# **ACKNOWLEDGMENTS**

#### STEERING COMMITTEE

- Dr. Tony Allen, President
- Cleon L. Cauley, Chief Operating Officer
- Dr. Saundra F. Delauder, Provost and Chief Academic Officer
- Dr. Lynda Hope Murray-Jackson, Associate Vice-President, Institutional Effectiveness & MSCHE ALO
- Dr. Clytrice Watson, Associate Provost for Academic and Student Services
- **Dr. Vita Pickrum,** Vice President of Institutional Advancement
- Dr. Stacy L. Downing, Vice President of Student Affairs and Enrollment Management
- Antonio T. Boyle, Vice President Strategic Enrollment Management and Student Affairs
- Alecia S. Gadson, Interim Director of Athletics
- Bernard Pratt, Executive Director Of Auxiliary & Capital Planning
- **Zafar Chaudhry,** Associate Vice President Procurements
- **Tom Idnurm,** Director of Facility Management (Formerly Wesley College)
- Bob Worzburg, Special Assistant to the General Counsel at Delaware State University
- Alan Brangman, Strategic Advisor

#### **CONSULTANTS**

Gautam Sundaram, Perkins&Will, Practice Leader, Principal

**Zena Howard,** Perkins&Will, Managing Director, Principal

Malcolm Davis, Perkins&Will, Practice Leader, Senior Associate

**Brad Rogers,** Perkins&Will, P+S Consultant, Senior Associate

Xiaoyuan Zhang, Perkins&Will, Urban Designer II

Namitha Jalori, Perkins&Will, Workplace Consultant

Yanel deAngel, Perkins&Will, Managing Director, Principal

Jennifer Williams, Perkins&Will, Sr. Int. Project Designer, Senior Associate

Chris Bouchard, Perkins&Will, Senior Project Architect, Associate

Sarah Dickerson, Perkins&Will, Designer III

Mark Heller, Perkins&Will, Designer III

Kent Amos, Strategic Advisor

Persis Rickes, Rickes Associates

Elyse Skerker Sigal, Rickes Associates

Conrad Hertz, RMF

Avery Monroe, RMF

**Timothy Chatterton, Becker Morgan** 

**Jeremy Halpert,** BeckerMorgan

#### INSTRUCTIONAL SPACE UTILIZATION STUDY

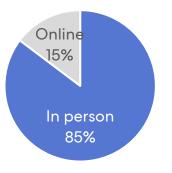
- Perkins and Will analyzed the Fall 2019 & Fall 2020 course schedule to evaluate the utilization of each instructional space that appeared in the course schedule provided.
- For the purpose of this study, instructional spaces are grouped by Program Type (classroom, class lab, online), Room Size and Building
- Results are measured against targets based on the room type of each space
- This study includes an assessment of the (114)
  rooms that appeared in the course schedule
  provided to us. If courses are being delivered in
  other spaces, those are not included in this study
- Comparing spaces which exceed or fall short of the targets reveal inefficiencies in space use or misalignments between the instructional model and the facilities that support it.

#### **PRELIMINARY TAKEAWAYS**

**COVID Impact:** The course schedule provided is from Fall 19-Spring 21. When in-person activity has been lower than normal in 2020 it was important to study 2019 to understand utilization under normal conditions.

#### PRELIMINARY TAKEAWAYS

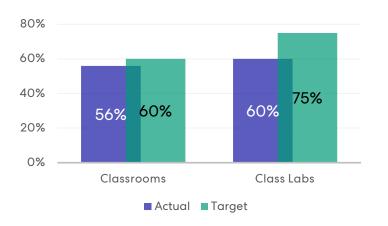
Online vs In Person: On an average between Fall 2019 to Fall 2020, 258 courses are either entirely online or hybrid, representing 15% of all credit hours. Consider whether this reflects future course delivery.



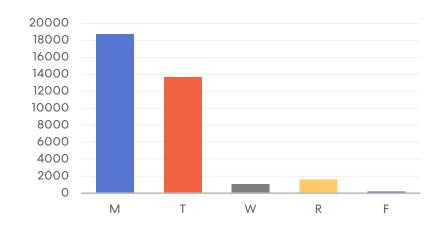
Weekly Hours of Usage Per Room: Most instructional spaces are underused in terms of hours per week. This is likely due to COVID scheduling and may increase in the future.



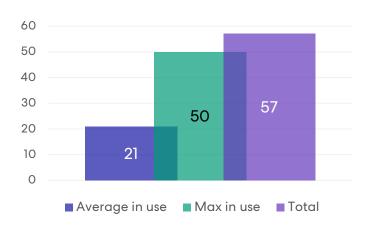
**Fill Rate:** When in use, most instructional spaces are appropriately filled in terms of enrollment vs seat capacity.

