Hudson Valley County Community College: Computer Information Systems A.S.
The College of Saint Rose: Computer Science B.S./
Computer Information Systems M.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, Linguistics,
Or Philosophy of 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:

Hudson Valley Equivalencies:

ENGL 101 English Composition I (3) AND
ENGL 102 English Comp II (3) NOTE 1

Foreign Language Elective (3)

History Elective (3)

Lib Arts & Science Elective (3) NOTE 2*

Fine Arts Elective (3)*

MATH 150 (4) NOTE 3

CISS 100 Fund of Info Processing (4)

Lib Arts & Science Elective (3-4) NOTE 4*

ECON 100 or 101 (4)

Lib Arts & Science Elective (3) NOTE 5*

CISS 101 Micro Applic Dev (3)
CISS 102 Unix Operating System (3)
CISS 210 Analysis/Design Info Sys (3)

Minimum Total Hours Required: 140 - 160

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 1 (4)
MAT 191 Calculus 2 (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 1 (3)
CSC 404 Animation and Rendering (3)
CSC 405 Computer Game Design (3)
CSC 414 Biinformatics 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)

**IV. REQUIREMENTS FOR M.S. (33cr.):**

**Master’s Degree Program Requirements:**

CIS 501 Algorithms & Data Structures (3)
CIS 502 Computer Architecture (3)
CIS 503 Database Theory & Design (3)
CIS 504 Data Communications (3)
CIS 505 User Interface Design (3)
CIS 507 Software Engineering (3)
CIS 508 Technical Communication (3)

**NOTE 11**

**Specialization Sequence:**

CIS 511 Game Design 1 (3)
CIS 512 Game Design 2 (3)
CIS 597 Master’s Project in Game Design (3)
OR
CIS 513 Bioinformatics 1 (3)
CIS 514 Bioinformatics 2 (3)
CIS 597 Master’s Project in Bioinformatics (3)
OR
CIS 515 Internet Programming 1 (3)
CIS 516 Internet Programming 2 (3)

**Hudson Valley Course Equivalencies:**

CISS 110 Programming & Logic I (4)
CISS 111 Programming & Logic II (4)
CISS 250 Database Mgt Systems (4) *NOTE 7*
CISS 280 Assembly Lang (4) *NOTE 7*
CISS 150 Operating Systems (3)

MAT 180 Calculus I (4) *NOTE 3*
MAT 190 Calculus II (4) *NOTE 3*
BADM 220 Statistics (4) *NOTE 6*

MAT 183 Discrete Math (4) *NOTE 3*

CISS 270 Network Infrastructure (3) *NOTE 7*
CISS 221 Advanced Web Design (3) *NOTE 7*

CISS 271 Network Management (3) *NOTE 7*
CISS 225 Adv Web Design-Server (3) *NOTE 7*

**NOTE 12**
Elective from the following (3 cr.):

CIS 511 Game Design 1 (3)
CIS 512 Game Design 2 (3)
CIS 513 Bioinformatics 1 (3)
CIS 514 Bioinformatics 2 (3)
CIS 515 Internet Programming 1 (3)
CIS 516 Internet Programming 2 (3)
CIS 517 Embedded Systems 1 (3)
CIS 518 Embedded Systems 2 (3)
CIS 530 Advanced Database (3)
CIS 531 Java Frameworks (3)
CIS 532 AJAX (3)
CIS 560 Search & Information Retrieval (3)

Notes for Hudson Valley Community College - The College of Saint Rose B.S./M.S. Agreement:

1) ENGL 101 and ENGL102 transfer in as ENG 105 (4 credits) and GEL 001 (2 credits of general elective) to complete the L01 requirement.

2) Students should use 3 credits of Liberal Arts & Science elective to take a Literature course that will fulfill the L04 Literature requirement. *

3) Students should use 6 credits of Liberal Arts & Science elective credit to take MATH 180 Calculus I, MATH 190 Calculus II, or MATH 183 Discrete Mathematics to fulfill the Liberal Education Mathematics and Mathematics requirements for the major.

4) Students are encouraged to use 3-4 credits of Liberal Arts & Science elective to take a Lab Science course. *

5) Students are encouraged to use 3 Liberal Arts/Sciences credits to take a Psychology, Sociology, Criminal Justice or Social Work course. *

6) Students should use their Math Elective credits to take BADM 220 Statistics, which transfers in as MAT 184 Elementary Statistics, a Major requirement.

7) Students should use CSC electives and Restricted Elective credits to take as many of CISS 221, CISS225, CISS 250, CISS 280, CISS 270, and CISS 271 as they can, keeping in mind that the maximum allowable transfer credits is 62. Students may also choose to take CISS 290 C++ Programming or CISS 200 COBOL to fulfill the last 3 credits of their CSC electives. CISS 290 and CISS 200 are equivalent to Saint Rose’s computer science electives.

8) The maximum number of credits allowed for transfer into Saint Rose is 62.

9) 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.

10) This document is valid until the time which either party changes their respective program. At which point review 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

11) The BS/MS program allows for up to 15 challenge credits. This allows a student to begin taking graduate courses during their senior year in place undergraduate electives. This also allows a student in the BS/MS program to finish both degrees in less than 155 credits (140 minimum).

12) All graduate level courses will be completed at The College of Saint Rose
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February 2011