

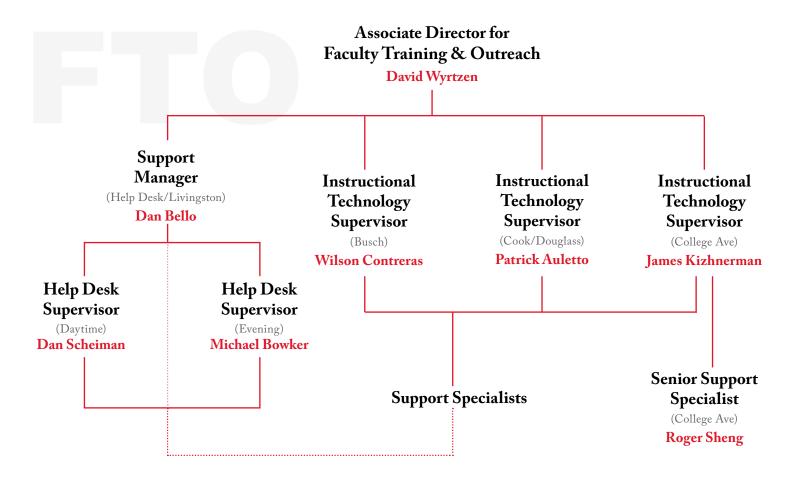


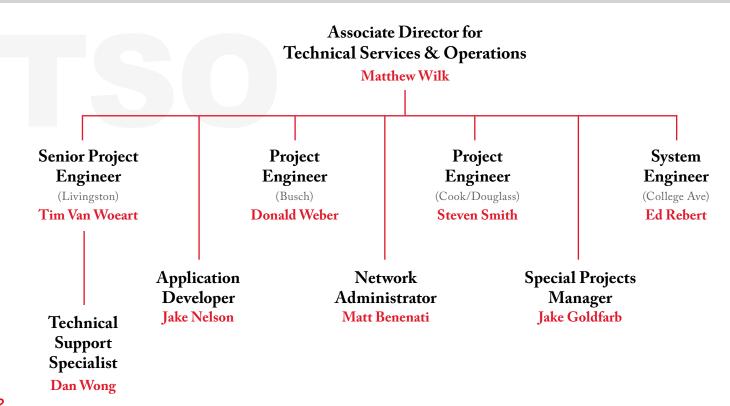
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ORGANIZATION CHART





Vision, Mission, & Values Statement

Vision Statement

All Rutgers-New Brunswick students will be afforded the opportunity to learn with the aid of state-of-the-art, technology-enhanced instructional spaces that support a wide range of teaching and learning styles. All Rutgers-New Brunswick faculty will be provided instructional technology and support that enables them to effectively engage with their students.

Mission Statement

Digital Classroom Services (DCS) is committed to designing, creating, and supporting best-in-class technology-enhanced learning environments. We design technology solutions that are at the forefront of emerging trends in classroom and instructional technology design and responsive to the unique needs of Rutgers-New Brunswick faculty. We train faculty to use these tools, introduce them to new technology-aided

 $instructional\ technology.$

Core Values

Excellence. Professionalism. Innovation.

teaching methods, and support the daily use of

Excellence is our standard in all that we do, from the classroom technology we offer, to the training tools, support, and services we provide. To convey our dedication to our mission, we are committed to working collaboratively with fellow Rutgers staff and to building strong relationships with our faculty. We design new learning environments and teaching tools, and we develop new methods of support to make Rutgers a leader in instructional technology. We collaborate with our colleagues at peer institutions to develop projects that leverage technology to meet the challenges facing higher education in today's ever changing technology landscape

Faculty Engagement

In addition to responding to requests for assistance, we proactively reach out to faculty to introduce them to new teaching tools and to learn about their instructional technology needs. Rather than prescribing instructional design, we work collaboratively with them to ensure our solutions are responsive to their needs and enhance the learning that occurs in their classrooms.

Intuitive Universal Design

DCS technology provides a consistent user experience so instructors will be familiar with the technology in all of our classrooms after having taught in any one of our classrooms. We adhere to an intuitive, user-friendly design aesthetic so that instructors can focus on teaching.

