

SCS Graduate Program Curricula 2009-2010

The following program requirements apply to SCS graduate students that begin their program in the 2009-10 academic year. Please note that you are bound to the curriculum requirements in effect in the quarter you start taking courses, not the quarter you are admitted. While we will make every reasonable effort to accommodate students whose programs change, this is not always possible. Northwestern University reserves the right to modify or discontinue any program without notice.

Click on the links below to review the curriculum for your program.

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Clinical Research and Regulatory Administration

Master of Science Degree Requirements

Courses	Units
<i>Core Courses (7)</i>	
CLIN_RES 400 Essentials of Initiating Clinical Research	1
CLIN_RES 401 Responsible Conduct of Research	1
CLIN_RES 402 Drug and Device Development	1
CLIN_RES 403 Clinical Research Design and Methodology	1
CLIN_RES 404 Research and Regulatory Administration	1
QARS 405 Applied Research and Writing	1
QARS 410 Introduction to Statistical Methods for Regulatory Compliance	1
<i>Electives (choose 2)</i>	
QARS 401 Regulation and Quality Systems	1
QARS 425 Quality Assurance Project Management	1
QARS 430 Ethical and Legal Issues in Regulation and Quality	1
QARS 450 Medical Device Regulations	1
QARS 460 Drug and Biologics Regulations	1
QARS 490 Special Topics in Regulatory Affairs	1
<i>Other Required Courses (2)</i>	
LEADERS 481 Foundations of Leadership	1
CLIN_RES 590 Capstone Project	1
<i>Total required units:</i>	11

Graduate Certificate Requirements

Courses	Units
<i>Core Courses (3)</i>	
CLIN_RES 400 Essentials of Initiating Clinical Research	1
CLIN_RES 401 Responsible Conduct of Research	1
CLIN_RES 402 Drug and Device Development	1
<i>Electives (choose 1)</i>	
CLIN_RES 403 Clinical Research Design and Methodology (Clinical Trials Conduct specialization)	1
CLIN_RES 404 Regulatory Support and Administration (Regulatory Administration specialization)	1
<i>Total required units:</i>	4

Computer Information Systems Master of Science Degree Requirements

Courses	Units
<i>Core Courses (6)</i>	
CIS 313 Telecommunications & Computer Networks	1
CIS 314 Object-Oriented Programming ¹	1
CIS 315 Advanced Object-Oriented Programming ²	1
CIS 317 Introduction to Databases	1
CIS 350 Strategic Information Systems	1
CIS 394 Software Project Management & Development	1
Electives (choose any 3 electives <u>or</u> 3 courses in an optional area of specialization)	
<i>Database & Internet Technologies</i>	3
<i>Information Systems Security</i>	3
<i>Software Development & Project Management</i>	3
<i>Information Systems Management</i>	3
Other Required Courses	
LEADERS 481 Foundations of Leadership	1
<i>One of the following</i>	
CIS 498 Computer Information Systems Project - <i>or</i> -	1
CIS 590 Capstone Project	1
<i>Total required units:</i>	11

¹ Students who completed CIS 212-CN 'Introduction to Object Oriented Programming' but not CIS 314 'Intermediate Object-Oriented Programming' prior to Fall 2008 may substitute an elective in place of the requirement to take CIS 314.

² Students who completed CIS 314 'Intermediate Object-Oriented Programming' but not CIS 315, 'Advanced Object Oriented Programming' prior to Fall 2008 may substitute an elective in place of the requirement to take CIS 315.

Professional Graduate Series Requirements

Please note: overlapping courses may count toward one PGS only

Database and Internet Technologies	Units
<i>Core Courses</i>	
CIS 314 Intermediate Object-Oriented Programming	1
CIS 317 Introduction to Databases	1
and one of the following:	
CIS 419 Web Application Development	1
CIS 431 Database Administration	1
CIS 435 Introduction to Data Warehousing and Data Mining	1
<i>Total required units:</i>	4

Information Systems Security	Units
<i>Core Courses</i>	
CIS 313 Telecommunications & Computer Networks	1
CIS 452 Fundamentals of Network Security	1
CIS 455 Business Continuity & Disaster Recovery	1
CIS 457 Management of Information Security	1
<i>Total required units:</i>	4

