1. Furniture

   a. Instructor station
      i. CIT uses a variety of desks and podiums for instructor stations. Some are sit-down and some are stand-up, depending on the needs of the department. Some have a pull-out drawer to host a document camera, whereas others are more compact and do not have this pull-out drawer.
      ii. The lectern that CIT currently endorses for use in a typical, fully-stocked Smart Classroom is Spectrum Furniture's *Media Manager Lectern V2* -- while the smaller lectern that CIT endorses at this time is Spectrum Furniture's *Compact Presentation Lectern*.
      iii. Instructor furniture should not be wheeled or designed to be moved.
      iv. The instructor station should be located in such a way that it does not obstruct the view of the screen and/or whiteboard.
      v. Some faculty prefer that there be as little space as possible between them and the students – thus they don’t mind having their backs to the students for a short time, while they access the lectern. Others prefer to be behind the lectern, with full view of the classroom as well as the projection screen.

   b. Student desks/seating
      i. Flat, not sloped and large enough to accommodate laptops.
      ii. There has been some experimentation with desks and seating to better support collaborative/group work – see NH162 as an example of this.
      iii. Some seating is set up in rows almost in a theatre style, (see the new Art History Classroom in the Spoelhof Center as an example of this); but typically the seating is individual, with a seat and a flat surface to write upon.

   c. Wiring needs
      i. *Conduit should be at least 1.5” in diameter* to accommodate 5 cables that get pulled through it: (2) VGA; (1) S-video; (1) Data; (1) Power. These cables connect the instructor’s station to the data projector.
      ii. Connections are also needed for the campus cable/digital TV, telephone (either at the instructor station or within reach of the instructor station), and connections to the mounted audio speakers in that room.
      iii. If the station is against a wall the wiring can be built into the wall.
      iv. If the station is free-standing away from a wall the wiring must be in a floor pocket at the location of the station. Cabling lying on top of the floor is not acceptable, even if enclosed in
a cable guard (a.k.a. “speed bump.”)

2. Projection

a. Screen size
   i. Normal screen size is 6’. This may need to be larger or smaller, depending upon the layout of the room and upon the specific needs of the department.

b. Screen location(s)
   i. Preferred location is at a front corner of the room, angled toward the center of the room. An alternate location is in the front, center of the room. We want to avoid situations where the instructor must stand in front of the screen.
   ii. The screen should be mounted as high as practical in order to give an unobstructed view from all seats. The bottom of the screen should be no lower than the bottom of the chalkboard/white board.

c. Projector(s)
   i. Projectors are to be mounted from the ceiling approximately 9’-10’ from the screen.
   ii. The height of the projector when mounted should be approximately at the top of the screen.
   iii. The projector must be hung from structural support and not from the suspended ceiling grid. Light fixtures and large air ducts directly above the projector should be avoided if possible so as not to impede access to structural support. Stabilizers might be required to keep the projected image from shaking.

d. Wiring needs
   i. Wiring needed at the projector includes:
      1. Power
      2. (2) VGA video cables from the instructor station
      3. (1) S-video
      4. Data

e. Screen type
   i. Manual vs. motorized
      1. Normally we install manual rollup screens.
      2. Installations requiring larger screens (>8’) or high screens should have motorized screens with controls on the wall near the lighting controls.
   ii. Projection screen vs. flat panel display
      1. Most classrooms will be equipped with front projection systems.
      2. Some rooms with seating less than 12 people may be equipped with flat panel displays based on departmental request.
f. Ceiling Height  
   i. Ideal ceiling height at the front of the room is 9’-12’ above the floor.  
   ii. Ceiling heights above 15’ may require specialized projector mounts in order to locate the projector at the same height as the top of the screen (see 2.c.ii)

3. Lighting

   a. Type of lighting  
      i. In general, non-dimming fluorescent lighting is acceptable.

   b. Light controls  
      i. Light controls should be located such that they are easily accessible to the instructor. Generally near the entrance door is acceptable.  
      ii. Light controls should be configured so that the lights closest to the screen can be switched off independently of the other lights in the room.  
      iii. Programmable electronic lighting controls are acceptable provided there are presets which turn off the lights closest to the screen independently of the other lights in the room.

   c. Windows  
      i. Windows should have treatment allowing the room to be darkened.

   d. Light fixtures  
      i. Should not be located directly above the projector or immediately above the screen.

4. Other

   a. Speaker locations & wiring needs  
      i. Audio speakers will be located (1) on each side of the screen, near the top of the screen.  
      ii. Conduit wiring will be needed to connect the audio speakers to the instructor station.  
      iii. Rooms seating more than 50 people may need additional speakers mounted in the ceiling for adequate coverage to all areas of the room.