
# Instructional Space Inventory Data project

## Final Report & Recommendations

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# Instructional Space Inventory Data Project

## FINAL REPORT

# Background

The Instructional Space Utilization Review Process Project is a follow-on project of the Administrative Excellence (AE) ***Classroom Space Utilization*** project that was completed in May 2012. The recommendations of the Phase 2 project team identified efficient use of space as an area for improvement and recommended that a future project team define a data set and gather one comprehensive set of data to populate enterprise inventory and scheduling systems instructional space information.

This team chartered based on the recommendations of the Phase 2 Space Utilization Work Team to:

- Create an instructional space inventory to support an enterprise scheduling system, which will provide transparency to the instruction scheduling process and help stakeholders identify instructional rooms for use.
- Provide an information data set with the ability to collect room features for scheduled instructional space.
- Populate an enterprise instructional space inventory to support transparent scheduling and campus stakeholder use.

The project team was formed to provide a cross-section of campus academic and administrative users of instructional space. The charge to the team included the following goals:

- Define the data needed to populate enterprise inventory and scheduling systems with information about all current instructional space across campus.
- Develop a plan to collect a complete set of instructional space data needed to populate the enterprise inventory and scheduling systems.
- Compile a complete set of current instructional space data.
- Define processes for keeping the campus space data current and up-to-date.

# Assessment of Instructional Space Data

The effort undertaken by this team was to:

- Identify any rooms used for scheduled instruction in 2011-2012 class schedules;
- Review space-related attributes data already maintained in campus databases and spreadsheets;
- Identify the campus needs to revise instructional space attributes;
- Create a set of data attributes to meet the needs of campus stakeholders.

For the purposes of this project the team began with a definition of instructional space that includes all general and department assignment classrooms, lecture halls, recitation rooms, seminar rooms, class laboratory rooms and other spaces used for scheduled instruction during academic year 2011-2012. The team also included any classrooms (use code 110) and class labs (use codes 210 and 220) that were not scheduled for instruction in 2011-2012.

This definition is more inclusive than the rooms identified as "classrooms" by the Space Management Office. The team identified 967 rooms scheduled for instruction during 2011-2012 compared to 578 rooms identified as "classrooms" (use code 110) and 291 rooms identified as "labs" (use codes 210 and 220). The additional 98 rooms scheduled for instruction include department conference and meeting rooms, offices and other types of department space.

## Data Gathered About the Instructional Space Attributes

The team inventoried space-related attributes data already maintained in campus databases, spreadsheets and scheduling systems that contain some room attributes. The following sources of room attributes were identified:

| Data source | Characteristics |
|---|---|
| INSITE database managed by FP&M Space Management Office | The list of 8 data attributes maintained by FP&M used to identify and define all campus spaces |
| Space Management Office General Assignment (GA) worksheet | Excel spreadsheet that maintains 71 data attributes on GA rooms |
| ISIS room characteristics | Database used by the Office of the Registrar to maintain 15 data attributes on GA rooms |
| Resource 25 (R25) system | Scheduling system used by Office of the Registrar to generate class schedule; used by schools and colleges to view and schedule GA rooms |
| Event Management System (EMS) | Event scheduling system used by 10 schools and colleges to schedule activities in department rooms; attributes are defined by Departments |

## Defining Instructional Space Attribute Needs

The current lists of attributes are primarily for General Assignment classrooms only, which is only 357 of the 967 rooms used for scheduled instruction in academic year 2011-2012. The current lists do not include room feature data for Department classrooms (221 rooms), class labs (291 rooms) and other Department rooms used for instruction (approximately 100 rooms per semester). The current lists of attributes also do not include all of the information needed by McBurney Center for Disability Services to support student instructional access needs. Because of this, the McBurney Center staff maintains a separate listing of attributes they need to know to provide student access. This limited information about room attributes helped the team to identify the instructional space data needs of campus stakeholders were not being met.