Software Project Management and Development	Units
<i>Core Courses</i>	
CIS 314 Intermediate Object-Oriented Programming	1
CIS 315 Advanced Object-Oriented Programming	1
CIS 316 Object-Oriented Analysis and Design	1
CIS 394 Software Project Management and Development	1
and one of the following:	
CIS 483 Software Testing and Quality Assurance	1
CIS 485 Software Systems Architecture	1
<i>Total required units:</i>	5

Information Systems Management	Units
<i>Core Courses</i>	
CIS 394 Software Project Management and Development	1
CIS 457 Management of Information Security	1
CIS 460 Information Technology Management	1
CIS 465 Information Technology Strategy	1
<i>Total required units:</i>	4

Creative Writing (MA)

Master of Arts Degree Requirements

Courses	Units
<i>Fiction Concentration</i>	
MCW 413 Studies in Fiction Writing	3
MCW 479 Poetry for Prose Writers	1
Five electives: may include internships, seminars, or independent studies (maximum of 2 independent studies and 1 internship); at least two electives must be literature classes, either MCW 490s and/or MALit courses.	5
MCW 590 Thesis Research	1
<i>Creative Nonfiction Concentration</i>	
MCW 461 Studies in Writing Creative Nonfiction	3
MCW 479 Poetry for Prose Writers	1
Five electives: may include internships, seminars, or independent studies (maximum of 2 independent studies and 1 internship); at least two electives must be literature classes, either MCW 490s and/or MALit courses.	5
MCW 590 Thesis Research	1
<i>Poetry Concentration</i>	
MCW 411 Studies in Writing Poetry	3
MCW 480 The Elements of Prose Genres for Poets	1
Five electives: may include internships, seminars, or independent studies (maximum of 2 independent studies and 1 internship); at least two electives must be literature classes, either MCW 490s and/or MALit courses.	5
MCW 590 Thesis Research	1
<i>Total required units:</i>	10

Professional Graduate Series Requirements

All Specializations	Units
<i>Core Courses</i>	
Four sections of MCW 411 Studies in Writing Poetry, 413 Studies in Fiction Writing, or 461 Studies in Writing Creative Nonfiction, depending on genre concentration	4
<i>Total required units:</i>	4

Creative Writing (MFA)
Master of Fine Arts Degree Requirements

Courses	Units
<i>Core Courses</i>	
Seven workshops in one genre (fiction, poetry, or creative nonfiction)	7
One cross-genre course (MCW 479 or 480)	1
MCW 570 Seminar on Teaching Creative Writing	1
MCW 579 Practicum in Teaching Creative Writing	1
<i>Electives</i>	
6 courses drawn from literature studies in the MALit program, MCW 490 special topics courses, and internships in publishing. Must include 3 literature courses, including at least 2 with a LIT prefix. May not include more than 2 independent study courses.	6
<i>Thesis</i>	
MCW 590 Thesis Research (must be registered for twice)	2
<i>Total required units:</i>	18¹

¹ Students who took MCW 495: Interdisciplinary Writing Studio may apply this credit to their workshop or elective requirement. Please contact your academic coordinator to officially apply this credit towards your degree.

Liberal Studies

Master of Arts Degree Requirements

Courses	Units
At least two of the following seminars:	2 - 3
IPLS 401 Seminar in Liberal Studies I	
IPLS 402 Seminar in Liberal Studies II	
IPLS 403 Seminar in Liberal Studies III	
Courses in humanities and related social sciences; may be applied toward a specialization (4 courses) in either: American Studies, History, Religious and Ethical Studies, or an individualized specialization	5 - 6
IPLS 590 Thesis Research	1
<i>Total required units:</i>	9

Professional Graduate Series Requirements

	Units
All Specializations	
<i>Core Courses</i>	
1 section of IPLS 401, 402, or 403	1
Any other 3 other MALS classes	3
<i>Total required units:</i>	4

Literature

Master of Arts Degree Requirements

Courses	Units
LIT 410 Introduction to Graduate Study	1
Literature Courses (400- or 500-level)	7
LIT 590 Thesis Research	1
<i>Total required units:</i>	9

