster.asp</a>

Absent, as determined from the attendance sheet circulated at the meeting, were:

#### Absentees 9

Nathan ChaoRobert KueperDavid KlarbergMargaret ReillyRobert FredericksBonnie DuenLora MilciadesNephala De AbreuRoka Abhishek

#### II. Consideration of minutes of the December 7, 2004 meeting:

A motion was made, seconded, and approved to accept the December 7, 2004 minutes.

#### III. Communications from:

President Marti: President Eduardo J. Marti referred to his written report and

began by thanking everyone for the outpouring of good wishes

after his recent operation.

Trustee Susan O'Malley couldn't be here today and her visit will

be rescheduled.

New faculty members and administrators were introduced: Anissa Mack, Art and Photography; John Imhof, Mechanical Engineering Technology and Design Drafting; Arturo O-Farrill, Music; Kam Tim Ou, Social Sciences; Maryellen Lo Bosco, Academic Advisement; Susan Edwards, Academic Affairs; William Faulkner, Finance and Administration. Dr. Emily Tai, History Department, was welcomed back from her sabbatical.

The budget situation is difficult and we will need a united front to restore the cuts the Governor has proposed. At this time, we don't know for certain the impact of the budget on our College.

The hearings for the Strategic Plan will take place on April 15 and 16. Since the plan represents the collective thinking of our College community, it is vital that people show up for the hearings and make their views heard.

Vice President Ellen Hartigan was thanked for her work in developing a Relationship Manager Program, which will work for more effective student services as a means to retaining students. Since higher student enrollment can lead to more funds, there will be a push to increase our offerings in the evenings and weekends.

CETL will play a leading role on this campus in moving the faculty to think about applied research in community college pedagogy. Everyone is urged to think about pedagogical research and it will play a role in promotion and tenure. The importance of research in the academic disciplines was also affirmed.

We are moving in the direction of our goal of creating a paperless campus. Use of Tiger Mail is a major component of this initiative.

#### **Senate Steering Committee:**

Dr. Philip Pecorino, Chairperson of the Academic Senate Steering Committee, referred to his written report. Laptops were placed throughout the room to show the use of the wireless environment. In the future they could also be used for Senate business.

Next month all Senate materials will be placed in one document distributed by email to make printing easier.

A questionnaire is being distributed during the meeting by the Committee on Committees concerning the online balloting system.

Three committees now have committee Guides on their websites.

Work is being done on forming new committees as needed, revising the charge of some committees and converting special and sub-committees to standing committees.

**UFS Representative:** Report received.

# IV. Monthly Reports of Committees:

<u>Committee on Committees:</u> Report received.

## **Committee on Curriculum:**

Course Revision: Social Sciences

A motion was **made**, **seconded**, and **approved** to accept the revisions to:

ED 115 Special Education

New Course: Electrical and Computer Engineering Technology

A motion was **made**, **seconded**, and **approved** to accept a new course:

#### ET 720 Advanced Web and Multimedia Programming Applications

#### Program Revision: Electrical and Computer Engineering Technology

A motion was **made**, **seconded**, and **approved** to accept the revisions to the programs:

New Media Technology Certificate Program Computer Engineering Technology Electronic Engineering Technology

#### WID WAC Proposal

A motion was **made**, **seconded**, and **approved** to accept a resolution on the WID WAC program, but not including any action of the formation of a Standing Committee on WID WAC.

#### V. Unfinished Business:

Report on UFS Conference on Academic Freedom

Report received.

Dr. Sheena Gillespie, Chair of the Faculty Executive Committee, remarked that petitions for faculty elections are due soon.

#### VI. Report on Academic Integrity Program

Dr. Paul-Jean Pierre, of the Office of Academic and Student Affairs, presented a report on the new academic integrity procedures.

#### VII. Demonstration of Online Class scheduling program

The new Online Class Scheduling Program, which is currently in beta testing, was presented by Ann Tullio of the Registrar's Office and George Sherman, Elizabeth Gordon and Lawrence Nelson of IT.

#### VIII Informational Presentation: Performing Arts Center

Susan Agin, the Director of the Performing Arts Center, gave a presentation on the work of the Performing Arts Center, which is now celebrating its 40<sup>th</sup> anniversary.

#### IX. New Business:

Student Representative Rose Topal spoke of student concerns regarding class cancellations. President Marti recommended the formation of a task force of students, faculty and administrators to look into the issue under Vice President Mark McCulloch.

The meeting adjourned at 4:55 pm.

Respectfully submitted,

Kenneth Pearl Secretary

# QUEENSBOROUGH COMMUNITY COLLEGE of The City University of New York

Report of the President to the Academic Senate

March 8<sup>th</sup>, 2005

First, let me welcome Dr. Susan O'Malley, Chair of the University Faculty Senate and CUNY Trustee. I am delighted that she made time from what I am certain is a very busy schedule, to attend one of our Academic Senate meetings.

Budget:: The current budget is somewhat restricted by less-than-anticipated revenue collections. I am confident that the Office of the Vice President for Finance and Administration will take the necessary steps to minimize the impact of the lower-than-expected enrollment so that services to our students are maintained at current levels. However, it is imperative that we all work diligently to ensure that the summer enrollment is as high as possible.

Next year's budget proposal is being discussed in the State Legislature. The Assembly and the Senate representatives should be contacted (using your own stationary and stamps, your private telephones, or your private e-mail) to inform them of the impact of the proposed reductions in TAP and to request that the base aid for community colleges be restored and increased from \$2,235 to \$2,385 per FTE. As you know, this money is part of our allocation and it is supplemented by the City and by tuition. Therefore, the restoration of base aid has a direct relationship on the burden that is placed on the City and on the student.

We are also interested in ensuring that the Capital Projects for community colleges are addressed. Community colleges have not received funding equivalent to the senior colleges because we are subject to a 50% match by the City. For a long time, the City did not match the State allocations. Now, we finally have a City Council that is willing to match the allocation, so it is important that the State fund the \$206 million requested for Capital projects at community colleges.

Strategic Plan: Now that we have completed the focus meetings with the Chairs, the HEOs and the students and the College Advisory Planning Committee has considered the suggestions made, we are ready for the Open Hearings. These are scheduled for April 15 and April 18.

Please make certain that you attend the Open Hearings. The Strategic Plan charts the direction of the College for the next year. The budget allocations will be made according to the priorities depicted on the plan.

