



DEPARTMENT OF COMPUTER & ELECTRICAL
ENGINEERING AND COMPUTER SCIENCE

College of Engineering & Computer Science
Florida Atlantic University

MASTER OF SCIENCE WITH MAJOR IN BIOENGINEERING STUDENT WORKSHEET
Fall 2011 Semester (Version 2.0, 6/6/2011)

Name: _____ Z#: _____ Advisor: _____

Date of Admission: _____ Date of Candidacy: _____

Undergraduate Institution/Year: _____ GPA: _____ Major: _____

GRE/Year: _____ TOEFL: _____ Catalog Followed: _____

Program Core Courses (12 Credits)

- BME 5000 Introduction to Bioengineering (3 credits) _____
BME 5743 Biosystems Modeling and Control (3 credits) _____
BME 6762 BioInformatics: Bioengineering Perspectives (3 credits) _____
BSC 6935 Biotechnology Lab (3 credits) _____ (See Dr. Binnering regarding lumping the two 2-credit lab courses BSC 4403L Biotechnology Lab 1 and BSC 4448L Biotechnology Lab 2 into a single 3-credit course)

Deficiency Requirement (Not counted in the total program credits)

- PCB 3063 Genetics (4 credits) _____**

Electives:

Thesis Option 12 credits of electives (at least 9 credits from Group A below)

Non Thesis Option 21 credits of electives (at least 12 credits from Group A below)

Group A: Engineering, Computer Science and Bioengineering Electives

Computer & Electrical Engineering & Computer Science Bioengineering Electives (No limit on the number of courses that can be chosen from the list below)

- CAP 5615 Introduction to Neural Networks _____
 CAP 6411 Foundations of Vision _____
 CAP 6512 Evolutionary Computing _____
 CET 5888 Automatic Biometrics _____
COT 5970 Intro to Data Mining and Machine Learning _____
 COT 6930 Data Mining and BioInformatics _____
~~EEL 4930 Biology for Bioengineers (3 credits) and Lab (1 credit) _____~~
 EEL 5661 Robotic Applications _____ **Thesis Option BME 6971 (6 credits) _____**
 EEL 5934 Bio-Imaging _____ **Non Thesis Option – DIS Research Project (3 credits) _____**
 EEL 6815 Neural Network Modeling _____
BME 6905 DIS (3 credits) _____
 EEL 5934 BioSignal Processing (3 credits) _____
EEL 6935 Tissue Engineering _____ [added in place of Biology for Bioengineers]

Computer & Electrical Engineering & Computer Science Other Electives (Limit of 6 credits)

- CAP 6415 Computer Vision (3 credits) _____ (also offered as EEL 6935)
 CAP 6673 Data Mining and Machine Learning (3 credits) _____
 COP 6578 Web Mining _____

COP 6579	Advanced Data Mining _____
COP 6726	New Directions in Database Systems (3 credits) _____
COP 6731	Theory and Implementation of Database System _____
EEL 5526	Digital Processing of Signals _____
EEL 5934	Modern Control _____
EEL 6585	Digital Processing of Speech Signals _____
EEL 6819	Neural Complex and Artificial Neural Networks _____
COT 6930	Visual Information Retrieval (3 credits) _____
Other	(as approved by student's advisor) _____

Mechanical Engineering Electives (Limit of 6 credits)

BME 6222	Molecular Cellular & Tissue Biomechanics _____
BME 6572	Nanotechnology _____
BME 6638	Fields Forces and Flows in Biological Systems _____
EML 6930	Biomechanics _____

Group B: Science Electives

Biology Electives: (Limit of 9 credits)

BSC 4806	Biology of Cancer _____
BSC 6617	BioInformatics (4 credits) _____
BSC 6936	Practical Cell Neuroscience (3 credits) _____
MCB 4203	Medical Bacteriology (3 credits) _____
MCB 6930	Advanced Topics in Microbiology _____
PCB 3703	Human Morphology and Function I (3 credits) plus PCB 3703L (Lab) (1 credit) _____
PCB 3704	Human Morphology and Function II (3credits) plus PCB 3704L (Lab) (1 credit) _____
PCB 4233	Immunology _____
PCB 4843C	Practical Cell Neuroscience (3 credits) _____
PCB 6236	Advanced Immunology _____
PCB 6849	Cellular Neuroscience and Disease _____
Other	(as approved by student's advisor) _____

Chemistry Electives: (Limit of 6 credits)

CHM 4139	Bioanalytical Instrumentation and Lab (4 credits) _____
BCH 5415	Biochemistry of the Gene _____
BCH 6740	Advanced Biochemistry _____
CHM 6157	Instrumentation _____
Other	(as approved by student's advisor) _____

Complex Systems and Brain Science: (Limit of 6 credits)

ISC 5465	Cognitive Neuroscience _____
ISC 6452	Cognition and Complex Systems _____
ISC 6460	Computational Neuroscience 1 _____
ISC 6464	Computational Neuroscience 2 _____
ISC 6447	Noninvasive Brain Recording _____
ISC 6930	Auditory Neurodynamics _____
ISC 6930	Neuroscience 3 _____
ISC 6930	Traumatic Brain Injury _____
PSB 6345	Neuroscience 1 _____
PSB 6346	Neuroscience 2 (3 credits) _____

Physics and Math Electives (Limit of 6 credits)

PHY 6938	Medical Imaging Physics (3 credits) _____
RAT 6628	Radiation Therapy Physics (3 credits) _____
RAT 6629	Advanced Photon Beam Radiation Therapy _____
RAT 6686	Radiation Physics (3 credits) _____
STA 5195	Biostatistics _____

Group C: Other Electives

Other Electives (Limit of 6 credits)

College of Business Elective (as approved by advisor) _____

College of Biomedical Science Elective (as approved by advisor) _____

Advisor Approval _____

Date _____