RED DEER COLLEGE

Centre for Teaching and Learning
Campus Management

Learning Space Master Plan
2019-2022

Acknowledgment

Thanks to the following for contributing to the Learning Space Master Plan:

Facilities Planning Advisory Committee
Learning Space Task Team
Learning Space Operations Subcommittee
Strategic Planning and Analysis
Information Technology Services
Learning Space Technology Advisory Group

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RDC will develop facilities that support teaching, learning, and the student experience.

RDC will create new facilities that are learner-centred and are available for community use. Land development will be environmentally sustainable. Existing facilities will be optimized to provide flexible space that is easily configured in response to the needs of learners.

RDC Strategic Plan 2012-2017 (RDC 2017: A Learner Centred Future)

Executive Summary

Purpose

The Learning Space Master Plan, a subset of the RDC Land Use Master Plan, is a framework aligned with the vision and values and strategic goals of Red Deer College. Learning space standards at RDC are part of the Master Plan. These learning space standards, and thereby the Master Plan, guide the design of new and renovated learning space, its use and management, as well as its assessment.

Scope

RDC learning spaces exist principally to support teaching and learning. Learning space inventory needs are driven primarily by academic program delivery needs, including trends in enrolment and pedagogy. Learning space design is driven by guiding principles that inform the creation of learner-centred spaces that support the student learning experience.

Learning spaces at RDC include both formal and informal learning spaces: formal spaces include all spaces where scheduled learning occurs; and informal spaces include all spaces where learning occurs outside of scheduled learning. Formal learning spaces include: classrooms, learning studios, seminar rooms, labs, studios, shops, gymnasia, etc. Informal learning spaces include: Library, Makerspace, Learning Commons, practice rooms, study rooms, gathering spaces, hallways, courtyards, etc.

The focus of the Master Plan is primarily formal learning spaces that are scheduled into the timetable. While informal learning spaces are currently not a focus of the Master Plan, they are impacted by Learning Space Planning and Utilization Guidelines (Appendix 1) and are important learning spaces on campus. Further work is required to incorporate these spaces into an expanded scope of this Learning Space Master Plan.

Spaces out of scope of the Master Plan include workspaces, service spaces, department spaces, administrative spaces, and residence.

Responsibility

The Learning Space Master Plan is the joint responsibility of the Centre for Teaching and Learning and Campus Management, under the leadership of the Director of Teaching and Learning and the Director of Campus Management. The Facilities Planning Advisory Committee provides recommendations for the Learning Space Master Plan. To ensure a quality teaching and student learning experience, the Learning Space Master Plan is informed by lived-experience, post-occupancy evaluation feedback, and evidence through research.

Recommendations

Design Recommendations

- Incorporate learning design guiding principles into all learning space standards
- Incorporate all learning space standards into room revitalization and development
- Where possible incorporate multiple use spaces and flexible learning

Operational Recommendations

- Refine room booking and timetabling policies and procedures to allow for increased utilization and accessibility
- Improve tracking and reporting of space utilization
- Develop a space utilization data reporting process
- Develop a post-occupancy evaluation process and guidelines for new and renovated spaces
- Assess select learning spaces using Learning Space Rating System measurable criteria
- Audit existing learning spaces for accessibility
- Establish frequency of conducting aspects of the learning space audit

Master Plan Recommendations

- Incorporate informal learning spaces into an expanded scope of the Learning Space Master Plan, including spaces such as quiet study and 24-hour study space

Context

Teaching and Learning Profile

Teaching and learning at RDC is focused on providing learners an exceptional experience, in alignment with the learner-centred focus of the strategic plan and program and course requirements.

Faculty at RDC develop and deliver quality curriculum through the integration of learning outcomes, learning activities, and assessments. Teaching and learning that is supported by flexible learning spaces and current technologies ensure a positive learning experience. Flexible learning spaces enable a wide range of pedagogy within a space, including active learning.

Class sizes range from small (Trades intakes and seminars in various programs) to large (Psychology and co-listed Nursing sections). The majority of classes fall within the 40-45 seat range with a trend towards classes of 40-60.

Credit and non-credit programming is offered through a School model:

- Donald School of Business
- School of Arts & Science
- School of Creative Arts
- School of Education
- School of Health Sciences
- School of Trades and Technology
- School of Continuing Education

RDC Campus

Learning spaces at RDC are located throughout several facilities:

Main Campus Building

Arts Centre – Main Campus

Collegeside – Main Campus

Gary W Harris Canada Games Centre – Main Campus

Donald School of Business – Downtown Red Deer

Welikoklad Event Centre – Downtown Red Deer

Confluence Campus – Rocky Mountain House

RDC Learning Spaces

Formal learning spaces at RDC are categorized by Room Types or Space Utilization Category (SUC). These codes are used to define scheduling and booking of learning spaces.