The team looked at the types of instructional space data a selection of other Universities collect and make publicly available (via accessible websites):

- Minnesota
- Penn State
- Purdue
- MIT
- Michigan State
- University of North Carolina
- University of Texas at Dallas

In addition, team members provided input informed by each of their own Departmental roles. The team worked with McBurney Disability Resource Center staff and FP&M Facilities Access Specialist to make sure they included the data needed to facilitate campus access for students, faculty and staff.

After reviewing the data needs and the inputs identified, the team developed a draft list of data attributes. They asked for input from the McBurney Center staff, FP&M Facilities Access and Space Management Office staff, and the Instructional Space Utilization Team members to review on the draft list of data attributes. The team then finalized a list of data attributes and definitions (see *Appendix A: Instructional Space Attributes*).

### Instructional Space Attributes Data Collection

Team members conducted a data collection exercise to identify what needed to be collected and what methods were most appropriate to use (See *Appendix B: Data Collection Planning Worksheet*). The worksheet describes:

- The timing and frequency of data collection, including when it will be completed
- Who will be responsible for collecting the data
- The steps taken to complete the data collection
- The steps to prepare data collectors (training)
- How the data collection process will be monitored for quality, consistency and completeness
- What measures will indicate a correct and complete data set

Following the exercise, the team determined they were the most knowledgeable about the attribute definitions and it was most appropriate they conduct this initial data collection.

## Findings and Conclusions

1. It was important that all data collectors have a clear definition of how to observe and record the attributes of a room.
2. Data collection is best conducted during semester breaks or summer session when the number of rooms in use for instruction and other activities is lower.
3. Room attributes will change over time as technology and campus needs change. There needs to be a regular process for campus stakeholders to review the list of defined attributes that are recorded and the attribute definitions to ensure the inventory data remains complete and accurate.
4. The team had to remove approximately 50 rooms from the list of those scheduled for instruction in 2011-2012. Reasons for removal included, infrequent, specialized use, recently converted to another use, Departments and/or Office of the Registrar have agreed to discontinue scheduling instruction, or the room is being repurposed, remodeled or decommissioned.
5. The team had to add approximately 20 rooms to the list to be scheduled. The primary reason for adding rooms to the list is the completion of remodeling or new space being added to service.

# Recommendations

1. The team recommended that the Office of the Registrar to be designated as the Data custodian for the instructional space inventory data. The justification for this recommendation is Office of the Registrar is responsible for developing the schedule of classes and it follows that they would prefer to maintain a consistent list of instructional space and the list of data attributes that informs scheduling decisions.

2. Data will be stored in a secure database that is developed and maintained by the designated Data custodian. Data in this database will be the "source of truth" for all instructional space inventory data on campus. All other databases, web pages, and spreadsheets that hold and display instructional space inventory data will need to ensure their information is derived from the latest version of this database.

3. The data needs to be web-viewable and queriable by campus users. It is recommended that the data be included as a part of the InfoAccess Data Warehouse. Campus stakeholders need to have access to this information in an easy-to-use format.

4. It is recommended that there is an annual process (preferably in the summer) to review the list of attributes and assess whether room information is up-to-date. Campus stakeholders need access to up-to-date and accurate information about data attributes so data needs to be updated on an annual basis.

5. The Team recommends the following process be followed to maintain an up-to-date and accurate set of room attributes:
   - Data custodian will annually update the list of rooms where instruction has been scheduled
     - Space Management Office is responsible for providing updates on all General Assignment (GA) rooms
     - Building managers are responsible for providing updates on all non-GA space, with assistance from Departments and Administrative Deans, as needed
   - Data custodian will enter the updated information into the database
   - Data custodian will enter new and updated information about changes to space used for scheduled instruction into the database, as notified by the Space Management Office and Department Managers
   - Data custodian will work with DoIT to schedule periodic automated updates of the database information to InfoAccess Dataview to keep the access list most current
   - Data custodian will monitor compliance with this process
   - Training about the process will be available on the web and presented at semi-annual building managers' meetings
   - Web page should be developed with information about the process and training materials (e.g. list of data attributes and their definitions and acceptable values

**UPDATE:** On May 13, 2013, The AE Steering Committee accepted the above recommendations with the exception of deciding that the Data custodian responsibilities for instructional space room attributes would remain with the Space Management Office.

