# SUNY ULSTER: COMPUTER SCIENCE A. S.
## THE COLLEGE OF SAINT ROSE: COMPUTER SCIENCE B.S.

## DEGREE REQUIREMENTS

**SAINT ROSE REQUIREMENTS:**                    **SUNY ULSTER EQUIVALENCIES:**

## I. LIBERAL EDUCATION REQUIREMENTS (41 cr.):

**L01: Expository Writing, Oral Communication, Research Techniques (4 cr.)**
ENG 105 (4)

ENG 102 College English II (3) and
COM 103 Oral Communication (3) or COM
105 Public Speaking (3) *Note 1*

**L02: Study of Language (3 cr.)**
Foreign Language, American Sign Language

Foreign Language Elective *Note 2\**

**L03: Historical Knowledge, Analysis, and Perspective (3 cr.)**
History

History Elective *Note 2\**

**L04: Artistic Knowledge and Interpretation: Literature (4 cr.)**
Literature

Literature Elective *Note 2\**

**L05: Artistic Knowledge and Interpretation (3 cr.)**
Art, Music, Communications, and Drama

Fine Arts Elective *Note 2\**

**L06: Philosophical, Spiritual, or Theological Inquiry (3 cr.)**
Philosophy or Religious Studies

PHI 205 Ethics (3) or Philosophy Elective
(3) *Note 2\**

**L07: Mathematics (3 cr.)**
Mathematics

MAT 170 Calculus I (4) *Note 3\**

**L08: Computer Science (3 cr.)**
Computers

CSC 150 Intro to Computer Science (4)
*Note 3\**

**L09: Scientific Knowledge and Inquiry (4 cr.)**
Laboratory Science (Biology, Chemistry, Physics or Earth Science)

Science w/Lab Elective *Note 2\**

**L10: Behavioral and Social Sciences 1 (3 cr.)**
Economics, Political Science or Business

Social Science Elective *Note 2\**

**L11: Behavioral and Social Sciences 2 (3 cr.)**
Psychology, Sociology, and Social Work

Social Science Elective *Note 2\**

**L12: Wellness and Physical Fitness (2 cr.)**
Physical Education

Physical Education Course *Note 2\*& 4*

**L13: Further Disciplinary Study (3 cr.)**
A second liberal education course in a same
discipline as a previously taken course.

## II. GENERAL ELECTIVES:

LIB 111 Information Literacy (1)
ENG 101 College English I (3)

**MINIMUM TOTAL HOURS REQUIRED: 122**          **MAXIMUM CREDIT HOURS TRANSFERABLE: 62**

# III. MAJOR REQUIREMENTS (61cr.):

| **Major in Computer Science:** | **SUNY Ulster Course Equivalencies:** |
|---|---|

CSC 202 Introduction to Programming (4)  —  CSC 150 Intro to Computer Science (4)

CSC 205 Windows Programming 1 (4)

CSC 252 Problem Solving with Java (4)  —  CSC 201 Data Structures (4)

CSC 302 Data Structures (4)  —  CSC 260 Theory and Practice of Object-Oriented Programming (3)

CSC 321 Database Management (4)

CSC 332 Microcomputer Architecture and Programming (3)  —  CSC 250 Computer Organization and Assembler Programming (3)

CSC 431 Algorithms (3)

CSC 432 Operating Systems (3)

CSC 433 Programming Languages (3)

CSC 434 Software Engineering (3)

MAT 190 Calculus 1 (4)  —  MAT 170 Calculus I (4)

MAT 191 Calculus 2 (4)  —  MAT 180 Calculus Ii (4)

MAT 184 Elementary Statistics (4)
    or
MAT 372 Introduction to Probability Theory (3)

MAT 220 Foundations of Mathematics (3)
    or
MAT 295 Discrete Math (3)  —  MAT 206 Discrete Mathematics (3)

## CSC Electives from the following: (12 cr.)

CSC 305 Windows Programming 2 (4)

CSC 311 Computer Graphics (3)

CSC 317 Forensic Computing (3)

CSC 342 Artificial Intelligence (3)

CSC 344 Computer Networks (3)

CSC 355 Internet Programming 1 (3)  —  CSC 131 Client-Side Web Development (4)

CSC 404 Animation and Rendering (3)

CSC 405 Computer Game Design (3)

CSC 414 Bioinformatics 1 (3)

CSC 415 Bioinformatics 2 (3)

CSC 444 Advanced Networking (3)

CSC 451 Embedded Systems 1 (3)

CSC 452 Embedded Systems 2 (3)

CSC 455 Internet Programming 2 (3)

CSC 453 Programming Mobile Devices (3)

CSC 460 Search and Information Retrieval (3)

## Notes for Ulster County Community College – The College of Saint Rose Computer Science B.S Agreement:

1) ENG 102 College English II and COM 103 Oral Communication (3) or COM 105 Public Speaking (3) at Ulster County Community College will transfer as ENG 105 (4 credits) and GEL 001 (2 credits of general elective) to complete the L01 requirement in Expository Writing, Oral Communication and Research at The College of Saint Rose.
2) 62 is the maximum number of credits allowed for transfer into The College of Saint Rose. All possible electives are listed in this agreement and the student, along with his/her advisor, should select the most appropriate courses to complete his/her degree while not unnecessarily exceeding the number of credits required for the A.S. degree. Students are encouraged to use their credits in electives at Ulster County Community College to fulfill liberal education requirements at The College of Saint Rose.
3) Math course and the computer science course taken for the major will also fulfill the respective liberal education requirement.
4) Students are required to have a minimum of 2 credits in physical education for graduation, but no more than a maximum of 4 credits.
5) A letter grade of C- or higher in each course is required for transfer into The College of Saint Rose. Any completed coursework with a grade lower than a C- will not be transferred.
6) This document is valid until the time which either party changes their respective program. At which point review and revision will be required.

\* The College of Saint Rose Transfer Equivalency Database and or catalog should be consulted to ensure that selected coursework will fulfill the appropriate Liberal Education Requirement as designated by the "L0" next to the course credits in the "LIBED" column: http://www.strose.edu/officesandresources/registrar/transferequivalency

**CONTACTS:**

**The College of Saint Rose:**
Robert J. Garofallou-Hogan,
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**SUNY Ulster:**
Kate Smith
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**SIGNATURES:**

**The College of Saint Rose**

John Avitabile
Department Chair, Computer Science

5/14/2014
Date

Richard Thompson
Dean, School of Math & Science

4/15/14
Date

Hadi Salavitabar
Provost/Vice-President for Academic Affairs

4/15/14
Date

**Ulster County Community College**

Steven Schimmrich
Chair of STEM

3/28/14
Date

John Ganio
Dean of Academic Affairs

3/28/14
Date

Donald Katt
President SUNY Ulster

3-28-14
Date