INTEGRATING THE EDUCATIONAL AND FACILITIES MASTER PLANS

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Pima Community College District (PCC) is one of the largest Community College Systems in the country.
BACKGROUND

Pima Community College District (PCC) has been offering technical career education and training programs for years but the College lost sight of the most important mission—ensuring that we were:

- Identifying unfilled labor market needs
- Providing opportunities for career advancement with relevant and coherent pathways
- Promoting the associate degree as a desired employment credential
CHALLENGES

The 21st Century initiated profound change in Higher Education. PCC has increasingly felt the pressure of compounding issues:

- Accreditation challenges
- Decreasing enrollment
- Delayed master plan
- Lack of a clear community vision for the College
- Traditional models of funding
- Governance
- Academic delivery and accountability (tech programs)
- Campus life for students
COMPETING INTERNAL PROCESSES

PCC had to address difficult internal process challenges forcing the College to face the consequences of not being consistent about the master planning cycle:

**Competing decision-makers**
- Multi-Campus vs. Multi-College district structure (most within Tucson metro)

**Duplicating campus programs and resources**
- Programs are not right-sized and sometimes in conflict with other campuses
- One-off program improvement projects that were dividing up the campuses
- District undergoing major renovations to ensure right sizing
- Change resistance/pushback - accustomed to doing their own campus based projects, instead of aligning with master plans
LEARNING OUTCOMES

• Frame joint plans around a shared mission to help promote rapid consensus building and decision making.
• Structure an effective leadership team comprised of administration, operations, and faculty members to lead concurrent plans.
• Successfully initiate more provocative ideas in the master planning process to elevate the educational plan goals and recommendations.
• Measure the planning outcomes every five years to continuously align educational and operational plans with the overall strategic plan.
INTEGRATED PLANNING

To address compounding challenges, PCC took a unique approach in integrating the educational and facilities master planning processes.

The results are exceeding expectations in realigning, repositioning, and transforming the College.

They demonstrate the value in intersecting these plans through the lens of enhancing student success outcomes.
ONE ALIGNED FUTURE STRATEGY

EDUCATIONAL MASTER PLAN
- Study Team & Participant Work Sessions
- Market Analysis
- Benchmarking
- New Program Assessment
- Student Services Assessment
- Future Capacities
- Program & Service Migration
- Existing Program Analysis Matrix
- GIS Demographic Mapping
- Center of Excellence/Integration

FACILITIES MASTER PLAN
- Work Sessions with the College
- Space Utilization Analysis
- Space Projections
- Physical Site Analysis
- Regional/Community Analysis
- Sustainable Design Feasibility
- Design Alternatives
- Design Refinement
- Master Plan Report
Integrating the Educational and Facilities Master Plans

**Educational Master Plan:**

**PROCESS AND INPUT**

**INTRO**
- History, Physical Assets, Institutional Trends

**INPUT**
- External and Internal Documentation
- Best Practices and Trends

**FRAMEWORK**
- District Strategic Directions
- Campus Planning Framework

**STRATEGIES**
- Student Success, Career Pathways
- Program Alignment, Pima Online
- Access & Diversity

**FUTURE CAPACITIES**
- Utilization
- Future Physical / Human Resources

**NEXT STEPS**
- Implementation
- Metrics for Success

**EXTERNAL**
- EMSI Economic Overview and Program Gap Analysis
- Sun Corridor Inc. and Tucson Regional Economic Opportunities
- Pima County Workforce Investment Board
- City of Tucson Economic Development
- Arizona Office of Employment and Population Statistics
- Tucson Hispanic Chamber of Commerce

**INTERNAL**
- Chancellor’s Reports of the Community
- PCC Strategic Plan
- Student Services Redesign Plan
- Developmental Educational Redesign Plan
- Strategic Enrollment Management Plan
- PCC Institutional Research Data

**Pima Community College Educational Master Plan**
SUCCESS FOCUSED

**SOCIAL**
- Participation in clubs, events, sports, activities, interacting with other students, friends

**ACADEMIC**
- Studying, interaction with faculty, library use, advising, group work, visible outcomes

**ENVIRONMENTAL**
- Things that “pull” students away – work, family, friends, finances

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**KEY ENGAGEMENT STRATEGIES**

1. Academic/career pathways and stackable credentials
2. Community and industry engagement/ partnerships
3. Program framework for Centers of Excellence
4. Program alignment / reduce duplication between campuses
5. Expand workforce and business development
6. Align programs with occupational / community needs
7. Developmental education redesign – IBEST, bridge programs
8. PCC Online – Restructure as separate entity
9. Adult Education – Continuity with Learning Centers
10. Student Services Redesign