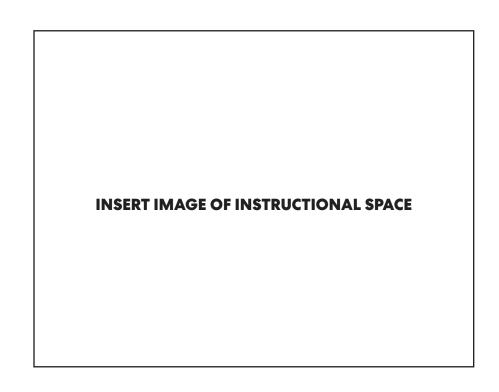


**Scheduling:** Peak usage is Monday-Tuesday. Offering more courses on Wednesday, Thursday and Friday could help with future space demands.



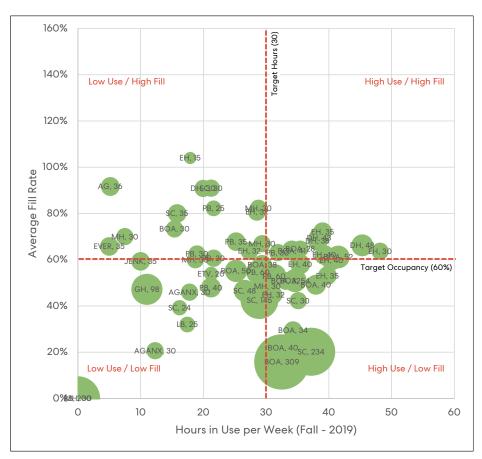
**Room Availability:** At any given time throughout the week, at least (7) classrooms are available / not in use for courses.





#### UTILIZATION HOURS IN USE VS. FILL RATE

Most classes are below the average fill rate of 60% and are often below the target hours for use.



EH, 150% 140% Low Use / High Fill High Use / High Fill ETV, 127% 120% SC, 114% ETV, 108% 100% Average Fill Rate EH, 879 SC, 84% BOA, 76% DH, 78% Target Occupancy (75%) 60% SC, 47% 40% 32% EH, 28% AGANX, 28% ETV, 25% AGANX, 22% EH, 22% High Use / Low Fill Low Use / Low Fill AGANX, 11% AGANX, 10% 50 0 10 30 40 Hours in Use per Week (Fall)

Fall 2019 Classrooms

Fall 2019 Class Labs

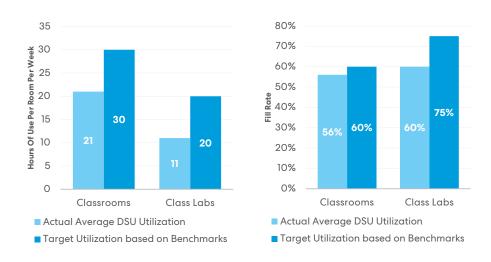
160%

## Weekly Hours of Usage Per Room

Most instructional spaces are underused in terms of hours per week.

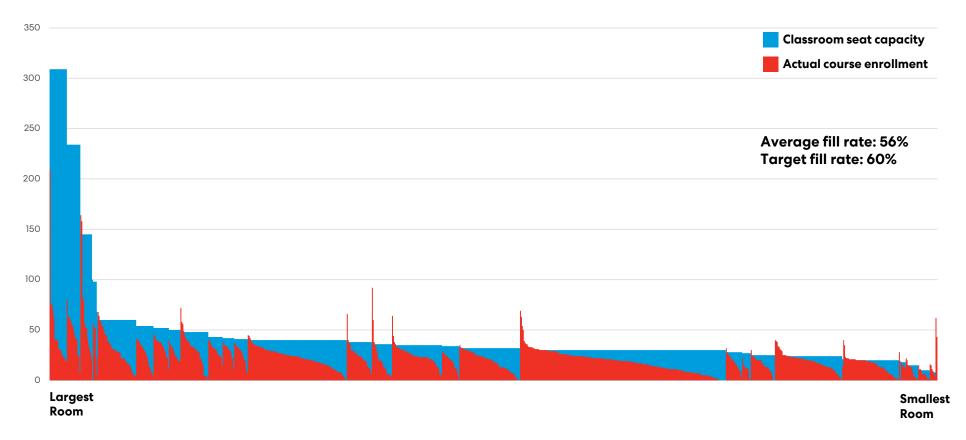
#### **Fill Rate**

When in use, most rooms are appropriately filled in terms of enrollment vs seat capacity.



#### **SEAT FILL CAPACITY GRAPH**

In the graph below, each vertical bar represents a course. The blue represents the seat capacity of the room where the course is held. The red represents the actual enrollment of the course.



