Goals: 
To teach procedures requiring skilled techniques and specialized physical examination with the ultimate goal to provide effective clinical instruction and improved patient care.

Objectives:
The learner should:
1. understand the indications for central venous access.
2. understand and recognize the possible serious adverse effects.
3. be familiar with the basic anatomical landmarks in the procedure and the function of the procedural equipment.
4. be able to demonstrate the basic approach and technique to the procedure.
5. receive appropriate feedback from the instructor on their performance.

Participants:
PGY-1 residents (Transitional Year/GTU/GW/Dewitt)
Acting Interns (GW/GTU/VCU)

Instructors:
Two Internal Medicine Faculty Members

Activity:
- **Educational Video (15 min)**
  This video demonstrates the techniques for central line placement. There is a review of the indications and contraindications for the procedure. There is a description of the prepackaged catheter-insertion kit including all the basic equipment and their function. And finally, there is a basic anatomical overview of the subclavian vein and the techniques used for access at the bedside.
  
  *Central Venous Catheterization, Videos in Clinical Medicine, www.NEJM.org*

- **Procedure Workshop (1.5-2hr)**
  This is a group exercise where the skills are reviewed on a model in the VCU simcenter. There will be a brief overview of sterile technique and use of the equipment in the catheter-insertion kit. Each learner will be able to practice central line insertion using the techniques observed in the video and by the instructor with direct feedback during the session. The learners will also participate in instructing their team members with emphasis on communication and team work skills.

- **Feedback Session and Review of Literature**
  Learner feedback is provided to the group with emphasis on the objectives described. The learners are provided with a handout which summarizes the basic principles and techniques emphasized in the workshop.

- **Post test** evaluation

References:

*Vascular Access Marino, ICU, Chapter 4*