1. Prior to rolling the cadaver supine and starting your dissection of the anterior-lateral lower leg, take the first 15 to 20 minutes of class to review your dissection of the gluteal region and the posterior thigh. If you have not finished the dissection of the popliteal fossa, you will have time to complete that dissection next week when you dissect the posterior lower leg.

2. When you have completed your review and have rolled the cadaver supine, make your first cut down the center of the tibia, using the anterior border of the tibia, to the toes. Once you complete your first cut, then make two other circumferential cuts, one at the level of the tibial tubercle and the other from the side of the lateral aspect of the little toe to the medial aspect of the big toe (hallux). As previously discussed, the lower leg is divided into four (4) compartments:
   - Anterior
   - Lateral
   - Superficial posterior
   - Deep posterior

Today, you will dissect and identify those structures in the anterior and lateral compartments.

3. Prior to examining the components of the anterior compartment, first identify the superior and inferior extensor retinacula. The superior retinacula is located just above the medial malleolus and is approximately 3-4 inches wide. The Y-shaped inferior extensor retinacula has its origin on the superior anteriolateral aspect of the calcaneus just inferior to the lateral malleolus.

4. After identifying both the superior and inferior extensor retinacula, locate and trace with your finger the anterior border of the tibia beginning from the tibial tubercle distally to the superior aspect of the superior extensor retinacula. After locating, carefully cut the crural fascia covering the anterior compartment away from the anterior border of the tibia and pull laterally down to the level of the superior retinacula.

5. After the anterior compartment has been exposed by removing the crural fascia and the superior extensor retinacula, identify the following structures located in the anterior compartment: the anterior tibialis; the extensor digitorum longus, the extensor hallucis longus, the anterior tibial artery as well as the deep peroneal nerve.

6. Next, follow the three muscle tendons as well as the anterior tibial artery as they travel distally to the dorsum of the foot. Note that three separate compartments are developed by the inferior extensor retinacula to accommodate the three muscle tendons. The yellowish, greasy material covering the tendons as they pass under the retinacula is the tenosynovial sheath. Note that both the deep peroneal nerve and the anterior tibial artery leave the anterior compartment. The deep peroneal nerve innervates the extensor digitorum brevis (the only muscle on the dorsum of the foot) and then continues deep distally to innervate the cutaneous tissue in the web space between the 1st and 2nd toes. The deep peroneal nerve is best located on the dorsum of the foot as it exits just distal to the 1st tendon of the extensor digitorum brevis (also termed the extensor hallucis brevis). The anterior tibial artery becomes the dorsalis pedis artery as it passes the talocrural
(ankle) joint line and is located just lateral to the extensor hallucis longus in the tarsal region of the foot. The dorsalis pedis artery is important clinically for obtaining a distal pulse in the foot of patients with circulatory problems.

7. As previously noted, the only muscle on the dorsum of the foot is the extensor digitorum brevis (EDB). Locate the origin of the EDB from the superior anterolateral surface of the calcaneus and trace the 4 tendons of the EDB as they travel to toes 1st – 4th. Note the tendon to the 1st toe or hallux is called the extensor hallucis brevis.

8. At the location where the crural fascia covering the anterior compartment cannot be pulled back any further laterally is the beginning of the lateral compartment. Prior to removing the crural fascia covering the lateral compartment, identify the superior and inferior peroneal retinacula. Note that while the superior peroneal retinacula contains the peroneal longus and peroneus brevis tendons, the inferior peroneal retinacula provides separate tunnels for each tendon.

9. Remove the crural fascia covering the lateral compartment and identify the peroneus longus muscle/tendon and the peroneus brevis muscle/tendon as well as the superficial peroneal nerve. Note the lateral compartment does not have an artery located within it.

10. Follow the peroneus longus and peroneus brevis tendons as they pass beneath the lateral malleolus. Note that the peroneus brevis inserts on the tuberosity of the 5th metatarsal bone while the peroneus longus enters the groove on the plantar surface of the cuboid to travel to its split insertion on the plantar surface of the base of the 1st metatarsal base and 1st cuneiform.
You should be able to identify the following structures on a cadaver or a skeleton.

1. Superior extensor retinacula
2. Inferior extensor retinacula
3. Anterior tibialis
4. Extensor digitorum longus
5. Extensor hallucis longus
6. Anterior tibial artery
7. Deep peroneal nerve
8. Tenosynovial sheath
9. 1st tendon of the extensor digitorum brevis (extensor hallucis brevis)
10. Extensor digitorum brevis
11. Extensor hallucis brevis.
12. Superior peroneal retinacuла
13. Inferior peroneal retinacuла
14. Peroneus longus muscle/tendon
15. Peroneus brevis muscle/tendon
16. Superficial peroneal nerve
17. Tuberosity of the 5th metatarsal bone
18. Groove on the plantar surface of the cuboid