League for Innovation: Congratulations to the 15 groups of presenters at the League Conference that concluded today. Over 2,000 community college educators from the United States and abroad attended the conference. Queensborough Community College truly emerged as a leader in post-secondary two-year education. Our interest in sharing our findings with our colleagues is commendable.

Affirmative Action Officer Search: Unfortunately, as of this writing, we do not have a person selected and the search continues. Thank you, Dr. Paul Jean-Pierre, for stepping in as Acting Affirmative Action and Compliance Officer. Also, our gratitude goes to the members of the Affirmative Action Search Committee: Jannette Treue Urciuoli, Chair; Dr. Joann Wein; Dr. Paul Jean-Pierre, Ms. Ada Alvira and Dr. Jay Mullin for their service.

# Steering Committee Report to Academic Senate –March 8, 2005

# 1. Meetings of the Academic Senate

- A) This is the second Senate meeting for which there will be only an electronic distribution via email and a few copies in print form available in the room. For this meeting we have distributed the agenda and all attachments as a single WORD file for easier printing.
- B) We will also attempt call your attention to the important items that call for Senate action in the cover email.
- C) We have received feedback about voting on proposals at the Senate while making exception for certain items and so we propose that proposals in the future should be line by line (topic by topic) and voted on that way as with the monthly curriculum committee items.
- D) Further, we note that there has been some subsequent discussion regarding an item on the last agenda: the WID WAC Program and the maximum seat limit of WI classes. We have entered into conversations about the matter with faculty, department chairpersons, President Marti and Vice President McColloch, faculty governance leaders in CUNY and with the Professional Staff Congress. We have notified the Faculty Executive Committee of the matter and of some of the actions being discussed. We have at the time of the composing of this report no proposals on this matter from any committee or member of the Senate nor from the Executive Committee of the Faculty. If anyone wishes to pursue this matter further, in so far as the Academic Senate is to be involved, they may, as always, bring it up under Old Business or they may forward their request or proposal to the Steering Committee and it will be considered for the agenda of the next Senate meeting

## 2. Senate Members

The Committee on Committees reports that we have the full complement of faculty in the Senate. We also have received notification that there have been changes in the student government representation and thus, we still do not have the full student complement at this time.

#### 3. The Senate Website

The Academic Senate Website is found off of the Governance webpage: http://www.qcc.cuny.edu/Governance/default.asp

The site is now receiving the agenda and minutes of all Academic Senate committees. http://www.qcc.cuny.edu/Governance/AcademicSenate/academic\_senate\_committees.asp

More committees are making use of the site. Members may go there to review the work of the committees. The site now includes a number of important items related to curriculum development and revisions placed there by the Committee on Curriculum: <a href="http://www.qcc.cuny.edu/Governance/AcademicSenate/CURR/documents.asp">http://www.qcc.cuny.edu/Governance/AcademicSenate/CURR/documents.asp</a>

#### **4.Collegial Governance**

The Committee of Academic Senate Committee Chairpersons met on February 9, 2005 to review their work and the comprehensive agenda of the Academic Senate including what President Marti has termed the "legislative agenda" of the Administration and "Collegial Governance". President Marti spoke of the role of the committees in the assessment process. The next such meeting will be a meeting with the President and his cabinet and representatives on the committees on May 11, 2005 in M-136 at 1pm.

## **5.Standing Committees**

<u>Committees for 2005-2006</u> The nominations to Standing Committees are now underway. It is not too late to apply or to encourage others to do so. Department Chairpersons may want to communicate with the Committee on Committees to determine which of their faculty have responded so far.

#### Work in Progress:

The Committee on Bylaws has made progress towards presenting the Senate with proposals for the creation of several new committees and revisions of several current Standing Committees that appear on the current agenda. They remain at work concerning a standing committee on Honors Programs and another on Student Competitions. Anyone with something to communicate concerning these matters should contact the Committee on Bylaws.

#### On the Addition of Committees of the QCC Academic Senate

- Committee On Environment –revision of title and charge
- Committee on Vendor Services- new Standing Committee as requested by the Committee on Environment
- Committee on Distance Education-new Standing Committee as recommended by the Committee on Computer Resources
- Committee on WID WAC- Change in status and charge as recommended by the Committee on Curriculum and by the Committee on Curriculum Sub Committee on WID WAC

# The Bylaws Committee of the Academic Senate Queensborough Community College The City University of New York

To: The Academic Senate Date: February 4, 2005

The Committee on Bylaws recommends the creation of a Standing Committee on Writing in the Disciplines/Writing Across the Curriculum (WID/WAC) as follows:

# The Committee on Writing in the Disciplines/Writing Across the Curriculum (WID/WAC)

The Committee on WID/WAC shall consist of the director or one co-director of the WID/WAC Program, three (3) faculty members from different departments who have participated in WID/WAC professional development and one (1) student.

#### The Committee on WID/WAC shall:

- a. Oversee and make recommendations to the Academic Senate related to the WID/WAC program;
- b. Review and make recommendations to the WID/WAC Director(s) concerning the WID/WAC Professional Development Program;
- c. Consult with the Committee on Course and Standing on waiver requests from students on any WI degree requirements that the Committee on Course and Standing may be called upon to decide;
- d. Make the final decision on the designation and recertification of any course or section as WI:
- e. Coordinate with the Curriculum Committee on issues concerning curriculum.

# The Bylaws Committee of the Academic Senate Queensborough Community College The City University of New York

To: The Academic Senate Date: February 4, 2005

The Committee on Bylaws recommends the creation of a Standing Committee on Distance Education as follows:

#### The Committee on Distance Education

The Committee on Distance Education shall consist of five (5) faculty members and two (2) students. All faculty and students should be familiar with online instruction. Faculty shall come from different departments so as to be representative of the wide range of disciplines and degree programs at the college.

# The Committee on Distance Education shall:

- a. Report and make recommendations to the Academic Senate on all matters related to Distance Education, in particular, concerning policies and procedures related to the development of, support for and offering of programs, degrees and classes;
- b. Work on the assessment process and criteria related to the Distance Education program of the College and report findings to the Academic Senate;
- c. Serve as an advisory body for all matters related to Distance Education.

Note: Within 12 months of its formation, the committee must prepare an interim report on what type of Distance Education Program would best serve the College and its mission, including: purpose(s), resources, training program, support services and assessment.

