

**LEHMAN COLLEGE  
OF THE  
CITY UNIVERSITY OF NEW YORK**

**DEPARTMENT OF MIDDLE AND HIGH SCHOOL EDUCATION**

**CURRICULUM CHANGE**

1. **Type of change:** Experimental Course

2.

Department(s)	Middle and High School Education
Career	<input type="checkbox"/> Undergraduate <input checked="" type="checkbox"/> Graduate
Academic Level	<input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial
Subject Area	Secondary Education
Course Prefix & Number	ESC 538
Course Title	Principles of Computer Science Education II
Description	Focus on teaching approaches for human computer interaction, problem solving, web design, programming, data analysis, and robotics in secondary education settings. Includes best practices in ways to analyze and translate creative solutions and artifacts in project-based learning environment.
Pre/ Co Requisites	
Credits	3
Hours	3
Liberal Arts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

**3. Rationale:**

ESC 538 is modeled from a national effort to spread computer science courses into all schools funded by the National Science Foundation. Further, New York State and New York City implemented the new *Computer Science for All* initiative in fall 2015. This will require classroom teachers to have more specialized knowledge in instructional technology, including key pedagogical design principles, including human computer interactions, in computer science education.

**4. Learning Outcomes and Sample Syllabus (By the end of the course students will be expected to):**

By the end of the course teacher should be prepared to integrate the following into computer science pedagogy:

- Analyze one's own computational work and the work of others
- Apply abstractions and models to various computing problems
- Design and implement rubrics to analyze creative solutions and artifacts (such as creating stories, animations, robotics and games on a programming platform)
- Analyze effects of development in computing
- Connect computing with other disciplines
- Communicate thoughts processes and results in simple formats
- Work effectively in teams

**5. Date of Departmental Approval: February 22, 2017**

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Subject Area	Secondary Education
Course Prefix & Number	ESC 539
Course Title	Principles of Project Design and Assessment in Computer Science Education
Description	Examine how to assess performance tasks associated with computational thinking in secondary classroom settings. Includes ways to create and use assessments when engaging with instruction material that require an iterative process similar to computer scientists and engineers use to bring ideas to life in a project-based environment.
Pre/ Co Requisites	
Credits	3
Hours	3
Liberal Arts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society

	____ Scientific World
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**3. Rationale:**

ESC 539 is part of a national effort to spread computer science courses into all schools funded by the National Science Foundation. Further, New York State and New York City implemented the new *Computer Science for All* initiative in fall 2015. This will require classroom teachers to have more specialized knowledge in instructional technology, including assessment in computer science education.

**4. Learning Outcomes and Sample Syllabus (By the end of the course students will be expected to):**

By the end of the course participants will be prepared to integrate the following into computer science pedagogy:

- Design assessment that aligns to college-ready computer science standards
- Connect computing to its effects on society related to innovations
- Create projects like digital music, animations, websites, and programs using an iterative design technique
- Use abstraction to develop models and simulations of natural and artificial phenomena, make predictions about the world, and analyze their efficacy and validity
- Analyze problems and projects to be able to propose solutions
- Communicate about the impact of technology and the processes that are used to generate new ideas
- Collaborate with other individuals with diverse perspectives, skills, and backgrounds to address complex and open-ended problems

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Subject area	Education
Course Prefix & Number	ESC 715
Course Title	Restorative Practices/Restorative Justice: Professional Development
Description	Knowledge, skills, and abilities needed to design, implement and assess a restorative practices/restorative justice (RP/RJ) professional development program in schools and community organizations.
Pre/Co Requisites	
Credits	3
Hours	3
Liberal Arts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Course Attributes	Writing Intensive
General Education Component	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

**3. Rationale:**

For the past two years, the NYC Council and NYC Department of Education have been providing basic restorative practices/restorative justice (RP/RJ) training to NYC teachers. What now needs to be addressed is the development of a RP/RJ team leader or coordinator to support and guide a whole school or whole community to incorporate RP/RJ philosophy and practices. This will include the team leader or coordinator

developing, and implementing and assessing a coherent model of RP/RJ professional development. This course is one of four courses of a new 4-course RP/RJ Leadership certificate program [ESC 701, ESC 713 (in the catalog), ESC 715 and ESC 716 (submitted as experimental courses)] being developed in collaboration with the NYC Department of Education and RP/RJ organizations: Restorative Justice, James Baldwin High School; Restorative Justice, Satellite Academy; and School Culture, Office of Safety and Youth Development.

**4. Learning Outcomes (By the end of the course students will be expected to):**

- 1) Develop an understanding of the principles of the design and implementation of restorative practices and restorative justice- based professional development of a whole-school or community organization
- 2) Develop a school-wide and community organization leadership team that includes a range of diverse stakeholders (administrators, staff, parents, youth, young adults, safety officers, and community businesses).
- 3) Create and assess the restorative leadership team's development and identify areas of strengths and weaknesses
- 4) Apply assessment findings to modify a restorative leadership team's development
- 5) Apply Danielson's model of professional development

**5. Date of Departmental Approval: March 16, 2017**

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Subject area	Education
Course Prefix & Number	ESC 716
Course Title	Restorative Practices/Restorative Justice: Inquiry-Based Research
Description	Knowledge, skills, and abilities needed to assess short- and long-term impact and effective of restorative practices and restorative justice (RP/RJ) prevention and intervention programs.
Pre/Co Requisites	
Credits	3
Hours	3
Liberal Arts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Course Attributes	Writing Intensive
General Education Component	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

**3. Rationale:**

In K-12 schools, social work, justice and criminal systems a range of restorative justice prevention and intervention programs are being implemented. Critical attention now needs to be given to assessing both the short- and long-term impact of these programs on the development of healthy learning communities and the reduction of violence, harm and injury. This course will prepare current and future restorative practitioners,

whole-school and whole-community program coordinators to apply inquiry-based research methodologies to determine program effectiveness to include but not limited to social, emotional, intellectual, creative development and nonviolent conflict prevention and resolution. This course is one of four courses of a new 4-course RP/RJ Leadership certificate program [ESC 701, ESC 713 (in the catalog), ESC 715 and ESC 716 (submitted as experimental courses)] being developed in collaboration with the NYC Department of Education and RP/RJ organizations: Restorative Justice, James Baldwin High School; Restorative Justice, Satellite Academy; and School Culture, Office of Safety and Youth Development.

**4. Learning Outcomes (By the end of the course students will be expected to):**

- 1) Develop an understanding of the principles of the design and implementation of inquiry-based research
- 2) Implement, evaluate, and modify an inquiry-based research project
- 3) Apply inquiry-based research methodology to both individual and team projects
- 4) Implement findings of an inquiry-based research project
- 5) Determine if Institutional Review Board (IRB) approval is required and how to meet IRB requirements

**5. Date of Departmental Approval: March 16, 2017**