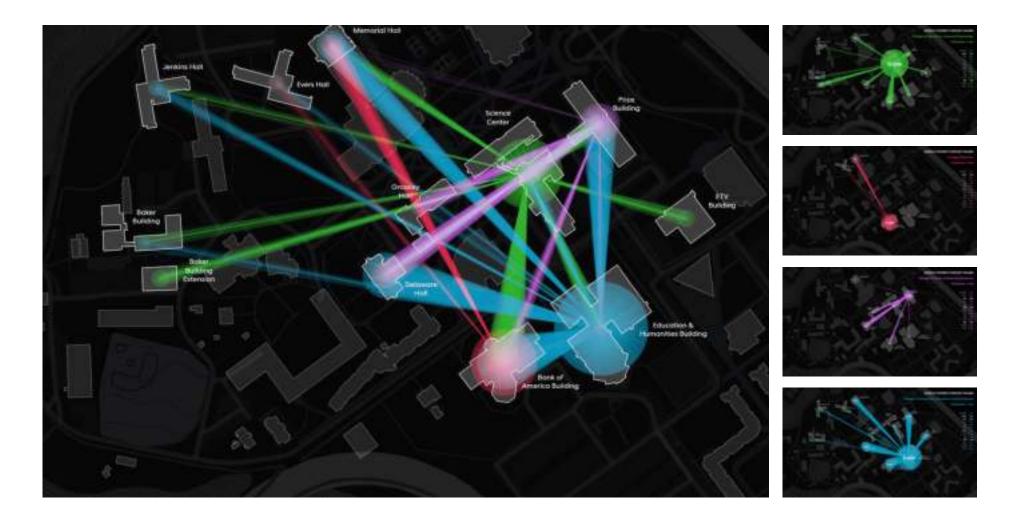
## **Considerations for Utilization:**

- Departmental "owned" classrooms vs central shared classrooms
- **Scheduling preferences** for Tuesday through Thursday mornings
- **Quality of classrooms** in some buildings make them less desirable
- **Usability of classrooms** (e.g. noise, leaks, etc.) makes it feel like there are fewer usable classrooms

# INSERT IMAGE OF INSTRUCTIONAL SPACE

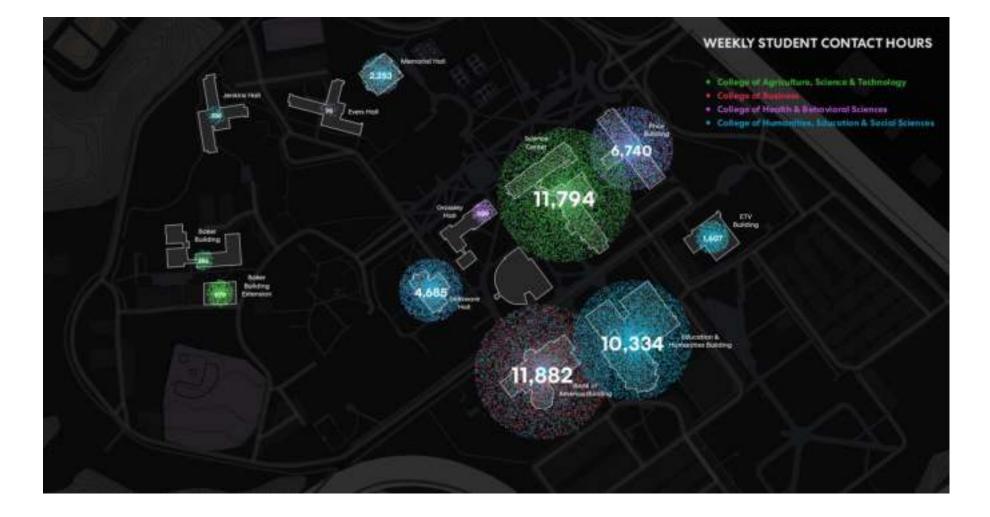
#### **ACADEMIC UTILIZATION**

Mapping Weekly Student Contact Hours by department to understand patterns of use and scheduling of instructional space across the campus. This study includes an assessment of departmental use of instructional spaces and mapping the journey a student woould take during a given day. The outcome of the study informed the need to densify the core and increase utilization of spaces for each department.



#### **ACADEMIC COLLABORATION**

Mapping Weekly Student Contact Hours by building to understand collaboration between departments. The outcome of this study informed the need to create interdisciplinary places and imprving collaboration between departments.

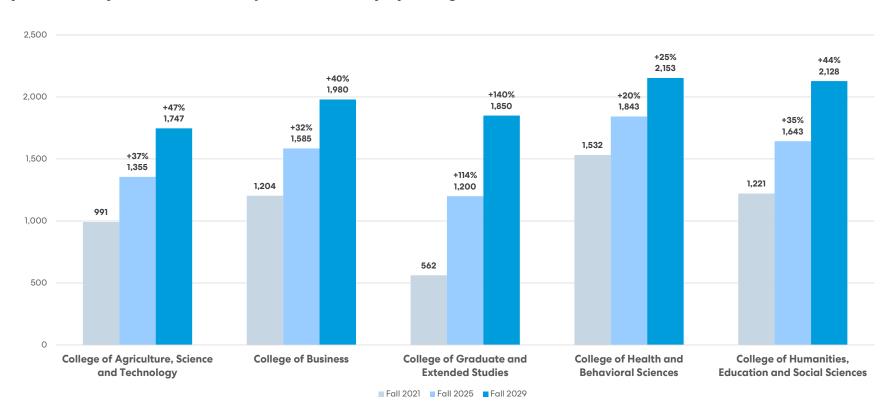


#### **ENROLLMENT PROJECTIONS AND SPACE NEEDS**

5-year and 10-year enrollment projections for the Master Plan were developed by DSU's office of Strategic Enrollment Management.