Professional Graduate Series Requirements

	Units
All Specializations	
<i>Core Courses</i>	
English 410 Introduction to Graduate Study	1
Any other 3 MALit classes	3
<i>Total required units:</i>	4

Medical Informatics- On Campus Master of Science Degree Requirements

Courses	Units
Track Courses (as required upon admission)	0-4
<i>Clinical Track</i>	
CIS 313 Telecommunications & Computer Networks	1
CIS 317 Introduction to Databases	1
<i>Technologist Entry Path</i>	
MED INF 401 American Health Care System	1
MED INF 402 Introduction to Clinical Thinking	1
Core courses (7)	
PUB HLTH 302 Introduction to Biostatistics	1
MED INF 403 Introduction to Medical Informatics	1
MED INF 404 Health Care Enterprise Operations	1
MED INF 405 Health Care Information Tech Integration & Standards	1
MED INF 406 Decision Support Systems & Health Care	1
MED INF 407 Legal, Ethical & Social Issues in Informatics	1
MED INF 408 Medical Technology Acquisition & Assessment	1
Other Required Courses (2)	
LEADERS 481 Foundations of Leadership	1
<i>One of the following:</i>	
MED INF 498 Capstone Project – or -	1
MED INF 590 Thesis Research	1
Additional health industry or CIS electives necessary to reach 11 unit requirement	0-2
Total required units:	11-13

Professional Graduate Series Requirements

Medical Informatics	Units
any necessary prerequisite track courses, determined by SCS	0-4
<i>Core Courses</i>	
MED 403 Introduction to Medical Informatics	1
any three MED INF courses (except 590)	3
Total required units:	4-8

Medical Informatics- Distance Learning Master of Science Degree Requirements

Courses	Units
Track Courses (as required upon admission)	0-4
<i>Clinical Track</i>	
CIS 313-DL Telecommunications & Computer Networks	1
CIS 317-DL Introduction to Databases	1
<i>Technologist Track</i>	
MED INF 401-DL American Health Care System	1
MED INF 402-DL Introduction to Clinical Thinking	1
Core courses	
MED INF 403-DL Introduction to Medical Informatics	1
MED INF 404-DL Health Care Enterprise Operations	1
MED INF 405-DL Health Care Information Tech Integration & Standards	1
MED INF 406-DL Decision Support Systems & Health Care	1
MED INF 407-DL Legal, Ethical & Social Issues in Informatics	1
MED INF 408-DL Medical Technology Acquisition & Assessment	1
MED INF 409-DL Biostatistics	1
Other Required Courses	
MED INF 481-DL Foundations of Leadership	1
<i>One of the following:</i>	
MED INF 498-DL Capstone Project – or -	1
MED INF 590-DL Thesis Research	1
Additional health industry or CIS electives necessary to reach 11 unit requirement	0-2
Total required units:	11¹-13

¹ The minimum number of units required for the degree is 11. Students who have completed all other curriculum requirements and have fewer than eleven units should complete sufficient additional electives to meet this requirement.

Professional Graduate Series Requirements

Medical Informatics	Units
any necessary prerequisite track courses, determined by SCS	0-4
<i>Core Courses</i>	
MED 403-DL Introduction to Medical Informatics	1
any three MED INF-DL courses (except 590)	3
Total required units:	4-8

**Public Policy and Administration – On Campus
Master of Arts Degree Requirements**

Courses	Units
Core courses (7)	
MPPA 402 Elements of Public Finance & Budgeting	1
MPPA 403 Fundamentals of Public Administration	1
MPPA 405 Elementary Statistics for Political Research	1
MPPA 406 Analytic Methods for Public Policy Analysis	1
MPPA 407 Scope and Dynamics of Public Policy	1
MPPA 408 Sociology of Organizations	1
MPPA 409 Applied Research and Writing	1
Concentration area courses (choose four electives in one of these areas of concentration)	4
<i>Health Services Policy</i>	
<i>Public Policy</i>	
<i>Public Safety and Security</i>	
<i>Urban Policy and Planning</i>	
Other Required Courses	
MPPA 590 Thesis Research	1
LEADERS 481 Foundations of Leadership	1
Total Required Units	13

