

The City University of New York
Articulation Agreement Between
Queensborough Community College
and
York College

A. Sending and Receiving Institutions

Sending Institution: Queensborough Community College (QCC)
Department: Physics
Program: Physics
Degree: A.S.

Receiving Institution: York College
Department: Earth and Physical Sciences
Program: Physics
Degree: B.S.

B. Admission Requirements for Senior College Program

Minimum GPA: 2.0

To take advantage of this articulation agreement, students must complete the A.S. in physics degree at Queensborough Community College and be accepted for admission to York College. Upon transfer to York, students must declare a major in physics.

Total transfer credits granted toward the baccalaureate degree: 60 credits. Total additional credits required at York College to complete the baccalaureate degree: 60 credits.

C. Course-to-Course Equivalencies and Transfer Credit Awarded

| | |
|---------------------------------|--------------|
| Queensborough Community College | York College |
|---------------------------------|--------------|

| Pathways Core Requirements | Credits | Transfer Credit | Credits | Transfer Credits Awarded |
|--|-------------|--|-----------------|--------------------------|
| Required Core 1A: ENGL-101 English Composition I ENGL-102 English Composition II | 3 3 | ENG 125 English Composition I: Introduction to College Writing ENG 126 English Composition II: Writing About Literature | 3 3 | 3 3 |
| Required Core 1B: MA-440 Pre-Calculus ¹ | 4 | MATH 120 Pre-Calculus | 4 | 4 |
| Required Core 1C: PH-421 General Calculus Physics A ¹ | 5 | PHYS 113 Physics I Laboratory PHYS 117 University Physics I | 1 4 | 5 |
| Flexible Core 2A: Select one course | 3 | World Cultures and Global Issues | 3 | 3 |
| Flexible Core 2B: Select one course | 3 | U.S. Experience in Its Diversity | 3 | 3 |
| Flexible Core 2C: Select one course | 3 | Creative Expression | 3 | 3 |
| Flexible Core 2D: Select one course | 3 | Individual and Society | 3 | 3 |
| Flexible Core 2E: CH-151 General Chemistry I | 4.5 | CHEM 108 Principles of Chemistry I CHEM 109 Principles of Chemistry I Lab | 3.5 1.5 | 4.5 |
| Additional Flexible Core Course: PH-422 General Calculus Physics B ¹ | 5 | PHYS 114 Physics II Laboratory PHYS 118 University Physics II | 1 4 | 5 |
| Subtotal | 36.5 | | Subtotal | 36.5 |
| Requirements for the Major | | Transfer Credit | | |
| MA-441 Analytical Geometry and Calculus I | 4 | MATH 121 Analytical Geometry and Calculus I | 4 | 4 |
| MA-442 Analytical Geometry and Calculus II | 4 | MATH 122 Analytical Geometry and Calculus II | 4 | 4 |
| PH-440 Modern Physics | 4 | PHYS 241 Modern Physics PHYS 999 Physics Elective Credit | 3 1 | 4 |
| DAN 100 PE-100 or PE-500 | 1 | PE176 or PE998 | 1 | 1 |
| PH-160 Physics Colloquium | 1 | PHYS 999 Physics blanket credit | 1 | 1 |
| Subtotal | 14 | | Subtotal | 14 |
| QCC Major Electives (select 9.5 credits) | | | | |
| CH-152 General Chemistry II | 4.5 | CHEM 111 Principles of Chemistry II CHEM 112 Principles of Chemistry II Lab | 3.5 1.5 | 4.5 |
| MA-119 College Algebra | 3 | MATH 104 College Algebra | 3 | 3 |
| MA-121 Trigonometry | 1 | MATH 999 Math blanket credit | 1 | 1 |
| MA-443 Analytic Geometry & Calculus III | 4 | MATH 221 Analytical Geometry and Calculus III | 4 | 4 |
| MA-451 Differential Equations | 4 | MATH 223 Differential Equations MATH 999 Math blanket credit | 3 1 | 4 |
| MA-461 Linear Algebra | 4 | MATH 333 Linear Algebra | 4 | 4 |
| PH-451 Numerical Methods for Scientists | 3 | PHYS 999 Physics blanket credit | 3 | 3 |
| PH-240 Computerized Physical Measurement Using Graphical Programming | 3 | PHYS 999 Physics blanket credit | 3 | 3 |
| PH-414 Analytical Mechanics | 4 | PHYS 999 Physics blanket credit | 4 | 4 |
| PH-415 Electricity and Magnetism | 4 | PHYS 321 Electricity and Magnetism I PHYS 999 Physics blanket credit | 3 1 | 4 |
| PH-416 Thermodynamics | 4 | PHYS 999 Physics blanket credit | 4 | 4 |
| PH 431 Calculus Optics | 2 | PHYS 999 Physics blanket credit | 2 | 2 |
| PH-450 Introduction to Physics Research | 3 | PHYS 999 Physics blanket credit | 3 | 3 |
| PH-501 Special Topics in Physics | 3 | PHYS 999 Physics blanket credit | 3 | 3 |
| PH-900 Ind. Study Physics Research | 2 | PHYS 999 Physics blanket credit | 2 | 2 |
| Subtotal | 9.5 | | Subtotal | 9.5 |
| Total | 60 | | Total | 60 |

All Queensborough Community College students must complete at least two writing intensive courses, designated as "WI" in the course schedule.