**CONTINUED STUDENT SUCCESS**

**PROGRAM COMPLETION/TRANSFER**

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**Tinto's Theory:** The more students become integrated into social and academic systems, the greater level of persistence completion.
Integrating the Educational and Facilities Master Plans

DEMOGRAPHICS

- Aging Population
- Greater Diversity
- Lowest population gains since the 1960’s due to migration
### Pima County 15 Year Population Estimates

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1,022,079</td>
</tr>
<tr>
<td>2020</td>
<td>1,100,021</td>
</tr>
<tr>
<td>2025</td>
<td>1,172,515</td>
</tr>
<tr>
<td>2030</td>
<td>1,243,099</td>
</tr>
</tbody>
</table>

% Change 21.6%

### Annual Immigration from Mexico to the US: 1991 – 2010

![Graph showing annual immigration from Mexico to the US from 1991 to 2010.](image-url)

Source: Pew Hispanic Center estimates compiled from various sources; see Methodology.

PEW RESEARCH CENTER
ALIGNING PROGRAMS WITH WORKFORCE NEEDS

SUPPLY AND DEMAND FOR PCC'S ASSOCIATES DEGREE LEVEL PROGRAMS

Significant gaps existed between program completions (supply) and workforce needs (demand)

- 86 programs were undersupplying market demand. WHY?
  - Mismatch between workforce credentials and PCC certificates and degrees
  - Duration of program
  - Reputation of program or relevancy of coursework
  - Lack of program awareness in the community
  - Location or access to program content

- Greatest areas of opportunity moving forward
  - Business Services, Culinary, Construction Trades, Applied Technologies, Health Care (focus on wellness)
Integrating the Educational and Facilities Master Plans

GUIDED PATHWAYS

**Guided Pathways**

- Clear roadmaps to student end goals
- Default program maps → whole-program plans → block schedules
- Exploratory majors
- Intake system redesigned as “on-ramp” to program of study
- Integrated, contextualized academic support for program “gatekeepers”
- Proactive progress tracking, feedback, support
Educational Master Plan: CAMPUS ANALYSIS

Downtown Campus Strategic Focus:

- Centrally located / close to University of Arizona
- Diverse campus with transit access
- Applied Technology Center of Excellence
- Focus on industry credentialing/partnerships
- Large ESL/ developmental education need
- Large concentration of Veterans
- Greater need for enrollment and academic support services
- Need for student spaces to retain students on campus

<table>
<thead>
<tr>
<th>Unit</th>
<th>Fall 2010</th>
<th>Fall 2015</th>
<th>% Change</th>
<th>Space Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headcount</td>
<td>10,443</td>
<td>7,012</td>
<td>-33%</td>
<td></td>
</tr>
<tr>
<td>Annualized FTSE</td>
<td>2,005</td>
<td>1,322</td>
<td>-34%</td>
<td></td>
</tr>
</tbody>
</table>

Campus Capacity

<table>
<thead>
<tr>
<th>Space Type</th>
<th># Rooms</th>
<th>WRH</th>
<th>SSO</th>
<th>WSH</th>
<th>% Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classrooms</td>
<td>40</td>
<td>30</td>
<td>69%</td>
<td>20.4</td>
<td>73%</td>
</tr>
<tr>
<td>Laboratories</td>
<td>10</td>
<td>39</td>
<td>57%</td>
<td>22.9</td>
<td>89%</td>
</tr>
</tbody>
</table>

Occupational Demand (EMSI) and Programs

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Award</th>
<th>Low Demand</th>
<th>High Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive Technology</td>
<td>CERT, AAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building and Construction Technologies</td>
<td>CERT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Aided Drafting/Design Technology</td>
<td>CERT, AAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fraud Examination</td>
<td>CERT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Information Management</td>
<td>AAS, CERT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machine Tool Technology</td>
<td>CERT, AAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paralegal</td>
<td>CERT, AAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Writing &amp; Communication</td>
<td>CERT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Translation and Interpretation Studies</td>
<td>CERT, AAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Welding</td>
<td>AAS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Downtown Campus

GIS Analysis

<table>
<thead>
<tr>
<th>GIS Student Analysis</th>
<th>High</th>
<th>Med High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Diversity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Dispersion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density of Fully Online Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GIS Area Analysis

<table>
<thead>
<tr>
<th>GIS Area Analysis</th>
<th>High</th>
<th>Med High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic Diversity of Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veteran Density</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income Distribution</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Attainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Enrollment Overview

