# BIOCHEMISTRY (GS03)

Course descriptions in school catalogs and the Course Search (https://catalog.uth.edu/course-search/)are correct at the time of publication. See myUTH (https://uthidp.uth.edu/nidp/saml2/sso/?id=Campus-Affiliate-LOA2-DUO&sid=0&option=credential&sid=0) for more recent course information and to register for courses.

**GS03 1011 Emerging Fields in Biochemistry and Molecular Biology: RNA Biology (1 Credit)**
Prerequisite: None. The goal of this mini-course is to learn cutting-edge RNA biology within a historical context. This course will focus on recent research in RNA biology: differential RNA processing and stability (splicing, polyadenylation, and turnover), the functional significance of various classes of non-coding RNAs (microRNAs, lncRNAs, cRNAs, ceRNAs, eRNAs, etc.), the CRISPR/Cas9 system, and RNA epitranscriptomics (RNA methylation and terminal uridylation). Class lectures and discussions will be predominantly student-led with assistance of topic area experts. Overall, there will be 12 class meetings (two meetings per week) at 1.25 hours each. Letter Graded

**GS03 1023 Current Methods in Biochemistry and Cell Biology (3 Credits)**
Prerequisites: Foundations of Biomedical Research (GS21 1017) or two semesters of undergraduate biochemistry. The goal of this course is to instruct students in cutting edge methodologies that relate to both structural and molecular biology. The class will consist of 43 1-hour lectures held on Monday, Wednesday, and Friday. Individual lecturers are chosen from multiple GSBS Graduate Programs based on their expertise in the relevant technologies. The lectures will provide a sound foundation in the principles, appropriate applications, and limitations of a repertoire of techniques ranging from qRT-PCR to metabolomic profiling to basic recombinant protein expression and analysis. The course is designed to act synergistically with techniques covered in the Core Course. Letter Graded

**GS03 1111 Scientific Writing for Grant Proposals (1 Credit)**
Prerequisite: Foundations of Biomedical Research (GS21 1017). The goal of this mini-course will be to learn how to write an effective grant proposal. There will be formal lectures on the components of an NIH grant followed by writing workshops. The course will also include a mock study section with peer review of the written proposals. This course fulfills the GSBS writing requirement. Letter Graded

**GS03 1711 Seminars in Biochem/Molecular Biology (1 Credit)**
Prerequisite: General knowledge of biochemistry. This course will consist of formal seminars given by staff and visiting scientists in the broad disciplines of biochemistry and molecular biology. Pass/Fail