# The Bylaws Committee of the Academic Senate Queensborough Community College The City University of New York

To: The Academic Senate Date: February 4, 2005

The Committee on Bylaws recommends the adoption of the following amendments to the Bylaws of the Academic Senate:

<u>Motion</u>: to <u>Restructure</u> the Committee on College Environment, Bookstore and Food Services as two Committees: the Committee on Environment, Quality of Life and Disability Issues and the Committee on Vendor Services.

## FROM:

#### **Section 14. College Environment Committee**

The Committee on the College Environment shall consist of five (5) members of the instructional staff and two (2) students.

The Committee on the College Environment shall:

- a. Formulate and recommend to the Academic Senate policies and practices pertaining to the College environment in matters of health, safety, security, maintenance, and allocation of facilities:
- b. Evaluate and report to the Academic Senate on the administrative response to problems in the College environment;
- c. Receive all pertinent information and requests for change in the allocation and use of all space and facilities;
- d. Receive all proposals concerning naming and renaming of campus facilities and make appropriate recommendations to the Academic Senate;
- e. Evaluate, report, and recommend to the Academic Senate on matters pertaining to the services and facilities of the Bookstore and Food Services on an annual basis;
- f. Consider and evaluate suggestions and complaints regarding the service and facilities of the Bookstore and Food Services;
- g. Participate in the selection of and the contractual arrangements with the Bookstore and Food Services vendors.

#### TO:

#### Section 14. Committee on Environment, Quality of Life and Disability Issues

The Committee on Environment, Quality of Life and Disability Issues shall consist of five (5) members of the instructional staff and two (2) students.

The Committee on Environment, Quality of Life and Disability Issues shall:

- a. Formulate and recommend to the Academic Senate policies and practices pertaining to the College environment in matters of health, safety, security, maintenance and allocation of facilities:
- b. Evaluate and report to the Academic Senate on the administrative response to problems in the College environment;
- c. Receive all pertinent information and requests for change in the allocation and use of all space and facilities;
- d. Receive all proposals concerning naming and renaming campus facilities and make appropriate recommendations to the Academic Senate;
- e. Review and report on College Master Plan regarding facilities and the campus environment;
- f. Review the assessment of the campus with regard to services for students with disabilities and disability issues as the assessment relates and pertains to the campus environment and campus facilities and make appropriate recommendations to the Academic Senate.

#### Section 23. The Committee on Vendor Services

The Committee on Vendor Services shall consist of five (5) members of the instructional staff and two (2) students.

The Committee on Vendor Services shall:

- a. Receive and evaluate the report of the Auxiliary Enterprise Board on vendor services and recommend to the Academic Senate on matters pertaining to the services and facilities of all vendors to the College, including the Bookstore and Food Services, on an annual basis;
- b. Consider and evaluate suggestions and complaints regarding the service and facilities of all vendors to the College, including the Bookstore and Food Services, sending them on to the Auxiliary Enterprise Board;
- c. Review the College's assessment of the manner of selection of and the contractual arrangements with all vendors to the College, including the Bookstore and Food Services and make recommendations.

# QUEENSBOROUGH COMMUNITY COLLEGE CITY UNIVERSITY OF NEW YORK ACADEMIC SENATE REPORT

**FROM:** Philip Pecorino, Chair, Academic Senate Steering Committee **TO:** Ken Pearl, Secretary, Academic Senate Steering Committee

**CC**: P. Pecorino, K. Villani, Dean K. Steele, College Archives (C.Williams)

**DATE:** February 18, 2005

SUBJECT: Old Business-Previous item from Committee on Curriculum re WID WAC

The Curriculum Committee presented the following resolution for adoption by the Academic Senate with regard to the WID WAC program.

#### V. ADMINISTRATION

Recommendation to the Academic Senate to create a standing Committee on WID WAC as follows:

The Committee on WID/WAC shall consist of the director or one co-director of the WID/WAC Program, three (3) WI certified faculty members from a cross-section of disciplines, one student, and a designee from the Office of Academic Affairs as ex-officio without vote.

#### The Committee on WID/WAC shall:

- a. Oversee and make recommendations to the Academic Senate related to the WID/WAC Program;
- b. Review the criteria for a Writing Intensive (WI) class;
- c. Recommend changes in the criteria for a WI class to the Curriculum Committee for its approval, which shall be final;
- d. Oversee a continuing WID/WAC Faculty Professional Development Program with the Office of Academic Affairs;
- e. Hear and decide student cases requesting a waiver from any WI degree requirements;
- f. Make the final decision on the designation of a course or section as WI;
- g. Insure that all classes designated as WI meet the criteria for a WI class;
- h. Coordinate with the Curriculum Committee on issues concerning curriculum.

# QUEENSBOROUGH COMMUNITY COLLEGE CITY UNIVERSITY OF NEW YORK ACADEMIC SENATE REPORT

**FROM:** Lorena B. Ellis, Chair, Committee on Curriculum

TO: Ken Pearl, Secretary, Academic Senate Steering Committee CC: P. Pecorino, K. Villani, Dean K. Steele, College Archives

**DATE:** February 17, 2005

**SUBJECT: Monthly Report for February 2005** 

The Curriculum Committee recommends the following for adoption by the Academic Senate:

#### **COURSE REVISIONS**

#### **Physics Department**

From: PH-231 Fundamentals of Lasers and Fiber Optics

3 class hours [2] laboratory hours 4 credits Corequisite: [PH-202 or 302 or 412 and MA-128]

Course description: Topics in optics related to lasers and optical fiber and devices for modulating and directing signals from such devices. Geometrical optics with emphasis on ray tracing. Matrix methods in optics. Lenses, thick and thin, mirrors, prisms and other passive elements and systems. Propagation of light in materials. Dispersion and its effects. Special topics in geometric and wave optics. Laboratory complements class work.

# To: PH-231 Fundamentals of Lasers and Fiber Optics

3 class hours 3 laboratory hours 4 credits

Corequisite: MA-114

Course description: Topics in optics related to lasers and optical fiber and devices for modulating and directing signals from such devices. Geometrical optics with emphasis on ray tracing. Matrix methods in optics. Lenses, thick and thin, mirrors, prisms and other passive elements and systems. Propagation of light in materials. Dispersion and its effects. Special topics in geometric and wave optics. Laboratory complements class work.

