Genetics, Genomics and Bioinformatics

UAB GRADUATE BIOMEDICAL SCIENCES

2017-2018 MSTP Training Plan

	Fall Term*	Spring Term*	Summer Term*
GS1	**Required Coursework:** **GRD 717**: Principles of Sci Integrity (Bioethics) **MSTP 798:** Non-dissertation research **Biostatics Course (See Page 2)** **Elective/Advanced Course(s):** A total of 3 advanced courses which should be decided by mentor and thesis committee. **Journal Club:** Choice of JC is discretion of student/mentor **Seminar:** Participation/Attendance required *-Registration not required*	**Required Coursework (See MS2 Schedule):** *We recommend the following GGB block:* **GBS 724:** Principles of Human Genetics (1.8.18 – 2.2.18) **GBS 720**: Genomic Structure/Function (2.5.18 – 3.2.18) **GBS 722**: Bioinformatics (3.5.18 – 3.30.18) **GBSC 718:** Epigenetics (4.2.18 – 4.27.18) **MSTP 798:** Non-dissertation research **Elective/Advanced Course(s):** A total of 3 advanced courses which should be decided by mentor and thesis committee. **Journal Club:** Choice of JC is discretion of student/mentor **Seminar:** Participation/Attendance required *-Registration not required*	**Required Coursework:** **GBS 717:** Methods & Scientific Logic **MSTP 798:** Non-dissertation research **Elective/Advanced Course(s):** A total of 3 advanced courses which should be decided by mentor and thesis committee. **Journal Club:** None **Seminar:** None
GS2	**Required Coursework:** **MSTP 798:** Non-dissertation research **Elective/Advanced Course(s):** A total of 3 advanced courses which should be decided by mentor and thesis committee. **Journal Club:** Choice of JC is discretion of student/mentor **Seminar:** Participation/Attendance required *-Registration not required* **Committee formed & Committee Meeting**	**Required Coursework:** **MSTP 798:** Non-dissertation research **Elective/Advanced Course(s):** A total of 3 advanced courses which should be decided by mentor and thesis committee. **Journal Club:** Choice of JC is discretion of student/mentor **Seminar:** Participation/Attendance required *-Registration not required* ****Qualifying Exam/Admission to Candidacy**	**Required Coursework:** **MSTP 799:** Dissertation research **Elective/Advanced Course(s):** A total of 3 advanced courses which should be decided by mentor and thesis committee. **Journal Club:** None **Seminar:** None
GS3	**Required Coursework:** **MSTP 799:** Dissertation research **Journal Club:** Choice of JC is discretion of student/mentor **Seminar:** Participation/Attendance required *-Registration not required* **Committee Meeting**	**Required Coursework:** **MSTP 799:** Dissertation research **Journal Club:** Choice of JC is discretion of student/mentor **Seminar:** Participation/Attendance required *-Registration not required*	**Required Coursework:** **MSTP 799:** Dissertation research **Journal Club:** None **Seminar:** None **Committee Meeting**
GS4	**Required Coursework:** **MSTP 799:** Dissertation research **Journal Club:** Choice of JC is discretion of student/mentor **Seminar:** Participation/Attendance required *-Registration not required*	**Required Coursework:** **MSTP 799:** Dissertation research **Journal Club:** Choice of JC is discretion of student/mentor **Seminar:** Participation/Attendance required *-Registration not required* **Committee Meeting**	**Required Coursework:** **MSTP 799:** Dissertation research **Dissertation Defense**** (public & private) **Graduation**

* Students must register for 9 hours each semester; any hours over must be approved by the MSTP Director.
- Must obtain permission of Thesis Mentor, Theme Director, and MSTP Director to register for Career Development courses (e.g., GRD and CIRTL).

**Students must be admitted to candidacy for a minimum of 1 year before thesis defense.

Additional theme requirements

- Publications: Two accepted or published papers
- Presentations: At least one (1) presentation at a national or international scientific meeting

Additional MSTP Requirements

- MSTP 794 (1): Translational Research Seminar Series (Fall, Spring, Summer)
- MSTP 795 (1): Continuing Clinical Education (Fall, Summer)
- MSTP 798 (1-8): Non Dissertation Hours
- MSTP 799 (1-8): Dissertation Hours (must be Admitted to Candidacy)
- Submission of F30/F31 **on or before** April of GS2 Year
- Committee Meetings every 6 months

Updated 11.28.17 JS; 9.21.17 RLS, RL

Biostatistics Courses available for MSTP Students:

GBSC 731: Introductory Biostatistics for Graduate Biomedical Sciences. - This course has been specifically designed for the GBS students. Fall.

Note: often BST 611 and 612 are taken together.
BST 611. Intermediate Statistical Analysis I. - Students will gain a thorough understanding of basic analysis methods, elementary concepts, statistical models and applications of probability, commonly used sampling distributions, parametric and non-parametric one and two sample tests, confidence intervals, applications of analysis of two-way contingency table data, simple linear regression, and simple analysis of variance. Students are taught to conduct the relevant analysis using current software such as the Statistical Analysis System (SAS). 3 hours. Fall.

BST 612. Intermediate Statistical Analysis II. - This course will introduce students to the basic principle of tools of simple and multiple regression. A major goal is to establish a firm foundation in the discipline upon which the applications of statistical and epidemiologic inference will be built. Prerequisite: BST 611 or Permission of Instructor. 3 hours. Spring.

Note: often BST 621 and 622 are taken together.
BST 621 - Statistical Methods I. - Mathematically rigorous coverage of applications of statistical techniques designed for biostatistics majors and others with sufficient mathematical background. Statistical models and applications of probability; commonly used sampling distributions; parametric and nonparametric one and two sample tests and confidence intervals; analysis of contingency tables; simple linear regression and analysis of variance. Prerequisites: A year of calculus and linear algebra. 3 hours. Fall.

BST 622 - Statistical Methods II. - Continuation of concepts in BST 621, extended to multiple linear regression; analysis of variance, analysis of covariance, multiple analysis of variance; use of contrasts and multiple comparisons procedures; simple and multiple logistic regression, and an introduction to survival analysis. Prerequisites: BST 621. 3 hours. Spring.