

13.7 The institution ensures adequate physical facilities and resources, both on and off campus, that appropriately serve the needs of the institution's educational programs, support services, and other mission-related activities.

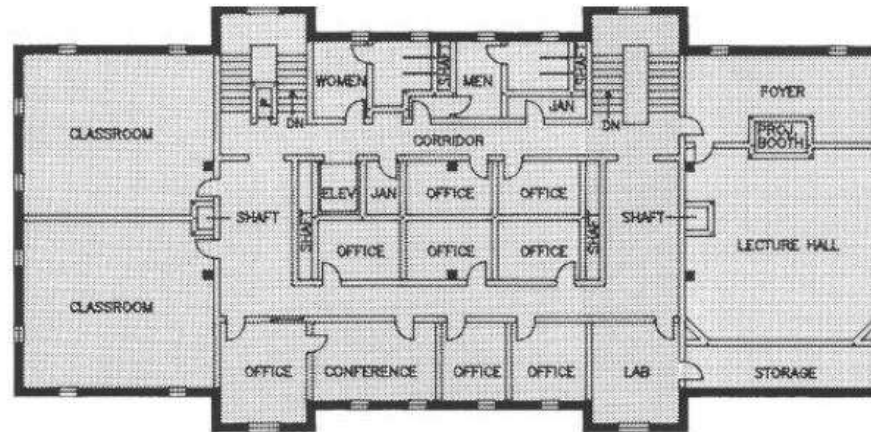
(SACSCOC Principles of Accreditation)

Space Utilization: How Much and How Well?

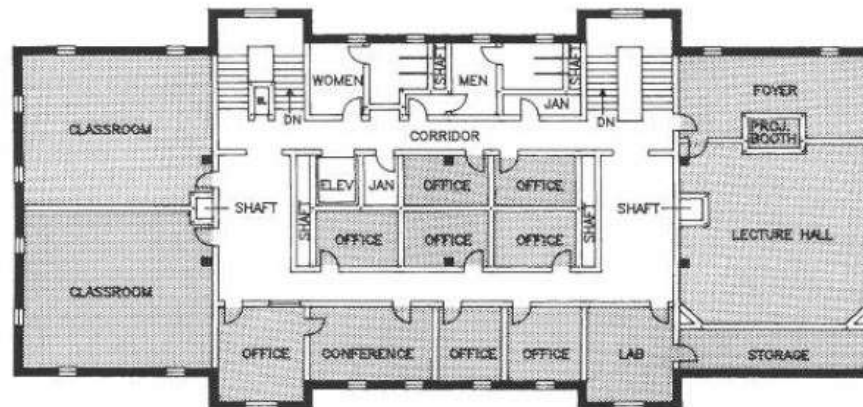
- Is the institution utilizing its space to the best advantage?
- Are there opportunities for improvement?
- Does the institution have adequate space to support goals for enrollment growth?
- Are there “valleys” or “open spaces” in the utilization patterns that could be improved via course scheduling?
- Are there any areas that are in “squash mode” (<15 ft² per student)

How Much?

Gross Square Footage



Assignable Square Footage



Space Type Taxonomy

- Classrooms
- Teaching Laboratories
- Open Laboratories
- Offices, Conference Rooms
- Learning “Commons” (Library, Student Success Center, Advising Center)
- Student Recreation

(NCES Classification Manual)

Space Inventory

- Each room was 'walked' by Facilities and Information Technology Staff
- Interior square footages were measured
- Numbers of student seats, computer stations, and/or laboratory work stations were counted.
- Room Numbers and Room Types were Verified
- Room Conditions and Items Needing Repaired Were Recorded
- Collected Information was entered into an electronic data base.