Rationale: This course is for students in the Laser and Fiber Optics Technology Program. As such the laboratory component has two purposes; the complement the course work by providing students with an opportunity to apply the principles taught in lecture to real situations and to provide an opportunity for students to develop skills required for the work place. The results of our recently instituted assessment (required by ABET) indicate that it is impossible to achieve both purposes in a two-hour laboratory session and that the students need more time on task. As part of our continuous improvement plan we are required to take corrective action, and increasing the number of laboratory hours is the appropriate action.

The original rationale for the physics II corequisite for PH231 was that optics was covered in physics II and students would have the optics from the physics as an introduction to this optics course. The problem with that rationale is that optics is the last

topic covered in physics II. Therefore, students in PH231 have already completed most of the course before they see the pertinent material in physics II. In fact, most of the optics in physics II is covered in the first third of PH231. As this is the first course in the curriculum, it will improve retention if students can get into their major sooner. By requiring a physics II corequisite, physics I becomes a de facto prerequisite and forces students to wait at least one semester (after they complete remediation) before being introduced to their major. This is discouraging to many students. A survey of related programs at community colleges throughout the US indicates that we are the only one that has a physics prerequisite or corequisite for this course or its equivalent.

From: PH-232 Laser and Electro-Optics Technology

3 class hours 2 recitation hours [2] laboratory hours 5 credits

Prerequisite: PH-231

Course description: Wave optics, interference, coherence, polarization, birefringence, diffraction, gratings in two and three dimensions, power and energy measurements, basics of laser safety, ultra-fast pulse techniques, electro-optic and acousto-optic switches, optical materials, non-linear optics. Laboratory complements class work.

# To: PH-232 Laser and Electro-Optics Technology

3 class hours 2 recitation hours  $\underline{3}$  laboratory hours 5 credits

Prerequisite: PH-231

Course description: Wave optics, interference, coherence, polarization, birefringence, diffraction, gratings in two and three dimensions, power and energy measurements, basics of laser safety, ultra-fast pulse techniques, electro-optic and acousto-optic switches, optical materials, non-linear optics. Laboratory complements class work.

Rationale: This course is for students in the Laser and Fiber Optics Technology Program. As such the laboratory component has two purposes; the complement the course work by providing students with an opportunity to apply the principles taught in lecture to real situations and to provide an opportunity for students to develop skills required for the work place. Preliminary assessment indicates that it is impossible to achieve both purposes in a two-hour laboratory session and that the students need more time on task. As part of our continuous improvement plan we are required to take corrective action, and increasing the number of laboratory hours is the appropriate action.

From: PH-235 Laser/Electro-Optics Projects

2 class hours [2] laboratory hours 3 credits

Prerequisite: PH-231

Corequisite: ET-910 or permission of the Dept.

Construction and testing of a laser, optical or electro-optic device such as a helium-neon laser, optical power meter, or fiber optics communication link; oral presentations and computerized literature searches.

# To: PH-235 Laser/Electro-Optics Projects

2 class hours 3 laboratory hours 3 credits

Prerequisite: PH-231

Corequisite: ET-910 or permission of the Dept.

Construction and testing of a laser, optical or electro-optic device such as a helium-neon laser, optical power meter, or fiber optics communication link; oral presentations and computerized literature searches.

Rationale: The time necessary for students to complete their projects is much greater than that provided for by having a 2 hour laboratory. In the past instructors have made themselves available to students at additional times, allowed the students to receive a grade even though they did not complete their projects (the grade was typically reduced) or gave the students incompletes (which only postponed when additional instructor time was made available). An additional problem is that the students need to use departmental laboratories and equipment in order to construct and test their projects, which can't occur when the department's CLTs are busy with other duties or when the room is in use by another class. By having a fixed three-hour laboratory session these problems would be alleviated.

It should be noted that all technology courses at the college except the above three have three-hour laboratories. It is an inconsistency that PH-231, 232 and 235 have two-hour laboratories.

From: PH-301 College Physics I

3 class hours 2 lab hours 4 credits

Prerequisite: MA-120 or MA-114 of equivalent or permission of the department PH-301 and 302 are designed for students who need or want two semesters of noncalculus physics, such as those planning careers in optometry, dentistry, and other medically-related fields. Topics include elementary particles, conservation laws, vectors, laws of motion, linear and angular momentum, energy, gravitation, and thermodynamics.

#### To: PH-301 College Physics I

3 class hours 1 recitation hour 2 lab hours 4 credits

Prerequisite: MA-120 or MA-114 of equivalent or permission of the department

PH-301 and 302 are designed for students who need or want two semesters of noncalculus physics, such as those planning careers in optometry, dentistry, and other medically-related fields. Topics include elementary particles, conservation laws, vectors, laws of motion, linear and angular momentum, energy, gravitation, and thermodynamics.

From: PH-302 College Physics II

3 class hours 2 lab hours 4 credits

Prerequisite: PH-301

Second-semester course following PH-301. Topics include electro-magnetism, vibrations, wave phenomena and radiation, relativity, atomic interactions, atomic energy, and physics frontier.

#### To: PH-302 College Physics II

3 class hours 1 recitation hour 2 lab hours 4 credits

Prerequisite: PH-301

Second-semester course following PH-301. Topics include electro-magnetism, vibrations, wave phenomena and radiation, relativity, atomic interactions, atomic energy, and physics frontier.

**Rationale**: It is not atypical for some topics to be omitted in a physics course due to lack of time. What is atypical is to guarantee the lack of time by having a course with too few hours. College physics is typically two 6 hour/ 4 credit courses and this change would bring Queensborough inline with the rest of the country. Within CUNY only one other college (Bronx CC) has an equivalent course that is 5 hours and a number (Hostos CC, Hunter and York) have an equivalent course of more than 6 hours per semester.

From: PH-411 Calculus Physics I

2 class hours 2 recitation hours 3 1/2 credits [2 laboratory hours on alternate weeks.] Prerequisite:MA-440 or the equivalent.

Corequisite: MA-441.

Fundamental principles of mechanics; includes kinematics, classical laws of motion, statics, conservation laws, work, mechanical energy, and simple harmonic motion.

# To: PH-411 Calculus Physics I

2 class hours 2 recitation hours 3 1/2 credits

2 laboratory hours

Prerequisite:MA-440 or the equivalent.

Corequisite: MA-441.

Fundamental principles of mechanics; includes kinematics, classical laws of motion, statics, conservation laws, work, mechanical energy, and simple harmonic motion.

