Laboratory Exercise 1: Articulations and Body Movements

Outline – specific objectives

1. Structural classification of joints – features and examples
   A. fibrous joints
   B. cartilaginous joints
   C. synovial joints

2. Functional classification of joints – basis for classification, correlate with above structural classification
   A. synarthroses
   B. amphiarthroses
   C. diarthroses

3. Fibrous joints – structural features, examples
   A. sutures
   B. syndesmoses

4. Cartilaginous joints – structural features, examples
   A. symphyses
   B. synchondroses

5. Synovial joints (see Chapter 8, text)
   A. General structure
      a. Articular cartilages
      b. Joint cavity
      c. Articular capsule
      d. Synovial membrane
      e. Synovial fluid
      f. Strengthening ligaments
         i. Intrinsic or capsular ligaments
         ii. Extrinsic ligaments
            - Extracapsular ligaments
            - Intracapsular ligaments
   B. Movements allowed by synovial joints
      a. Gliding movements
      b. Angular movements
         i. flexion
         ii. extension
         iii. dorsiflexion and plantar flexion of foot
         iv. abduction
         v. adduction
         vi. circumduction
      c. Rotation
d. Supination and pronation
e. Inversion and eversion
f. Protraction and retraction
g. Elevation and depression
h. Opposition

C. Types of synovial joints – general description, examples
   a. Plane joints
   b. Hinge joints
c. Pivot joints
d. Condyloid joints
e. Saddle joints
f. Ball-in-socket joints

6. Select synovial joints

A. Knee joint

   Medial collateral ligament
   Lateral collateral ligament
   Patellar ligament
   Posterior cruciate ligament
   Anterior cruciate ligament
   Popliteal ligaments
   Medial and lateral meniscus
   Bursae and fat pads – just recognize presence

B. Hip joint

   Ileofemoral ligament
   Pubofemoral ligament
   Ischiofemoral ligament
   Ligamentum teres

C. Shoulder joint

   Glenoid labrum
   Glenohumeral ligament
   Coracohumeral ligament
   Coracoacromial ligament
   Acromioclavicular ligament
   Coracoclavicular ligaments
   Transverse humeral ligament
   Tendon of long head of biceps brachi muscle
   Role of rotator cuff