

## Minimum Acceptable Standards for Teaching Spaces

Currently Under Revision - Draft 1 July 2006

### Introduction

These revised Minimum Acceptable Standards for Teaching Spaces have been prepared by the Teaching Spaces Advisory Group in consultation with all major stakeholders including Higher Education and TAFE teaching staff, Teaching and Learning Support staff (TLS) and Facilities Management Staff. It is proposed that these revised standards be endorsed by the PVC Teaching and Learning. This document supersedes all earlier versions of the Standard.

The purpose of these Standards is to ensure that teaching staff and students of the University have access to high quality appropriately equipped learning environments.

Victoria University's Strategic Plan 2004-2008 identifies a number of strategies to which these Standards are relevant:

- "1.2 Offer innovative and relevant programs and services that use new technologies and flexible delivery....."
- "1.10 Provide high-standard facilities that optimise the learning environment to meet the teaching, learning and social needs of the University community".  
and
- "5.6 Implement new systems for the development of forward capital plans, including land, buildings, information technology and other infrastructure requirements to better meet the needs of students, staff and community".

Once endorsed, these revised standards will be provided to architects, designers and relevant consultants for their use in the design and construction of new and refurbished teaching spaces across all areas of the University. Strict adherence to these standards is expected.

### General Design Issues

In addition to the technical requirements of modern teaching spaces a number of critical design issues need to be considered when designing teaching spaces if these spaces are to operate effectively for their intended purpose. It is expected that the following issues are considered and addressed by the designers of teaching spaces:

#### 1. General ambience

Teaching spaces whether large or small should be designed so that they are comfortable and welcoming environments, which encourage a positive response from staff and students. They need to be able to adapt to rapidly changing external conditions and in particular be able to provide an adequate level of airflow at a temperature conducive to a quality learning environment. Wherever possible they should include natural light, light warm colour tones and soft floor coverings.

**2. Shape of rooms, raked floors and stages.**

Rooms should always be rectangular with a ratio of 1.5 to 1. Oddly shaped rooms should also be avoided. Raked floors are essential in large rooms in order to provide appropriate sight lines. Stages should be avoided in teaching spaces as these limit the useability of the space and create accessibility issues.

**3. Fixed or moveable seating**

All large theatres and other rooms with raked floors are to have fixed seating with provision for sturdy writing tablets. An appropriate number of left hand tablets must be provided, preferably colour coded to enable easy identification. General classrooms and seminar rooms are to have moveable seating, which can be easily re-arranged to suit particular teaching and learning styles.

**4. Line of sight**

Line of sight is a critical issue for any teaching space. Many design factors impact on lines of sight. The shape of the room, ceiling height, furniture layout and whether the floor is raked all have an impact. The full area of projection screens, whiteboards and other relevant fittings must be visible from any seat in the room.

**5. Placement of Audiovisual Facilities**

Increasingly teaching staff want to write or draw on whiteboards, display OHP materials and/or display computer images simultaneously. Therefore it is necessary to design spaces, which enable whiteboards and screens to be placed side by side. **Pull down screens over whiteboards are not acceptable.**

All teaching spaces are also to be provided with an appropriately sized area from which the teacher/tutor/lecturer can conduct the session. This area (the teaching station) must be sufficient to house the appropriate educational technology in an uncluttered environment unencumbered by changes in floor level, movement of students (access and egress) and other detracting invasions.

**6. Lighting**

All rooms are to have lighting appropriate to their use. Lecture theatres are to have serial controlled lighting systems to enable interface with the audiovisual control system. Smaller rooms are to have separate lighting control above the projection surface area. Care should be taken to avoid glare on whiteboards and projection screens.

**7. Facilities for people with disability**

Access for people with disability shall generally be in accordance with A.S.1428-1993 Design for Access and Mobility, Parts 1 and 2, and comply with the Disability and Discrimination Act. An audio loop for the hearing impaired shall be installed in all Lecture Theatre Type B spaces.