RDC currently maintains an inventory of the following Room Types:

Room Type (SUC)	Capacity (Seats)	Description
Seminar Room	8-20	Flat floor with tables and chairs
Classroom	20-60	Flat floor (non-tiered) with student desks and chairs
Trades Classroom	12-40	Flat floor with tables and chairs, additional space for ILMs and prop storage (size dependent on storage needs)
Learning Studio	40-60	Flat floor and designed for flexibility in configuration to support a variety of learning activities
Tiered Classroom	40-120	Tiered and fixed tables and chairs
SCALE-UP Classroom	99	Flat floor and designed for active learning with tables and chairs configured in a round pod configuration
Lecture Theatre	100-200	Tiered and fixed theatre style seating
Computer Lab	5-45	Flat floor fixed-seating
Science Labs	24-30	Flexible labs requiring increased storage capacity
Health and Community Care	12-40	Labs, including Nursing, Pharmacy Technician (including wet lab), and Early Learning and Child Care
2D Studio	variable	Visual Arts – Painting/Drawing – Flat floor with space to accommodate easels, stools, and model stand while ensuring sightlines not obstructed
3D Studio	variable	Visual Arts – Sculpture/Design
Athletics	variable	Variable scheduled spaces including Movement Studios, Gymnasia
Shops	variable	Variable scheduled spaces

An inventory of learning spaces, including number of spaces by Room Type, is available in the appendices: Appendix 6 - Learning Space Inventory

Learning Space Audit

A Learning Space audit was conducted in 2017 to inform the Learning Space Master Plan. Data was gathered using several tools developed as part of the Request for Information process:

- *Themes from Conversations with Schools (Summer 2017)*
  Themed feedback collected through conversations with Schools that identify trends in program growth and learning space needs and preferences.
- *Summary of Space Utilization*
  Analysis of 2015-2016 and 2016-2017 utilization data.
- *Learning Space Faculty Survey (Fall 2017)*
- Instructor survey to gather insight around pedagogy and learning spaces.
- *Consultations with Scheduling Office and Facilities Office (Spring 2017)*
  Observations and patterns not reflected in reports, commonly requested attributes, Supply and Demand reports.

The purpose of the audit was to provide an assessment of current learning spaces to inform the renewal and development of learning spaces in support of new programs and program growth and change.

Summary of Findings

- Supply versus Demand: Do existing learning spaces support class sizes offered?

  In the last several years five classrooms of 30 capacity were removed. This has caused classes of 30 to be bumped into larger rooms 50+ (e.g. EDAS class of 30 scheduled into tiered Margaret Parsons Theatre). Classes of 40 are more likely to match the rooms available in the timetabling system.

- Pedagogy: Do existing learning spaces support teaching methods and learner-centred practice?

  There are currently several learning spaces on campus that do not support desired pedagogy, but will not be upgraded to reflect learning space standards, even though there is increased demand among programs for collaborative and active learning. For example, due to a shortage of large space learning studios, tiered classrooms have high utilization but low satisfaction, as they do not support desired pedagogy (e.g. collaboration and group work). The need to maintain a specific space inventory, with an adequate number of room types and capacity, prevents converting tiered spaces to learning studios. These learning spaces need to be assessed on an ongoing basis to ensure their physical and technological condition continues to support learning.

  Future review needs to be conducted regarding accessibility and universal design of learning spaces as specified by the Universal Design Policy.

- Future Growth: Will existing learning spaces support new programs, program growth/renewal?

  Demand for 30-40 and 40-50 capacity has grown with greater demand on 40-45 capacity classrooms. Many schools have identified the need for larger net square metres per student to allow for collaborative and active learning. In addition, there is increased need for flexible computer labs with capacity at 40 or greater. This last issue may be alleviated by a Bring Your Own Device initiative.

- Space Utilization: How well utilized are existing learning spaces?

  Learning Studios and rooms with greater than 40 capacity have greater utilization. As anticipated, special use spaces or areas where booking is restricted, have lower utilization.

  Tiered classrooms are underutilized (2501, 2600, MPT); this attribute is seldom selected and is less desirable. Larger classes, e.g. PSYC, are typically scheduled into these spaces. The only room to have two consecutive years of utilization over 80%, was room 2303. The 2300 wing has the highest utilization of any hallway at RDC. It also has the highest utilization per net square metre per student.

- Scheduling Practices: How does scheduling and room booking impact utilization?

  Classrooms are primarily requested based on (1) technology and (2) flexible furniture, but these features are not consistent across campus. This creates high demand for some spaces and less demand for others. Request for room attributes might come from PACs and not instructors, as in some cases, instructors are not scheduled until closer to term start. Since the instructor is not known at the time, the room may not match the pedagogy used, and classroom reassignment may occur.

  Further analysis is required to compare initial room requests with final scheduled rooms.

Further information from the Learning Spaces Audit if found in the appendices:
Appendix 8 - Learning Space Audit

Planning for the Future

When planning for the future it is important to take into consideration the current learning space environment and shortcomings related to campus and specific learning spaces, as well as recent and proposed changes.

Recent Changes
Many RDC learning spaces have been developed and/or renovated over the past 10 years, including the recent opening of a teaching and learning facility in August 2018. For a timeline of changes, see:
Appendix 7 - Completed Learning Space Projects

In addition, strategies for incorporating stakeholders, integrating learning space design principles, and consulting experts in space planning are now integral to the learning space design process. Data analysis strategies are being refined to inform planning for learning space usage and the need for new and renewed learning spaces.

1. Development of Learning Space Technology Standards
   - Designed to provide a consistent classroom experience for students and faculty
   - Guided by pedagogically sound best practice in teaching and learning

2. Development of new instructional space that supports flexible learning
   - Development of learning studios as the standard
   - Development of a SCALE-UP classroom supporting flexible learning at a large scale (99 students)
   - Development of lab spaces (e.g. Health Sciences Lab) that support flexibility

3. Application of learning space design principles to learning space development and renovation
    - Learning Space Designer integrated into learning space projects
    - Linkages between Campus Management, Centre for Teaching and Learning, and IT Services
    - Inclusion of Stakeholders in the design of learning spaces

4. Designation of space for smudging
    - Identification and assessment of areas suitable for smudging
    - Currently 7 spaces of varying capacity are designated as approved for smudging on main campus

Proposed Projects

The proposed projects are informed by the Learning Space Audit and in alignment with the Learning Spaces standards and guidelines.