From: PH-412 Calculus Physics II

2 class hours [1] recitation hours 3 credits [2 laboratory hours on alternate weeks.]

Prerequisite: PH-411. Corequisite: MA-442.

Fundamentals of heat, waves, and optics; includes heat transfer, first and second laws of thermodynamics, kinetic theory of gases; nature of light, geometrical and physical optics; optical instruments; sound.

# To: PH-412 Calculus Physics II

2 class hours 2 recitation hours 3 credits

<u>2 laboratory hours</u> Prerequisite:PH-411. Corequisite: MA-442.

Fundamentals of heat, waves, and optics; includes heat transfer, first and second laws of thermodynamics, kinetic theory of gases; nature of light, geometrical and physical optics; optical instruments; sound.

From: PH-413 Calculus Physics III

2 class hours 2 recitation hours 3 1/2 credits [2 laboratory hours on alternate weeks.]

Prerequisite: PH-411. Corequisite: MA-443.

Electricity and magnetism. Includes Coulomb's law, electric field and potential, elementary DC and AC circuits; magnetic fields, induction, Maxwell's equations.

#### To: PH-413 Calculus Physics III

2 class hours 2 recitation hours 3 1/2 credits

<u>2 laboratory hours</u> Prerequisite: PH-411. Corequisite: MA-443.

Electricity and magnetism. Includes Coulomb's law, electric field and potential, elementary DC and AC circuits; magnetic fields, induction, Maxwell's equations

**Rationale:** (1) For increasing the laboratory hours – Queensborough students taking calculus physics have been short-changed in laboratory. Laboratory work is an integral part introductory physics courses and should occur every week. Currently a student completing the three-semester sequence will have performed fewer labs than any student at any other college including CUNY colleges.

(2) For adding the extra recitation hour to PH-412 – The original assignment of hours and credits was to match the credits granted by CCNY and be consistent with Carnegie units. There is no less material covered in PH-412 than the other two courses nor is it any less rigorous. Without the additional recitation hour students in PH-412 will continue to be short changed by covering the material in insufficient detail or by having some material omitted.

## Department of Electrical and Computer Engineering Technology

**From:** ET-510 [Digital Computers]

3 class hours, 3 lab. hours, 4 credits

To: ET-510 Introduction to Digital Electronics

3 class hours, 3 lab. hours, 4 credits

Rationale: Today all texts incorporating the topics taught in 510 (which have been unchanged in the decade past) all use titles similar to Digital Fundamentals or Introduction to Digital Electronics. Our original title for ET510 which predates the invention of the microprocessor reflected the early days where the main use of digital techniques was for digital computers. At that time, most consumer applications were analog. There were no CD players, PCs, cell phones or digital cameras. Today, digital technology is a much broader field and we have a separate microprocessor course (ET515 or ET560) in each curriculum. Therefore, changing our course title will bring our list of courses into today's vernacular.

**From:** ET-560 Microprocessors and Microcomputers

3 class hours, 3 lab. Hours, 4 credits Prerequisite: [ET-503, 510 or 540.]

To: ET-560 Microprocessors and Microcomputers

3 class hours, 3 lab. Hours, 4 credits

Perequisite: ET-503 and ET540 or ET-509 and ET510

**Rationale**: Development speed is a driving force in today's industry; the first manufacturer to market is the winner. In the area of microprocessor applications, this means that reusable standardized code is becoming more and more important. The use of C++, with its extensive reservoir of useful code modules, means that today it is more useful than assembly code.

Our old pre-requisite for ET560 was ET-503, Introduction to Assembly Language Programming. The problem with assembly code is that it is different for each family of microprocessors. Modules developed for one microprocessor cannot be used on another.

As a result, microprocessor manufacturers are supplying more free C++ code for their products than assembly code. Our students need to learn this new and more flexible approach to programming microprocessors. In response to this change in industry practice, ET560 will now be taught with C++ code and will require a new pre-requisite of ET509 which introduces to students embedded C++ programming.

#### **NEW COURSES:**

#### **English Department**

## **EN-223 Advanced Fiction Writing**

Three class hours, one recitation hour, 3 credits Prerequisites and/or co-requisites: EN-201

Course description: This course offers students the opportunity to further develop fiction writing techniques introduced in EN-201. The course will provide students with intensive practice in a wide variety of narrative forms, supportive critical feedback on their work, strategies for editing, and exposure to a broad range of contemporary published fiction.

Rationale: Enrollment in English Department EN-201 Creative Writing: Fiction course has steadily increased over the past three years. The department has responded by offering more sections of this course. This proposed course will provide second-year fiction writing students with the opportunity to continue developing their fiction writing skills to an advanced level. In addition, this course is expected to serve non-matriculated advanced fiction writers who are interested in developing their fiction writing in an academic environment. The English Department will offer one Advanced Fiction Writing course each Spring semester.

#### EN-222, 225 Special Topics in Writing as Art & Craft

3 class hours, 1 recitation hour, 3 credits Prerequisites and/or co-requisites: EN-102

Course description: These courses will focus on fiction and non-fiction writing about a specific theme or topic to be announced in advance and will vary each semester. Descriptions of the topic in a particular semester will be available in the English Department before registration.

Students may take two such courses for credit, as long as they do not repeat the topic. Topics will include but are not limited to:

Reading and Writing about Crime and Murder

Reading and Writing about the Immigrant Experience

Finding Nurture in Nature: Reading and Writing about the Natural World

Reading and Writing about Place: Geography, Travel and Identity

Reading and Writing about War

Be Home Before Dark: Reading and Writing about Family Navigating Difference: Reading and Writing about Being "Other" Love, Lust and Romance: Reading and Writing about Love

I Can't Believe I Ate the Whole Thing: Reading and Writing about Food

Reading and Writing about Prison, Criminality and the Law

Writing for Children and Young Adults

he Teaching of Writing Multimedia Writing

**Rationale**: EN 224-225 will focus on a specific theme or topic to be announced in advance and will vary each semester. Descriptions of the topic in a particular semester will be available in the English Department before registration. Student registration in the department's writing courses has been growing, and the courses with varying topics will attract students.

Students may take two such courses for credit, as long as they do not repeat the topic.

## Music Department

## MU-208 Musicianship I

3 studio hours, 1 lab hour, 1 recitation hour, 3 credits Prerequisites and/or co-requisites: none

Course description: A course designed to introduce beginners to the basic elements of music theory and music performance, with a special focus on piano and singing. Topics include developing piano technique, singing notated music, and developing performance and analysis skills with fundamental elements such as meter, rhythm, intervals, scales and chords.