## Teaching Space Categories

Five categories of teaching space have been established. These are:

1. Tutorial Room or other Teaching Laboratory
2. Electronic Classroom or Specialist Teaching Space.
3. Electronic Teaching Laboratory
4. Lecture Theatre Type A
5. Lecture Theatre Type B

The Minimum Acceptable Standards of fitout applicable to each category are:

1. **Tutorial Room or other Teaching Laboratory:**
  - Appropriate vitreous enamel whiteboard minimum size 2.4 m wide
  - Overhead projector and trolley. Power outlet mounted below projection screen
  - Minimum 1800x1800 projection screen or clean white wall
  - Fixed VCR/DVD player and monitor
  - Port for access to IT network
  
2. **Electronic Classroom or Specialist Teaching Space:**  
**(This will include large flat floor classrooms and seminar rooms). A minimum of 50% of all General Purpose Classrooms will be equipped to this standard.**
  - Appropriate vitreous enamel whiteboard minimum size 2.4 m wide
  - Overhead projector and low profile trolley. Power outlet mounted below projection screen
  - Minimum 1800x1800 projection screen or clean white wall
  - Ceiling mounted data projector
  - Teachers workstation joinery housing a fixed network PC and LCD monitor, VCR/DVD player, system controller (JED) and auxiliary AV inputs
  - Provision for personal laptop computer plug-in with all necessary cabling provided
  - Sound reinforcement systems (dependent on size of room)- Microphone on lectern and lapel mic. Including separately controllable program and vocal sound systems
  - Passive infra red (PIR) sensor for system shutdown
  - Wireless access point or within a wireless access zone
  - All equipment appropriately secured and tamper proofed using VU approved locks and fasteners
  
3. **Computer Laboratory:**  
**(Excludes open access laboratories)**
  - Appropriate vitreous enamel whiteboard minimum size 2.4 m wide
  - Overhead projector and trolley Power outlet mounted below projection screen
  - Minimum 1800x1800 Projection screen or clean white wall
  - Ceiling mounted data projector connected to nominated teacher PC
  - Fixed VCR/DVD player, system controller (JED) and auxiliary AV inputs
  - Provision for personal laptop computer plug-in with all necessary cabling provided
  - Passive infra red (PIR) sensor for system shutdown
  - Wireless access point or within a wireless access zone
  - All equipment appropriately secured and tamper proofed using VU approved locks and fasteners
  
4. **Lecture Theatre Type A. Small theatre with a capacity up to 100 seats:**
  - Data/video projector fixed to ceiling and controlled via lectern control panel
  - Custom designed height adjustable University Standard Lectern (Medium Model) that houses all equipment
  - Permanent networked PC
  - Provision for personal laptop computer plug-in with all necessary cabling provided
  - Sound reinforcement systems (dependent on size of room)- Microphone on lectern and lapel mic. Including separately controllable program and vocal sound systems.
  - VHS/DVD video replay

- Ceiling mounted video camera connected back to lectern PC to facilitate the Presentation Recording System
- Independent audio recording microphone for the Presentation Recording System
- OHP and low profile trolley Power outlet mounted below projection screen
- Programmable touch screen control system
- Hearing aid loop
- Passive infra red (PIR) sensor to control house lighting on/off and AV system shutdown.
- Appropriate vitreous enamel whiteboard/s fixed to wall.
- Large projection screen as appropriate for size of room or clean white wall
- All equipment appropriately secured and tamper proofed using VU approved locks and fasteners
- Interface to house lighting system
- Dimmable and programmable house lighting including spotlight for lectern location.
- Interface to house EWIS system
- Lectern mounted internal dial telephone

**5. Lecture Theatre Type B. Large theatre with a capacity of 180 seats or more and/or is a multiuse/premiere public theatre:**