# Description of the New Process

Campus stakeholders need to be able to have a single source of reliable, accurate and timely information about the attributes of any and all space used for scheduled instruction. The current methods used have defined a limited set of attributes for a limited portion of the campus space scheduled for instruction each semester. The new process proposed by the team focuses on identifying what data about room attributes are needed by campus stakeholders and establishing a process to ensure complete, consistent and accurate information that can be made readily available to campus stakeholders.

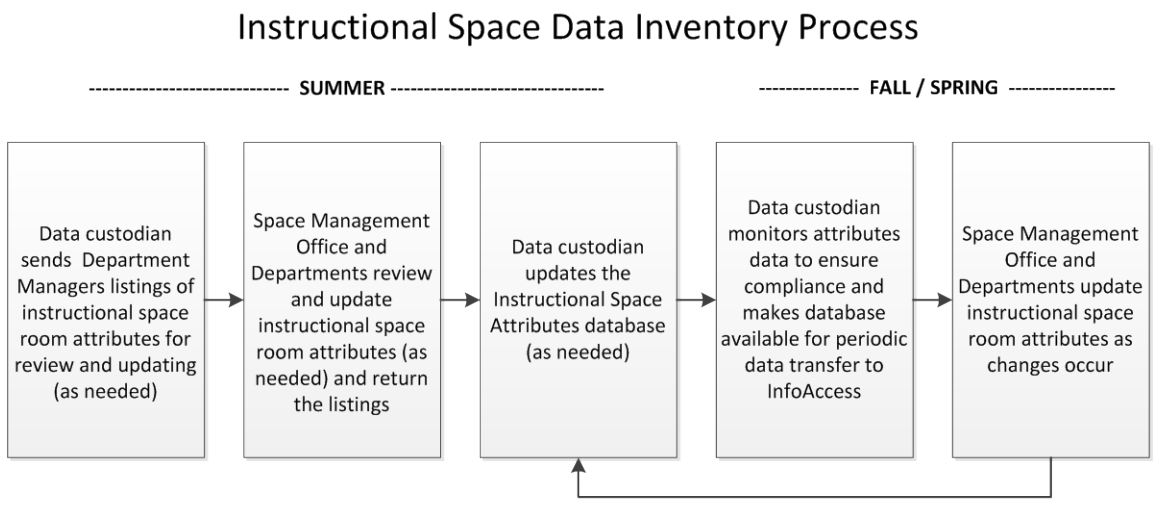
## Keeping the Instructional Space attributes list current

The new process has an annual mechanism that allows the Data custodian to review the set of data attributes to ensure that the information needs of campus stakeholders are being met. By communicating the process to campus, it allows other campus stakeholders to request a modification to the attributes list for identified needs. When the change is requested, the Data custodian reviews the attributes list and collaborates with the campus stakeholder to determine the most appropriate method of collecting and recording the attribute information. The Data custodian will follow up with communications to all campus stakeholders when the modification has been completed.

## Keeping the Attributes complete and up-to-date

The new process has a mechanism to periodically (at least annually) review the attributes for all scheduled instructional space. Departments will receive a notification from the Data custodian indicating that it is time to review and update the attributes list for each room. This process will allow the Data custodian to be aware whether information is being regularly reviewed and updated. This mechanism can also be triggered when there are any changes to the attributes or status of instructional spaces.

The following diagram represents the process for review and updating of the data attributes List information:



# Measures of Success

Measures of the success of this new process will need to be established and monitored on an ongoing basis.

## Accurate and Current Information

The Data custodian should establish methods of carefully reviewing of how current information is based on the number of questions and/or suggestions for changing or updating data about instructional space. They can also monitor how frequently the information on rooms have been updated.

## Accessible Information

It is important that all instructional space data be accessible and usable to meet campus needs. The team believes that access to information on campus instructional space will be better met by using the existing data warehouse query and reporting tools.