## Rationale for MU-208 replacing MU-205 and MU-311:

Currently, the department offers two courses addressing introductory musicianship and performance: MU-205 (Fundamentals of Music I), and MU-311 (Piano I.) Both courses assume no musical background on the part of the student. The central focus of MU-205 is the building of music literacy from scratch, via the introduction of basic elements of musical notation, including meters, simple rhythms, pitches, clefs, and scales. The keyboard is used as a tool to better assimilate these elements, but often, there is not enough time to devote to keyboard technique and fluency. Thus, keyboard elements are often given short shrift in favor of building music literacy skills through written assignments and exams.

MU-311 is purely an introductory piano course. Students taking MU-311 currently are required to take MU-205 as a co-requisite, while MU-205 students are merely "strongly encouraged" to take MU-311. This creates a real inequity among students in MU-205. MU-205 students who are concurrently taking MU-311 have a great advantage, one that is consistently manifested by their better performances in both written and applied exams, as well as in their more confident participation in classroom discussion.

Another issue that creates difficulties regarding these two courses is that students are often taking MU-205 and MU-311 with different instructors. The topics and specific assignments being covered in each course should ideally be very closely integrated throughout the semester, but we have found this to be an extremely difficult task, with the courses not currently integrated. Students in a single MU-205 section will often be collectively spread out between three separate sections of MU-311 led by three different instructors, with the remaining MU-205 students not even being concurrently enrolled in MU-311.

A section of MU-208, meeting 5 hours a week, would replace a single pair of these courses (i.e., MU-205 and MU-311, now meeting 3 and 2 hours respectively.) This would create several distinct advantages over

the current curricular design. Keyboard and music literacy components could be fully integrated, as there would be sufficient time for each (as aforementioned, not currently the case in MU-205), and both components would be taught by the same instructor to the same group of students. With MU-208, continuity and pacing would be greatly improved and more finely tuned, as a single instructor would be fully responsible for both piano study and building music literacy. Finally, MU-208 would much better allow musicianship to be fostered in an environment of immersion and synergy, due to greater opportunities for integration between analytical and applied elements.

Student demand and projected enrollment for MU-208 would ostensibly be comparable to MU-205 and MU-311, consistently two of our most popular courses. Just as is the case for MU-205 and MU-311, several sections of MU-208 would be offered each semester.

#### MU-209 Musicianship II

2 studio hours, 1 class hour 1 class hour, 1 recitation hour, 1 lab hour, 3 credits Prerequisite is MU-208 with a grade of C or better, or satisfactory score on the Music Placement Test. Co-requisite is MU-210 (Elementary Sight-Reading and Ear Training).

Course description: A continuation of MU-208, focusing on developing further skills and fluency with fundamental elements of musical language, with regard to both performance and analysis. Applied topics include minor scales, diatonic harmony, seventh chords, more complex rhythmic structures, and musical composition.

# Rationale for MU-209 replacing MU-206 and MU-207

Currently, the department offers two 2<sup>nd</sup> semester musicianship courses in which the subject matter is very closely aligned: MU-206 (Fundamentals II), which deals primarily with building fluency in the language of music through written work, and MU-207 (Basic Keyboard Skills), which focuses on applying the subject matter of MU-206 to piano keyboard performance. Currently, these courses have co-requisite status, but their co-requisite relationship is organized haphazardly: students taking MU-207 must take MU-206 concurrently, but MU-206 students have no co-requisite requirements whatsoever.

Although MU-206 includes some applied keyboard performance, its first priority is to build abilities and skills with musical composition and analysis. A considerable majority of class time is thus allocated to written assignments and analysis of musical scores. Keyboard activities are used as tools to better assimilate these elements, but often, there is not enough time to devote to piano technique and fluency. Thus, keyboard assignments are often given short shrift in favor of building musical analysis skills through written assignments and exams. MU-206 students who are not concurrently taking MU-207 are therefore at a distinct disadvantage, compared with classmates who are enrolled in MU-207. This is also clearly manifested by the vast disparity of performance levels in MU-206, when correlated with student enrollment in the MU-207.

Another issue that creates difficulties is that students are often taking both co-requisite courses with different instructors. The topics and specific assignments being covered in each course should ideally be very closely integrated throughout the semester, but we have found this to be an extremely difficult task, with the courses not currently integrated. For example, students in a single MU-206 section will often be collectively spread out between three separate sections of MU-207 led by two or three different instructors, with the remaining MU-206 students not even being concurrently enrolled in MU-207.

A section of MU-209, meeting 5 hours a week, would replace a single pair of the aforementioned classes (i.e., one MU-206 course plus one MU-207 course.) This would create several distinct advantages over the current curricular design. Keyboard, composition and analysis components could be fully integrated, as there would be sufficient time for each (as aforementioned, not currently the case in the allegedly comprehensive MU-206 class), and both components would be taught by the same instructor to the same group of students. With MU-209, continuity and pacing would be greatly improved and more finely tuned, as a single instructor would be fully responsible for all elements of applied and analytical study. Finally, MU-209 would much better allow musicianship to be fostered in an environment of immersion and synergy, due to greater opportunities for integration between analytical and applied elements.

Student demand and projected enrollment for MU-209 would ostensibly be comparable to MU-206 and MU-207, two consistently popular courses. Just as is the case for MU-206 and MU-207, several sections of MU-209 would be offered each semester.

# **Electrical and Computer Engineering Technology**

# ET-509 C ++Programming for Embedded Systems

3 Lab Hours, 1 Credit Prerequisite ET-501

Course description: The nature of a program, simple C++ programs, variables, binary and hex number system, mathematical and logic operations with binary and hex numbers, looping and delays, arrays, pointers, microprocessor memory characteristics, data manipulation using pointers, input output programming exercises on a real microprocessor.

**Rationale**: Embedded software is in almost every electronic device designed today. Yet because each embedded system is unique and highly customized to its application, the ability to program it becomes an important skill for our technology student. Through this course our students will have a basic understanding of programs and hand on working knowledge of programming a microprocessor.

The techniques and code examples taught in the course are directly applicable to real-world embedded software projects of all sorts. After taking this course, our students will be able to understand the basics involved in programming an embedded microprocessor.