Projects currently in development or anticipated in the next three to five years include:

Space Utilization Assessments and Reporting
- Analysis of data obtained and application to decision making related to scheduling and the development and renovation of facilities.
- Review of Timetable Development Policy and recommendations to Academic Policies Committee regarding Scheduling standards and patterns.
- Assessment of optimal scheduling based on a variety of delivery options.

Renewal of learning spaces to accommodate new programs and program growth and change
- Based on the need for new or unique space where renewing or repurposing space is not feasible.
- For example, renovation of the 2400 Wing to create Animation Labs based for new AVFX program.

Assessment of the Physical Condition of Campus Learning Spaces
- Based on review of learning space finishes, layouts, and technologies, followed by recommendations for renewal.
- Upgrade Traditional Classrooms to flexible Learning studios with standard technology
- Upgrade learning spaces to ensure accessibility for all learners
- Upgrade to enable a variety of additional spaces to be designated for smudging

Identification of Facilities that are No Longer Recyclable
- Based on space that is not performing and identifying strategies for renewal or removal.

Design and Delivery of New Facilities Based on Space Utilization and Pedagogy Needs
- Exploration of collaborative Tiered Classrooms
- Exploration of flexible Computer Labs, Flex Labs, and BYOD, etc.
- Assess need for more large scale flexible learning spaces (similar to 2601 and 2602) with capacity of 60+

Learning Space Guiding Principles

Red Deer College has adopted Guiding Principles (basic concepts that help guide strategic decision-making and that reflect philosophical issues about learning spaces, etc.) to determine:

- Design of Learning Spaces
- Management of Learning Spaces
- Assessment of Learning Spaces

The Learning Space Master Plan is developed in the context of evolving learning space design principles incorporating new pedagogical and technological directions that inform the need for flexibility in learning spaces. RDC demonstrates a commitment to the creation of learner-centred spaces based on these principles and directions. At the heart is the focus on the student learning experience.

The inclusion of stakeholders, and collaboration between Campus Management, the Centre for Teaching and Learning, and IT Services, helps to ensure that campus learning spaces support immediate and future learning needs.

Guiding Principles

Learning spaces are designed and scheduled to support teaching and learning at Red Deer College by incorporating six design principles:

Interaction

Enable meaningful, active and collaborative interactions between participants (student to student, student to instructor, instructional team).

Technology

Provide appropriate technology to support diverse, enriched and flexible instructional practices and learning experiences.

Environment

Design a sustainable and healthy environment that is conducive to learning, and will support the long term use of the space.

Flexibility

Design for a wide range of instructional practices, student activities, and curricula, room uses, and potential for change.

Accessibility

Ensure that principles of accessibility are central to the design of all learning spaces, and that all participants have a common experience (Universal Design).

Location

Locate learning spaces to support effective building zoning, circulation, and access.

Adopted from UBC Learning Space Design Guidelines - July 2018

Master Plan Elements

The Learning Space Master Plan addresses the following elements:

- Design of Learning Spaces
- Management of Learning Spaces
- Assessment of Learning Spaces

Design of Learning Spaces

Learning spaces are designed with input from faculty, staff, student, and community stakeholders. Learning space design principles are applied to the development and renovation of space. When RDC hires consultants (i.e. Architectural, Mechanical, Electrical, Interior Design), planning incorporates stakeholder input and College architectural, technological, and learning space design expertise in the design and delivery of spaces at RDC.

Facilities renovation and development is focused on learners and the future of learning at RDC. Learning space modernization has a focus on principles of learning space design, technological trends, and pedagogical and delivery methods increases the optimization of learning space. Learner-centred and flexible spaces are replacing dated and traditional learning spaces at the College.

In order to ensure that the development and renovation of learning spaces is learner-centred and supports current and future teaching and learning strategies it is important that stakeholders are included in the design process, and that planning and delivery of the space involves Campus Management, the Centre for Teaching and Learning, and IT Services.

In order to maintain an inventory of high quality formal learning spaces, the following areas are considered:

- Pedagogy
- Geographical Considerations
- Scheduling Considerations
- Room Type and Configuration
- Capacity Considerations
- Universal Design

More specifically, the design of a learning space will take into consideration the following aspects which are then assessed as part of the standard post-occupancy evaluation process:

- Room size and crowding
- Sight lines and room layout
- Technologies
- Furniture
- Finishes
- Environmental Conditions (Acoustics, Lighting, Air Quality, Temperature)
- Safety

Institutional stakeholders will be consulted to ensure all learning spaces are developed and used to most effectively support teaching and learning at Red Deer College.

Guidelines and standards for the design and development of RDC learning spaces are included in appendices:
Appendix 1 - Learning Space Planning and Utilization Guidelines
Appendix 2 - Room Type and Capacity Standards
Appendix 3 - Learning Space Furniture and Fixture Standards
Appendix 4 - Learning Space Technology Standards

Management of Learning Spaces

All learning spaces are shared College space and are scheduled using a centralized model to optimize space utilization and reporting. Learning spaces are scheduled through the Scheduling Office and booked through the Facility Bookings Office.

Utilization of RDC learning spaces is optimized through Room and Event Scheduling and Campus Management data. Analysis of utilization data ensures ongoing review of space utilization and informs the need for additional or renewed learning spaces on campus.

The Learning Spaces Operations Subcommittee (LSOS), a standing committee of the Facilities Planning Advisory Committee (FPAC), is responsible for recommending to, and acting upon recommendations from, the FPAC in support of learning spaces contributing to teaching and learning excellence and student success.

