

## Clinical Informatics (CI) Curriculum - PhD $\geq$ 55 hours (inclusive of the MS hours)

### Biomedical Informatics Core: .....(12 hours)

BMIG 5011 Introduction to Biomedical Informatics I and lab (4 hours)

BMIG 5012 Introduction to Biomedical Informatics II and lab (4 hours)

BMIG 5010 Project Rotation in Biomedical Informatics (2 hours)\*

\*two rotations required for the core for a total of 4 credit hours

### Background necessary for research area .....( $\geq$ 6 hours, PhD)

Clinical Informatics students need foundational courses in both the biological/clinical and computational sciences. Necessary topics differ according to the research area. Examples are listed below.

#### (1) Biological sciences\*

PHYO 5013 Physiology, NBDS 5093 Cell Biology, PHYO 5112 Gene Expression, BMIG 5115 Healthcare in the United States,

\*Medical or Nursing School clinical courses may count towards the Biological/clinical sciences requirement in the CI or CRI tracks.

#### (2) Computational sciences

IFSC 7320 Database Systems and Information Architecture, IFSC 7370 Big Data (includes no-SQL Databases), BMIG 6012 Data Warehousing, Aggregation, and Reporting

### Specialty Track Courses: .....( $\geq$ 9 hours, PhD)

BMIG 5112 Introduction to Human Computer Interaction (3 hours)

BMIG 5116 Managing Organizations, People and Projects (3 hours)

BMIG 5017 Clinical Data Standards (1 hour)

BMIG 5013 Health Information Systems (1 hour)

BMIG 6110 Clinical Decision Support (2 hours)

BMIG 5012 Medical Decision-making (1 hour)

BMIG 6012 Data Warehousing, Aggregation, and Reporting (1 hour)

### Research Methods and Conduct: .....( $\geq$ 28 hours, PhD)

BMIG 6050 Research Design (3 hours)

PCOL 5211 – 5241 Scientific Communication and Ethics (4 semesters, 1 credit hour each)

BMIG 5800 Thesis (6 hours MS)

BMIG 6800 Dissertation research ( $\geq$  18 hours PhD)

BMIG 6215 Research (0 hours MS, variable PhD)

BMIG 5801 Capstone Project (Graduate Certificate only) (3 hours)

BIOM 5190 Research and Application Seminar (0 hour MS, 3 hours PhD)

### Free Electives: .....( $\geq$ 0 hours, PhD)

Chosen based on need to support master's or doctoral research. This may include course listed below.