

Fall 2019					
Area 1 - Biomedical Informatics Foundations and Applications - 12 hours Research Foundations - Choose 1 3 CLEM HLTH 8210 Health Research 1: Design and Measurement 3 MUSC ¹ HIN 708 Applied Statistical and Research Methods 3 MUSC ¹ DHA 866 Applied Research Biomedical Informatics Foundations - Both 3 MUSC ¹ BDSI 701 Intro to Biomedical Informatics 3 MUSC ¹ BDSI 702 Biomedical Data Standards and Terminologies Track Specific Course - Choose 1 3 MUSC ¹ BDSI 711 Precision Medicine Informatics 3 MUSC ¹ BDSI 712 Clinical and Translational Informatics 3 CLEM HLTH 8900 Population Health Informatics		Area 2 (continued) - Computing, Math, Stats, and Engineering - 12 hours Math - Choose 1 3 CLEM MATH 8050 Data Analysis 3 CLEM STAT 8010 Statistical Methods 4 MUSC ¹ BMTRY 700 Introduction to Clinical Biostatistics Machine Learning/Data Science - Choose 1 3 CLEM CPSC 8100 Intro to Artificial Intelligence 3 CLEM CPSC 6300 Applied Data Science 3 MUSC ¹ BDSI 721 Applied Machine Learning Other - Choose 1 3 CLEM STAT 8190 Biostatistics 3 CLEM HLTH 8310 Quantitative Analysis in Health Research I 4 MUSC ¹ BMTRY 701 Biostatistical Methods II 3 CLEM CPSC 8650 Data Mining 3 CLEM ECE 8560 Pattern Recognition 3 CLEM CPSC 8480 Network Science 3 CLEM MATH 8070 Applied Multivariate Statistical Analysis 3 MUSC ¹ BMTRY 719 Bayesian Biostatistics 3 CLEM CPSC 8040 Data Visualization 3 CLEM CPSC 8810 Deep Learning 3 CLEM ECE 6310 Introduction to Computer Vision 3 CLEM ECE 8770 Computer Vision 3 CLEM ECE 8470 Digital Image Processing 3 CLEM BIOE 6310/11 Medical Imaging 3 MUSC ¹ BIOMI 812 Signal and Image Processing 3 CLEM MATH 6410 Introduction to Stochastic Models 3 CLEM ECE 6420 Knowledge Engineering 3 CLEM IE 8030 Engineering Optimization and Applications 3 CLEM IE 8520 Prescriptive Analytics 3 CLEM PADM 8420 GIS for Public Administrators 3 MUSC ¹ DPHS NEW GIS and Mapping for Public Health 3 CLEM CPSC 8400 Design & Analysis of Algorithms 3 CLEM CPSC 8380 Advanced Data Structure		Area 3 - Population Health, Health Systems, and Policy - 5-6 hours Choose 2 - Course Titles Must Be Different 3 CLEM HLTH 8110 Health Care Delivery Systems 3 CLEM HLTH 8020 Health Economics 3 CLEM HLTH 8100 Health Policy 3 MUSC ¹ HAP 704-02 Health Policy 2 CLEM HLTH 8140 Health Systems Quality Improvement 3 MUSC ¹ HAP 632-02 Quality Management of Health Services 3 MUSC ¹ HAP 735-02 Health Law and Risk Management 3 MUSC ¹ HIN 716 Ethical, Legal, and Regulatory Issues in Health Informatics 2 CLEM HLTH 8130 Population Health and Research 3 CLEM HLTH 8090 Epidemiology 3 MUSC ¹ BMTRY 736 Foundations of Epidemiology I 3 MUSC ¹ BMTRY 747 Foundations of Epidemiology II 3 MUSC ¹ DHA 850 Population Health Management	
Area 2 - Computing, Math, Stats, and Engineering - 12 hours Systems and Data Base Management - Choose 1 3 CLEM CPSC 6620 Database Management System 3 CLEM CPSC 8620 Database Management System Design 3 CLEM CPSC 8470 Introduction to Information Retrieval 3 MUSC ¹ HIN 700 Database Management 3 CLEM CPSC 6550 Computational Science: Methods & Software Systems 3 CLEM ECE 8780 General Purpose Computation on GPUs 3 CLEM ECE 8780 High-Performance Computing with GPUs 3 CLEM CPSC 8200 Parallel Architectures 3 CLEM ECE 6730 Introduction to Parallel Systems 3 CLEM ECE 8750 Peer-to-Peer, Wireless, and Cloud Computing 3 CLEM CPSC 8490 Principles of Scientific Computing 3 CLEM CPSC 8300 Systems Modeling 3 CLEM CPSC 6140 Human and Computer Interaction 3 CLEM HCC 8310 Fundamentals of Human-Centered Computing 3 CLEM IE 6880 Human Factors Engineering 3 CLEM IE 8000 Human Factors Engineering 3 CLEM CPSC 8710 Foundations of Software Engineering 3 CLEM CPSC 8700 Software Design		Area 4 - Domain Biology/Medicine - 3-4 hours Choose 1 3 CLEM BIOE 8460 Biomedical Basis for Engineered Replacement 3 MUSC ¹ CGS 765 Proteins: Dynamic Structure and Functions 4 MUSC ¹ CGS 766 Genes: Inheritance and Expression 3 MUSC ¹ CGS 767 Cells: Organization and Communication 3 CLEM BCHM 6360 Molecular Biology: Genes to Proteins 3 CLEM BCHM 6430 Molecular Basis for Disease 3 CLEM GEN 6700 Human Genetics 3 CLEM BIOL 6030 Introduction to Applied Genomics			
¹ Clemson students taking MUSC courses will register with course number CPSC 8810					