

PKAL Planning Facilities for Undergraduate Science & Mathematics

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Key Points

- Building new space just because the current space is old is not enough; one must examine how a new building will help to *transform* what is currently being done (i.e., teaching/research). Ask faculty: “what would you like to be able to do pedagogically (with a new facility) that you are not currently able to do?”
- Design a building that students want to be in when they don't have to be.
- In student interactive spaces provide chalk boards and white boards. Let this be a teaching/learning space. Design informal learning spaces to foster “intellectual collisions.”
- Establish a predictable and logical Design – Estimate – Build Schedule. “Design it in – Take it out” exhausts the team more than anything in a project's process.
- Overheard “Value Engineering has nothing to do with value.”
- The cost to build a building is only 8 to 10% of the total cost of that building over a ten year period.
- Innovative ways to include user input:
 - Give students a disposable camera and ask them to take pictures of their favorite places on campus.
 - Ask students to draw their concept of a classroom and lab.
 - Have faculty review sessions to develop goals.
 - Challenge the ‘silos’ and make new space available for different disciplines.

Design Team

When beginning a major project there are certain people (stakeholders) that should be on the Design Team. PKAL refers to “those at the table”.

- ‘Shepherd’. This is the team leader – also referred to as the facilitator, translator and coordinator. We call him ‘the great communicator’.
- Fundraiser. Probably someone from development.
- Facilities.
- Construction Manager. This would include the project manager, estimator and/or scheduler.
- Information Technology. We should push the limit on Technology.
- Architect. This person will bring in the Lab Consultant, Engineers, Facilities Space Planner, LEED Consultant, Landscape and Civil as needed.
- A science faculty member, someone who is a good communicator in his/her collegium and will keep the collegium informed.
- Faculty Opinion Makers. Non-STEM members of the faculty.
- Students.

Action Items

- Develop an aligned “Vision for the Sciences.”
- Develop a Mission Statement for the Sciences.
- Develop the “Story of the Sciences at Eckerd College” to place new building in the context of overall institutional development.
- Visit other facilities that have been recently completed (at least one year old). Learn from parallel worlds.
- Develop faculty support for innovative teaching methods. Transform the curriculum.
- Challenge conventional teaching methods.
- Try to define the word “flexibility”.
- Determine those teaching methods/curricula that drive space design. What are the human factors that foster learning?

- What settings/environments really work, such as lecture halls, studios, and team approaches.
- Will the project require additional staffing? Maintenance personnel? What will be the cost to operate?
- Breakdown 'silos'; discourage the "my office, my lab, I need" conversations. Focus the faculty on the larger goals of the programs that this space should help fulfill. Understand that the space is first and foremost for Eckerd students.

Design Ideas

- Flexible/movable/multi-discipline spaces. Should not take more than 6 to 10 seconds to change space if this occurs during class time.
- Cluster teaching. Design spaces and furniture to create small groups.
- Cutting edge technology. Multiple screens, cameras, LCDs. There are a myriad of items that should be identified during the more detailed phase of the design and document development.
- Determine the lab layouts with Rick Heinz at the Schematic Design Phase to support the teaching methods.
- Apply the design principals that the Architect assumes are obvious. Quality of space, light, sound (or lack of it), air quality (bad air makes one drowsy), finishes, color, texture, ceiling heights, transparency, glass, visibility.
- Make chalk and marker board bottom rails at 12' off the floor instead of the more traditional height of 36".
- Conversations about spaces and specifically lecturing spaces stressed the ambience of the space. We could probably use the auditorium in Sheen A if we corrected the air conditioning equipment noise and replaced the seating. How does scale affect learning – small group in a large space.
- Create a friendly space. Create displays for "Science in Sight". Celebrate Science in the architecture, art, technology, space and exhibits; make sure no one can doubt that they are in a science building.
- Transparency – glass walls to show off facility.
- Student interaction space – some small/some large. Some of these spaces need to be close to faculty offices for faculty/ student interaction.
- "Celebrate the front door" (words of Charlie Canerday). The existing original Perkins and Will buildings have no identifiable front door. In this case the interaction spaces are outside but there are few well defined spaces.
- Sustainability/green building. We should get this building certified to show our commitment to the environmental programs on campus. While we work toward the principals of LEED the certification process will validate this effort. See the addendum on LEED Certification.
- The facilities plans that have been presented by Paulien and Associates, Inc. have used a utilization factor of .65. We should change this to .55 to get more student and faculty interaction spaces.
- Outdoor spaces are even more a factor when adding another building to a three building complex. The spaces between the buildings need more attention for the student interaction space. Create a new greenhouse, natural landscaping, and shaded space. There should be an effort campus-wide to create more student interaction spaces on the exterior.
- One of the common themes at PKAL was that every building must have an Atrium. It can be difficult to have an atrium in a one-story building, however. But there are ways to enhance interior circulation spaces and entrances that achieve the same effect. We should remember the 'Eckerd Style of Architecture' principals that were applied in the design of the Library and IOTA residence.

We are only going to build this building once. Think, plan, review, design, challenge, review, revise, review then build.