Projections were broken down by College, program, campus, and level.

#### 5-year and 10-year Enrollment Projection Summary by College



## 10-year Enrollment Projection Detail by Residency

Residency	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020	5 yr avg	Fall 2021	Fall 2022	Fall 2023	Fall 2024	Fall 2025	Fall 2026	Fall 2027	Fall 2028	Fall 2029	Fall 2030
In-State	2,235	2,165	2,236	2,335	2,292	2,253	2,561	2,764	2,981	3,206	3,491	3,766	4,056	4,407	4,706	5,044
Out-of-State	1,887	1,937	2,132	2,248	2,320	2,105	2,388	2,577	2,779	2,989	3,255	3,511	3,781	4,109	4,387	4,703
International Abroad	272	295	286	279	287	284	323	349	376	404	440	475	511	556	593	636
International Domestic	206	251	218	192	128	199	228	246	265	285	310	335	361	392	418	448
Master Plan Growth		4,648	4,872		5,027		5,500		6,400	6,885	7,496	8,087	8,709	9,464	10,104	10,831
Master Plan UG							4,800	5,136	5,500	5,885	6,296	6,737	7,209	7,714	8,254	8,831
Master Plan G							700	800	900	1,000	1,200	1,350	1,500	1,750	1,850	2,000

## 10-year Enrollment Projection Detail by Campus

Residency	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020	5 yr avg	Fall 2021	Fall 2022	Fall 2023	Fall 2024	Fall 2025	Fall 2026	Fall 2027	Fall 2028	Fall 2029	Fall 2030
Main	4,041	3,984	4,135	4,237	4,168	4,113	4,470		4,992	5,370	5,697	5,984	6,270	6,625	6,871	7,257
High School	190	249	251	297	230	243	195	210	256	275	300	404	348	379	404	433
DSU@Online		24	92	130	230	119	309	333	384	413	525	566	697	852	1,010	1,083
DSU@Wilmington	84	79	96	89	94	88	69	74	192	207	300	404	523	662	808	975
Ningbo University	270	295	285	286	287	285	449	485	512	551	600	647	697	757	808	866
Sanming University	2	1	1			1	0	0	0	0	0	0	0	0	0	0
Sussex	12	16	12	15	17	14	8	9	64	69	75	81	174	189	202	217
ChangChun Univ. of Sci. & Tech					1	1										
Downtown Wilmington	1					1										
Master Plan Growth		4,648	4,872		5,027		5,500		6,400	6,885	7,496	8,087	8,709	9,464	10,104	10,831
Master Plan UG							4,800	5,136	5,500	5,885	6,296	6,737	7,209	7,714	8,254	8,831
Master Plan G							700	800	900	1,000	1,200	1,350	1,500	1,750	1,850	2,000

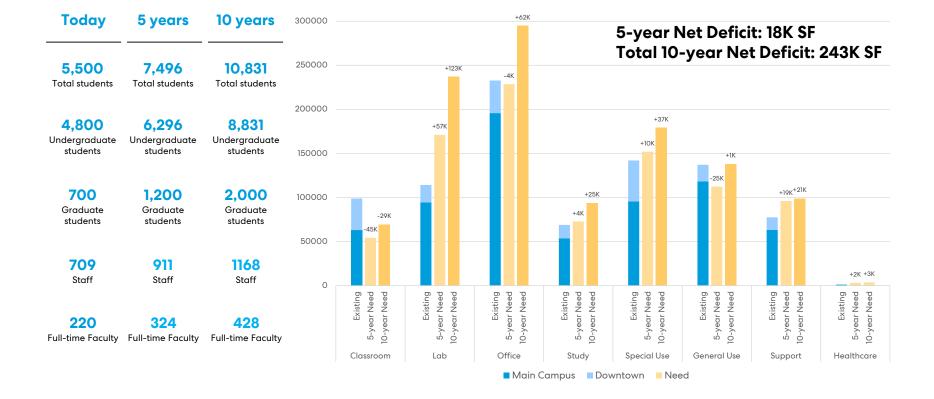
## 10-year Enrollment Projection Detail by College and Program