<table>
<thead>
<tr>
<th>Unit</th>
<th>Fall 2010</th>
<th>Fall 2015</th>
<th>% Change</th>
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Incorporating the Educational and Facilities Master Plans
Educational Master Plan: CENTERS OF EXCELLENCE

• Provides structure and flexibility (stackable credentials, on ramps)
• Concentration of resources and specialized expertise
• Increased ability to integrate credit, non-credit, industry certifications/credentials
• Suitable for Bridge and IBEST programs using pathways
• Enhanced equipment and facilities sharing
• Enriched student engagement and cross-program understanding

Recommended Centers of Excellence for PCC:
• Public Safety and Emergency Services Institute
• Center for Digital and Creative Arts
• Center for Engineering and Applied Technologies
• Center for Culinary and Hospitality Management
# SPACE NEEDS ANALYSIS

## Classroom Utilization Summary

<table>
<thead>
<tr>
<th>Fall Term</th>
<th>Total Rooms</th>
<th>Without Scheduled Utilization</th>
<th>Average Weekly Room Hours</th>
<th>Hours in Use Student Station Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>160</td>
<td>3</td>
<td>24.0</td>
<td>70%</td>
</tr>
<tr>
<td>2104</td>
<td>176</td>
<td>2</td>
<td>27.0</td>
<td>67%</td>
</tr>
<tr>
<td>2001</td>
<td>161</td>
<td>n/a</td>
<td>40.0</td>
<td>64%</td>
</tr>
<tr>
<td>2000</td>
<td>177</td>
<td>14</td>
<td>35.0</td>
<td>68%</td>
</tr>
<tr>
<td>1999</td>
<td>159</td>
<td>15</td>
<td>36.0</td>
<td>70%</td>
</tr>
<tr>
<td>1998</td>
<td>142</td>
<td>n/a</td>
<td>44.0</td>
<td>60%</td>
</tr>
<tr>
<td>1997</td>
<td>142</td>
<td>n/a</td>
<td>42.0</td>
<td>59%</td>
</tr>
</tbody>
</table>

### Weekly Room Hours

The average number of hours per week a room is scheduled over a term or semester.

### Student Station Occupancy

The average percent of seats filled when a room is occupied during scheduled use.
A total of 1,124,744 Assignable Square Feet at 12 locations
SPACE NEEDS ANALYSIS BY SPACE TYPE AND CAMPUS

Planning Assumptions
- 70% FTSE Enrollment Growth
- 37% Faculty and Staff Growth

EMP Initiatives Factored Into Analysis
- Applied Technology Center of Excellence
- New programs in Auto Collision, Diesel, Advanced/Automated Manufacturing, Integrated Design
- Right-size welding laboratory, Automotive Tech, construction spaces
- Add Fab Lab or maker space for manufacturing and testing
- Classrooms for collaborative/active learning
- Learning Commons with more study stations
- Right-size student center to accommodate growth
- Conferencing area for business/industry partners/ workforces development programs

10 Year Space Needs for Downtown Campus

<table>
<thead>
<tr>
<th>Category</th>
<th>Downtown Campus Fall 2015 ASF</th>
<th>Downtown Campus Fall 2025 ASF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Center</td>
<td>1000</td>
<td>2000</td>
</tr>
<tr>
<td>Assembly / Exhibit</td>
<td>500</td>
<td>1000</td>
</tr>
<tr>
<td>Library</td>
<td>300</td>
<td>600</td>
</tr>
<tr>
<td>Offices</td>
<td>200</td>
<td>400</td>
</tr>
<tr>
<td>Laboratories</td>
<td>7000</td>
<td>10000</td>
</tr>
<tr>
<td>Classrooms</td>
<td>1500</td>
<td>3000</td>
</tr>
<tr>
<td>Support</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Health / Other</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Integrating the Educational and Facilities Master Plans
PCC’S INTEGRATED PLANNING, EFFECTIVENESS AND BUDGET PROCESSES

This figure summarizes the components of the planning, effectiveness and budget process at PCC. Primary connections are indicated with arrows, but all processes within this system are linked. Inputs and outputs from each process feed into the other processes within the integrated system.
GUIDING PRINCIPLES FOR THE PLANNING PROCESS

- Align like programs and services across the district.
- Use space more efficiently.
- Reduce facility operating costs.
- Leverage capital to renovate facilities to create modern, flexible, learning environments.
- Establish centers of excellence to attract students.
- Plan for increased enrollment.
PCC SERVICE REGION

COMPREHENSIVE:
- 6 campuses
- 8 centers

PROCESS INCLUDED:
- GIS Analysis
- Facility Analysis
- Program Review
- Space Needs
- Optimization
- Reuse Strategies
EDUCATIONAL ATTAINMENT