Excellent Customer Service

Rutgers-New Brunswick is a large, complex institution. In order to help the community overcome the challenges involved in getting help at such a large university, we strive to provide excellent user support by being responsive and professional and by providing status updates to our users. When challenges arise outside of our experience or control, we will coordinate with other Rutgers resources to provide a solution.



James Kizhnerman training student workers.

Mentoring Student Workers

We work closely with our student workers to teach them to be conscientious, responsible, and attentive employees. We model a professional, nurturing, and rewarding workplace so that when they leave Rutgers, they will be better prepared to enter the workforce.

Smart Operating Practices

We continuously assess our operation to ensure that we are working effectively and efficiently, and that we are good stewards of University resources.

LEARNING SPACES



305

learning spaces supported by DCS



74

learning spaces added to DCS since 2012



45

buildings across the Rutgers-New Brunswick campuses



60

of these classrooms are brand-new learning spaces

SUPPORT



2,886

support tickets



1,247

consultations



143

equipment deliveries



50

equipment loans

About DCS

As Rutgers-New Brunswick's central classroom technology unit, Digital Classroom Services engages at multiple levels of the learning experience. The Technical Services and Operations team designs, builds, installs, and maintains integrated systems that are tailor-made for Rutgers classes. Faculty Training & Outreach staff support the daily use of instructional technology, work with faculty to maximize the benefit that technology can bring to their teaching, and foster teaching development and broader pedagogic change through online resources and working groups.

Classroom Technology

Digital Classroom Systems

In 2012, Rutgers-New Brunswick commenced the Digital Class-room Podium Project. The project's founding goal was to equip all general-purpose classrooms with a state-of-the-art presentation hub that utilized a consistent design, so instructors would know how to use all rooms after having taught in one room. After working with faculty and staff across the University, a steering committee created the Digital Classroom Podium (DCP).

The DCP represented a novel approach to integrated classroom



Rutgers Room Control 2.0

systems. While typical systems in university settings utilize a processor built and programmed by outside vendors to control the room's equipment, DCPs are equipped with a Mac computer, which, in addition to being used by instructors to access presentation material, runs software that operates the room equipment. This software - Rutgers Room Control - is designed and programmed in-house by DCS's Application Developer.

Twenty-six DCPs were installed in classrooms on Rutgers-New



Since launching the Podium Project, DCS has developed a family of systems for different Rutgers learning spaces. While each system utilizes different capabilities and furniture, they are all operated using a uniform touchscreen interface. As a result, faculty who are familiar with one system are prepared to use all our systems.

PRESENTATION TECHNOLOGY



99%

of DCS classrooms are equipped with data projection



285

classrooms have been equipped with Digital Classroom Systems since the project's launch in 2012

CAPTURE & CONFERENCE TECHNOLOGY



79

Videoconference & Lecture Capture Spaces



46

Audioconference & Lecture Capture Spaces



2

Immersive Synchronous Lecture Hall for room-to-room instruction

CLASSROOM TECHNOLOGY UPGRADES

New System Installations -

Allison Road Classrooms 108, 110, 328 Beck Hall 221

Frelinghuysen Hall A1, A2, A3, A4, B6 Hickman Hall 114, 129, 202, 207, 213 Murray Hall 210, 211, 212, 213 School of Communication and Information 101, 103, 201, 203

Science & Engineering Resource Center 204, 206, 211, 212, 216, 217, 218, 220

System Refreshes -

Beck Hall 219, 250, 251, 252, 253 Hill Center 114, 116 Loree Hall 020, 022, 115 Lucy Stone Hall B105, B110, B112, B117, B121, B123, B205,

Ruth Adams Building 104
Science & Engineering Resource Center
111, 117, 118, 202, 203, 205, 207, 208, 209, 210
Tillett Hall 105

Brunswick's four campuses in 2012-2013 so that DCS could learn more about the system's utility as a teaching tool. At the end of the first two semesters of their use, feedback received from surveys, discussion sessions, and one-on-one conversations resulted in improvements to the DCP and Rutgers Room Control.

DCS began installing Digital Classroom Podiums in medium-sized classrooms while our Engineers developed additional versions of the Podium for different types of learning spaces. Since 2012, DCS has introduced the Digital Classroom Podium A1 for lecture halls and auditoriums, the Digital Classroom Flip-Top for seminar rooms, the Digital Classroom Lectern for small classrooms, the Collaborative Instructor Hub for Active Learning Classrooms, and the Immersion Lectern for Immersive Synchronous Lecture Halls. While each system is housed in different furniture and has different capabilities, they all use a standard design scheme and are controlled using the same onscreen interface. As a result, our family of Digital Classroom Systems enables us to equip all Rutgers-New Brunswick general-purpose classrooms with a system that is customized to the learning that occurs there, while offering a consistent user experience that minimizes the learning curve.

With nearly all of the general-purpose classrooms in New Brunswick equipped with some version of a Digital Classroom System, DCS began to "refresh" older systems beginning in 2018. To ensure that systems do not become outdated, each room is revisited at least every six years, with older components being replaced by newer equipment and with further modifications made to bring systems up to our most current design.

Specialty Rooms

While the majority of general-purpose classrooms are traditional classrooms, DCS has also developed five categories of rooms equipped with specialized technology designed for specific modes of teaching.

Active Learning Spaces

Active learning is one of the most exciting developments in higher education. It can take many forms, but most approaches to active learning emphasize collaboration, group work, and problem solving – rather than the passive reception of class content. Because it upends many traditional assumptions about teaching, traditional learning spaces are often ill–equipped for active classes. Providing classrooms that can better facilitate active learning requires a completely different approach to space design that includes but goes beyond just technology.

To meet this new demand, DCS has partnered with architects, Institutional Planning and Operations, and other stakeholders at Rutgers-New Brunswick to introduce two types of Active Learning

Spaces: Interactive Lecture Halls and Active Learning Classrooms. Interactive Lecture Halls offer the opportunity for dialogue and group work within a large lecture format. These spaces

include seating that can be used

to form groups; wireless display technology which students use to share work; student whiteboards; and microphones. Active Learning Classrooms utilize circular group tables of nine, at which students

sit in moveable chairs that can be reconfig-

ured as students form different clusters. The tables give students access to power outlets, connections to monitors, pushto-talk microphones, tablet whiteboards, and whiteboard walls. At the center of the room, the Collaborative Instructor Hub allows instructors to send presentation material to any of the room's multiple monitors and to "grab" content from student devices to share. The result is a space that facilitates interaction in multiple directions, simultaneously.



NJ Institute For Food, Nutrition & Health room 205 is a video conference and lecture capture space.

Conference and Capture Spaces

The advent of videoconferencing has created an expectation that geography need not limit student access to guest presenters and one another. To facilitate the use of videoconferencing and recording in classrooms, DCS has introduced four types of Conference and Capture Spaces, in which learning is not restricted to the four walls of the classrooms.

Immersive Synchronous Lecture Halls are DCS's most cutting-edge spaces. These rooms - one on Cook/Douglass and one on Busch - enable class to be held in the two spaces simultane-

ously. While the instructor alternates between the two rooms every class meeting, students can register for the room which is most convenient to them. An array of cameras and microphones capture the instructor and the students to create the experience of being in the same room. The improvement to the student experience has been reflected by the majority of students surveyed indicating that they welcome the option to take classes in these rooms to reduce bus travel.

Rather than connecting to other spaces, Videoconference and Lecture Capture: Presenter and Audience Spaces offer a more versatile option for videoconferencing with remote participants regardless of where they are. These rooms are equipped with multiple cameras, area microphones, and displays. The result is a space in which in-person and remote participants can easily see, hear, and interact with one another. Because of the level of engagement it can provide for both types of students, these rooms have become our go-to space for converged classes, a method of course delivery in which some students attend in-person while others attend online.

To meet the growing demand for videoconference and lecture capture classes of varying size, DCS has also introduced Videoconference and Lecture Capture Spaces. These spaces have a camera and microphone that can be used with the room's Mac computer to utilize and share video, audio, and presentation materials over the web using popular solutions like Zoom, Cisco Webex, and Big Blue Button. Remote participants can receive a high-quality audio and video class experience.

In more than 40 Audioconference and Lecture Capture Rooms, remote students can watch online streams consisting of the instructor's voice and presentation material. The wide availability of such rooms means that many faculty can easily add a streaming or recording element to their class as needed. Additionally, DCS



Screening Rooms

spaces.

utilizes portable equip-

ment to offer videoconfer-

ence on demand in all its

To accommodate the many courses that make extensive use of video and film, DCS created and supports five Screening Rooms. These rooms allow the classroom to become a theater so that students benefit from a high-quality viewing experience. DCS equips

these rooms with a variety of technology to aid the different types of screenings that occur within them, including reel-to-reel projection, theater-grade digital screening, surround sound, large screens, and blu-ray players. The tiered or sloped seating in these rooms ensure that there is not a bad seat in the house, while soundproofing enables students to experience high quality audio without interrupting other nearby classes.



DCS Training Center in Tillett Hall

DCS Training Center

The DCS Training Center in Tillett Hall serves multiple purposes. With four displays and videoconference technology, it is available for use by DCS and other departments conducting technology-reliant meetings. The space has become a preferred location by committees whose membership spans multiple campuses, graduate students presenting dissertations to scholars at other universities, and classes holding special sessions with remote participants. At the same time, the Training Center has served as DCS's pilot room, in which new technology can be tested before being introduced to Rutgers-New Brunswick classrooms. Finally, this space provides a location for faculty to meet with DCS's support staff to learn how to use our technology.

Chancellor Learning Spaces

In addition to its general-purpose classrooms, DCS also supports twelve learning spaces operated by units belonging to the Office of the Chancellor. These rooms are used for student training, meetings, videoconferences, and non-traditional classes. Because these rooms are controlled and used solely by each unit, DCS is able to provide technology more specifically designed to their needs, built on the foundation of the Digital Classroom Systems used more widely on campus..

Departmental Collaborations

While DCS's main focus is the classroom technology in general-purpose classrooms and Chancellor Learning Spaces, we

also look for opportunities to advance classroom technology at Rutgers more broadly through our collaborations with other schools and departments. DCS has coordinated with other technology-focused units at Rutgers that use similar solutions, such as Solstice wireless display sharing. Our leadership participates in university committees and task forces driving changes in technology. We frequently serve in an advisory role to other areas looking to employ technology in their rooms. Finally, DCS sells Digital Classroom Systems to other departments for use in their own controlled spaces. As a result, other departments benefit from a cost-effective solution that is familiar to their faculty who have taught in DCS rooms, while creating uniformity across Rutgers-New Brunswick.

Portable Technology

The DCS Help Desk administers an equipment delivery and loan program that gives faculty access to additional equipment that is not already in rooms. Technology like wireless presenters and web cameras can be used to leverage Digital Classroom Systems. Training & Outreach.

Daily Technical Support

Our technology is only as good as the support we provide. To help ensure that faculty can focus on teaching, rather than operating equipment, DCS provides multiple modes of support when regular classes are in session. From the start of the day until the last class, faculty in classrooms can call the DCS Help Desk for assistance. Our staff assist users over the phone, remotely connect to classroom equipment to remedy issues, or dispatch on-site staff located in one of six campus offices.

Consultations

Beyond helping to troubleshoot in-class issues, the DCS team also includes staff who work with faculty one-on-one. These experts are located on each campus and are available to train faculty to use technology, help develop plans for integrating new tools into the classroom, and introduce instructors to new technology and the approaches to teaching that they can inspire.

Active Learning Community

Launched in 2015, the Active Learning Community (ALC) is a working group of faculty and staff who use, support, or are interested in active learning techniques. Driven by DCS, the School of Arts & Sciences, the Rutgers Learning Centers, and Teaching and Learning

with Technology - the ALC has become one of DCS's most fruitful outreach initiatives. Workshops, training sessions, and class observations throughout the year culminate in a spring Symposium featuring faculty and staff from Rutgers and other institutions. In addition to being a channel for faculty support, the ALC is also an important resource for the further development of active learning spaces. Continuous research and dialogue occurring through the community on the use of active learning spaces greatly informs the creation of future classrooms.

Online Resources

We connect with the broader Rutgers community through our robust online presence. The DCS web site - dcs.rutgers.edu - is a frequently used resource. Individual pages for each DCS classroom have become a valuable tool for faculty, students, and staff. Teaching resources in the form of videos and tutorials help instructors learn more about technology at their own convenience. Additionally, our targeted surveys help provide a means to collect valuable feedback on our rooms and our services.

2022-23 Challenges

Reduced Funding for Evergreen Work

Impacts of financial headwinds facing the University as a whole resulted in a reduced department budget. In order to minimize disruption to classes, much of the cost-cutting impacted DCS's evergreen work. Works in some rooms was delayed while the scale of the work in other rooms was reduced.

Videoconferencing in Seminar Rooms

DCS's videoconference and lecture capture solution for seminar



rooms has made use of a camera and microphone built-in to the Digital Classroom Flip-top's user screen. While this approach provides an efficient way to capture the audio and video of the instructor, some classes wished to also capture the students so that guest lecturers could communicate with them. While portable equipment was able to meet this demand, a solution built into the room would provide a better experience for users.

Collecting Broad Feedback for Evergreen Planning

Because the annual Evergreen work naturally occurs in multiple, simultaneous ways, it can be difficult to gather from feedback from all the staff that interact with these systems to ensure that their various perspectives are included in the design and planning of this work.



2022-23 Accomplishments

Evergreen

This past year saw a big push to update classrooms. Following evergreen cycles in which budgetary constraints forced us to reduce our workload, DCS sought to use 2022-2023 to get closer to catching up to its goal of revisiting all rooms every six years.

In addition to refreshing rooms that had been postponed in previous cycles, we also focused on right-sizing the equipment in small classrooms. Digital Classroom Podiums in twenty-six rooms were replaced with new Digital Classroom Lecterns (DCLs), which have a smaller footprint, allowing the instructor more space in which to teach while using technology. The DCLs also include a built-in presenter camera and microphone. As a result, Rutgers-NB number of Videoconference & Lecture Capture Spaces grew to eighty.

In larger rooms that warrant Digital Classroom Podiums, we "refreshed" those systems by replacing the physical podium as well as aging components. As we introduced new technologies like conference cameras and microphones, we also removed older technology which have declined in usage. We removed blu-ray players and VGA connections. By removing old technology that has increasingly been abandoned for newer, better solutions - we can reduce points of failure in our systems and focus on new features that will get more use.

Finally, we updated nearly all of our classrooms with new Mac keyboards. As a result, users who were familiar with Macs were able to utilize keyboard shortcuts with which they are familiar.

Rutgers Active Learning Symposium

May marked the in-person return of the Rutgers Active Learning Symposium (RALS). After two years in which the pandemic forced us to host RALS online, we once again invited faculty, staff, and students from Rutgers and beyond to convene around cutting edge teaching practices.

The 2023 Symposium featured a presentation and workshop from Dr. Andrew C. Butler. Dr. Butler of Washington University in St. Louis, the chair and an associate professor in the Department of Education as well as an associate professor in the Department of Psychological & Brain Sciences. Dr. Butler led two keynote sessions: "Creating Learning Environments that Support Student Motivation" and "Providing Feedback on Assignments and Assessments: Type, Timing, and Other Considerations."

These keynote sessions were complemented by a host of sessions led by Rutgers faculty in which they shared their successes, demonstrated new approaches, shared the results of research, and much more. By the end of the day, our commitment to bringing together a community of practice around active learning was rewarded by the excitement that was present over being together again.

Increased Support for Conference and Capture

As instructors returned to the classroom following a period of remote instruction, they were increasingly interested in using remote tools to provide students with flexible ways to attend class. Requests for assistance with videoconference and recording all increased. To meet this new demand, DCS held workshops, added new online instructional resources, and met one-on-one with faculty. To ensure we were prepared for in-class requests for assistance, we made videoconference and lecture capture training a standard part of our Support Specialist orientation.

2023-24 Goals

Refine Evergreen Process

When the Digital Classroom Podium project was first launched, great emphasis was placed on the user experience. In the subsequent years, this priority was largely channeled into furthering the development of Rutgers Room Control, while Evergreen work dealt with improving performance, increasing reliability, and developing ways to expand our system's features.

Next year, we will work to refine the Evergreen design process to better incorporate the faculty perspective from the beginning so that the user experience is considered before planning is underway rather than arising as questions emerge throughout that process.

Videoconferencing in Seminar Rooms

Currently any seminar room with conference and capture capability only has camera and microphone coverage for the instructor. However, there has been a demand recently to include the whole room so that guest lecturers can interact with students. In 2023-24, we will explore ways to provide this capability in an approach that aligns with our existing conference and capture tiers and our current user experience.

Aligning Classroom Attributes

DCS and the Office of Academic Scheduling (OASIS) and Instructional Services have long coordinated our work in several ways, including sharing and maintaining information on the

classrooms. However, we have typically done so by maintaining separate stores of information while sharing information and trying to coordinate nomenclature and standards. This has resulted in deviations in information, unnecessarily redundant work, and barriers to providing information to room requestors that will lead to better space assignments. In

2023-2024, we will work to better align our room attributes and manage them in a shared data repository that can populate the various places people access them.

Coordination with Units Supporting Classrooms

While DCS has long worked closely with OASIS when dealing with room needs and assignments, coordination with other departments whose work impacts classrooms has not been clearly articulated. As a result, information regarding room openings, facilities-related issues, and other urgent matters are often not communicated between these groups in a timely manner. Additionally, the ways in which DCS communicates user-related issues to these units could be clarified to ensure that DCS forwards or takes ownership of the problems appropriately.

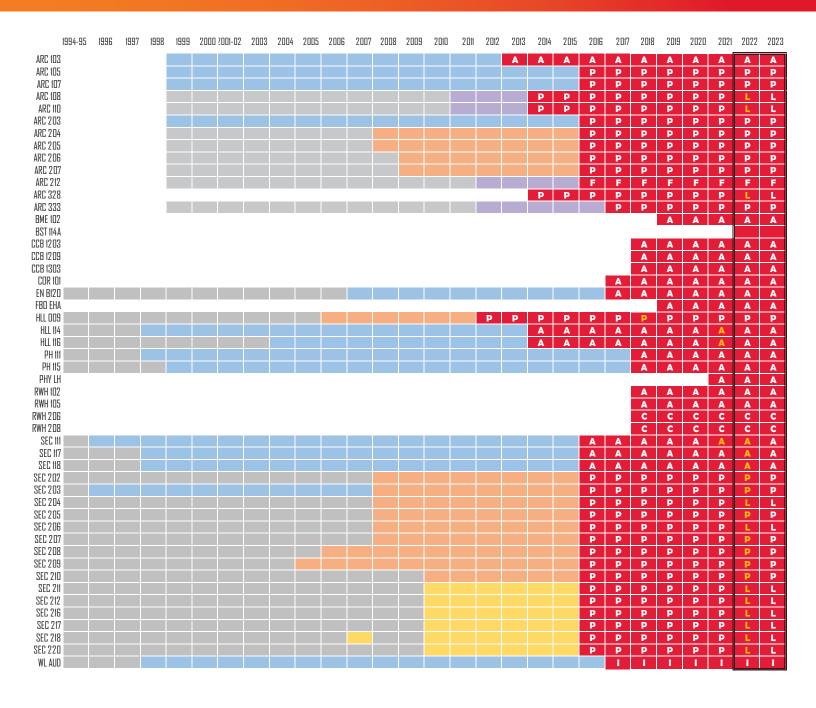
Web Site Work

DCS typically refreshes its web site every few years to ensure it feels current, contains up-to-date information, and continuously reflects the way visitors use and want to use it. This work must also now include considerations of the impacts of Rutgers move to a shared content system for University web sites. In the coming year we will work to make aesthetic and content changes to ensure our web site is current while beginning to coordinate with the Office of Information Technology to develop a plan to appropriately coordinate the DCS web site within the larger online Rutgers ecosystem.

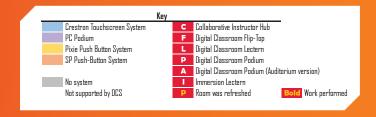


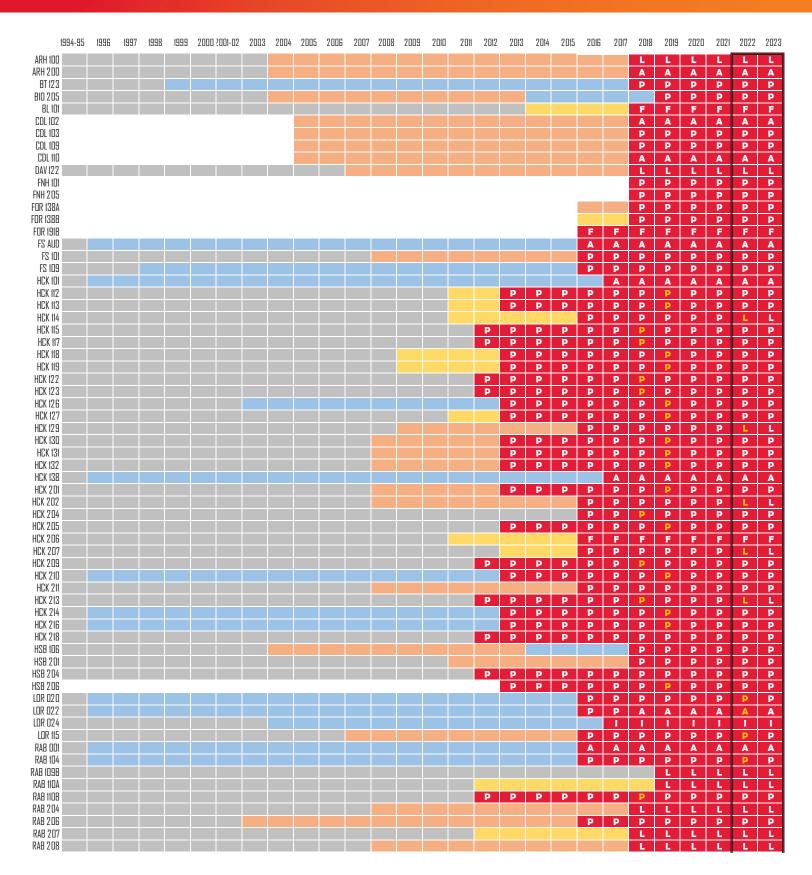
Richard Weeks Hall of Engineering room 105

>>> Classroom Matrix Busch Classrooms



>>> Cook/Douglass Classrooms

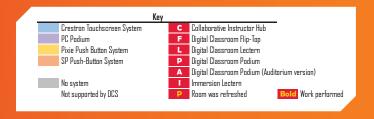


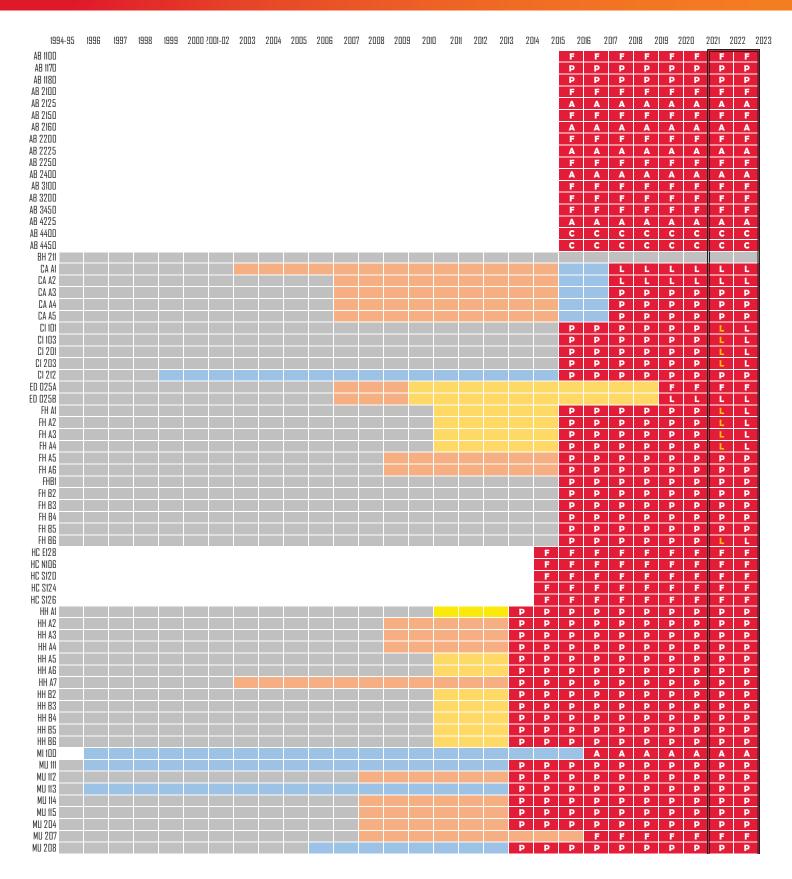


>>> Cook/Douglass Classrooms

199	94-95	1996	1997	1998	1999	2000 2001	-02	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
RAB 209A																	P	P	P	P	P	P	P	P	P	P	P	P
RAB 209B																	P	P	P	P	P	P	P	P	P	P	P	P
TH 101																							F	F	F	F	F	F
TH 201																						F	F	F	F	F	F	F
TH 206																							L	L	L	L	L	L
WAL 203																												
WAL 210																												

>>> College Ave Classrooms





>>> College Ave Classrooms

1994-95	1996	1997	1998	1999	2000 ?	001-02	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	201	13 20	14 21	115 2	016 2	2017 2	2018 2	2019 2	2020	2021	2022 2023
MU 210																		P	P	P	P	P	P	P	P	P	P
MU 211																		P	P	P	P	P	P	P	P	P	P
MU 212																		P	P	P	P	P	P	P	P	P	P
MU 213																		P	P	P	P	P	P	P	P	P	P
MU 301																					A	A	A	Α	A	A	A
SC 101																	P	P	P	P	P	P	P	P	P	P	P
SC 102																	P	P	P	P	P	P	P	P	P	P	P
SC 103																	P	P	P	P	P	P	P	P	P	P	P
SC 104																	P	P	P	P	P	P	P	P	P	P	P
SC 105																	P	P	P	P	P	P	P	P	P	P	P
SC 106																	P	P	P	P	P	P	P	P	P	P	P
SC 114																	P	P	P	P	P	P	P	P	P	P	P
SC 115																	P	P	P	P	P	P	P	P	P	P	P
SC 116																	P	P	P	P	P	P	P	P	P	P	P
SC 119																	P	P	P	P	P	P	P	P	P	P	P
SC 120																	P	P	P	P	P	P	P	P	P	P	P
SC 121																	P	P	P	P	P	P	P	P	P	P	P
SC 123																							Α	Α	A	A	Α
SC 135																							Α	Α	A	A	A
SC 201																	P	P	P	P	P	P	P	P	P	P	P
SC 202																	P	P	P	P	P	P	P	P	P	P	P
SC 203																P	P	P	P	P	P	P	P	P	P	P	P
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SC 214																P	P	P	P	P	P	P	P	P	P	P	P
SC 215																	P	P	P	P	P	P	P	P	P	P	P
SC 216																	P	P	P	P	P	P	P	P	P	P	P
SC 219																P	P	P	P	P	P	P	P	P	P	P	P
SC 220																	P	P	P	P	P	P	P	P	P	P	P
SC 221																	P	P	P	P	P	P	P	P	P	P	P
VD 211																					Α	A	Α	Α	A	A	Α
VH 104																						P	P	P	P	P	P
VH 105																					Α	A	A	A	A	A	A
ZAM EDR																					P	P	P	P	P	P	P
ZAM MPR																					P	P	P	P	P	P	P

>>> Livingston Classrooms



