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

DEGREE REQUIREMENTS

SAINT ROSE REQUIREMENTS:

I. LIBERAL EDUCATION REQUIREMENTS (41 cr.):

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

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

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

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

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

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

L07: Mathematics (3 cr.)
Mathematics

L08: Computer Science (3 cr.)
Computers

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

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

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

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

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

II. GENERAL ELECTIVES:

SUNY ULSTER EQUIVALENCIES:

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

Foreign Language Elective Note 2*

History Elective Note 2*

Literature Elective Note 2*

Fine Arts Elective Note 2*

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

MAT 170 Calculus I (4) Note 3*

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

Science w/Lab Elective Note 2*

Social Science Elective Note 2*

Social Science Elective Note 2*

Physical Education Course Note 2* & 4

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:**
CSC 202 Introduction to Programming (4)  
CSC 205 Windows Programming I (4)  
CSC 252 Problem Solving with Java (4)  
CSC 302 Data Structures (4)  
CSC 321 Database Management (4)  
CSC 332 Microcomputer Architecture and Programming (3)  
CSC 431 Algorithms (3)  
CSC 432 Operating Systems (3)  
CSC 433 Programming Languages (3)  
CSC 434 Software Engineering (3)  
MAT 190 Calculus I (4)  
MAT 191 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)

**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 I (3)  
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)  

**SUNY Ulster Course Equivalencies:**
CSC 150 Intro to Computer Science (4)  
CSC 201 Data Structures (4)  
CSC 260 Theory and Practice of Object-Oriented Programming (3)  
CSC 250 Computer Organization and Assembler Programming (3)  
MAT 170 Calculus I (4)  
MAT 180 Calculus II (4)  
MAT 206 Discrete Mathematics (3)  
CSC 131 Client-Side Web Development (4)

**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/transfer equivalency](http://www.strose.edu/officesandresources/registrar/transfer equivalency)
CONTACTS:

The College of Saint Rose:
Robert J. Garofallou-Hogan,
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SIGNATURES:

The College of Saint Rose

John Avitable
Department Chair, Computer Science
4/14/2014

Richard Thompson
Dean, School of Math & Science
4/15/14

Hadi Salavitabar
Provost/Vice-President for Academic Affairs
4/15/14

Ulster County Community College

Steven Schimmrich
Chair of STEM
3/31/14

John Ganio
Dean of Academic Affairs
3/31/14

Donald Kutt
President SUNY Ulster
3-28-14

Date

Date

Date