Room Type	All Course Delivery		Fall 2017 Credit Course Delivery	
	Rooms	ASF	Rooms	ASF
Computer	27	21,933	22	17,157
Laboratory	36	43,959	31	38,700
Lecture	79	69,684	57	48,188
Polycom	8	6,863	8	6,863
Grand Total	150	142,439	118	110,908

How Well?

$$\textit{Room Utilization} = \frac{\sum_{i=1}^n \textit{Seats Used}}{\sum_{i=1}^n \textit{Seat Capacity}}$$

"Breaking Rock in the Hot Sun"

Reconcile and Join Four 'Non-Systematic' Data Files

- Course Schedule, Course Files, Academic Affairs Room Inventory, Facilities Walkthrough Inventory
- Reconcile Building and Room Codes
- Reclassify "Classroom Spaces" to Closets, Break Rooms. Storage Spaces, and Offices
- Clarify Room 'Ownership': Credit Course Spaces vs Non-Credit Course Spaces
- Re-schedule Creatively Scheduled Courses
- "A Place for Everything and Everything in It's Place"

Data Transformation

Course	Days	StartDate	StartTime	EndTime	Campus	Bldg	Room	Capacity	Enroll
Crse1	MTW	8/19/2017	9:15	12:00	Camp1	A	100	15	12
Crse2	Web	11/8/2017						20	10
Crse3	R-Hybrid	8/19//2017	7:45	9:05	Camp2	ND	157	15	10
Crse4	MTWR	8/21/2017	10:00	11:00	Camp3	E	2	30	25
o		o	o	o	o	o	o	o	o
o		o	o	o	o	o	o	o	o
o		o	o	o	o	o	o	o	o
o		o	o	o	o	o	o	o	o
o		o	o	o	o	o	o	o	o
CrseN	TR	9/21/2017	14:00	15:45	Camp1	B	8	20	5

WeekDay	Camp	Bldg	Room	Type	Assgn	Cap	T8	T9	T10	T11	T12	T13	T14	T15	T21
M	Camp1	A	218	Lect	BIS	33	22	22							
M	Camp1	A	218	Lect	BIS	33			19	19	19				
M	Camp1	A	218	Lect	BIS	33						28			
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
R	Camp2	ND	157	Lab	WELD	15	12	12							
R	Camp2	ND	157	Lab	WELD	15				9	9				
R	Camp2	ND	157	Lab	WELD	15							10	10	

Excel for Time Conversions

CRN	START TIME	END TIME	Duration	Minutes
20044	17:30	18:45	1:15	75
20065	18:00	20:05	2:05	125
20068	18:00	20:05	2:05	125
20078	9:00	17:00	8:00	480
20082	9:00	17:00	8:00	480
20083	9:00	17:00	8:00	480
20084	9:00	17:00	8:00	480

Hours to Minutes

Duration: $f_x = C2 - B2$

Format as 24 Hour time

Minutes: $f_x = D2 * 1440$

Format as Number

(1440 = 24 hours * 60 minutes)

CRN	STARTIME ORIG	STARTIME
20011	5:00	5:00
20438	17:30	18:00
20431	18:35	19:00
20107	10:00	10:00
20398	9:00	9:00
20279	7:45	8:00
20020	7:30	8:00

Round Time to Nearest Hour

STARTIME: $f_x = \text{Round}(B2 / (1/24), 0) * (1/24)$

Format as 24 Hour Time

A	B	C
CRN	ENDTIME	ENDTIME2
20001	17:00	16:00
20006	21:00	20:00
20007	17:00	16:00
20008	21:00	20:00
20009	12:00	11:00
20011	6:00	5:00
20012	17:00	16:00
20027	9:00	8:00
20033	11:00	10:00
20044	19:00	18:00

