TEACHING & LEARNING SPACES - DESIGN GUIDELINES

| Purpose/Objectives | To implement the University’s:
|                   | - Statement of Policy on Teaching & Learning Spaces as set out in Policy Document No 116007P.
|                   | - Teaching & Learning Spaces Procedures, in particular, Items 2, 4, 7 & 8 under the Table of Contents heading, as set out in Policy Document No 116008D.

| Context | The University’s Policy seeks to promote a range of teaching and learning spaces to suit a variety of teaching and learning approaches as appropriate for each campus. More particularly the Policy states that spaces should be, inter alia:
|         | - Flexible to incorporate a range of uses.
|         | - Not incorporate ‘locked-in’ structures.
|         | - Have uniform cost-effective technology.
|         | - Be comfortably furnished and well lit.
|         | - Be designed to minimise the University’s ecological footprint.
|         | - Comply with disability requirements.

The Procedures Document seeks to further refine University Policy in stating that:

- Spaces are to be designed to accommodate teaching and learning approaches that include, but are not limited to, didactic (lecturing), collaborative, individual, social, virtual, informal, indoor and outdoor learning.
- Wherever possible, small informal spaces suitable for a few people to congregate (known as ‘eddy space’) will be weatherproofed, if outdoors, and fitted with comfortable seating, wi-fi access and power points.
- Space allocation per student varies with discipline and teaching mode.
- As a minimum, all space for formal (timetabled) teaching and learning should have natural light and easily adjustable blinds; light-weight, ergonomic furniture that is, as far as appropriate, stackable, movable and foldable; and of multiple writable wall surfaces.

The Design Standards set out in this document have been further informed by a comprehensive audit of existing learning spaces at all LTU campuses. Its key findings included:

- There is currently an inadequate spatial provision per seat/student which inhibits the adoption of alternative teaching and learning modes particularly at the Melbourne campus.
- Generally the existing furniture style (typically tablet chairs, long narrow tables or small 500x500 tables) is inappropriate for a tertiary institution which seeks to promote team and peer learning.
- Informal learning spaces are limited particularly in and around faculties and ‘banks’ of centrally managed learning spaces.
- In some cases learning spaces are isolated or difficult to find in upper level locations.
- Spaces generally are disappointing in appearance in respect of finishes, colour schemes and window furnishings
- Poor air circulation where air-conditioning and/or ceiling fans has not been provided.

Against this background of policy intent and space audit outcomes the adoption of more detailed design guidelines will:
- Complement other University initiatives to improve learning outcomes and the Design for Learning’s aim that graduates acquire a capability to work in teams and understand the dynamics of teamwork.
- Inform and direct design decision making in both new and adaptive reuse learning space projects.
- Ensure that there is a higher degree of equity between faculties and campuses in terms of student access to quality learning environments.

**Introduction/Application**

The design guidelines have application for the following categories of learning spaces:
- Flat floor formal spaces up to 60-65 seats (generally centrally booked).
- Small tiered lecture theatres up to 100-110 seats.
- Large lecture theatres (greater than 150 seats).
- Informal learning spaces within faculties and/or adjoining formal learning spaces.

Informal learning spaces can be distinguished from the learning commons and associated spaces provided in central libraries. The latter are ‘managed’ spaces which include ‘bookable’ study booths and learning support services. In this regard the phrase ‘learning commons’ is taken to refer to the central library facilities as the ‘hub’ of student centered learning infrastructure. The equivalent spaces outside of the libraries are referred to simply as ‘informal learning spaces’.

Design guidance for specialist, laboratory and simulation learning spaces will be the subject of separate suite of guidelines.

**Principles**

The following key principles underpin these guidelines:
- Spatially, the learning experience is a continuum from library managed learning commons to internal and external informal learning spaces and finally to the formal academic learning environments.
- All ‘banks’ of formal learning environments should incorporate adjoining informal learning spaces to facilitate student interaction and the impromptu formation of small learning groups.
- A key factor to achieving adaptable and flexible flat floor spaces is the provision of adequate floor space per seat/student.
- A range of room sizes and types is to be adopted for formal learning spaces to take account of the different learning modes between faculties and disciplines, the wide range of subject enrolment cohorts and preferred class sizes.
- Within each category of formal learning spaces, consistency in spatial standards, furniture selection, communication aids (including AV) is a desired outcome to ensure learning space predictability for academics and students.
and to ensure cost effective procurement.