Student Demand and enrollment: Since this will be a required course for both the Electrical Engineering Technology and Computer Engineering Technology students the anticipated yearly enrollment will be 70 students.

#### PROGRAM REVISIONS:

Music Department: Change in the A.A.S. Degree Program in Music Electronic Technology

#### FROM: REQUIREMENTS FOR THE A.A.S. DEGREE

#### **GENERAL EDUCATION CORE REQUIREMENTS:**

no changes to these courses

REQUIREMENTS FOR THE MAJOR		
ET-920	Electrical Technology Fundamentals	3
ET-282	Fundamentals of Audio Electronics	3
ME-250	Introduction to the Recording Studio & MI	DI 3
ME-251	Digital Music Sequencing	3
ME-260	Electronic Techniques	1
ME-276	Digital Sound Design	2
ME-277	Digital Recording	3
ME-281	Recording Techniques II: Studio Operation	on 3
ME-900	Cooperative Education Internship	2
[MU-311-314	Piano I-IV (any two)	2
MU-241*	Music Theory I	3
MU-211*	Sight Reading and Ear Training I	1
MU-400	Performance Series Elective	1
MU-	Advised Music Electives	2

Sub-total	35	
Total Credits Required for the A.A.S. Degree		
in Music Technology	60	

\*Note: Prior to taking MU-211 and MU-241, all students are required to take courses in basic musicianship and music theory ([MU-205, MU-206, MU-207] and MU-210) unless they request and pass a Music Placement Test administered by the Music Dept.

# TO: REQUIREMENTS FOR THE A.A.S. DEGREE GENERAL EDUCATION CORE REQUIREMENTS:

no changes to these courses

REQUIREMENTS F	Credits	
ET-920	Electrical Technology Fundamentals	3
ET-282	Fundamentals of Audio Electronics	3
ME-250	Introduction to the Recording Studio & MID	OI 3
ME-251	Digital Music Sequencing	3
ME-260	Electronic Techniques	1
ME-276	Digital Sound Design	2
ME-277	Digital Recording	3
ME-281	Recording Techniques II: Studio Operatio	n 3
ME-900	Cooperative Education Internship	2
MU-312-314	<u>Piano II-IV (any two)</u>	2
MU-241*	Music Theory I	3
MU-211*	Sight Reading and Ear Training I	1
MU-400	Performance Series Elective	1
MU-	Advised Music Electives	2
	Sub-total	35

# Total Credits Required for the A.A.S. Degree in Music Technology 60

\*Note: Prior to taking MU-211 and MU-241, all students are required to take courses in basic musicianship and music theory (MU-208, MU-209 and MU-210) unless they request and pass a Music Placement Test administered by the Music Dept.

<u>Music Department: Change in the A..S. Degree Program in Fine and Performing Arts:</u>
<u>Music Concentration</u>

#### FROM: MUSIC CONCENTRATION

Students select 20-26 credits in consultation with a department adviser as indicated below.

# The following courses are required:

MU-110. Introduction to Music, or

MU-120. Survey of Western Music

MU-241, 242. Music Theory and Keyboard Harmony I, II or

MU-231, 232. Jazz Theory I, II.

MU-211, 212. Sight Reading and Ear Training I, II. MU-[311]. 312. Piano [I, ] II.

#### Two credits selected from the: MU-400 series

The remaining 5-11 credits may be selected from any courses in the Department of Music including those above not already taken, with the exception of [MU-205, 206, 207,] 210, and 261.

#### TO: MUSIC CONCENTRATION

Students select 20-26 credits in consultation with a department adviser as indicated below.

## The following courses are required:

MU-110. Introduction to Music, or

MU-120. Survey of Western Music

MU-241, 242. Music Theory and Keyboard Harmony I, II or

MU-231, 232. Jazz Theory I, II.

MU-211, 212. Sight Reading and Ear Training I, II.

MU-312. Piano II.

#### Two credits selected from the: MU-400 series

The remaining 5-11 credits may be selected from any courses in the Department of Music including those above not already taken, with the exception of MU-208, 209, 210, and 261.

**RATIONALE:** In accordance with the accompanying new course proposals for MU-208 and MU-209, MU-208 will replace MU-205 and MU-311, and MU-209 will replace MU-206 and MU-207. Thus, these changes need to be reflected in the course catalog wherever the courses being replaced are mentioned, and the new courses replacing them must be substituted. As all of the aforementioned courses are introductory, and serve as prerequisites for courses in two degree programs, these changes must be made in all passages describing the roles of these courses as prerequisites.

# FROM: MU-210 Elementary Sight Reading and Ear Training

2 studio hours 1credit

Prerequisite: [MU-205] with a grade of C or better.

Corequisite: [MU-206], or satisfactory score on the Music Placement Test. May not be credited toward the music concentration of the A.S. in Fine and Performing Arts curriculum. May be used as a free elective in all curricula.

Designed to develop basic skills in sight reading and melodic dictation.

#### TO: MU-210 Elementary Sight Reading and Ear Training

2 studio hours 1credit

Prerequisite: MU-208 with a grade of C or better.

Corequisite: <u>MU-209</u>, or satisfactory score on the Music Placement Test. May not be credited toward the music concentration of the A.S. in Fine and Performing Arts curriculum. May be used as a free elective in all curricula.

Designed to develop basic skills in sight reading and melodic dictation.

# FROM: MU-231 Jazz Theory I

2 class hours 2 studio hours 3 credits

Offered in Fall

Prerequisite: [MU-206, 207,] and 210 with a grade of C or better, or satisfactory score on the Music Placement Test. Corequisite: MU-211.

A beginning theory course for performers of jazz. Chords, scales, and other theoretical materials are studied from the special viewpoint of the performing artist. Students will be expected to apply this study to improvisation on their own instruments. Some proficiency on an instrument or in voice is required.

#### TO: MU-231 Jazz Theory I

2 class hours 2 studio hours 3 credits

Offered in Fall

Prerequisite: <u>MU-209</u> and 210 with a grade of C or better, or satisfactory score on the Music Placement Test. Corequisite: MU-211.

A beginning theory course for performers of jazz. Chords, scales, and other theoretical materials are studied from the special viewpoint of the performing artist. Students will be expected to apply this study to improvisation on their own instruments. Some proficiency on an instrument or in voice is required.