Subtract (Add) an Hour

ENDTIME2: $f_x = B2 - (1/24)$

Format as 24 Hour Time

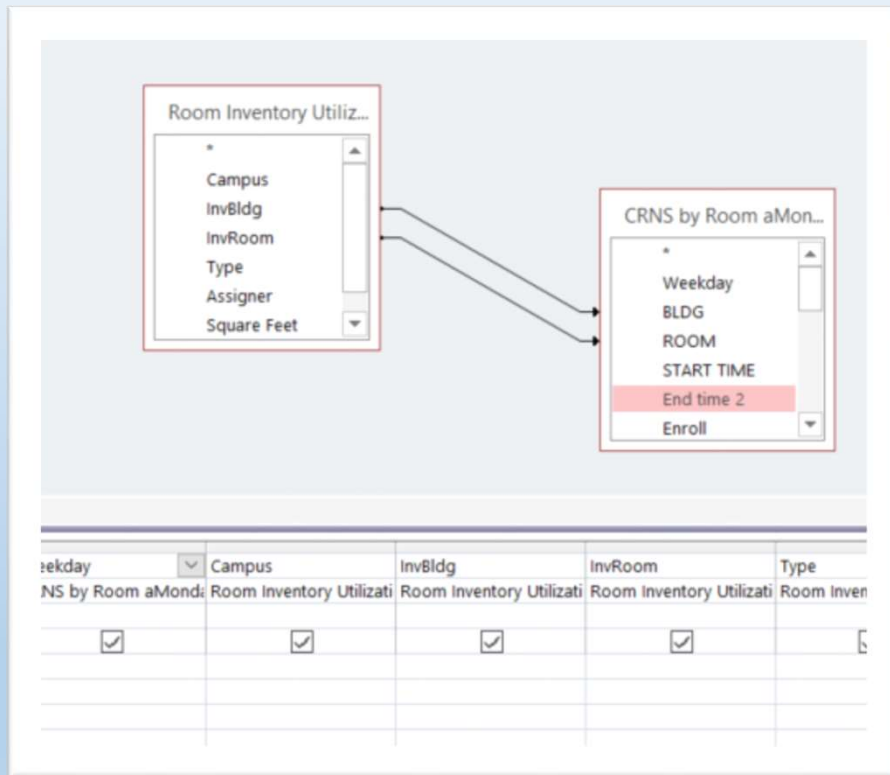
Access for Conditional Statements and Joins

CRNS by Room

- CRN
- DAYS
- START TIME
- END TIME
- End time 2
- Campus
- BLDG
- ROOM
- Type
- Assigner

Create Table for Room Utilization by Weekday:
Weekday: IIf(([days] Like 'M' Or [days] Like 'MR' Or [days] Like 'MTWR' Or [days] Like 'MW' Or [days] Like 'MWR' Or [days] Like 'MTWRF'),'Monday','')

Field:	CRN	DAYS	Weekday: IIf(([days] Like 'M' Or S
Table:	CRNS by Room	CRNS by Room	C
Sort:			
show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			
or:			



Join Scheduled Courses to Room Inventory so That *All* Available Rooms are Included in the Analysis