	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall
College by Program	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
College of Agriculture, Science and Technology		1,070	1,164	1,259	1,355	1,452	1,549	1,648	1,747	1,847
Agriculture	169	182	197	212	227	242	257	272	287	302
Biological Sciences (incl Med Tech & Forensic										
Biology)	294	394	424	454	484	514	544	574	604	634
Chemistry	30	32	37	42	47	52	57	62	67	72
Chemistry/Pre-Professional	30	32	37	42	47	52	57	62	67	72
Computer Science	144	159	174	189	204	219	234	249	264	279
Elec. & Electronics Eng. Tech	144	139	1/4	107	204	219	234	249	204	2/9
Engineering Physics	103	111	121	131	141	151	161	171	181	191
Food & Nutritional Sciences	27	29	34	39	44	49	54	59	64	69
Forensic Biology	74									
Forensic Chemistry										
,										
Information Technology	33	35	38	40	43	46	50	53	57	61
Mathematics	9	10	10	11	12	13	14	14	15	17
Natural Resources	42	45	49	53	57	62	67	72	77	83
Physics	3	3	3	4	4	4	5	5	5	6
Pre-Computer Science										
Textiles & Apparel Studies	33	35	38	40	43	46	50	53	57	61
College of Business	1,204	1,294	1,391	1,488	1,585	1,683	1,781	1,880	1,980	2,080
Accounting	352	377	402	427	452	477	502	527	552	577
Aviation	145	155	165	175	185	195	205	215	225	235
Finance	65	70	74	80	85	91	98	104	112	120
Hospitality & Tourism Mgmt	21	22	24	26	28	29	32	34	36	39
Management	429	463	498	533	568	603	638	673	708	743
Sport Management	192 562	<b>207</b>	<b>227</b> 900	<b>247</b>	<b>267</b> 1,200	<b>287</b> 1.350	<b>307</b>	<b>327</b> 1.750	<b>347</b> 1.850	<b>367</b> 2.000
College of Graduate and Extended Studies										
EdD Educational Leadership	122	139	159 10	179 10	199 10	219 10	239 10	259 10	279 10	299 10
English Language Proficiency Grad Agriculture	6	7	10	13	16	19	22	25	28	31
Grad App Chemistry(thesis)	1	1	2	3	4	5	6	7	8	9
Grad Applied Chemistry	- 1	0	3	6	9	12	15	18	21	24
Grad Applied Chemistry  Grad Applied Optics	2	2	7	12	17	22	27	32	37	42
Grad Biology	1	- <u>ī</u>	4	7	10	13	16	19	22	25
orau ziciogy			-	-				.,		
Grad Bus Admin	9	10	12	13	15	17	19	23	24	26
Grad Computer Science		0	0	0	0	0	0	0	0	0
Grad Education		0	0	0						
Grad Food Sci. & Biotechnology	7	6	8	10	12	14	16	18	20	22
Grad Historic Preservation										
Grad Justice Studies	2	15	30	45	60	75	90	90	90	90
Grad Master Arts Teaching	4	30	45	60	75	90	90	90	90	90
Grad Mathematics										
Grad Mol. & Cell Neuroscience	3	3	6	9	12	15	18	21	24	27
Grad Natural Resources	7	8	11	14	17	20	23	26	29	32
Grad Nursing	7	30	30	40	40	50	50	60	60	60
Grad Occupational Therapy	83	80	80	80	120	120	120	160	160	160
Grad Physics	5 32	6	6	7	9	10	11	13	13	14
Grad Public Administration	188	37 215	41 242	46 269	55 322	62 363	69 403	80	85 497	91 537
Grad Social Work Grad Sport Administration	22	215	242	31	322	363 42	403	470 55	497 58	63
Grad Sport Administration  Grad Tch Engl. As Second Lang.	1	1	10	10	10	10	10	10	10	10
M.ED Educational Leadership	12	14	18	22	26	30	34	38	42	46
Non-Degree Seeking	12	115	63	28	26	22	43	93	97	133
PhD Applied Chemistry	8	9	12	15	18	21	24	27	30	33
PhD Mathematics&Physics	14	16	19	22	25	28	31	34	37	40
PhD Neuroscience	16	18	21	24	27	30	33	36	39	42
PhD Optics	7	8	11	14	17	20	23	26	29	32
TESOL/Bilingual Education	2	2	10	10	10	10	10	10	10	10
,										