Assessment of Learning Spaces

The assessment of learning spaces is done through various methods. Performance metrics including space utilization data and support ticket information is used to determine use of space. Strategic Planning and Analysis (SPA) analyses and reports annually on broad and detailed utilization of learning spaces. Supplementary analysis may be requested by FPAC or the Director of Campus Management.

A post-occupancy evaluation is conducted at various points following the delivery of new or renovated learning space to determine satisfaction with the space, identify and rectify challenges, and inform planning of future learning space. The post-occupancy evaluation process was implemented in 2009, as a means to assess the environmental aspects of the new Teaching Common learning spaces. This process has become standard practice, and seeks responses from both instructors as well as students.

Design considerations assessed include, but are not limited to:

- Room size and crowding
- Sight lines and room layout
- Technologies
- Furniture
- Finishes
- Environmental Conditions (Acoustics, Lighting, Air Quality, Temperature)
- Safety

Standards for conducting a post-occupancy evaluation are included in the appendices:
Appendix 5 - Post-Occupancy Evaluation Standards

Another tool available to assess learning spaces is the *Learning Space Rating System*, which is "a set of measurable criteria to assess how well the design of classrooms support and enable active learning."[1] The assessment tool can be used to benchmark our learning environments against best practices within the higher education community, as well as help determine that a learning space is aligned with institution strategies and plans.

[1] Learning Space Rating System. EDUCAUSE Learning Initiative. https://www.educause.edu/eli/initiatives/learning-space-rating-system

Appendix 1 - Learning Space Planning and Utilization Guidelines

Updated October 2019

PURPOSE

Learning spaces at Red Deer College exist to support formal and informal teaching and learning. All learning spaces are shared College space. Usage of these spaces are optimized to support the institutional mandate and to ensure effective stewardship of these physical resources.

GUIDELINES

The Facility Planning and Space Allocation Policy guides the development, renovation, usage, and allocation of learning space at Red Deer College. These Guidelines serve to:

- Establish a baseline to measure and optimize the utilization of currently used facilities. This measure may be used to identify or support the need for new construction or renovation.
- Understand the use of learning spaces and plan for the creation of new and renovation of existing spaces.
- Effectively schedule all College learning spaces; ensuring learning spaces and scheduling balance learning need and efficient use of space.
- Identify the Facilities Planning Committee as the recommending body responsible for ensuring the effective stewardship of learning spaces.
- Ensure stakeholder consultation occurs during design, development, construction, and post-occupancy evaluation of learning space.

The Facilities Planning Advisory Committee (FPAC), as an advisory body, guides and supports the design and delivery of all facilities on campus. Institutional stakeholders will be consulted to ensure all learning spaces are developed and used to most effectively support teaching and learning at Red Deer College.

Sub-Committees reporting to FPAC include: Learning Spaces Operations Subcommittee, Learning Spaces Task Team, Workspace Task Team, Workspace Allocation Task Group, and Green Campus Task Group. These subcommittees and task teams incorporate campus stakeholders in day-to-day decisions related to aspects of facilities.

Strategic Planning and Analysis (SPA) analyses and reports annually on broad and detailed utilization of learning spaces. Supplementary analysis may be requested by FPAC or the Director of Facilities.

Summary of RDC Policies that inform the planning and utilization of learning spaces:

- Facility Planning and Space Allocation
  Principles and guidelines around space planning and allocation; facilities are planned and designed to meet the needs of learners first and foremost.
- Facilities Booking and Rental
  Procedures include facility booking priorities; College courses and related activities are prioritized over other meetings, activities, and events.
- Timetable Development for Programs
  Procedures include the assignment of academic space.
- Enrollment Limits Policy
  Guidelines include consideration of facility capacity to maintain a high quality learning environment.
- Final Exam Policy
  Guidelines include priority of rooms scheduled during final exam week.
- Universal Design Policy
  Universal design principles apply to the design of new and redesign of existing College spaces.

Appendix 2 - Room Type and Capacity Standards

Updated October 2019

PURPOSE

The purpose of the Room Type and Capacity Standards is to guide the capacity of a learning space that is ideal for teaching and learning in that space.

STANDARDS

The setting of capacity of a learning space is determined by the purpose of the space, as defined by the Room Type. Each Room Type is assigned a recommended net square meters per student (nsm) calculation (Area of Space divided by Recommended nsm = Ideal Capacity). This is calculated independent of furniture and equipment within the space.

Classrooms (Target Room Utilization 80%, 80% Seating Capacity)			
Room Type	**Description**	**Number of Seats**	**Recommended nsm**
Learning Studios	Flat floor and designed for flexibility in configuration to support a variety of learning activities	20-60	2.7
Classrooms	Flat floor with student desks and chairs, traditional	20-60	2.7
SCALE-UP Classroom	Flat floor and designed to support a variety of collaborative learning activities	99	2.7
Tiered Classrooms	Tiered and fixed tables and chairs	40-120	2.2
Lecture Theatres	Tiered and fixed theatre style seating	100-200	1.85
Seminar Rooms	Flat floor with tables and chairs	8-20	2.7
Trades Classrooms	Flat floor with tables and chairs, additional space for ILMs, prop storage (size dependent on storage needs)		2.7-5.0

Laboratories including Lab Service Spaces (Target Room Utilization 60%, 80% Seating Capacity)			
Room Type	**Description**	**Number of Seats**	**Recommended nsm**
Computer	Flat floor with individual computer workstations		3.7
Science	Science lab – Flexible labs requiring increased storage capacity		7.5
Health and Community Care	Labs, including Nursing, Pharmacy Technician (which could be a wet lab)		7.5

