

CURRICULUM

1. Required MS Computer Science Category 'A' (Core) Courses (9 cr)

Course Number	Course Title	Cr	Course Director	Delivery Method
CSCI 5446	Theory of Automata	3	Tom Altman	Inclass
CSCI 5451	Algorithms	3	Tom Altman	Inclass
CSCI 5593	Advanced Computer Architectures	3	Gita Alaghband	Inclass
CSCI 5573	Operating Systems	3	Ilkyeun Ra	Inclass

2. Required MS Computer Science Category 'B' (Elective) Courses (12 cr)^{†‡}

Course Number	Course Title	Cr	Course Director	Delivery Method
CSCI 5211	Mobile Computing and Programming	3	(Tam Vu)	Inclass
CSCI 5551	Parallel and Distributed Systems	3	(Gita Alaghband)	Inclass
CSCI 5559	Database Systems	3	(Farnoush Banaei-Kashani)	Inclass
CSCI 5565	Introduction to Computer Graphics	3	(Min Choi)	Inclass
CSCI 5585	Advanced Computer Graphics	3	(Min Choi)	Inclass
CSCI 5595	Computer Animation	3	(Min Choi)	Inclass
CSCI 5702	Data Mining and Analytics	3	(Farnoush Banaei-Kashani)	Inclass
CSCI 5799	Cloud Computing	3	(Ilkyeun Ra)	Inclass
CSCI 5800	Special Topics Courses Topics include: Introduction to Data Science (Farnoush Banaei-Kashani), Big Data Systems (Farnoush Banaei-Kashani), Machine Learning (Ashis Biswas), and Advanced Data Science (Farnoush Banaei-Kashani), etc.	3	Alternating	Inclass
CSCI 7551	Parallel and Distributed Systems	3	(Gita Alaghband)	Inclass
CSCI 7582	Artificial Intelligence	3	(Boris Stilman)	Inclass
CSCI 7595	Computer Animation	3	(Min Choi)	Inclass
CSCI 7702	Data Mining and Analytics	3	(Farnoush Banaei-Kashani)	Inclass
CSCI 7799	Cloud Computing	3	(Ilkyeun Ra)	Inclass

[†] For a course to count as a category B course it must be taught by a full time CS faculty member.

[‡] Course offerings vary from semester to semester.

3. MS Track Electives (9 cr)

Course Number	Course Title	Cr	Course Director	Delivery Method
BIOS 6611 ^{C1}	Biostatistical Methods I	3	Juarez-Colunga/Baron	Inclass - every fall
BIOS 6612 ^{C2}	Biostatistical Methods II	3	Lutz	Inclass – every spring
BIOS 6660 ^{C2}	Analysis of Biomedical Big Data Using R and Bioconductor	3	Phang	Inclass – variable terms
BIOS 6680 ^{C2}	SAS Database Design and Management	3	Blatchford	Inclass – every fall
BIOS 6685 ^{C2}	Intro to Public Health Informatics	3	Bondy	Inclass – variable terms
BIOS 7659 ^{C3}	Statistical Methods in Genomics	3	Kechris	Inclass – variable terms
CPBS 7711 ^{C3}	Biomedical Informatics	4	Hunter	Inclass – every fall

CPBS 7630 ^{C3}	Computational Methods to Address Big Data Challenges in Biomedicine	3	Costello	Inclass – variable terms
MOLB 7620 ^{C3}	Genomics	2	Sikela	Inclass – every spring
MOLB 7621 ^{C3}	Genome Analysis Workshop	3	Hesselberth	Inclass – every spring
CANB 7640 ^{C3}	Practical Bioinformatics for Large-Scale Genomics Data Mining	2	Tan	Inclass – variable terms

Take one from each of the lists: “C1” (introductory statistics, pre-requisite for many other courses), “C2” (other Biostatistics or Public Health domains), and “C3” (Genomics or Bioinformatics domains)

4. MS Thesis (6 cr)

Sample 2-year MS Schedule Fall entrance:

Year 1 Fall MS CS Core - Cat A (3 cr) MS CS Core - Cat A (3 cr) MS CS Elective - Cat B (3 cr)	Year 1 Spring MS CS Core - Cat A (3 cr) MS CS Elective - Cat B (3 cr) MS CS Elective - Cat B (3 cr)	Year 1 Summer MS Track Elective (3 cr)
Year 2 Fall MS Track Elective (3 cr) MS CS Elective - Cat B (3 cr)	Year 2 Spring MS Track Elective (3 cr) MS Thesis (3 cr)	Year 2 Summer MS Thesis (3 cr)