## FROM: MU-241 Music Theory and Keyboard Harmony I

3 class hours 1 studio hour 3 credits

Prerequisite: [MU-206, 207,] and 210 with a grade of C or better, or satisfactory score on the music placement test. Corequisite: MU-211.

An integrated approach to music; melody, elementary species counterpoint, and keyboard harmony.

#### TO: MU-241 Music Theory and Keyboard Harmony I

3 class hours 1 studio hour 3 credits

Prerequisite: <u>MU-209</u> and 210 with a grade of C or better, or satisfactory score on the music placement test. Corequisite: MU-211.

An integrated approach to music; melody, elementary species counterpoint, and keyboard harmony.

## FROM: MU-311, 312, 313, 314 Class Instruction in Piano I,II, III, IV]

2 studio hours 1 credit each course

Corequisite: [MU-205, 206], or satisfactory score on the Music Placement Test.

#### TO: MU-312, 313, 314 Class Instruction in Piano II, III, IV

2 studio hours 1 credit each course

Coreguisite: MU-208, 209, or satisfactory score on the Music Placement Test.

#### FROM: ME-251 Digital Music Sequencing

2 class hours 2 laboratory hours 3 credits

Prerequisite: ME-250, [MU-205 and MU-311 (all] completed with a minimum grade of C).

An introduction to the use of synthesizers and computers in the production of sequencer-based compositions. Students apply basic techniques by working with professional sequencing programs and synthesizers in the Music Technology Lab.

## TO: ME-251 Digital Music Sequencing

2 class hours 2 laboratory hours 3 credits

Prerequisite: ME-250 and MU-208 (both completed with a minimum grade of C).

An introduction to the use of synthesizers and computers in the production of sequencer-based compositions. Students apply basic techniques by working with professional sequencing programs and synthesizers in the Music Technology Lab.

#### **PROGRAM REVISIONS:**

# Electronics Engineering Technology Program:

From: ELECTRONIC ENGINEERING TECHNOLOGY

A.A.S. Degree Program

A TAC/ABET ACCREDITED ENGINEERING TECHNOLOGY CURRICULUM

#### REQUIREMENTS FOR THE A.A.S. DEGREE

# GENERAL EDUCATION CORE REQUIREMENTS Credits

EN-101, 102	English Composition I, II	6
MA-114	College Algebra and Trigonometry	
	for Technical Students	4
MA-128	Calculus for Technical and Business Students	4
PH-201,202	General Physics I, II	8
SS-or HI-	Electives in Social Science or	
	History (HI-100 series)	6
	Sub-total	28

## REQUIREMENTS FOR THE MAJOR

ET-110	Electric Circuit Analysis I	4
ET-140	Sinusoidal and Transient Circuit Analysis	3
ET-210, 220	Electronics I, II	8
ET-230	Telecommunications I	4
[ET-305	Transients and Electromechanical	
	Transducers	2]
ET-320	Electrical Controls Systems	3
ET-410	Electronic Project Laboratory	1
ET-501	Computer Applications	1
[ET-502	Introduction to Computer Programming	
ET-510	Digital Computers	4
[ET-515	Introduction to Microprocessors	

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				Sub-total	[32]
	ELECTIVES	ET electives+			[4]
	Total Credits I	Required			64
To:					
	ELECTRONIC ENGINEERING TECHNOLOGY A.A.S. Degree Program A TAC/ABET ACCREDITED ENGINEERING TECHNOLOGY CURRICULUM				
	REQUIREME	NTS FOR THE	A.A.S. DEGREE		
	GENERAL ED	DUCATION CC	RE REQUIREMENTS		Credits
	En-101, 102 MA-114 MA-128 PH-201,202 SS-or HI-		English Composition I, II College Algebra and Trigonor Technical Students Calculus for Technical and I General Physics I, II Electives in Social Science History (HI-100 series)	ometry Business Studer or	4 nts4 8
				Sub-total	28
	REQUIREME	NTS FOR THE	MAJOR		
	ET-110 ET-140 ET-210, 220 ET-230 ET-320 ET-410 ET-501 ET-509 T-510 ET-560		Electric Circuit Analysis I Sinusoidal and Transient Ci Electronics I, II Telecommunications I Electrical Controls Systems Electronic Project Laborator Computer Applications C++ Programming for Embe Digital Computers Microprocessors and Micro	rcuit Analysis  y edded Systems.	383111
	ELECTIVES ET ele	ctives+			
	Total Credits Required				64

#### SUMMARY OF CHANGES

The proposed changes to the ET curriculum will maintain the same number of credits and hours needed for graduation as in the existing ET curriculum. Furthermore, there are no changes to the general education and liberal arts and sciences course requirements. This proposal maintains the CUNY 64-credit constraint and is in full compliance with the new TAC/ABET accreditation guidelines.

# New Courses

ET-509 C++ Programming for Embedded Systems

#### **Course Revisions**

ET-510 [Digital Computers] – title changed to <u>Introduction to Digital Electronics</u> ET-560, Microprocessors and Microcomputers, 4 credits, is being revised with new prerequisites

#### **Course Deletions**

ET-305	Transients and Electromechanical	
	Transducers	2
ET-502	Introduction to Computer Programming	1
ET-515	Introduction to Microprocessors	1
ET Elective	·	1

# Rationale:

The ET curriculum urgently needs to be updated to accommodate the continued growth in importance of the microprocessor in the electronics industry. The current ET-515, Introduction to Microprocessors course (1-credit, 3-hours) is no longer adequate for many of electronics jobs in the field of electronics. Furthermore, schools like NYC College of Technology and SUNY, Farmingdale, do not accept ET-515 for articulation because their ET programs utilize 4-credit microprocessor courses. Queensborough ET students now need the same course we have been offering to our CT students, ET560, Microprocessor and Microcomputers (4-credits, 6-hours), in order to be fully prepared to deal with current job market, and for articulation to four year programs. To make room for the 4-credit, 6 hour ET560 course, the proposed new curriculum will eliminate ET515, Introduction to Microprocessors, and ET305, a transient circuit analysis/machinery course, whose subject matter is of diminished importance. Also the number of ET Elective credits required will be reduced from 4 to 3 credits. Furthermore, in order to satisfy ET-560 prerequisite requirements, a new course ET-509, Fundamentals of Programming, will replace ET-502, for ET students. ET-509 will utilize the C++ programming environment instead of Visual Basic, and will be specifically oriented to microprocessor topics like register and bit manipulation.