Studios (Target Room Utilization 60%, 80% Seating Capacity)			
Room Type	**Description**	**Number of Seats**	**Recommended nsm**
2D Studio	Visual Arts – Painting/Drawing – Flat floor with space to accommodate students, easels, stools, and a model stand while ensuring sightlines are not obstructed		7.5
3D Studio	Visual Arts – Sculpture/Design		7.5
Music Studios and Practice Rooms	Student practice and music instruction		4.00
Performing Arts Facilities	Unique facilities used for large and small groups, including dance, theatre, and music classes, rehearsal, programming, performance, and external bookings. ● Arts Centre Foyer ● Mainstage Theatre ● Studio A (Black Box Theatre), Studio B, Studio C, Studio D (Movement Studio) ● Booth Auditorium Control Room ● Costume Shop ● Recording Studio	Capacity fluctuates to reflect these uses.	

Shops (Target Room Utilization 80%, 80% Seating Capacity)			
Room Type	**Description**	**Number of Seats**	**Recommended nsm**
Electrical Engineering Instrumentation Locksmith	Flexible labs requiring storage capacity		7.5
Welding	Lab space accommodating medium size equipment, storage, and multiple lab groups (no requirement for zoning of space or multiple projects underway)		10.0
Scene Shop Sculpture Shop	Lab space accommodating medium size equipment, storage and multiple lab groups (requirement for zoning of space and multiple projects that last an extended period of time)		23.0
Carpentry Millwright Plumbing Sculpture Shop Sprinkler Fitter Steamfitter Pipefitter Theatre Construction	Lab space accommodating medium size equipment, storage and multiple lab groups (requirement for zoning of space and multiple projects that last an extended period of time)		23.0
Automotive Heavy Equipment Technician	Lab space accommodating large size equipment, storage, maneuvering space, and multiple lab groups (requirement for zoning of space and multiple projects that last an extended period of time)		33.0

Athletic/Wellness Spaces			
Room Type	**Description**	**Number of Seats**	**Recommended nsm**
Athletic Facilities	Gymnasia		variable
Athletic Facilities	Movement Studios		variable
Athletic Facilities	Fitness Rooms		variable

Informal Learning Spaces			
Room Type	**Description**	**Number of Seats**	**Recommended nsm**
Study Space	Library		tbd
Study Space	Learning Commons - Nova Chemicals Learning Common - Cenovus Energy Learning Common - DSB Learning Common		tbd

Appendix 3 - Learning Space Furniture and Fixture Standards

Standards developed by the CTL in consultation with Campus Management and the Learning Spaces Operations Subcommittee - Updated October 2019

PURPOSE

The purpose of the *Learning Space Furniture and Fixture Standards* is to provide a common set of attributes that support current pedagogy and provide a consistent classroom experience for students and faculty. Implementation of this standard will ensure the development of learner-centred flexible learning spaces.

This standard applies to general purpose learning spaces including Learning Studios and Classrooms. Specialized spaces such as labs, studios, and shops require different requirements.

STANDARDS

Layout and Sightlines

- Room Aspect Ratio - consideration of width to depth dimension of room to ensure instructors' and students' ability to make eye contact and hear each other.
- Instructor Area - podium located in front corner, should not block sightlines to whiteboard or displays.
- Table Arrangement - table groupings of 4-5 seats per grouping, oriented to provide sightlines to front of room (seminar rooms arranged boardroom style). See Figure 1.
- Sightlines to podium and displays without barriers such as pillars.
- Adequate circulation room at front of classroom, including room to accommodate table for instructor.
- Adequate turning radius between tables.
- Provision of accessible seats at the front of the room.

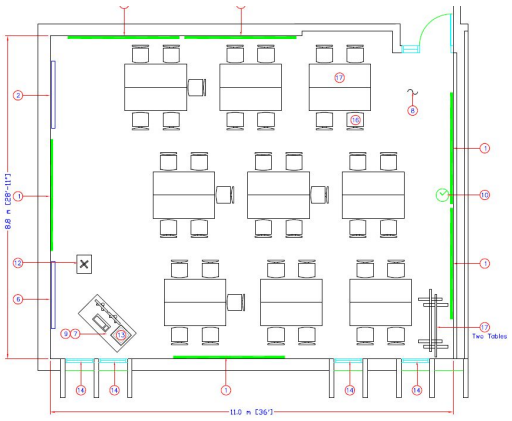


Figure 1.
Sample Table Arrangement

Access and Egress

- Doors - preferred location at the back of the room to minimize disruption by latecomers. Two (2) doors to provide egress for capacity of 60+ as per Building Code.
- Accessibility - minimum door size 915 mm (3'), with preferred placement of side light panel.

Lighting

- Zone Lighting - dimmable lighting with switching adjacent to podium.
- LED Lighting - appropriate colour temperature (lumens/Kelvin).
- Windows - as practical to provide natural lighting.
- Window Coverings - dual blinds preferred to enable varying levels of natural light to permeate room.

Furniture

See Figure 2 for images of sample furniture.

- Tables - rectangular, flip top, nesting tables with carpet castors. 29” height. 60L 24W 29H. Ideally, 1-2 height-adjustable tables for accessibility. See Figure 2.
- Chairs - nesting/stacking with carpet castors, flex-back, armless, non-fabric upholstery. See Figure 2.
- Lectern - preferably on carpet castors (not required for seminar rooms). See Figure 2.
- Podium - Instructor Station as defined in Learning Spaces Technology Standards - Appendix 4 (not required for seminar rooms). See Figure 2.