	Fall	Fall								
College by Program	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
College of Health and Behavioral Sciences	1,532	1,618	1,692	1,766	1,843	1,920	1,996	2,073	2,153	2,235
Community Health		0	0	0	0	0	0	0	0	0
Health Promotion		0	0	0	0	0	0	0	0	0
Kinesiology	308	330	360	390	420	450	480	510	540	570
Movement Science	1									0
Nursing	127	136	140	143	147	150	150	150	150	150
Pre-Nursing	489	500	500	500	500	500	500	500	500	500
Total Nursing	616	636	640	643	647	650	650	650	650	650
Psychology	344	371	391	411	431	451	471	491	511	531
Public Health	105	112	120	129	138	147	158	169	181	193
Social Work	158	169	181	194	207	222	237	254	272	291
College of Humanities, Education and Social Sci	1,221	1,306	1,427	1,533	1,643	1,757	1,876	2,000	2,128	2,262
Art Education	11	12	13	13	14	15	17	18	19	20
Art Management										
Comprehensive Music Education										
Criminal Justice	276	295	316	338	362	387	415	444	475	508
Early Care & Ed,0-K/Exc,3-6										
Early Childhood Ed(Birth-Grd2)	10	- 11	14	17	20	23	26	29	32	35
Elementary & Special Education										
Elementary Education (K-6)	59	63	71	79	87	95	103	111	119	127
Elementary Special Educ (1-8)										
English	23	25	26	28	30	32	35	37	40	42
English Education										
English Language Proficiency		0	10	10	10	10	10	10	10	10
French									- 10	
History	19	20	20	20	20	20	20	20	20	20
Integrated Studies	6	6	7	7	8	8	9	10	10	11
International Studies	2	2	10	10	10	10	10	10	10	10
Law Studies	28	30	32	34	37	39	42	45	48	52
Law Studies	20	- 00	02	04	- 07	07	72	45	40	52
Liberal Studies	72	77	83	88	94	101	108	116	124	132
Mass Communications	251	269	289	309	329	349	369	389	409	429
Mathematics Education	7	7	8	9	9	10	11	11	12	13
Middle Level Education (6-8)	14	15	20	25	30	35	40	45	50	55
Music	26	28	30	32	34	36	39	43	45	48
Music Education	17	18	19	21	22	24	26	27	29	31
Music Industry	42	45	48	51	55	59	63	67	72	77
	42	45	40	31	55	59	03	07	12	//
Music Therapy	00	0.4	0.5	07	29	07	00	0.5	38	40
New Media in Arts	22	24	25	27		31	33	35		
Physical Education	18	19	21	22	24	25	27	29	31	33
Political Science	89	95	102	109	117	125	134	143	153	164
Pre-Education	178	190	205	220	235	250	265	280	295	310
Secondary Special Ed (7-12)										
Sociology	26	28	30	32	34	36	39	42	45	48
Spanish										
Studio Art	25	27	29	31	33	35	38	40	43	46
World Language Education										
No College Assigned	3	-153	-174	-161	-131	-76	6	112	246	407
Non-Degree Seeking HS & CS NBUT										
Undecided	3	-153	-174	-161	-131	-76	6	112	246	407
Grand Total	5,513	5,936	6,400	6,885	7,496	8,087	8,709	9,464	10,104	10,831

#### **Summary of Space Needs:**

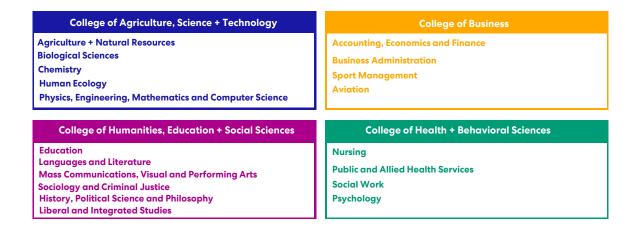
The calculated space needs are based on the enrollment, staffing, and best practice planning ratios such as square footage per student and square footage per faculty. The assessment uses assignable square footage (ASF), which does not include mechanical spaces, corridors, structural, or non-occupiable areas. Residential space needs are calculated separately based on market factors.



#### **DEPARTMENT CHAIR SURVEY**

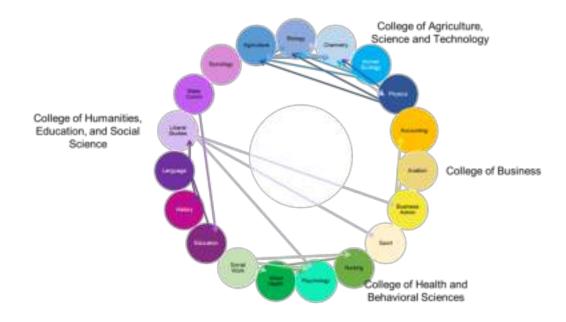
The project tam conducted a survey of department Chairs to gain broad insights from the Chairs' perspective to support DSU's long-term planning as it pertains to space and design over the next 10 years.

Each Chair was asked about their perspective on departmental locations, quality of space, and the importance of various design and spatial factors for supporting their work.



## **Location and Adjacency**

What academic department(s) would you prefer to be adjacent to?



The graphic illustrates the responses from each department Chair, showing which other departments they would ideally be located with.

#### Location

How appropriate is your department's primary location?

"The majority of our classes are held in Price Building with the exception of labs"

"Faculty offices and classrooms are in the same building."