# Next Steps

The team has identified three additional actions needed to complete their work on the Instructional Space Data Inventory:

- The team is completing final review and cleanup of instructional space data attributes to be turned over to the data custodian.
- The Data custodian will develop a database and make instructional space data accessible to campus staff who need information about instructional space.
- The Data custodian will collaborate with the team to communicate project accomplishments with Campus stakeholders

***Finalize Data Review***

- Staff from the Office of the Registrar have been completing review of rooms and verifying completeness, accuracy and consistency of the data. They will continue compiling any missing data and making any data revisions.
- Instructional Space photos will be included by Space Management Office
- All data will be turned over to the Data custodian

***Database and Web Access of Data Attributes***

- Data custodian will need to develop a secure database to hold the primary source of data attributes
- 2-dimensional data set of 900+ rooms x 62 attributes
- Easy to upload to DoIT InfoAccess
- Establish InfoAccess Dataview and upload process with DoIT

***Communications to Campus Stakeholders***

- Meeting with Project Sponsors completed February 25, 2013
- Presentation to Space & Remodeling Policies Committee completed March 21, 2013
- Presentation to AE Advisory Committee scheduled April 18, 2013
- Communicate with Campus stakeholders
    - McBurney Center and FP&M Facilities Access Specialist
    - Department Managers / Building Managers/ Administrative Deans
    - Curricular Representatives

# Appendix A

## Instructional Space Attributes

The following is the Team's list of the instructional space room attributes.

| Attributes | Responses |
|---|---|
| Facility Name | |
| Room Control | List department |
| Room Number | List number |
| Organization or person responsible for technology support of room | List contact name/department, email, telephone and website |
| Room Name (if applicable) | List name |
| Room Area | Square feet |
| Number of seats in the room - (Seat Count) | If this field is pre-populated with a value above 0, do not edit. If it shows a value of 0, please enter a seat count. |
| Use / sub-use category | Class Laboratory -Wet Laboratory |
| | Classroom - Lecture Hall |
| | Animal Quarters Service - Arena |
| | Conference Room - Conference |
| | Classroom - Classroom |
| | Class Laboratory - Dry Laboratory |
| | Class Laboratory - Wet Laboratory |
| | Open Laboratory - Computer Laboratory |
| | Alteration / Conversion - Remodel |
| | Class Laboratory - Computer Laboratory |
| | Class Laboratory -Dry Laboratory |
| | Media Production - Media Studio |
| | Assembly - Auditorium |
| | Open Laboratory - Dry Laboratory |
| | Classroom -Seminar |
| | Meeting Room - Meeting Room |
| | Study Room - Computer Laboratory |
| | Study Room - Group Study |
| | Class Laboratory - Art Studio |
| | Clinic - Counseling / Interview |
| | Research / Non-class Laboratory - Dry Lab |
| | Class Laboratory -Instrument |
| | Class Laboratory - Laboratory Equipment |
| | Class Laboratory Service - Wet Laboratory |
| | Research / Non-class Laboratory - Art Studio |
| | Class Laboratory -Computer Laboratory |
| | Class Laboratory - Practice Laboratory |
| | Class Laboratory -Art Studio |

| Attributes | Responses |
|---|---|
| | Meeting Room - Seminar |
| | Assembly - Lecture Hall |
| | Research / Non-class Laboratory - Wet Lab |
| | Class Laboratory Service - Workroom |
| | Office Service - Conference |
| | Classroom -Classroom |
| | Office Service - Commons |
| | Class Laboratory Service - Storage |
| | Class Laboratory - Music Studio |
| | Open Laboratory - Practice Laboratory |
| | Study Room - Study |
| | Classroom -Lecture Hall |
| | Treatment / Examination - Treatment / Exam |
| | Meeting Room - Conference |
| | Class Laboratory -Group Practice |
| | Lounge - Lounge |
| | Open-Stack Study Room - Library Study |
| | Research / Non-class Laboratory - Corridor |
| | Class Laboratory -Drafting |
| | Research / Non-class Laboratory - Computer Laboratory |
| | Office - Open Office |
| | Study Room - Reading |
| | Class Laboratory - Computer Laboratory |
| | Meeting Room - Student Organization |
| | Office - Private Office |
| | Open Laboratory - Music Studio |
| | Central Computer / Telecommunication - Computer Laboratory |
| | [No Value] |
| Can other departments use the room? | 1-Yes |
| | 2-No |
| If yes, please enter contact information | |
| Primary Furniture/Seating Type - select one | 1-Classroom Tables and Chairs (Moveable) |
| | 2-Classroom Tables and Chairs (Fixed) |
| | 3-Classroom Tables (Fixed) and Chairs (Moveable) |
| | 4-Tables & Chairs |
| | 5-Tablet Arm chairs |
| | 6-Fixed Seating |
| | 7-Conference (Fixed) |
| | 8-Computer Stations |
| | 9-Lab Benches |
| | 10-Open Area |
| | 11-Practicum |

