This course will use general science and research articles to explore some of the tremendous recent advances in biophysics. Includes will be new forms of optical imaging techniques, new means of controlling single particles (e.g. with optical tweezers, patch clamping…), new means of engineering immuno-response to better fight diseases and bioterrorism, new advances in understanding integral membrane structures (such as the recent x-ray crystallography of the potassium channel which won a Nobel prize in 2003)… The students are expected to read weekly papers (along with whatever papers are needed to understand them), write a 1 page summary of those papers, participate in discussion, give a speech covering some research topic in greater depth, and write a final report. This course is intended as a seminar of juniors and seniors majoring in the physical sciences. (Others allowed in with permission of the instructor.)