

EYP/® minutes

To: Attendees
Project Name: Bull Run Hall Addition
Project No.: 1019004.01
Date of meeting: May 21, 2019
Time of meeting: 9:00-10:30
Location of meeting: Sci Tech, IABR, Conf Rm 1004
Meeting Number: 1.5

Meeting Purpose: Instructional Computer Labs

Attendees:

George Mason University:

- Khondkar Islam, IST
- Jim Jones, ECE/CYSE
- Joyce Rose, VSE
- Peter Farrell, IST Faculty
- James Casey, CVPA/Game Design
- Sang Nam, CVPA/Game Design
- John Schreifels, Chem & Biochem
- Barney Bishop, Chem & Biochem
- Carrie McVicker, COS
- Iosif Vaisman, COS-SSB
- Crystal Clemons, ITS
- Laura Manno, Provost/Planning
- Colby Grant, Sci Tech Admin
- Debbie Brady, Facilities
- Virginia Steele, Facilities
- Joy Staulcup, Facilities

EYP:

- Melissa Burns, Academic Planner
- Brian Tucker, Lab Planner
- Rebecca Ross, Planner/Architect
- Suzanne Klein, Project Director

Minutes:

General Comments:

The group met on George Mason University's SciTech campus to discuss functional space needs for Bull Run Hall Addition and Academic VIII Buildings. This meeting focused on needs specifically related to instructional computer labs.

1. **Introductions:** Laura Mano provided an introduction of the design team EYP which was followed by introductions of all participants.
2. **Project Overview:** Laura explained that the Sci Tech campus will be a standalone campus and GMU is committing resources to make that happen. The first step is Bull Run Hall Addition followed by a 200,000gsf building, Academic VIII, listed as the number one priority to request capital funds. She

asked the group to identify functional space needs to refine the program for the Bull Run Hall Addition and identify new needs for the expansion into Academic VIII.

Brian and Melissa lead a programming exercise to list and describe each functional space type related to the instructional computer labs.

3. **IST Senior Design Studio:**

- Transition between pure classroom and community outreach.
- Work with external partners (often non-profit organizations)
 - Student projects are often outreach to help businesses who can not afford to hire consultants long-term.
 - Would like to include other students and colleagues outside of department.
 - Currently do not have the capacity, so the class is limited to IST seniors.
 - 30 students working in teams of 5-6.
- Need to have an environment conducive for having clients come to campus and feel comfortable to work with students collaboratively.
 - Have space electronically sufficient and comfortable; modern educational space
 - Not have to be kicked out at the end of class (external partners and students).
- Students and external partners need to use GMU network
- Privacy is an issue, but since the work is free clients usually are okay with it.

4. **IST – Networking Classes**

- Space for network racks and routers for instruction
- Active learning and screens at desks
- Large monitors around room
- 30-40 students
- Taught Monday – Saturday 4:30-7:20pm

5. **Cyber Physical Systems: Lecture to Lab Learning**

- Virtualization; ability to use the cloud for instruction (100+ students)
- Hands-on Component (groups of 20-25 students)
 - Computer Engineering workbench
 - Soldering Equipment

6. **Bioinformatics:**

- Lecture and Lab in the same space
- 20 Students in class + 15 students remotely
- Class is broadcast
 - Single camera that tracks the instructor
 - Would like capability for cameras to track students in the classroom
 - Today students joining remotely cannot share their content – it would be nice if they could (webex or blackboard collaborate)
 - Servers in Fairfax today with some localized servers needed
 - Powerful workstations used 24/7 for simulations. Dispatcher programs when someone touches the keyboard the simulation stops.

7. **Game Design:** Computer is always a part of the class

- 30-40 students per class
- Utilizing various layouts currently
 - Lower level: individuals follow the instructor in more traditional arrangement.
 - Senior level: “pod” type - everyone has a computer around a pod and able to use it as needed. Students also have the ability to hook up their own device.
 - Monitor on desk to dock their own machine. Swing arms so they can be pushed out of the way.
- Use higher end machines than in a typical computer lab. (PC)
- Music Composition class uses Mac for sound editing software.
- Software is in the cloud but installed on machines.
- Consider power requirements for plugging in student laptops.
- Classes usually test their games within the same classroom. Either load the game on a laptop or computers in the classroom.
 - Like a more controlled environment for feedback.
 - Other option is for everyone to play and do a survey utilizing a shared drive.
 - Feedback sessions on campus, but students do it on their own.
- Event space could be utilized for gaming competitions. The program is expecting more gaming students on the SciTech campus and it would be a good opportunity to showcase work.
 - A good example of space they’ve used in the past is the Hilton Gregory.
 - Configurable room

8. **College of Science Testing Center:**

- Physics and Chemistry would use; other Colleges and Schools have testing needs as well
- Fairfax Testing Center:
 - Utilized 40-50 hours per week
 - 48 computers
 - Proctored
- Organic Chemistry uses it for all testing - students are given a window of 3-4 days to take a test
- Laura mentioned this could potentially be accommodated in a current space on campus and considered for future Academic VIII building.
- Consistent Student Experience with the other GMU campuses.