"The department has primarily been situated in the same building for fifty five years at a corner of the campus with barely-developed woodlands."

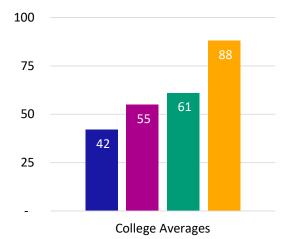
"The location is fine."

"We are in a perfect location to work with our campus constituents."

"Centrally located"

"Adequacy"

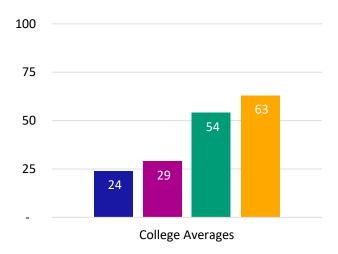
" It is quite accessible to students on campus."



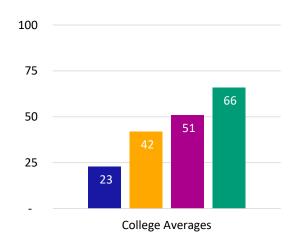
- College of Agriculture, Science and Technology
- College of Humanities, Education, and Social Sciences
- College of Health and Behavioral Sciences
- College of Business

## **Space Quality: Instructional**

How well do existing classrooms meet your current instructional needs?



How well do existing classrooms meet your current instructional needs?



"More lecture halls needed. Multiple repairs to science center classrooms needed."

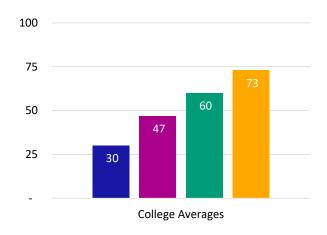
> "Comfortable desks are needed. Most of our graduate students need chairs that are comfortable as some are in their middle years"

"They should be spacious and configurable for different teaching and learning modalities. Instructional spaces should also include ample storage space to hold design-related items."

"Specialized instructional space: 1) our radio station needs to be remodeled. We have ask for and been approved for upgrades, but no one has come to fix the issues; 2) our music rooms are not sound proof; 3) we need dedicated Art space"

## **Space Quality: Office**

How appropriate, overall, is the quality and functionality of your department's current office space?



- College of Agriculture, Science and Technology
- College of Humanities, Education, and Social Sciences
- College of Health and Behavioral Sciences
- College of Business

"Most of the offices have no outdoor light; most are extremely hot at all times; most have water leakage and seem prime for mold. In short, the EH offices are unacceptable."

"Need additional office space for projected department growth" "It is insufficient"

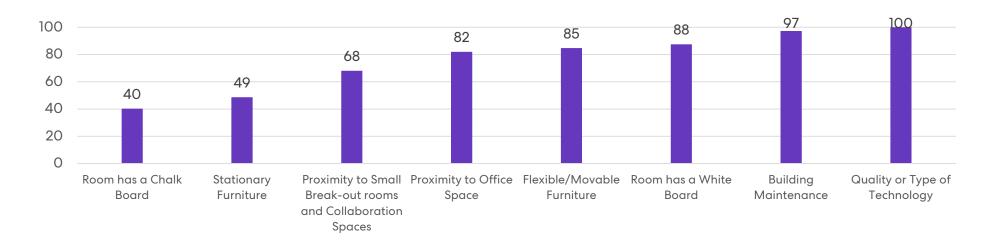
"The division currently consists of 35 faculty and staff members. We do not have a meeting space that can accommodate in-person meetings. The division only has lounge space for students. The student lounge space is very small and it is the collaborative area that is of more importance!"

"We need upgrades to our large meeting spaces. Technology, seating, visual appeal..."

"James Baker Building has [had a] lack of maintenance and is demanding thorough renovation. The central air conditioning system has not been working for seven years. The roof is leaking. Cockroaches and rats are taking over the building. The air conditioning system has stopped working at Ag Annex Building for three years."

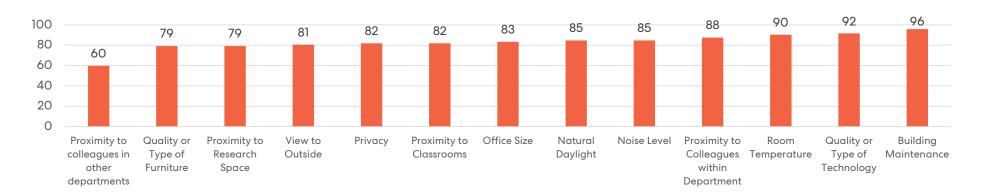
## **Overall Factors that Influence Good Spaces**

How important is each factor in influencing a good instructional space?



## **Overall Factors that Influence Good Spaces**

How important is each factor in influencing a good office space?