Figure 2. Sample Furniture

Table

Chair

Lectern

Podium

Fixtures

- Whiteboards - magnetic, high quality material (e.g. ceramic), placed in front and all sides as practical. Whiteboards accompanying a short throw projector as defined in Learning Spaces Technology Standards - Appendix 4.
- Wireless Access - adequate to support teaching and learning.
- Phone - preferred location is wall adjacent to podium.
- Clock - hardwired to wall, placed so easily seen by instructor and students.

Finishes

- Carpet Tile - preferred for acoustics and noise reduction.
- Power Outlets - adequate perimeter power as practical, in-floor power where possible, power to accommodate 50% of capacity.
- Paint - neutral light colour.

Documentation

- Classroom Layouts - includes capacity and default table arrangement, affixed to wall beside exit.
- Emergency Exit Plan - affixed to wall beside exit.
- Classroom Technology Quick Guide - located on podium.
- Learning Space Support Contact Information (CTL, ITS, Campus Management) - located on podium.

Other

- Waste and Recycling Receptacles - positioned by door.

Appendix 4 - Learning Space Technology Standards

Standards developed by the Learning Space Technology Advisory Group - Updated October 2019

PURPOSE

The purpose of the Learning Space Technology Standard is to provide a common technology platform and consistent classroom experience for students and faculty.

Guided by pedagogically sound best practice in teaching and learning, the application of the standards to a room considers room function and attributes.

Implementation of this standard will ensure our learning spaces are equipped with cost-effective, reliable, and sustainable technology that is future-focused and easily supported. The standard will facilitate consistent training and documentation for users of RDC learning spaces, and will reduce the potential for loss of revenue and reputation due to technology challenges.

STANDARDS

These recommendations are based on, and meet most of the criteria of, the Classroom Technology Standards document presented May 2016 to the Educational and Information Technology (EIT) Committee, by the Teaching and Learning Technology Sub-Committee of EIT with input from faculty members of the Centre for Teaching and Learning, IT Services, and the Library Information Common.

Non-standard learning space configurations will require a business case and will be subject to approval.

Business cases will be required for SCALE-UP Classrooms, Computer Labs, Labs, and Studios.

All Seminar Rooms, Learning Studios, Traditional Classrooms, Tiered Classrooms, Lecture Theatres, and Trades Classrooms will be equipped with the following standards at the Instructor Station and at the Display:

Instructor Station (Podium)

There are three Instructor Station (podium) types, referred to as P1, P2, and P3. Each podium will include: HDMI, VGA and USB connectivity. Teaching and learning requirements do not support the co-location of a telephone on the podium; phones should be attached to the wall, near the podium.

- Diagram 1 illustrates the Podium Design
- Diagram 2 illustrates the Design and Function of the Extron Switching Panel

  P1: P1 standards support a cloned desktop. P1 standards are applied to Traditional Classrooms, Learning Studios, Trades Classrooms, Tiered Classrooms, and Lecture Theatres.

  P2: P2 standards are a scaled back Instructor Station and only include a PC with wired network, audio, and a telephone. No physical podium will exist in these rooms. P2 standards will be applied to Seminar Rooms.

  P3: P3 standards will support an extended desktop. P3 standards will only be applied upon approval of a business case.

Accessible Podium

Accessible podiums will be available in selected classrooms across College buildings. All other functions and technology will remain consistent. An accessible podium design is yet to be determined.

Display
There are five Display types, referred to as D1, D2, D3, D4, and D5.

D1: This Display type represents touch-enabled, dual display. D1 includes short throw interactive data projectors with minimum 100" white boards.

This is the RDC classroom standard and will be applied to Traditional Classrooms, Trades Classrooms, and Learning Studios.

D2 and D3: These Display types represent the non-touch, single display options in a room. D2 includes an LCD TV, whereas D3 includes a long throw projector and screen.

These display standards will be applied to Seminar Rooms, Tiered Classrooms, and Lecture Theatres.

D4 and D5: These Display types represent dual display options in the room. This standard includes LCD TVs. D4 includes 80-100" non-touch TVs. D5 includes 80-100" touch TVs.

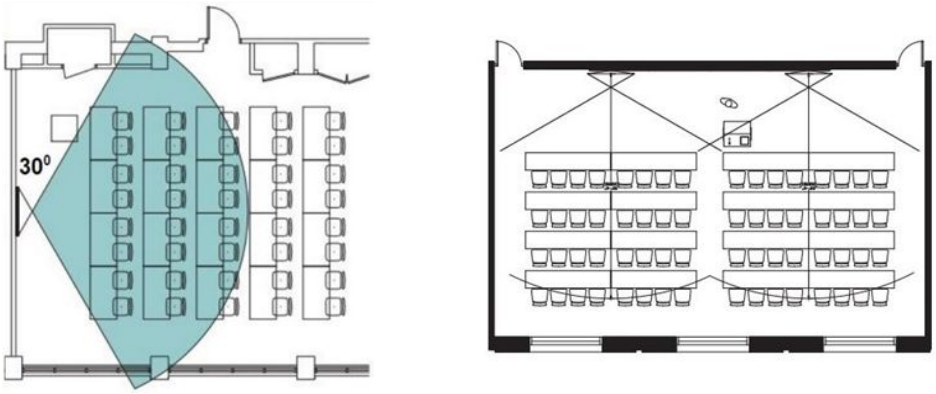
This standard will only be applied with a proven instructional need and/or dictated by room attributes and approval of a business case.