| Attributes | Responses |
|---|---|
| Active Phone Jack available? | 1-Yes |
| | 2-No |
| Telephone in room | 1-Yes |
| | 2-No |
| Phone jack restrictions | 1-Restricted to campus calls only |
| | 2-Restricted to local calls |
| | 3-No restrictions |
| Audio System | 1-Program |
| | 2-Voice Reinforcement |
| | 3-Both |
| | 4-None |
| Type of Microphones available | 1-Wired |
| | 2-Wireless |
| | 3-Both |
| | 4-None |
| How many microphones are available? | 1 |
| | 2 |
| | 3 |
| | 4 or more |
| Location of Audio Output Jacks | 1-Front |
| | 2-Side |
| | 3-Center |
| | 4-Podium |
| | 5-AV Closet |
| | 6-None |
| DVD/CD Player | 1-Standard |
| | 2-Region Free |
| | 3-None |
| DVD/CD Player with Closed Caption Decoder | 1-Yes |
| | 2-No |
| VCR | 1-Standard |
| | 2-World |
| | 3-None |
| VCR with Closed Captioning Decoder | 1-Yes |
| | 2-No |
| Projection Type | 1-Front |
| | 2-Rear |
| | 3-Flat Panel Monitor |
| | 6-Interactive |
| | 7-Mixed |
| | 8-None |
| Projection Screen Type | 1-Wall |
| | 2-Electric |
| | 3-Fixed |
| | 4-Manual |

| Attributes | Responses |
|---|---|
| | 5-None |
| Projection Aspect Ratio | 1-4:3 |
| | 2-16:9 |
| Max. number simultaneous images displayed | 0 |
| | 1 |
| | 2 |
| | 3 |
| | 4 |
| | 5 |
| | 6 or more |
| Document Camera | 1-Yes without USB output |
| | 2-Yes with USB output |
| | 3-No |
| Lecture Capture available | 1-Yes |
| | 2-No |
| Instructor Station Computer Type | 1-PC |
| | 2-Mac |
| | 3-Dual Boot |
| | 4-Other |
| | 5-None |
| Instructor Laptop Computer Input | 1-Analog (VGA) |
| | 2-Digital (HDMI) |
| | 3-Both |
| | 4-None |
| How many laptop inputs are there? | 1 |
| | 2 |
| | 3 |
| | 4 or more |
| Wired network jacks for instructor use | 1-Yes |
| | 2-No |
| Wired network jacks for student use | 1-Yes |
| | 2-No |
| If yes, how many jacks are available for student use? | List number |
| Location of wired network jacks for student use or accessibility use | 1-Front |
| | 2-Side |
| | 3-Rear |
| | 4-At some workstations |
| | 5-At all workstations |
| Student Computer Type | 1-PC |
| | 2-Mac |
| | 3-Dual Boot |
| | 4-Other |
| | 5-None |

