NEW FACILITIES FOR COMMUNITY COLLEGES

Recommendations

Review the comprehensive academic plan, along with the facilities master plan.

The academic plan and the facilities master plan are integral to planning for new facilities. Both plans should reflect the importance of science education at the college and the surrounding community. The existing plans are insufficient in their analysis of the evolving study and pedagogy of science. Subsequent plans should address the needs of a new facility.

Facilitate dialog between the department and administrators to encourage ongoing development of building plans. Regular communication will enhance the outcome of the building project. Faculty can express departmental needs and justify programming needs by facilitating changes in the building design. Collaboration ensures that departmental needs are addressed while reassuring faculty of the administration's commitment to construction.

Identify a faculty shepherd from within the department.

A faculty shepherd can represent the faculty's interests during the design and construction of the facility. Developing plans and interacting with design professionals and construction companies is incredibly time-consuming. A faculty shepherd, given release from normal teaching duties, will have time to fully understand the documents and ensure that the plans are carried out. The administration should ultimately rely on faculty to make decisions regarding designing and equipping the building.

Persuade local industry to contribute to the building project.

Many local companies are science and technology oriented. If not for actual building costs, perhaps local companies could equip labs, fund a science attraction or contribute scientific artworks that have educational value. Consider an agreement that any furniture, fixtures and equipment donations will remain with the building project.

Develop grant proposals to obtain further funding.

Science and biotechnology equipment are very expensive and grant funding could reduce the cost of equipping the new building. The employment of innovative teaching strategies may form the basis of a National Science Foundation proposal. New innovations in building design may also be the basis for a grant proposal.

BACKGROUND

The consulting team was invited by the chair of natural sciences to review the need for new science facilities at this community college in the southwest. The college has a history of providing training in technical areas. However, the transfer of students to baccalaureate campuses will become a prominent part of their mission as more students attend community colleges for their first two years of study.

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Make a commitment to fundraising at the chancellor's level to accomplish the entire project in a timely manner. Only the chancellor can assess the level of support for the project at the state and community levels. The chancellor is in the best position to promote the project within local industry and the surrounding community. He or she is also in the position to convince business and industry of the importance of a successful science program for the future economic growth of the area.

Design each space for flexibility now and in the future.

Flexible design allows the use of many pedagogical styles, as well as the ability to cater to individual learning styles. Flexible design includes movable tables and chairs and large, open spaces for student collaboration. Collaborative learning requires larger classrooms than traditionally built (approx. 1200 sq ft for 48 students). 1400-1500 sq ft is needed to accommodate 24 students in a laboratory. Flexible design also allows classrooms and labs to change function as programs evolve over time.

Design the new facility with adequate "soft space."

Soft space can greatly enhance teaching and learning. Soft space includes seating in hallways, gathering places outside of classrooms, enlarged stairway landings and landscaping and seating in outdoor spaces. These areas generate spontaneous learning and should be adjacent to teaching and learning spaces as well as faculty offices. They also provide students with study spaces for use between classes as well as places for groups to meet. Soft spaces encourage the development of a community of scientific scholarship.

Design the new facility with instructional support spaces and student study rooms.

Instructional spaces facilitate teaching and enhance learning. Uncluttered labs send the message that overall organization contributes to the scientific process. A greenhouse and animal facilities are examples of places to prepare instructional materials that also serve faculty development, student project work and undergraduate research.

Student study rooms have been proven to enhance student learning through collaboration in study groups. Study groups are especially effective in the study of sciences. These rooms also provide a venue for commuter students to function as collaborative teams. Discipline-specific study rooms are effective because they provide space for discipline-specific tutoring and scientific equipment and models can be provided for extended study. The study room should be housed in the departmental building to allow sharing of equipment and prevent undue wear and tear on equipment

Consider including a science-themed attraction in the new facility.

Such an attraction will enhance K-12 community tours that will increase the connection to the community. The positive experience of the children may encourage them to attend your college in the future. Moreover, a well-designed science attraction may enhance the scientific literacy of visiting students and the community, as well as current students. ■