

## MCEN 4228/5228: 3D Bioprinting & Biofabrication

### A. COURSE OBJECTIVES:

This course is of interest for students with a bio/medical, material chemistry or engineering background interested in the application of 3D printing and other 3D fabrication techniques in the field of medicine. It will provide insight in the opportunities of additive manufacturing technologies, micro/nano devices and 3D printing in biomedical applications. It will provide the basics of 3D printing and additive manufacturing and devices used for biofabrication, and the introduction to 3D design. In addition, it will also provide insight in the specific challenges encountered when translating 3D printing to biofabrication, such as the development of specific bioinks and the required control over processing conditions. Finally, it will provide state-of-the-art examples of how currently biofabrication is translated from bench towards the bedside.

### B. BASIC INFORMATION

**Course instructor:** Prof. Wei Tan

**Contact information:** ECOT 516, Phone: (303)492-239, Email: wtan@colorado.edu

**Class hours & locations:** 9 to 11:30am, M/WMT /F2 ET Q q 0.00000912 04612 792 re W\* n