| Attributes | Responses |
|---|---|
| How many student computers are available for use? | List number |
| Location of powered outlets for student use | 1-Front |
| | 2-Side |
| | 3-Rear |
| | 4-At some workstations |
| | 5-At all workstations |
| | 6-None |
| How many outlets are available? | Enter number |
| Is there an AV touch panel at the instructor station? | 1-Yes |
| | 2-No |
| Is the instructor station AV touch panel password protected? | 1-Yes |
| | 2-No |
| If yes, please enter contact information | Contact name/department, email, telephone |
| Video Conferencing | 1-Yes |
| | 2-No |
| Writing Surface Type | 1-Fixed Blackboard |
| | 2-Fixed Whiteboard |
| | 3-Moveable Blackboard |
| | 4-Moveable Whiteboard |
| | 5-Painted or wall covered surface |
| | 6-None |
| Writing Surface - Lineal Feet | Enter value |
| Exterior Windows | 1-Yes |
| | 2-No |
| Room Darkening | 1-Partial |
| | 2-Total |
| | 3-None |
| Natural Gas | 1-Yes |
| | 2-No |
| Sink with Water | 1-Yes |
| | 2-No |
| Specialized Ventilation | 1-Fume Hood |
| | 2-Exhaust Fan |
| | 3-Other |
| | 4-None |
| Air Conditioning | 1-Yes |
| | 2-No |
| Flooring Type | 1-Flat |
| | 2-Sloped |
| | 3-Tiered (stepped) |
| Floor Covering | 1-Carpet |
| | 2-Vinyl |

| Attributes | Responses |
|---|---|
| | 3-Vinyl Composition tile |
| | 4-Wood |
| | 5-Sprung wood |
| | 6-Terrazzo |
| | 7-Concrete |
| | 8-Other |
| ADA: Assistive Learning Device (ALD) | 1-FM Listen Technologies 72MHz |
| | 2-Infrared |
| | 3-Loop |
| | 4-Other FM |
| | 5-None |
| ADA: Instructor Area | 1-Flat |
| | 2-Platform |
| | 3-Stage |
| | 4-None |
| ADA: Presenter Lighting | 1-Yes |
| | 2-No |
| ADA: Presenter Image Magnification | 1-Yes |
| | 2-No |
| ADA: Is the room wheelchair accessible? | 1-Yes |
| | 2-No |
| ADA: Wheelchair Seating Type | 1-Fixed |
| | 2-Moveable |
| | 3-Both |
| | 4-None |
| ADA: Wheelchair Seating Location | 1-Front |
| | 2-Middle |
| | 3-Rear |
| | 4-Multiple |
| ADA: Removable or retractable arm rests | 1-Yes |
| | 2-No |
| | 3-N/A |
| Other notes or comments about the room | |

# Appendix B

## Data Collection Plan

| WHAT DATA COLLECTION METHOD? | WHEN WILL DATA BE COLLECTED? | WHO WILL COLLECT DATA? | WHAT WILL THEY NEED TO DO? |
|---|---|---|---|
| Identify which data collection method will be used (survey, interview, observation, record review) | Describe the timing and frequency of data collection, including when it will be complete | Identify who will be responsible for collecting the data | Describe the steps they will take to complete the data collection |
| The Team will use the Qualtrics survey tool that Julie has been developing. | The plan is to begin collecting the data in mid-December and completing the data collection no later than January 18, 2013. | Team members will be assigned sets of rooms by building or campus location and responsible for collecting the data. | Team members agree on the descriptions of attributes and how to record the data, then begin to review the rooms and train staff and students who are participating. |
| Team members (and their trainees) will visit each of the rooms and record their observations. | | Ed will be recruiting students and staff in Enrollment Management, Jesse recruiting students in Education and Kim recruiting co-workers in Space Management. | |

## Data Collection Plan *continued*

| HOW WILL THEY BE TRAINIED IN COLLECTING THE DATA? | HOW WILL DATA COLLECTED BE MONITORED? | WHO WILL MONITOR THE DATA COLLECTED? | HOW WILL YOU KNOW THE DATA SET IS COMPLETE AND CORRECT? |
|---|---|---|---|
| Describe the steps to prepare them for the data collection | Identify how the data collection process will be monitored for quality, consistency and completeness | Identify who will monitor the data collection for quality, consistency and completeness | Identify what measure(s) will indicate a correct and complete data set |
| Staff and students will need to be trained in how to use the Qualtrics tool, what the attributes are and how the information about room attributes is being interpreted and recorded. | identify missing data, consistency of answers and compiling cross-tabulations to ensure accuracy and consistency | Ed will also take the lead in monitoring the collected data. | The Team has identified a list of 967 rooms that need to be completed. |
| Ed has agreed to take the lead in training. | | | |