Display Size
Display type for each room will be determined by room size and configuration. Display size will be based on the following formula:

$$\frac{\text{Display Size (diagonal measurement in inches)}}{3} = \text{Maximum Viewing Distance (in feet)}$$

Position of Displays
The bottom of each display will measure a minimum of four feet from the floor.

Viewing angle will be no less than 30^0 from the centre of the display. Displays may have to be located off-centre of the mid-point of the wall to account for the students with obstructed sight lines due to the position of the instructor station.



Rooms that require a different display configuration will require approval of a business case.

Diagram 1: Design of Podium Standard

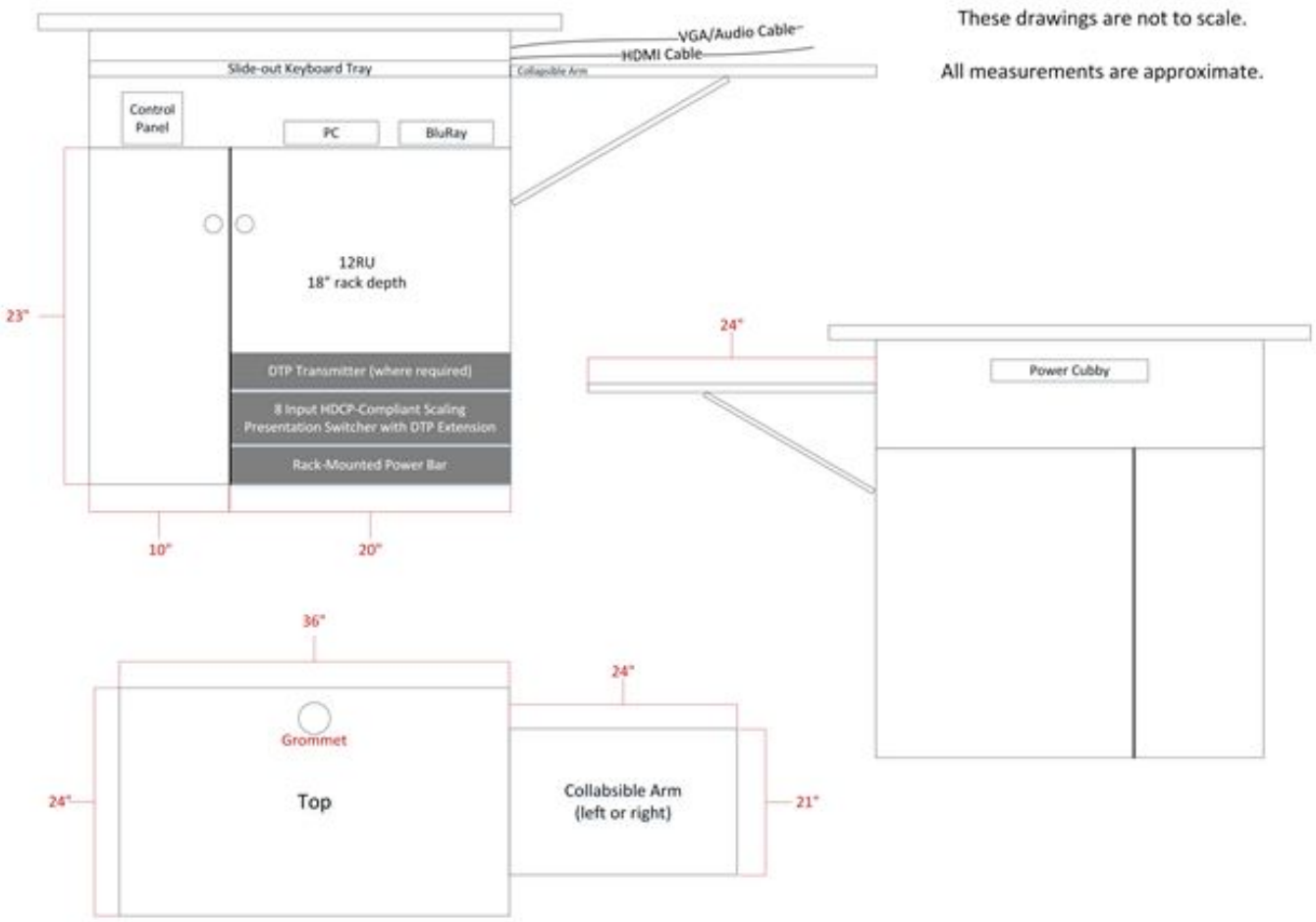
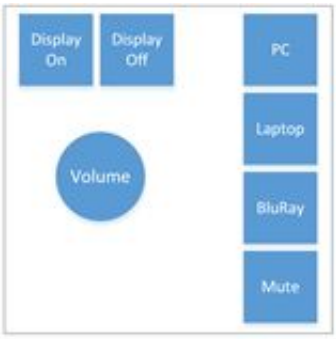


Diagram 2: Design and Function of Extron Switching Panel



Display On
Turn on primary Display
Set Input to PC
Button flashes for 10 seconds
Button remains lit

Display Off
Turn off primary Display
Button flashes for 10 seconds
All buttons unlit

PC
Sets Input to PC
Button flashes for 5 seconds
PC and Display On buttons remain lit. All other buttons unlit

Laptop
Sets Input to Laptop.
Button flashes for 5 seconds.
Laptop and Display On buttons remain lit. All other buttons unlit.

Volume
Adjusts overall system volume from 0 – 100.

BluRay
Sets Input to BluRay.
Button flashes for 5 seconds
BluRay and Display On buttons remain lit. All other buttons unlit.

Mute
Mutes Video and Audio.
Button flashes Red while muted. 2nd press unmutes Video and Audio. Button unlit.