However these guidelines do not preclude the adoption of more enhanced design responses where it can be demonstrated that these improve learning outcomes, better achieve disciplinary objectives and are cost effective.

### General Guidelines

These guidelines are to be read in conjunction with the attached Schedule of Minimum Standards that are to apply for the nominated categories and sizes of learning spaces.

1. **Preferred Formal Learning Space Sizes**

   The suite of preferred formal learning spaces sizes are summarised below and detailed in the attached Schedules. Note the mix of class sizes within a specific development or project will be determined on an as needs basis:

   **Flat Floor Spaces:**
   - (a) Seminar Room: 20 seat – area 50m2 or 2.5m2 per seat (minimum room size)
   - (b) Interactive Tutorial Room: 30 seat – 65m2/2.2m2 per seat
   - (c) Medium Interactive Tutorial Room: 40 seat – 80m2/2.0m2 per seat
   - (d) Large Interactive Tutorial Room: 60-65 seats – 120-130m2/2.0m2 per seat (maximum size for a flat floor learning space).

   **Small Tiered Lecture Theatres:**
   - (a) Discursive: 70-90 seats – 140-155m2/1.7-2.0m2 per seat. To be designed to facilitate a meaningful whole of class conversation during a lecture delivery.
   - (b) Lectorial: 70-90 seats – 160-180/2.0-2.3m2 per seat. To be designed to facilitate a collaborative learning environment that can revert to a traditional lecture mode.
   - (c) Interactive: 90-110 seats – 180-190m2/1.7-2.0m2 per seat. To be designed to facilitate small group learning/interaction in a lecture theatre setting.

   Small tiered lecture theatres are to be designed to be accommodated within standard floor to ceiling heights for academic buildings in an adaptive reuse or a new build context.

   **Large Tiered Lecture Theatres:**
   - (a) Medium: 150-250 seats – 225-350m2/1.3-1.5m2 per seat. To be designed to facilitate an engagement between the lecturer and the assembled student audience through strategically positioned aisle ways.
   - (b) Large: 300-450 seats – 360-550m2/1.2m2 per seat. Designed as a traditional large lecture theatre subject to incorporating the design features nominated elsewhere in these guidelines.

2. **Adjoining Access Spaces to Formal Learning Areas**

   **Flat Floor Spaces:**

   Immediate access spaces adjoining flat floor formal learning environments are, generally, to be provided at a rate of 1m2 per 3m2 of formal learning spaces. To be conceived as ‘informal learning spaces’ the design response must explore the incorporation of the following activities:
   - Small group learning using table and chair settings with access to power outlets and mobile whiteboards.
   - Informal social activates using ‘coffee’ table settings or equivalent and soft
### 3. Furniture Provision

**General:**
The technical specifications in respect of quality, materials, robustness, OH&S and sustainability of selected furniture shall conform to the Infrastructure & Operation’s Furniture Specification Manual.

**Flat Floor Spaces:**
Furniture selection in terms of shape, size and type of tables and chairs should comply with the Schedule unless it can be demonstrated that particular disciplinary or pedagogical factors demand a different furniture selection response. Flexible furniture settings are the desired outcome in all cases.

The design response must also explore the incorporation of perimeter slimline bench units either fixed or movable with access to wall mounted power and data outlets at dado level.

**Lecture Theatres:**
Refer to the attached schedules.

### 4. Finishes and Colour Scheme

The design response must explore the adoption of an enlivening and creative palette of colours and materials. ‘Quirky’ or memorable interior finishes are preferred.

### 5. Communication Aids

Refer to the attached Schedule.

### 6. Power Outlets

Refer to the attached Schedule.

### 7. External Glazing

The design response is to include an ample provision for natural light penetration taking into account the need for solar control devices for east, north and west orientated walls. Roof lights are also considered a desirable feature, where possible, provided these also incorporate solar control devices.

### 8. Internal Glazing

The design response is to explore the opportunities for internal visual permeability between formal and informal/circulation spaces noting that it may be necessary in some cases to incorporate devices to contain the disturbance from external activities on formal classroom learning.

### 9. Air Circulation

Where air conditioning is not provided ceiling fans should be installed.