9. **College of Science:**

- Flip Classroom
- Electronics in individual pods.
- Utilize whiteboards for group work.

10. **Classroom Utilization:**

- Information Systems Technology
 - 4:30 - 7:30pm
 - M, T, W, TH, S

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- 3-5 Sections per week
 - 30 seats
- Bioinformatics
 - 4:30 - 7:30
 - M, T, W, TH
 - 30 seats
- Game Design
 - 9:00am to 10pm
 - Monday through Friday
 - Need dedicated open lab times squeezed in when no courses.
 - 1 hr 45 min courses that meet 2 times per week
 - 2 hr 45 min courses that meet 1 time per week
- Cyber Physical Systems
 - 8:00 – 4:00pm
 - Monday through Friday
 - 90% undergraduate traditional students

11. Open Labs

- Open computer lab is a need for multiple disciplines.
- Mediascape tables with flat screens, computers provided at some stations.
- Student design space or classroom space – becomes open lab during designated hours.

12. Servers – centralized server rooms rather than having servers in each classroom.

- Cyber Physical Systems, and Bioinformatics need dedicated servers.
 - Physical access for teaching. (100 sf)
- IST will only have dedicated servers if sponsored by an external partner.
- Game design does not need access to servers, digital access is sufficient.
- Data Center may need to be considered as part of Academic VIII.

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IST **MITG #5** **CONP LABS** **CLASS** 4:30-7:20 1 of 4
 • MTWRSat
 • 30 stu.

IT SENIOR Proj's

- CLASSROOM TO OUTREACH
- EXTERNAL CLIENTS → DESTINATION SPACE (NOT FOR PROFITS)
- COMFORTABLE / SAFE FOR CLIENT INTER.
- WOULD LIKE OTHER GMU COLLABORATIONS (IE BUSINESS SCH.)
- ELECTRONICALLY SUFFICIENT
- 30 PEOPLE = 5-6 TEAMS
- NOT KICKED OUT
- RECORDING / PLAYBACK (OF STUDENTS) → OUT OF CLASS
- EVENT SPACE

⊗ = ACCESS TO SERVERS

#5 **M-F** 8:00-4:00 2 of 4

→

- LECTURE TO LAB LEARNING

↳ CYBER PHYSICAL SYSTEMS ⊗

- CLOUD BUT HANDS ON
- PHYSICAL REQIT
- MICRO / HOODS / ELEC. BENCHES
- 25 STUDENTS

IST ⊗ 4:30-7:20 / MTWRS

- NETWORK BACK / ROUTER SPACE
- MULTIPLE SCREENS + BIG
- ACTIVE LEARNING +
- DESK FACING SCREEN
- 30-40 STUDENTS

#5 - 4:30-7:20 3 of 4
 - MTWRS
 - 30 SEATS

BIOINFORMATICS ⊗

- LECTURE / LAB - ALL IN CAMP LAB
- IN LABS + REMOTELY - BROADCAST (UP TO 20) (UP TO 15)

GAME DESIGN - M-F
 - 9am-10am
 - 1:15 hr.
 - 2:45 hr.

- 30-40 STUDENTS
- TRADITIONAL + PODS LAYOUTS
- DED. EQUIP + HACK UPON DEVICES (HIGH-END) TABLETS → POWER ISSUES
- EVENT SPACE

#5 4 of 4

COS

TESTING CENTER

- AB CAMP. / OWN SERVER
- 40-50 hrs / WK (2000 STUDENTS)
- PROCTOR
-

FLIP CLASSROOM TEACHING

- ELECTRONICS
- WHITEBOARD

ALL!

- DEDICATED - OPEN LAB TIME
- OPEN COMPUTER LAB?
- BREAK OUT AREAS - W/ RECORDING

AB - DATA CENTER?

End of Meeting

The above constitutes my understanding of the items discussed and the decisions reached. If there are any additions or corrections,

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please, contact the undersigned.

Signed: Suzanne Klein

Cc: Attendees

Date: May 25, 2019