I. Bones

For each bone you should know its:

- borders, surfaces, angles, processes, fossae, foramina
  a. articular surface contacts
  b. areas of specific muscle attachments

II. Muscles

For each muscle you should know its:

- Location (position)
- Attachments (origin and insertion in general)
- Function
- Innervation (nerve supply)
- Blood supply (chief supply and possible collateral supply)
- Relations – to other muscles, triangle, vessels and nerves

III. ARTERIES

For each artery you should know its:

- commencement and parent vessel.
- course, particularly where the vessel's pulsations are palpable or where it is exposed to injury.
- major branches and mode of termination.
- area of supply.
- degree of anastomosis with other major vessels.
IV. VEINS

For each vein you should know:

- its commencement, remember that this is distal.
- its course, particularly where the vein can be punctured with a needle for intravenous administration or withdrawals.
- areas that are subject to trauma.
- the extent of any valves within the veins.
- mode of termination and major tributaries.
- area of drainage
- degree of anastomosis with other veins, particularly between the deep and superficial

V. NERVES

For any nerve you should consider;

- the types of fiber(s) that it contains:
  a. somatic - serving the skin and musculoskeletal system
     1. motor (afferent)
     2. sensory (afferent)
  b. autonomic - serving the viscera, glands and blood vessels.
  c. origin of the various fibers.
- the course of the nerve, particularly where it is palpable or subject to trauma.
- its major branches and the structures (muscles, skin, joints, organs) supplied.
- in the case of motor branches to muscles, the motor deficit that trauma to that branch would effect.

VI. LYMPHATICS

Lymphatic vessels cannot be detected by routine examination of a living subject unless they are enlarged. They are also difficult to dissect. They can be demonstrated radiologically after injection of radio-opaque dyes. It is, however, very important for you to be familiar with the lymphatic drainage of an area since both infection and malignant tumors can spread by this route. Here are some considerations

1. superficial lymphatics that drain an area tend to run with veins; deep ones tend to run with arteries. (as with veins, the division between superficial and deep lymphatics is determined by the deep fascia).
2. the primary lymph nodes into which the lymphatics drain and the extent to which these can be palpated.
3. the route whereby lymph returns to the blood stream.
4. the degree of anastomosis; in general there is considerable anastomosis between the lymphatics serving adjacent areas so that, when lymphatics are blocked by tumor, nodes not normally draining an area can become involved. However, in the leg, there is relatively little anastomosis between the superficial and deep lymphatics.

VII. MUSCLE ACTION

- We study the actions of muscles as a foundation for more advanced work on how the CNS controls movement in health. Furthermore, in cases of acute injury or disease of the spinal segments, roots, plexuses or motor nerves, you should be able to determine which of the major muscles are paralyzed. It is unreasonable to ask a patient to contract a named muscle. You should know what movement to ask the patient to carry out against resistance in order to decide whether the muscle of interest is contracting or not. **Blood supply to muscles.** Although muscles need a good blood supply, the details of the local arteries of supply are rarely of importance. In general, adjacent arteries supply a muscle, and there is a major point of entrance of the neurovascular bundle. The two ends of a muscle receive their supply locally.