## **ACADEMIC OFFICE SPACE PROJECTIONS**

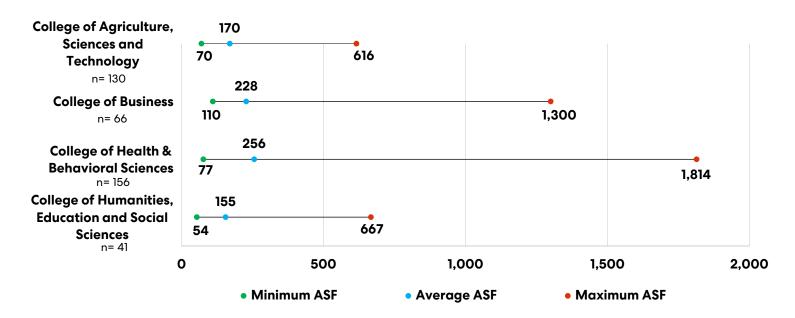
Existing Office Space by College

College	Office Count (FICM 310)	Office Space (FICM 310 + 315)	Conference Space (FICM 350 + 355)	Total (All FICM 300)
College of Agriculture, Science and Technology	130	23,743	2,213	25,956
College of Business	66	17,696	3,341	21,037
College of Humanities, Education and Social Sciences	156	25,329	3,330	28,659
College of Health and Behavioral Sciences	41	11,690	2,659	14,349
Total	393	78,458	11,543	90,001

The project team conducted an alysis of existing office space and projected office space needs by College.

## Existing Office Space by College (FICM 310)

Average office space sizes vary greatly across campus and within each College as a result of existing "Legacy Space".



## **Personnel Projections by College**

Total Personnel As Reported By College

College	Current w/o Wesley	Current w/ Wesley	Projection 2031	Planning Assumptions
College of Agriculture, Science and Technology	115	118	TBD	Acquiring 3 personnel from Wesley
College of Business	96	98	TBD	Acquiring 3 personnel from Wesley
College of Humanities, Education and Social Sciences	188	218	348	Acquiring 30 personnel from Wesley; Growing FT Faculty by 52 in 2031; Total growth in 2031= 130 personnel
College of Health and Behavioral Sciences	101	253	321	Acquiring 152 personnel from Wesley; Growing FT Faculty by 34 in 2031; Total growth in 2031= 68 personnel

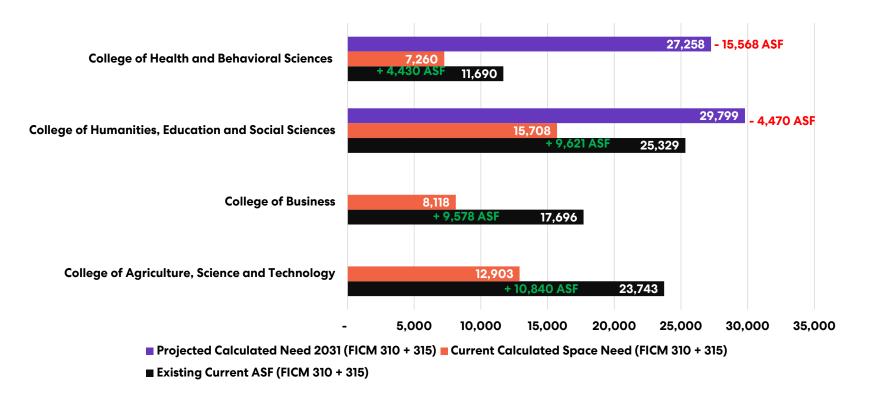
## **Current Personnel Compared to Current Number of Offices**

Total Personnel As Reported By College Compared with Existing Office Counts

College	Number of Current FT Faculty	Number of Current FT Staff	Number of Existing Offices (FICM 310)	Delta
College of Agriculture, Science and Technology	76	16	130	+38
College of Business	33	17	66	+16
College of Humanities, Education and Social Sciences	75	21	156	+60
College of Health and Behavioral Sciences	32	7	41	+2

- This test-fit checks ability of each college to find closed-door space for all current fulltime personnel.
- Assumption is that "surplus" office spaces are used for adjuncts, part-time faculty, student workers, additional staff, etc.
- "Counting" spaces, as opposed to looking at total ASF, ensures results are not skewed by variations in office sizes.

#### Office Space Calculations and Projections: FICM 310 + 315



## **Academic Office Space Projections: Summary and Considerations**

- Every College currently has a surplus of office space.
- In 2031, the College of Humanities, Education and Social Science and the College of Health and Behavioral Science are anticipated to have a deficit of space based on projected personnel growth.
- Personnel growth numbers for College of Agriculture, Science and Technology and College of Business need to be vetted by DSU for accuracy.
- Existing ASF does not factor in space that will be acquired from Wesley.
   2031 space projections will need to be weighed against total space acquisition.
- All existing ASF reported is as indicated in current DSU space inventory and subject to additional verification.