

BIOL6355 - The Nucleus

[BIOL 6355](#) The Nucleus (3 semester credit hours) The nucleus is the defining feature of all eukaryotes. It contains our chromosomes and is the command center of all our cells. In the nucleus, our genetic information is interpreted, protected, duplicated and modified. Central control of gene expression occurs in the nucleus by transcription and post-transcription mechanisms. Moreover, the nucleus is organized into various functional compartments that specialized in transcription, splicing, rRNA processing and repression. The course will provide a broad overview of functional organization of the nucleus using recent primary literature from the field, focused particularly on genomic analyses of nuclear function. The course will introduce students to seminal works in the field and recent developments with the goal of instilling critical understanding of structure and function of the nucleus. Advanced knowledge of molecular biology is essential. Prior course work on genetics, genetic analysis and genomics is strongly recommended. Instructor consent required. (3-0) Y