Appendix 5 - Post-Occupancy Evaluation Standards

Standards developed by CTL in consultation with Campus Management - Updated October 2019

PURPOSE

Post-Occupancy Evaluation of newly developed or renovated learning spaces guides the planning for future learning spaces.

STANDARD

A Post-Occupancy Evaluation is conducted at various points following the delivery of new or renovated learning space to determine satisfaction with the space, identify and remedy challenges, and inform planning of future learning space.

Post-Occupancy Evaluation Studies

The Post-Occupancy Evaluation (POE) is comprised of a set of four studies that assess how effectively the space is occupied:

Study 1 - Process Evaluation
Used to assess the experiences of individuals that played a role in the project process.

Study 2 - Preliminary Experience Survey -
Used to quickly collect occupant's first impressions of the new environment. Feedback gathered from staff, faculty, and students help establish how things are going and what needs to change immediately.

Study 3 - Primary Occupant Survey
Formal survey of students and instructors that collects ratings of occupant experience across several environmental areas to determine overall experience of space.

Study 4 - Secondary Occupant Experience Survey
Formal survey of other users (Continuing Education, Facilities Bookings, etc.) that collects ratings of occupant experience across several environmental areas to determine overall experience of space.

Survey Scope

Surveys are conducted in consultation with Strategic Planning and Analysis. The POE survey assessment may include, but is not limited to, the following design considerations:

- Room size and crowding
- Sight lines and room layout
- Accessibility and Universal Design
- Technologies
- Furniture
- Finishes
- Environmental Conditions (Acoustics, Lighting, Air Quality, Temperature)
- Safety

Appendix 6 - Learning Space Inventory

Updated October 2019

Total Learning Spaces by Room Type

Room Type	Total Scheduled Spaces	Total Spaces
Seminar Room	16	21
Classroom	17	18
Trades Classroom	25	25
Learning Studio	29	33
Tiered Classroom	6	6
SCALE-UP Classroom	1	1
Lecture Theatre	1	1
Computer Lab	5	9
Science Labs	10	10
Health and Community Care	14	14
2D Studio	9	10
3D Studio	3	5
Athletics	5	6
Shops	34	34

Learning Spaces by Location

Main Campus		
Classrooms	Science Labs	Computer Labs
Learning Studios	Music Practice Rooms	Trades Shops/Labs
Tiered Classrooms	Seminar Rooms	Trades Classrooms
Lecture Theatre	Performing Arts Space	Athletic Studios
2D and 3D Studios	Health & Community Care	

Arts Centre		
Classrooms	Seminar Rooms	Performing Arts Space
Learning Studios	Music Practice Rooms	2D and 3D Studios

College Side		
Classrooms	Learning Studios	Health and Community Care

Gary W Harris Canada Games Centre		
Classrooms	Seminar Rooms	Health and Community Care
Learning Studios	Athletic Studios	

Donald School of Business		
Learning Studios	Seminar Rooms	Computer Labs/Flex Lab

Welikoklad Centre
Performing Arts Spaces

Confluence Campus	
Learning Studios	Health & Community Care

Appendix 7 - Completed Learning Space Projects

Updated October 2019

	2019	— Animation Lab Year 2 (913A)
Alternative Energy Lab (817) — Gary W. Harris Canada Games Centre — Animation Lab Year 1 (913B) —	**2018**	
	2017	— Makerspace in Library (2006F) — Health Sciences Lab (1504)
	2016	
SCALE-UP Classroom (2602) —	**2015**	
	2014	— Learning Studios (2601, 1503) — Learning Studios (Confluence Campus)
Welikoklad Event Centre — Occupational & Physical Therapist Labs (CollegeSide) — Learning Spaces (CS2182D, 2505, 2602) — Interview Observation Room (B501B) — Test Centre Renovation —	**2013**	
	2012	— Learning Studios (819, 1303, 2503, 2300 Wing) — MPA Screening Room (1322) — Nursing Simulation Lab (1323)
Donald School of Business — Engineering Technology Labs —	**2011**	
	2010	— Cornerstone Dining (1500) — Cornerstone Kitchen (1501) — Mixology Lab (1502) — Experimental Classrooms (913A-913B) — Collaboration Rooms (913D-913E) — Teaching Common (913C)
	2009	
Four Centres Building —	**2008**	
	|	
	2002	— Library Information Common (1006)
	|	
Science Labs —	**2000**	

Appendix 8 - Learning Space Audit

A Learning Space Audit was conducted in 2017.

Details are available separate from the Learning Spaces Master Plan.

Areas for Improvement

- Increased tracking of utilization for informal learning spaces
- Increased tracking of usage of practice and studio spaces
- Prioritize the creation of flexible and multiple use space
- Optimize evening usage by either increasing utilization or consolidating evening usage to specific areas to reduce costs
- Align timetabling general constraints with provincial standards
- Align timetabling patterns to maximize utilization
- Update technology and room characteristics standards to better support the pedagogy used by instructors
- Align capacity and number of rooms with demand

Priorities for Renovations

- 1439 Tiered Classroom (capacity 60) - identified to have safety (egress) concerns, has a sink in the front, determine need on campus for a demo sink
- B501 Tiered Classroom (capacity 45) -
- 2403 (former printmaking studio/current interim makerspace) - will be renovated as part of 2400 wing repurposing for Animation Labs.
- Computer Labs - More flexibility desired.
- SCALE-UP Classrooms - assess the need for more similar spaces of different capacities (e.g. 60)
- Upgrade Traditional Classrooms to flexible Learning studios with standard technology

Areas for Further Exploration

- Accessibility and Universal Design of learning spaces