Subject: Small Group Meeting Minutes – Classroom Technology
Date: October 9, 2013

The following represents our understanding of issues discussed and decisions reached. Please review for accuracy and notify our office of any modifications.

NDSU Faculty Members Present:
Mike Ellingson, Mark Dahl, Melissa Stotz, Marc Wallman, Micah McGowen, Kristi Wold-McCormick

Design Team Members Present:
Mike Berger, Kurt Hassebrock – MBN Engineering (Electrical Engineer)
Stephanie Richards McDaniel, Brian Lapham – BWBR (Design Architect)
Brian Berg, Mark Honzay – Zerr Berg Architects (Architect of Record)

1. Advisory Committee meeting updates
   • The design team summarized the building program that had been discussed with the advisory committee.
   • The design team discussed the critical success factors used to shape the building design.
   • The design team discussed the criteria factors used primarily to determine which labs, classes, and spaces would fit within the building program.
   • In addition, the group explained how the small group meetings have been taking place to work on lab space planning.

2. Instructor Stations
   • The majority of the rooms on campus are fixed rack along the wall.
   • Only one room on campus has the tethered rack, which is problematic.
   • The majority of instructors bring a USB drive to connect to a computer in the room.
   • Wireless connections to the projector should be an option, but not the only option.
   • Wireless mice and keyboards

3. The design team gave an overview of the available classroom spaces that will be provided within the STEM building. The classroom list below indicates what is currently being planned. This feature list will be updated as the design moves forward.

   Classroom
   • Occupants: 25
   • Group Work: Yes
   • Flexible: Yes
   • Presentation: Teacher to Class, Students to Class
   • Best Use: Lecture, group work, discussion
   • Technology: Projector, screen

   Computer Cluster
   • Occupants: 24-48
- Group Work: Yes
- Flexible: Limited
- Presentation: Teacher to Class, Students to Class
- Best Use: Hands on
- Technology: Projector, screen

- Auditorium
  - Occupants: 300
  - Group Work: Difficult
  - Flexible: No
  - Presentation: Teacher to Class
  - Best Use: Lecture, demonstration
  - Technology: Projector, screens

- Active Learning
  - Occupants: 63-81-126
  - Group Work: Yes
  - Flexible: Yes
  - Presentation: Teacher to Class, Students to Class
  - Best Use: Group work discussion, collaboration
  - Technology: Connection from table to head unit at each table

- Lecture
  - Occupants: 60-100
  - Group Work: Limited
  - Flexible: No
  - Presentation: Teacher to Class
  - Best Use: Lecture
  - Technology: Power at tables. Possibly data at tables

- Informal Learning
  - Occupants: Varies
  - Group Work: Yes
  - Flexible: Yes
  - Presentation: Student to Student
  - Best Use: Informal Study, Group Work
  - Technology: To be determined

4. Additional STEM Classroom Needs & Discussion
   - Additional Computer Clusters
     - Drop-in stations that are not able to be reserved
   - Wireless connections to screens is currently being utilized at Barry Hall to wirelessly push media from devices to screens, however the ability to connect and display is limited.
   - Screen size standard
     - 16x10 format
     - Back of room projection
     - Action Item: The design team will work with NDSU faculty to determine if multiple screens are needed.
     - Action Item: The design team will work with NDSU faculty to determine the proper coordination of whiteboard space, whiteboard locations, screen space,
and screen locations. The amount of space available for both whiteboards and projection screens is limited, so the group will have to balance to needs of both.

- Angled screen
  - Undesirable, as they compromise sightlines.
- Short throw projectors
  - Currently not utilized much due to the lack of brightness
- Smart Boards
  - Are currently in limited use due to the small size of the screen.
- Access Floor
  - Would be ideal if affordable for the active learning classrooms
- Monitors
  - Not currently installed in any classrooms
  - Use projectors instead of monitors typically
- Auditorium Interaction
  - Currently use PRS type clickers
  - Working on program to use app on smart phone or computer device to interact with class
- Power at auditorium/lecture
  - Power will be needed due to student’s schedules and need for battery re-charging
  - Chairs can be provided to provide power at a pre-determined distance apart
- Lecture capture
  - Currently have around 10 rooms with lecture capture capability
  - Would like this system available in every classroom and lab space if the budget supports
- Lighting & Shades
  - Ideal to have control over lighting and shade control at the podium. Depending on the budget
  - Controllable ballasts for lighting
- Guest Lecture
  - Ability to project the lecturer is available.
  - Ability to capture the students is difficult and currently dealt with by bringing a remote camera into the room when needed.
- Computer station
  - Standard size per person 30” deep x 42” wide. NDSU noted that less width may be workable if the 30” depth is maintained.
- Survey
  - **Action Item:** The design team will formulate questions to ask at the expo and to include in a survey to campus
  - IT Expo – October 23rd
    1. 11-12pm roadmap
    2. 12-4 concurrent sessions
    3. 2-3 panel discussion in century theater
  - October 23rd. Melissa will be doing a panel on active learning.
CC:  Mike Ellingson, Mark Dahl – NDSU Facilities Management
Kristi Wold-McCormick, Benton Duncan, Carolyn M. Harvey, Andy Mara, Anita Welch, Don Miller, Phil McClean, Dinesh Katti, Erik Diederich, Alan Kallmeyer, Erika Offerdahl, Marc Walman, Kelly Bisek – NDSU STEM building advisory committee
Doug Wild, Craig Peterson, Stephanie Richards McDaniel, Brian Lapham, Kyle Lunke – BWBR
Marc Shannon – Northern Technologies
Steve Schilke – KLJ Engineering
Jason Skiple – Heyer Engineering
Jeremiah Christenson – O.N.E.
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