STRIATED MUSCLE ANATOMY

I. Sarcomere = the smallest functional unit of both skeletal (and cardiac) muscle

- composed of a thick filament (myosin) and multiple thin filaments (actin)

A. Actin

B. Tropomyosin

C. Troponin

D. Myosin
II. Anatomical relationship between sarcoplasmic reticulum and the sarcomere

III. The Role of Sarcoplasmic [Ca$^{2+}$]

- Although ATP is the ultimate source of energy for contraction, skeletal muscle regulates force of contraction by altering [Ca$^{2+}$], not [ATP]
IV. Sliding Filament Mechanism of Contraction (a.k.a. the cross-bridge cycle)

Net Result: