

On-campus Instructional Spaces: Adaptation for Fall 2020

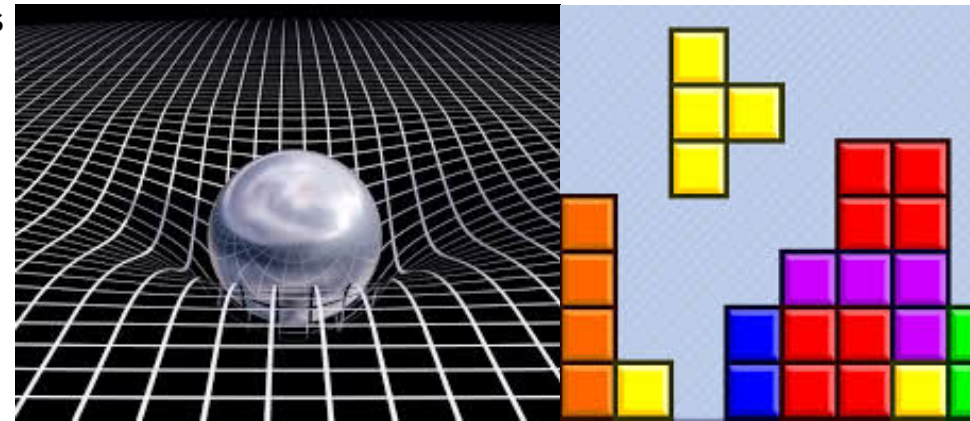
Update 24 August 2020

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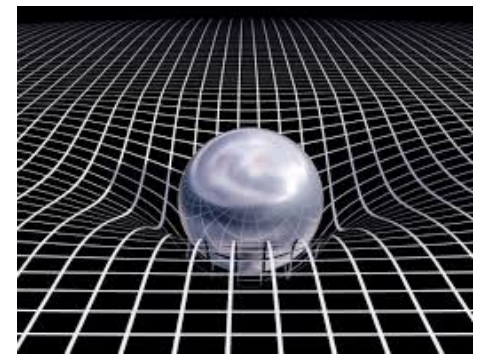


*space-time continuum of classroom scheduling meets
Tetris-inspired tactics of timed puzzle solving*

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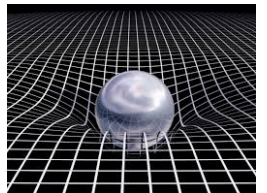
Thank you to the 42 units that

- met with us in “office hours” in July and August by deadline, so instructors could prepare
- iterated on solutions as DLC plans and Commonwealth guidance changed
- updated Registrar requests for daily adjustments in August
- asked other questions about campus operations to improve experiences for their faculty, staff, and students over the summer months
- helped identify other space challenges that we will address in coming weeks



On-campus Instructional Spaces: Principles

- Enable MIT educational mission for students and by faculty & staff
- Establish clear “Covid capacity” of rooms consistent with all *current* health and government guidance
- Minimize mixing of students (larger cohort) during instructional blocks
- Minimize sectors in use for classes, if capacity allows
- Enable enhanced cleaning of learning spaces between instructional blocks
- Enable compatibility with other student, staff, and faculty needs (biobreaks; access point transit)



Status Update

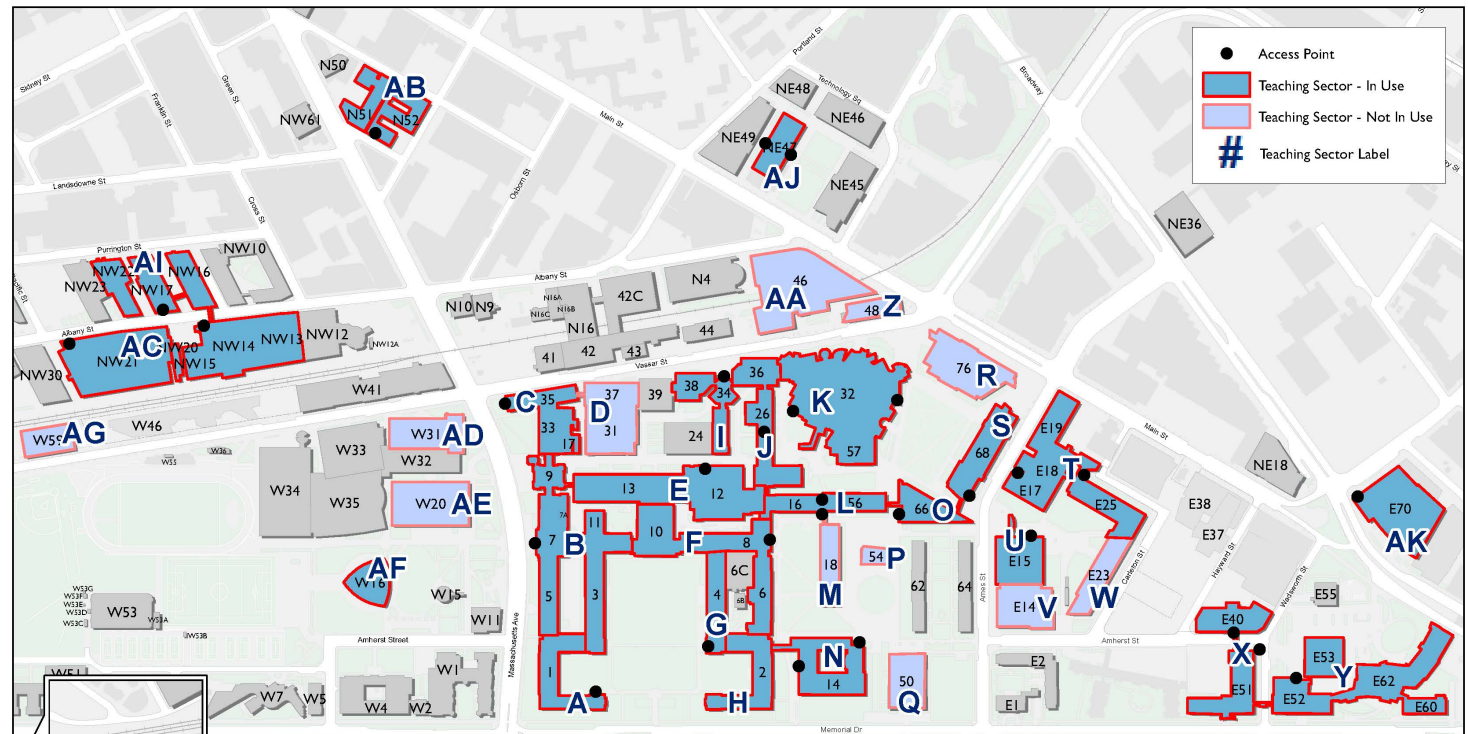
- 1,377 Total Classes
 - Virtual: 1,181
 - Hybrid (Virtual+On Campus): 115
 - On Campus: 81

42 DLCs

- 38 Schedules Approved
- 4 Pending final confirmation details this week

AS OF 8/21/2020		2726	82%	2229	18%
Course	Dept	Total Classes	Total Virtual	Total On Campus	
1	Civil and Environmental Engineering	52	50	2	
2	Mechanical Engineering	189	141	48	

- On-campus sessions with space assigned
- Covid capacity of rooms → more sessions than classes
- Covid capacity determined by MIT is listed for all possible instructional spaces, AND Commonwealth maximum is 25 persons in the same room at any time.



Status Update

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 - Virtual: 1,181
 - Hybrid: 115
 - **On campus: 81**

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- 4 Pending final confirmation details this week

AS OF 8/21/2020		2726	82%	18%	497			
Course	Dept	Total Classes	Total Virtual	Total On Campus	Number Sectors	Number Buildings	OK	Status
1	Civil and Environmental Engineering	52	50	2	1	1	1	Approved
2	Mechanical Engineering	189	141	48	4	5	1	Approved
3	Materials Science and Engineering	64	63	1	1	1	1	Approved
4	Architecture	190	67	123	4	6	1	Approved
5	Chemistry	120	104	16	3	3	1	Approved
6	Electrical Engineering and Computer Science	300	291	9	3	3	1	Approved
7	Biology	90	76	14	3	4	0	Meeting for office hours on 8/28
8	Physics	91	91	0	0	0	0	Need to schedule the on-campus labs run in their own space.
9	Brain and Cognitive Sciences	32	32	0	0	0	1	Approved
10	Chemical Engineering	78	67	11	4	4	0	Waiting confirmation that all on campus labs and spaces are requested
11	Urban Studies and Planning	76	76	0	0	0	1	Approved
12	Earth, Atmospheric, and Planetary Science	58	58	0	0	0	1	Approved
14	Economics	100	74	26	3	4	1	Approved
15	Management	348	182	166	3	4	0	Still determining optimal format for case discussion sessions
16	Aeronautics and Astronautics	50	47	3	2	2	1	Approved
17	Political Science	30	30	0	0	0	1	Approved
18	Mathematics	158	142	16	2	2	1	Approved
20	Biological Engineering	39	38	1	1	1	1	Approved
22	Nuclear Science and Engineering	26	20	6	3	3	1	Approved
24	Linguistics/Philosophy	50	50	0	0	0	1	Approved
21A	Anthropology	6	6	0	0	0	1	Approved
21G	Global Studies and Languages	121	121	0	0	0	1	Approved
21H	History	26	26	0	0	0	1	Approved
21L	Literature	29	29	0	0	0	1	Approved
21M	Music and Theater Arts	105	80	25	4	4	1	Approved
21W	Writing	33	32	1	1	1	1	Approved
AS	Aerospace studies	10	10	0	0	0	1	Approved
CC	Concourse Program	11	11	0	0	0	1	Approved
CMS	Comparative Media Studies	42	41	1	1	1	1	Approved
CSB	Computational and Systems Biology	1	1	0	0	0	1	Approved
EC	Edgerton Center	24	16	8	1	1	1	Approved
EM	Engineering Management	8	2	6	2	2	1	Approved
ES	Experimental Study Group	32	32	0	0	0	1	Approved
HST	Health Sciences and Technology	31	30	1	1	1	1	Approved
IDS	Data, Systems, and Society	8	8	0	0	0	1	Approved
MAS	Media Arts and Sciences	22	22	0	0	0	1	Approved
MS	Military Science	5	5	0	0	0	1	Approved
NS	Naval Science	8	8	0	0	0	1	Approved
SCM	Supply Chain Management	29	17	12	2	3	1	Approved
SP	Special Programs	4	4	0	0	0	1	Approved
STS	Science, Technology, and Society	21	20	1	1	1	1	Approved
WGS	Women's and Gender Studies	9	9	0	0	0	1	Approved

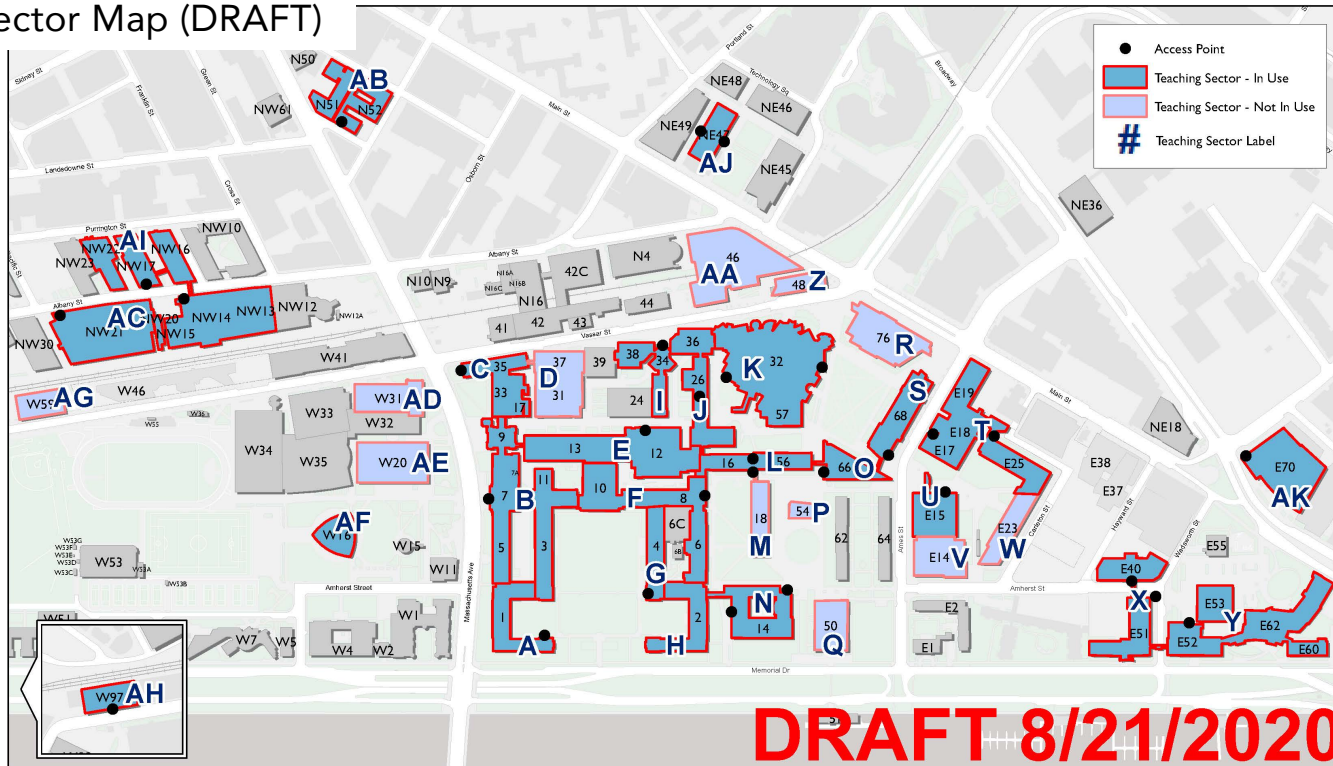
By sector view for each DLC

Reminder: This means class components on campus (e.g., 2 recitations), which can be greater than the number of subject listings on campus

		82%	18%	# DLCs	2	4	4	1	1	1	1	2	2	1	3	4	1	1	1	1	4	1	3	1	3	1	4	3	42		
		2726	2229	497	# Classes	7	14	16	2	2	9	1	83	9	14	5	19	10	3	3	6	4	3	7	8	4	66	77	125	2229	
Course	Dept	Met?	Total Classes	Total Virtual	Total On Campus	Number Sectors	??	A	AB	AC	AF	AH	AI	B	C	E	F	G	H	I	J	K	L	N	O	S	T	U	X	Y	ZZZ
1	Civil and Environmental Engineering	31-Jul	52	50	2	1		2																						50	
2	Mechanical Engineering	15-Jul	189	141	48	4		6						33	8		1													141	
3	Materials Science and Engineering	12-Jun	64	63	1	1												1												63	
4	Architecture	12-Aug	190	67	123	4			4					50			3										66			67	
5	Chemistry	6-Aug	120	104	16	3										14	1	1												104	
6	Electrical Engineering and Computer Science	13-Aug	300	291	9	3			2													6	1							291	
7	Biology	??	90	76	14	3	5																		1	8				76	
8	Physics	5-Aug	91	91	0	0																								91	
9	Brain and Cognitive Sciences	??	32	32	0	0																								32	
10	Chemical Engineering	22-Jul	78	67	11	4															3		1		5		2			67	
11	Urban Studies and Planning	31-Jul	76	76	0	0																								76	
12	Earth, Atmospheric, and Planetary Sciences	14-Aug	58	58	0	0																								58	
14	Economics	11-Aug	100	74	26	3																					1		16	9	74
15	Management	4-Aug	348	182	166	3	2																						49	115	182
16	Aeronautics and Astronautics	7-Aug	50	47	3	2		2							1															47	
17	Political Science	26-Aug	30	30	0	0																									30
18	Mathematics	1-Jul	158	142	16	2												6	10											142	
20	Biological Engineering	??	39	38	1	1																		1						38	
22	Nuclear Science and Engineering	13-Aug	26	20	6	3			2			1									3									20	
24	Linguistics/Philosophy	5-Aug	50	50	0	0																									50
21A	Anthropology	21-Jul	6	6	0	0																									6
21G	Global Studies and Languages	22-Jul	121	121	0	0																									121
21H	History	17-Jun	26	26	0	0																									26
21L	Literature	✓??	29	29	0	0																									29
21M	Music and Theater Arts	29-Jul	105	80	25	4					2	9					11								3						80
21W	Writing	5-Aug	33	32	1	1																					1				32
AS	Aerospace studies	NONE	10	10	0	0																									10
CC	Concourse Program	??	11	11	0	0																									11
CMS	Comparative Media Studies	5-Aug	42	41	1	1																	1								41
CSB	Computational and Systems Biology	✓??	1	1	0	0																									1
EC	Edgerton Center	??	24	16	8	1				8																					16
EM	Engineering Management	28-Jul	8	2	6	2		4	2																						2
ES	Experimental Study Group	??	32	32	0	0																									32
HST	Health Sciences and Technology	24-Jul	31	30	1	1																					1				30
IDS	Data, Systems, and Society	12-Aug	8	8	0	0																									8
MAS	Media Arts and Sciences	✓??	22	22	0	0																									22
MS	Military Science	1-Jul	5	5	0	0																									5
NS	Naval Science	8/6 & 7/1	8	8	0	0																									8
SCM	Supply Chain Management	29-Jul	29	17	12	2																							11	1	17
SP	Special Programs	✓??	4	4	0	0																									4
STS	Science, Technology, and Society	6-Aug	21	20	1	1																							1		20
WGS	Women's and Gender Studies	5-Aug	9	9	0	0																									9

ZZZ=virtual, just so we could keep track of all MIT classes and sessions

MIT Instructional Sector Map (DRAFT)



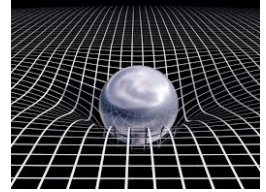
Instructional Sectors

Example: Sectors D and M, P-R, V-W have no scheduled UG or G classes.

	??	A	AB	AC	AF	AH	AI	B	C	E	F	G	H	I	J	K	L	N	O	S	T	U	X	Y	ZZZ
# DLCs	2	4	4	1	1	1	1	2	2	1	3	4	1	1	1	1	4	1	3	1	3	1	4	3	42
# Classes	7	14	16	2	2	9	1	83	9	14	5	19	10	3	3	6	4	3	7	8	4	66	77	125	2229

Buildings

	1	2	3	4	5	6	7	10	12	24	26	32	33	35	56	66	68	14W	E15	E18	E25	E40	E51	E52	E62	E70	N51	N52	NE47	NW17	NW21	W16	W97	WI	ZZZ	
# DLCs	4	1	2	4	2	1	1	2	1	1	1	1	1	1	4	3	1	1	1	1	2	1	4	3	2	1	2	2	1	1	1	1	1	1	1	42
# CLASSES	14	10	26	19	31	1	26	4	14	3	3	6	1	8	4	7	8	3	66	2	2	10	67	15	110	2	10	6	1	1	2	2	9	4	2229	



On-campus Instructional Spaces:

How will this work?

- Registrar lists on-campus meeting locations for all classes online (like normal); informs DLCs (like normal)
- Student Covid Pass linked to registered class **sector** locations
- **Adaptations:**
 - We all tap our cards at access points...patient, paced entry to sectors for instructional blocks at specific building doors (see maps maintained current online)
 - Restrooms single occupancy
 - Elevators reduced occupancy
 - Meals between classes may require pickup (student meal plan)
 - Wipe in/wipe out of space used for instruction between each class, in addition to Custodial Services cleaning between instructional blocks
 - For these reasons, on-campus instructional class sessions should start 10 min after and end 10 min before the stated class meeting period.

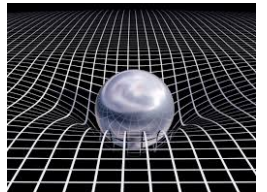
On-campus Instructional Spaces:

What's next?

- Complete four pending DLC assignments; Registrar posting
- Extracurricular and experiential learning space discussions underway
- Additional card-accessible doors to be shared on all maps, aligned with start of in-person classes (8 Sept)

- Outdoor space use guidance for Registrar-listed on-campus classes (process TBD to be communicated before start of in-person classes so by 8 Sept)
- **NOTE that MIT Now communicated over weekend that maximum number of people in any outdoor group on campus is currently 10.**

- Interstitial space use for virtual/on-campus student schedules



On-campus Instructional Spaces:

Questions/Answers from 9am call

- Who stocks the cleaning supplies, so instructors and students can wipe in/out?
 - MIT Custodial Services will provide containers of disinfecting wipes and signage in rooms for which there are Registrar-listed classes. Signage there indicates where/how to dispose of wipes after each person wipes in/wipes out of his/her/their own instructional space working area at the beginning and end of that on-campus class session.
 - DLCs can order more from the Covid Store for their instructors to use in classrooms, but we don't think it will be necessary for this purpose.
 - If instructor finds supplies missing from room assigned to on-campus class session, contact Marty O'Brien, Senior Manager of Campus Services (mobrien@mit.edu or 617.253.6728).
- Who puts students (G or UG) on Covid Access/Pass so they can get in to MIT campus for registered classes?
 - Not the DLCs
 - If students are resident on campus, DSL will add students who have registered classes
 - If students are not resident on campus, IS&T will add students who have registered classes

On-campus Instructional Spaces: Questions/Answers from 9am call

➤ Can you tell us more about ventilation in MIT's assigned instructional spaces?

Joe Higgins, as VP for Campus Services & Stewardship, has shared the following info with several units who have inquired about campus space and ventilation analysis:

Based on the Centers for Disease Control (CDC) and Commonwealth of MA guidance, it is clear that the most effective ways to limit the spread of Covid-19 are the safety measures our community is already taking: practice physical distancing, wear face coverings, wash hands often, clean and disinfect frequently, limit the number of people in spaces, and isolate people who become infected. According to CDC workplace FAQ, "The risk of spreading the virus that causes Covid-19 through ventilation systems has not been studied, but is likely low." In other words, the risk of infectious virus particles passing from one office to another through the ventilation or air conditioning is not a known high risk. While this is not a known high risk at present, experts recommend keeping windows and doors open when feasible. We encourage an ethos of social distancing and mask use at all times in the presence of others.

A dedicated team from MIT's Environment, Health, and Safety (EHS) and Facilities Engineering is reviewing ventilation strategies for each building, and exploring opportunities to increase outdoor air ventilation and improve Indoor Environmental Quality where we can, improve HVAC filtration to MERV-13 or the highest level achievable, and keep systems running longer hours (24/7 if possible). At a minimum, all installed ventilation systems will be operated as they are designed to maintain indoor environmental air quality.

Throughout this process, MIT has been consulting with experts, including infection control professionals and MIT faculty, and monitoring emerging guidance. MIT staff stand ready to evaluate and implement new guidance on any emerging standards, or guidance from medical experts and public health officials. We are working with the Associate Dean of Engineering/Professor Anette (Peko) Hosoi on her modeling tool to help speed information gathering and understanding of the ventilation, occupancy, and time duration use of instructional spaces.

Practical operational steps we are taking include:

- Confirm that existing central air handling units are functional and operating
- Confirm that exhaust fans in building restrooms are functional and operating
- Confirm that windows in restrooms can be opened, weather and window type permitting
- Modify existing central air handling units to run longer hours (if possible)
- Increase outdoor air ventilation to improve Indoor Environmental Quality (unit type permitting)
- Adjust demand-control ventilation systems (based on occupancy and unit type)
- Improve system filtration materials (unit type permitting)