

## APPENDIX A: CLASSROOM DESIGN ELEMENTS

UAF has developed standard design details for various classrooms of different size and use. The consultant shall use these elements to the fullest extent when designing new or renovated classroom space.

### Capacity and Furnishings:

There are six different categories for classroom capacity design. The consultant shall ensure that a good mixture of these sizes is provided based on recommendations from UAF. Classroom size is selected based on several criteria including programs served, student type (undergrad vs. grad), and anticipated enrollment. For example, an undergraduate core required History 101 class will need a large classroom that can hold more than 200 students. A graduate level engineering course with only 6 students will require a classroom of much smaller size.

Assignable area per student is based on the type of furnishings in the class. Tables and chairs may consume up to 25 square feet per student whereas a tablet arm chair may only take up 15 square feet. Fixed seating area will need to be determined by the consultant based on final furniture selection. The minimum assignable area per student shall be set forth by the building codes applicable to the room. The maximum assignable area per student shall be based on criteria provided by UAF.

Classroom A	<15 students	Tables and Chairs Only
Classroom B	16 to 30 students	Tables and Chairs Only
Classroom C	31-50 students	Tables and Chairs or TAC's
Classroom D	51-100 students	TAC's, fixed seating, or tables/chairs
Classroom E	101-200 students	Fixed seating only
Classroom F	> 200 students	Fixed seating only

### DESIGN ELEMENTS:

Each classroom is designed to meet the basic Level 1 requirements for instructional features and equipment. Subsequent to a Level 1 classroom is an increase in instructional technology and features. The levels of classroom design shall be:

Classroom Level 1	Basic Instructional Tools and Technology
Classroom Level 2	Level 1 plus capability to have plug and play for portable smart-carts
Classroom Level 3	Level 2 plus smart podium is a permanent furnishing hardwired into building systems. Level 3 provides one direction communication
Classroom Level 4	Level 3 plus capability have two-way interactive communication, audio/video/computer conferencing

## CLASSROOM LEVEL DEFINITION

### LEVEL 1:

#### FEATURES:

- a. Lighting control: multiple switches for controlling individual lamps in a bank of lights
- b. Chalkboard and markerboard: Install a minimum of one of each type and of equal size in the room. Boards may be installed on opposing walls. All boards shall have a cork board type tack strip at the top and a minimum 3" deep chalk tray at the bottom.
- c. Blinds and/or Darkening Shades in room with windows.
- d. Flooring will be selected by the project manager and user group per Division 9 of these design standards. Selection will be based on how the consultant is addressing sound attenuation in the room.
- e. Provide proper sound and acoustical treatment to allow for proper noise levels within the room and to prevent those noises from being transmitted to adjacent classrooms.
- f. Power outlets spaced equally around the room: Consider that outlets will be used for laptop computers and for various projectors, cameras, etc. Ceiling and floor outlets are acceptable also as long as they are flush mounted with the finished floor material. Use at least the minimum quantity required by code.
- g. Data Connections spaced equally around the room: As with the power outlets consider the use. There should be a data outlet for every common use duplex power outlet. There should also be at least two data outlets at the front of the classroom for use by the instructor.
- h. Adequate wall protection to prevent wall damage from tables and chairs. FRP panels or 6" wide (min) chair rails are acceptable.
- i. 10% seating shall be left handed.
- j. 5% seating or at least two stations, shall be ADA accessible
- k. Teaching area is at least 8' from the front wall of the class room to the first row of tables, TAC's, or fixed seating. Teaching area will accommodate the lectern, small table, and drafting chair.

#### EQUIPMENT:

Equipment provided by the owner that must be integrated into the design includes:

- a. Overhead projector
- b. Projection screen
- c. Lectern
- d. Small table for instructor
- e. Drafting Chair

## LEVEL 2

FEATURES: All Level 1 Features plus

- a. Data, power, video, and phone outlets for connection to a portable smart-cart at the front of the room. Number and location will be provided during design. Provide additional connection locations as directed by the Project Manager.
- b. Minimum 31" TV with built in VCR and DVD player mounted in the front of the room. Two or more TV's may be required to provide adequate coverage.
- c. Video connections via a wall jack between the TV's and the portable smart-cart.

EQUIPMENT: All Level 1 Equipment plus

Equipment provided by the owner that must be integrated into the design includes:

- a. Slide Projector
- b. Portable smart-cart with equipment such as computer, projector, and speakers.

## LEVEL 3

FEATURES: All Level 1 and 2 Features plus

- a. Data, power, video, and phone outlets for connection to a permanently affixed smart podium at the front of the room. Number and location will be provided during design. Provide additional connection locations as directed by the Project Manager.
- b. Lighting Control: master controls that offer various light programs from full lighting to theatre lighting, depending on room size and project requirements.
- c. Minimum 31" Flat Screen (Plasma or LCD) TV. Two or more TV's may be required to provide adequate coverage based on room area.
- d. Sound system built into room with all controls adjacent to the smart podium. Must be capable of connecting to microphones, wired and wireless. Must be capable of providing adequate sound levels throughout the room.
- e. Multiple projection screens. Screens in rooms that are multi-level or have ceiling heights over 8' shall be motor operated with controls at the front of the class.
- f. Video/Audio connections via a wall jack between the TV's and the affixed smart podium.
- g. Overhead projection will be from the podium to the ceiling mounted projector on to the screen or onto the TV's.
- h. For Classroom Size D and above, consult with UAF for proper outlet placement and quantity. It may be desirable in an auditorium with chairs and table tops, to provide a power strip on each table and wireless data connection at the front of the room.

EQUIPMENT: All Level 1 and 2 Equipment plus

Equipment provided by the owner that must be integrated into the design includes:

- a. Ceiling mounted projector, will need power, data, and video and proper structure above for mounting the pedestal.
- b. Permanent smart podium with equipment such as computer, VCR, DVD Player,

Sound control console, CD player.

**LEVEL 4**

FEATURES: All Level 1, 2, and 3 Features plus

- a. Capability for audio, video, and computer conferencing.
- b. Phone connections around room walls and near the center of the room where conference tables may be installed. Install jacks in a flush mounted floor box.
- c. Minimum 42+” Flat Screen (Plasma or LCD) TV. Two or more TV’s may be required to provide adequate coverage based on room area.

EQUIPMENT: All Level 1, 2, and 3 Equipment plus

Equipment provided by the owner that must be integrated into the design includes:

- a. Audio and video conferencing equipment to include speaker phones, digital cameras, video cameras, etc.