CRNS by Room aMonday ii

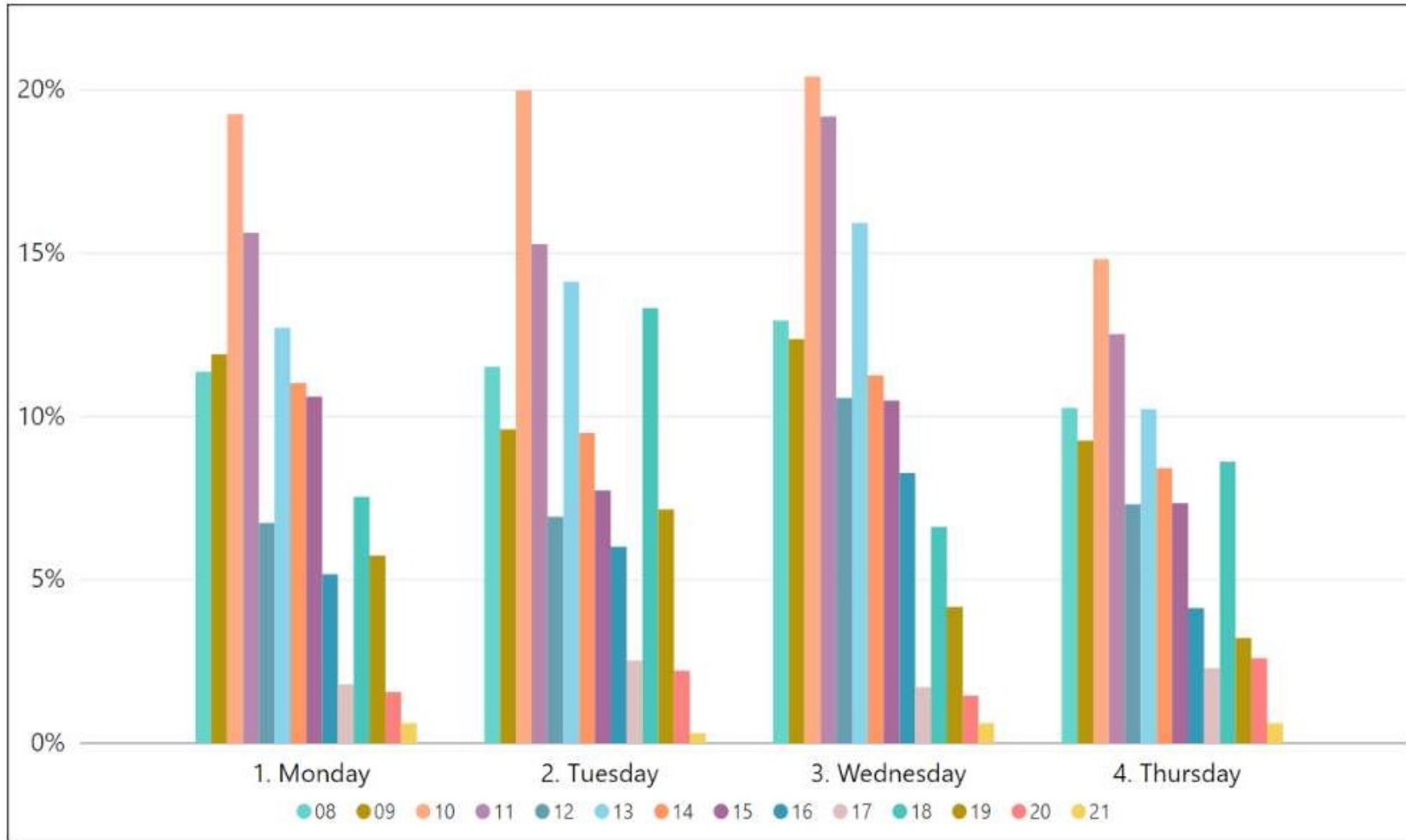
- CRN
- DAYS
- Weekday
- START TIME
- End time 2
- Campus
- BLDG
- ROOM

T12: Iif((#12:00:00 PM# Between [Start Time] And [End Time2]),[Enroll],0)

:00:00 AM# Be	T10: Iif((#10:00:00 AM#	T11: Iif((#11:00:00 AM#	T12: Iif((#12:00:00 PM#	T13: Iif((#1:00:00
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Power BI for Graphics

Room Utilization by Hour and Day of the Week



Type

- Select All
- Computer
- LAB
- Lecture
- Polycom

Campus

- Select All
- DeKalb
- Newton
- NewtonD
- Regional Transportation Center
- S DeKalb

Building

- Select All
- DA
- DB
- DC
- DD
- NB
- NC
- ND
- RE
- SD

Next Steps

- Maintain Space Inventory Data Base. The creation of this data base was the major outcome of this study. It will be used for master planning, contracting with builders and suppliers for additions, repairs and renovations, and budget planning.
- Annual 'Walkthroughs' will be scheduled and conducted to update information about allocations, room codes, student capacities, conditions and repair needs.
- Policies addressing space ownership, space use, room numbering, and course scheduling are being developed
- Available days and times that are open and can accommodate more courses were identified.
- Room to accommodate future enrollment growth was established.

Questions?

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