BMEN6378 - Mechanobiology for Engineers

**BMEN 6378** Mechanobiology for Engineers (3 semester credit hours) This course will introduce principles by which mechanical forces regulate biological processes in cells and tissues in healthy and diseased states. In order to understand mechanobiology from an engineering perspective, this course will review aspects of solid and fluid mechanics, cell biology, intracellular polymer mechanics, cellular mechanics and mechanotransduction, disease mechanisms, biological modeling and research methodology. In addition, the impact of mechanobiology in bone, arteries and various cell types will be discussed. (3-0) T