### 10. Sustainability

Motion activated lighting and indoor air handling units (where applicable) along with timing devices for AV equipment to be provided along with appropriate sun
11. Storage

Flat floor learning environments are to be provided with common storage facilities at the rate of 1m2 per 15m2 of dedicated formal learning space.

Shared Facilities n/a

Implementation
Executive Director, Infrastructure & Operations

Status
New. Approved by Academic Board, 12 October 2011, endorsed by Minute 452.4.1; Education Committee, 28 September 2011

Key Stakeholders
Deputy Vice Chancellor Education
PVC (CAP), Director CTLC
LeST Committee
Associate Deans Academic
Heads of School (where applicable)
Director Academic Services

Approval Body
Academic Board

Initiating Body
Learning Spaces & Technology Committee (LeST)

Definitions
See above

Related Legislation
Building Code of Australia [www.abcb.gov.au](http://www.abcb.gov.au);

Related Policy Documents
LTU Teaching & Learning Space Policy
LTU Teaching & Learning Space Procedure

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# Schedule to Learning Space Design Guidelines

<table>
<thead>
<tr>
<th>Learning Space Type</th>
<th>Spatial Standard (m²/seat)</th>
<th>Aver. Seating Capacity</th>
<th>Average Room Size (m²)</th>
<th>Furniture Provision</th>
<th>Communication Aids</th>
<th>Power Outlet Provision</th>
<th>Comments</th>
<th>Illustration</th>
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<tbody>
<tr>
<td><strong>A. Flat Floor Spaces</strong></td>
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<tr>
<td>1. Seminar Room</td>
<td>2.5m²</td>
<td>20</td>
<td>50m²</td>
<td>7x1700x850 flip-top tables with mobile chairs.</td>
<td>1 projector/1 screen; whiteboard.</td>
<td>Minimum 7 power outlets set at dado level on perimeter walls</td>
<td>Tables arranged in a boardroom style to facilitate whole group interaction. Other configurations possible – see Diagram A1.</td>
<td>See Diagram A1 in Annexure 1</td>
</tr>
<tr>
<td>2. Tutorial/Interactive Learning Space</td>
<td>2.2m²</td>
<td>30</td>
<td>65m²</td>
<td>6x1700x850 flip-top tables with mobile chairs. The design response must also explore the provision of perimeter bench units with access to wall mounted power and data outlets.</td>
<td>As above with 2 whiteboards.</td>
<td>10 power outlets at dado level or 5 po’s plus, where the construction setting permits, a floor box power outlet to a minimum of 3 tables.</td>
<td>Classroom setting based on 5 person pods/tables to enable the learning mode to shift between small group work/interaction and lecturing (didactic) mode. Other table configurations or design responses possible including the incorporation of flat screens for small group learning – see Diagram A2.</td>
<td>Diagram A2</td>
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<tr>
<td>3. Medium Tutorial/Interactive Learning Space</td>
<td>2.0m²</td>
<td>40</td>
<td>80m²</td>
<td>8x1700x850 flip-top tables with mobile chairs. Ditto for perimeter bench units.</td>
<td>1 projector/2 screens; document camera; 2 whiteboards; voice amplification</td>
<td>15 power outlets at dado level or 8 po’s plus floor boxes to a minimum of 4 tables.</td>
<td>Ditto; easily followed guides to be provided to enable positioning of tables in alternative layouts formats - see Diagram A3.</td>
<td>Diagram A3</td>
</tr>
<tr>
<td>4. Large Tutorial/Interactive Learning Space</td>
<td>2.0m²</td>
<td>60</td>
<td>120m²</td>
<td>12x1700x850 flip-top tables with mobile chairs. Ditto for perimeter bench units.</td>
<td>As above with 3 whiteboards</td>
<td>20 power outlets at dado level or 10 po’s plus floor boxes to a minimum of 6 tables.</td>
<td>Ditto</td>
<td>Diagram A4</td>
</tr>
<tr>
<td>Learning Space Type</td>
<td>Spatial Standard (m2/seat)</td>
<td>Aver. Seating Capacity</td>
<td>Average Room Size (m2)</td>
<td>Furniture Provision</td>
<td>Communication Aids</td>
<td>Power Outlet Provision</td>
<td>Comments</td>
<td>Illustration</td>
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<td><strong>B. Small Tiered Spaces</strong></td>
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<tr>
<td>1. Discursive Lecture Theatre</td>
<td>1.7 – 2.0m2</td>
<td>70 - 90</td>
<td>145 - 155m2</td>
<td>Fixed 450mm continuous table setting to each tier configured in a ‘horse shoe’ shape; non-mobile chairs.</td>
<td>3 projectors/ - 1 w/screen - 2 s/screens; 1 whiteboard; document camera; voice amplification.</td>
<td>Power outlets to be provided at rate of 1 per 3 seats incorporated into fixed table/bench design.</td>
<td>This is a ‘traditional’ Harvard style lecture theatre that enables the whole class to engage as a group.</td>
<td>See Diagram B1 in Annexure 2</td>
</tr>
<tr>
<td>2. Interactive Lecture Theatre</td>
<td>1.7 – 2.0m2</td>
<td>90 - 110</td>
<td>180 – 190m2</td>
<td>Fixed 450mm continuous table setting on wide tiers enabling small group learning activities during lecture period; mobile chairs.</td>
<td>As above</td>
<td>As above</td>
<td>This style presents as a lecture theatre in the first instance but it enables the attendees to assemble in small groups during the lecture period.</td>
<td>Diagram B2</td>
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<tr>
<td>3. Lectorial Theatre</td>
<td>2.0 – 2.3m2</td>
<td>70 - 90</td>
<td>160 – 190m2</td>
<td>Attendees assemble around 7 seat tables in a tiered setting; mobile chairs.</td>
<td>As above</td>
<td>As above</td>
<td>In contrast to B2 this space presents as a large interactive tutorial room that can convert to a traditional lecture setting when required.</td>
<td>Diagram B3</td>
</tr>
<tr>
<td><strong>B. Larger Tiered Spaces</strong></td>
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<tr>
<td>1. Medium Lecture Theatre</td>
<td>1.3 – 1.5m2</td>
<td>150 -250</td>
<td>225 – 350m2</td>
<td>Fixed seating in accordance with I &amp; O’s Technical Specifications.</td>
<td>3 projectors/ - 1 w/screen - 2 s/screens; document camera; voice amplification.</td>
<td>Power outlets to be provided at the rate of 1 per 5 seats with outlets embedded into the fixed seating structure.</td>
<td>The design response is to explore the opportunities to promote lecturer/student engagement through strategically positioned aisle ways.</td>
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</tr>
<tr>
<td>2. Large Lecture Theatre</td>
<td>1.2m2</td>
<td>300 -450</td>
<td>360 550m2</td>
<td>Ditto</td>
<td>Ditto</td>
<td>Ditto</td>
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</table>
Diagram A4 Large Tutorial/Interactive
60cap (120sqm) 12 x loose flitop tables