D. Senior College Courses Remaining for Baccalaureate Degree

¹ Students are required to take particular courses in some areas of the Common Core that fulfill both general education and major requirements. If students do not take the required courses in the Common Core, they will have to take additional credits to complete their degree requirements.

| Course and Title | Credits |
|--|----------------|
| College Option General Education Courses | |
| Writing Intensive (WI) course at the 200-level or higher: (Fulfilled by PHYS 383 below) | 0 |
| Writing Intensive (WI) course at the 200-level or higher OR WRIT 300-level course: | 3 |
| Subtotal | 3 |
| Major Courses | |
| PHYS 231 Oscillations and Waves | 3 |
| PHYS 312 Classical Mechanics I | 3 |
| PHYS 321 Electricity and Magnetism I | 0-3 |
| PHYS 351 Statistical Mechanics | 3 |
| PHYS 383 Modern Physics Laboratory (WI) | 3 |
| PHYS 441 Quantum Mechanics and Atomic Physics | 3 |
| CHEM 111 Principles of Chemistry II | 0-3.5 |
| CHEM 112 Principles of Chemistry II Laboratory | 0-1.5 |
| MATH 221 Analytical Geometry and Calculus III | 0-4 |
| MATH 223 Differential Equations and Dynamical Systems | 0-3 |
| MATH 333 Linear Algebra | 0-4 |
| Two courses at 400-level or higher in PHYS or ASTR (28.5) | 6 |
| Subtotal | 30.5-40 |
| Additional course work to reach 120 credits Physics and Math blanket credits count toward this category | 17-26.5 |
| Total credits to be earned at York College | 60 |

B.S. with Honors in Physics

Eligibility: A 300-level Physics course, and a 3.0 average in all Physics courses. Approval by the Faculty of the Physics Discipline.

Requirements for Graduation with Honors:

1. Successful completion of the Physics Major Discipline requirements and a 3.0 average in all Physics courses.
2. Successful completion of 6 credits of 400-level courses in the Physics Discipline consisting of independent research under the supervision of a faculty member and successful presentation of a thesis to the faculty members of the Physics Discipline.
3. Certification by the Faculty of the Physics Discipline.

Note: All physics majors take MATH 121, CHEM 108 and CHEM 109 to fulfill General Education requirements. MATH 119 and MATH 120 are prerequisites to MATH 121.

E. Summary of Credits Required

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|---|----|
| Total credits to be earned at Queensborough Community College | 60 |
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|---|-----|
| Total credits to be earned at York College | 60 |
| Total credits required for the B.S. in Physics degree | 120 |

F. Articulation Agreement Follow-up Procedures

Procedures for reviewing, updating, modifying, or terminating the agreement:

This agreement will be valid for 3 academic years from the Effective Date (below). Each year, there will be a review of the agreement's effectiveness by the Academic Affairs Officers at each institution.

When any of the programs within this agreement undergo any changes relevant to this agreement, this agreement will be reviewed and revised as necessary by the Curriculum Committees of both the sending and receiving program.

Either party may independently cancel this agreement by notifying the other party no less than one academic year before the intended date of cancellation.

Procedures for evaluating agreement:

The academic department, advisement centers, and Offices of Institutional Effectiveness from each campus will keep data on the academic progress of the transfer students. Upon request, York College will provide Queensborough Community College with the following information: a) the number of QCC students who applied to the program; b) the number of QCC students who were accepted into the program; c) the number of QCC students who enrolled; and d) the GPAs of these enrolled students.

Sending and receiving college procedures for publicizing agreement:

Queensborough Community College and York College will collaborate in publicizing this agreement on their websites and in their catalogs. They will share brochures and other marketing materials including web-based promotions. Transfer advisors will be made aware of this agreement and will have available all necessary materials to publicize the agreement to the students with whom they work.

Additional Information

Students transferring to York College must complete at least 40 credits at York, with at least half of the credits in the major program taken at York College.

If more than 64 credits are transferred students may not graduate with honors. A minimum of 56 credits must be completed at York College to graduate with honors.