Professional Graduate Series Requirements

Please note: overlapping courses may count toward one PGS only

	Units
Public Safety and Security	
Core Courses	
MPPA 403 or 407	1
Any three courses from the PSS specialization	3
Total required units:	4

	Units
Urban Policy and Administration	
Core Courses	
MPPA 403 or 407	1
Any four courses from the UPA specialization	3
Total required units:	4

	Units
Public Policy and Administration	
Core Courses	
MPPA 403 or 407	1
Any three courses from MPPA curriculum	3
Total required units:	4

**Public Policy and Administration – Distance Learning
Master of Arts Degree Requirements**

Courses	Units
Core courses (11)	
MPPA 402-DL Elements of Public Finance & Budgeting	1
MPPA 403-DL Fundamentals of Public Administration	1
MPPA 404-DL Microeconomics for Public Policy and Administration	1
MPPA 405-DL Elementary Statistics for Political Research	1
MPPA 406-DL Analytic Methods for Public Policy Analysis	1
MPPA 407-DL Scope and Dynamics of Public Policy	1
MPPA 408-DL Sociology of Organizations	1
MPPA 409-DL Applied Research and Writing	1
MPPA 411-DL Legislative Process	1
MPPA 419-DL Strategic Policy Implementation	1
MPPA 452-DL The Global City	1
Other Required Courses (2)	
LEADERS 481-DL Foundations of Leadership	1
<i>One of the following:</i>	
MPPA 498-DL Capstone Project – or -	1
MPPA 590-DL Thesis Research	1
Total Required Units	13

Professional Graduate Series Requirements

Public Policy and Administration	Units
Core Courses	
MPPA 403-DL or 407-DL	1
Any three courses from MPPA-DL curriculum	3
Total required units:	4

Quality Assurance and Regulatory Science

Master of Science Degree Requirements

Courses	Units
Core Courses	
QARS 401 Regulation and Quality Systems	1
QARS 405 Applied Research and Writing	1
QARS 410 Introduction to Statistical Methods for Regulatory Compliance	1
QARS 420 Practical Laboratory Management	1
QARS 421 Applied Quality and Regulatory Practices	1
QARS 430 Ethical and Legal Issues in Regulation and Quality	1
QARS 435 Risk and Decision Management	1
Electives (any two elective QARS or any CRRA courses)	2
Other Required Courses	
LEADERS 481 Foundations of Leadership	1
QARS 590 Capstone Project	1
Total required units:	11

Professional Graduate Series Requirements

Quality Assurance and Regulatory Science	Units
Core Courses	
Any five courses from the MQARS curriculum	5
Total required units:	5

**Sports Administration
Master of Arts Degree Requirements**

Courses	Units
Core Courses (7)	
MSA 400 Sports in the Social Context	1
MSA 401 Sports Research Methods & Quantitative Analysis	1
MSA 402 Fundamentals of Sports Marketing	1
MSA 403 Management and Organization of Sports	1
MSA 404 Principles of Sports Finance & Accounting	1
MSA 405 Legal & Ethical Issues in Sports Management	1
MSA 406 Sports Risk Management	1
Concentration area courses (choose two electives in one of these areas of concentration)	2
<i>Sports Management</i>	
<i>Sports Marketing & Public Relations</i>	
Other Required Courses (2)	
LEADERS 481 Foundations of Leadership	1
MSA 590 Thesis Research/Capstone	1
Total required units:	11

Professional Graduate Series Requirements

Please note: overlapping courses may count toward one PGS only

	Units
Sports Management	
Core Courses	
MSA 400 Sports in the Social Context	1
MSA 401 Sports Research Methods & Quantitative Analysis	1
Any two additional MSA courses	2
Total required units:	4

	Units
Sports Marketing and Public Relations	
Core Courses	
MSA 400 Sports in the Social Context	1
MSA 401 Sports Research Methods & Quantitative Analysis	1
MSA 402 Fundamentals of Sports Marketing	1
Any one additional course from the Marketing and PR specialization	1
Total required units:	4