Note: footprint utilised is the existing NE2 large fixed flat floor lecturn seated teaching space
ANNEXURE 2 To Schedule of Learning Spaces Standards

DIAGRAMS OF SMALL TIERED LECTURE THEATRES UP TO 110 SEATS
**B1-DISCURSIVE**

*Description:* Curved and tiered room with benches between each row. Each second row has a wider row to enable collaboration with the row in front. Multidirectional AV for dual screen viewlines.

*Pedagogy:* Dispersal of knowledge through "whole group" discussion across room through case-study type debate with lecturer as central focus.

*Spatial allowance:* 1.7-2.0m² per student

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**B2-INTERACTIVE**

*Description:* Tiered teaching space with moveable seating. Two rows per level with shared desk between. Multidirectional AV for dual screen viewlines.

*Pedagogy:* Tiered teaching space with the ability to switch between delivery mode and student group work.

*Spatial allowance:* 1.7-2.0m² per student

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**B3-LECTORIAL**

*Description:* Tiered tutorial / lecture room with group tables of 6 students with moveable chairs. Multidirectional AV for dual screen, team teaching and/or groupwork.

*Pedagogy:* Allows transformation from lecture to tutorial to group work in one space, enhancing the ability of lecturer to switch between teaching styles.

*Spatial allowance:* 2.0-2.3m² per student
Diagram A1  **Seminar**

20cap (48sqm)  7 x loose fliptop tables
Diagram A2 Tutorial/Interactive
30cap (66sqm) 6 x loose fliptop tables
Diagram A3 Tutorial/Interactive
40 cap (80 sqm) 9 x loose fliptop tables