While emerging technologies such as tissue engineering offer exciting alternative therapies to tissue and organ transplantation, many challenges remain with respect to engineering functional tissues. This shortcoming is largely due to a lack of understanding of how cells respond to their three-dimensional environment. Towards engineering functional tissues, our group investigates the effects of various biophysical and biochemical cues through a combination of biomimetic hydrogels and bioreactors. Our approach is to combine novel hydrogel architectures and chemistries with mechanical loading to capture the complex environment in musculoskeletal tissues. In this seminar, I will highlight some of our recent efforts focusing on cartilage, bone, and tendon. Together, our research program aims to provide new insights into how biophysical and biochemical cues from the scaffold and external mechanical forces impact cells in 3D and then to use this information to design advanced strategies for growing living tissues.

THURSDAY, DECEMBER 6, 2012
COOKIES AND COFFEE -- 2:45 P.M.
SEMINAR -- 3:00 P.M.
SARKEYS ENERGY CENTER, ROOM M-204

This is a required seminar for CHE 5971

Accommodations on the basis of disability are available by contacting the office before the event.