- Data/video projector fixed to ceiling and controlled via lectern control panel. Larger theatres may require two data projectors.
- Custom designed height adjustable University Standard Lectern (Large Model) that houses all equipment
- Permanent networked PC
- Provision for personal laptop computer plug-in with all necessary cabling provided
- Sound reinforcement systems (dependent on size of room)- Microphone on lectern and lapel mic. Including separately controllable program and vocal sound systems.
- VHS/DVD video replay
- Ceiling mounted video camera connected back to lectern PC to facilitate the Presentation Recording System
- Independent audio recording microphone for the Presentation Recording System
- Lectern mounted document camera
- OHP and low profile trolley. Power outlets mounted below projection screen
- Programmable touch screen control system
- Hearing aid loop
- Passive infra red (PIR) sensor to control house lighting on/off and AV system shutdown.
- Appropriate vitreous enamel whiteboard/s fixed to wall.
- Large projection screen as appropriate for size of room or clean white wall
- All equipment appropriately secured and tamper proofed using VU approved locks and fasteners
- Interface to house lighting system
- Dimmable and programmable house lighting including spotlight for lectern location.
- Interface to house EWIS system
- Lectern mounted internal dial telephone

\*In some cases theatres will require additional facilities depending on local requirements and for usage other than teaching.

\*\* In some fields of study teaching staff make extensive use of whiteboards. Multi-panel whiteboards are to be installed in such instances subject to the availability of sufficient ceiling height.

## **Design and Consultation Process**

Adherence to these standards is mandatory. All new and refurbished teaching spaces are required to comply with this Standard. To facilitate this, a copy of this Standard is to be provided to all relevant persons engaged by the University. These persons are required to consult with the staff of the Educational Technology Support Unit (ETSU) on matters relevant to this Standard. ETSU will provide advice and assistance as required to facilitate adherence to these Standards. Where these Standards cannot be complied with in full due to physical or other constraints, advice should be sought from ETSU on alternate acceptable solutions.

## Matrix view - Minimum Fit-out by Room Type

| Equipment   | Tutorial Room or other Teaching Laboratory | Electronic Classroom or Specialist Teaching Space | Computer Laboratory | Lecture Theatre A (<100) | Lecture Theatre B (>100) |
|---|--|---|---------------------|--------------------------|--------------------------|
| Whiteboard – vitreous enamel 2.4m wide  | X  | X   | X                   |                          |                          |
| Whiteboard – vitreous enamel appropriate sized  |  |   |                     | X                        | X                        |
| Screen or white wall - minimum 1800mm x 1800mm  | X  | X   | X                   |                          |                          |
| Screen or white wall - appropriate size   |  |   |                     | X                        | X                        |
| Teachers workstation – desk style - housing all equipment   |  | X   |                     |                          |                          |
| Lectern – Medium – height adjustable - housing all equipment  |  |   |                     | X                        |                          |
| Lectern – Large – height adjustable - housing all equipment + Auxiliary AV inputs   |  |   |                     |                          | X                        |
| Overhead Projector and trolley with power outlet below screen   | X  | X   | X                   | X                        | 2 X                      |
| Document camera – lectern mounted   |  |   |                     |                          | X                        |
| VHS/DVD video replay facility   | X  | X   | X                   | X                        | X                        |
| PC (networked) & LCD monitor, JED system controller, auxiliary AV inputs  |  | X   | X                   | X                        | X                        |
| Access for Laptops with fixed cables  |  | X   | X                   | X                        | X                        |
| Access to IT network for laptops  | X  |   |                     |                          |                          |
| Wireless access point / within wireless access zone   |  | X   | X                   |                          |                          |
| Data Projector – ceiling mounted  | X  | X   | X                   | X                        | X                        |
| Touch Screen Control system - programmable  |  |   |                     | X                        | X                        |
| Sound reinforcement system – microphone + lapel microphone involving separately controllable program and vocal sound system |  |   |                     | X                        | X                        |
| Passive infra-red (PIR) for AV system shut-down   |  | X   | X                   |                          |                          |
| Passive infra-red (PIR) for lighting, air conditioning, and AV shutdown   |  |   |                     | X                        | X                        |
| Presentation Recording system - Video camera ceiling mounted + audio recording microphone                                   |  |   |                     | X                        | X                        |
| Hearing aid loop  |  |   |                     | X                        | X                        |
| Lighting – dimmable, programmable, including spotlight on lectern + interface to house lighting                             |  |   |                     | X                        | X                        |
| EWIS system interface   |  |   |                     | X                        | X                        |
| Telephone – internal dial – Lectern mounted   |  |   |                     | X                        | X                        |
| Equipment secured and locked  |  | X   | X                   | X                        | X                        |