CENSUS (2013 TRACT DATA)
(1 dot = 10 people)

- less than high school graduate
- high school graduate or equivalent
- some college or associates degree
- bachelors degree or higher

14%  23%  37%  26%

*based on data only mapped within this view
Integrating the Educational and Facilities Master Plans

ETHNICITY OF PCC STUDENTS

PCC STUDENTS (FALL 2015)
(1 dot = 1 pcc student)

- pima campus
- pima center
- pima office

- hispanic/latinx pcc student
- white pcc student
- black pcc student
- asian pcc student
- american indian or alaskan native
- native hawaiian or pacific

43%
41%
4%
3%
2%
0%

Sources: EAA, PCC, BAMA
Integrating the Educational and Facilities Master Plans

LOCATION ATTENDED BY PCC STUDENTS (FALL 2015)
(1 dot = 1 pcc student)

- pima campus
- pima center
- pima office
- downtown campus pcc student

28%
21%
15%
13%
12%
12%

**100% = of Campuses Attended**
CAMPUS SITE ANALYSIS
CAMPUS PROGRAM ANALYSIS

Academic Programs

Math 1732
Writing 816
Building & Construction Tech 580
Health Info Tech 573
Biology 544
Psychology 500
Automotive Tech 433
History 428
Art 425
Spanish 186
Welding 181
Machine Tool Technology

DOWNTOWN CAMPUS

Administration  
Student Services  
Athletic  
Academic  

Integrating the Educational and Facilities Master Plans
DISTRICT-WIDE RECOMMENDATIONS

PCC allowed all assets to be considered as part of the master planning effort which provided the opportunity to propose dynamic and transformational changes across the District.

Augment student / academic success areas to increase engagement and retention.

Create efficiencies in student self-service admissions areas.

Increase developmental education.
The recommendations align directly with the programmatic goals outlined within the Educational Master Plan. This enabled strategies specific to existing campus facilities.

**Academic Framework:**
- Centers of Excellence – identification of physical hubs for COE model
- Program Alignment – reduced duplication between campuses
- Distributed Models – definition of programs requiring multiple sites

**Potential New Programs:**
- Guided Pathways – realignment and/or development of new programs across district to promote educational efforts
- Partnerships – new spaces to encourage external industry engagement
CONSOLIDATION & REALIGNMENT STRATEGIES

RELOCATE TO CAMPUS

From Community Campus:
• Workforce & Business Development

From Northwest Campus:
• Opportunity for Hotel Restaurant Management

RELOCATE AWAY FROM CAMPUS

To West Campus:
• Arts & Fashion Consumer Sciences
  - from Recommendation 7.4 of EMP
• Health Information Management
  - from Recommendation 7.8 of EMP
• Music, Biology
• 200 level Education

To East Campus:
• Business, Criminal Justice, Chemistry

To Maintenance & Security:
• Archives
SOLUTION DEVELOPMENT

Implementable strategies to repurpose existing campus spaces for improved student success.

*New Automotive / Transportation Technologies Building.*

*New Maker Space, Design / Engineering / CAD Labs.*
Realistic yet innovative solutions to accelerate implementation of Facilities Master Plan.

**PHASE 1: NEAR TERM PROJECTS**

- Automotive/ Transportation Technologies Building  
  *(from Recommendation 7.5 of EMP)*
- Landscape/Quad Improvements
- Expanded Welding, Building Construction, Trades,  
  *(from Recommendation 7.5 of EMP)*
- New Maker Space, Design/Engineering/CAD Labs  
  *(from Recommendation 7.12 of EMP)*

**FUTURE SPACE DEFICIT: 85,000 GSF**
LESSONS LEARNED

Concurrent facilities and educational plans
• Best strategy for gaining consensus and providing the administration with data driven decisions

Integration between the Educational and Facilities Master Plan Consultants
• Unique team collaboration opportunities and non-competing comprehensive results
LESSONS LEARNED

Initiate more provocative ideas in the master planning process as they elevate the educational plan
• Push the boundaries of the established academic and physical infrastructures

Structure an effective leadership team comprised of administration, operations, and faculty members
• The leadership team must understand the needs, expectations, and timelines to be successful
• Identify the needs in the RFP – Establish clear guidelines for the college and the consultant(s) teams

Measure the planning outcomes every five years to continuously align educational and operational plans into the overall strategic plan
EARLY SUCCESSES

Following the presentation to the Governing Board, PCC has already celebrated a number of early successes:

**Educational Master Plan Priorities and Timelines**
- Established by Executive Leadership Team
- Guided the decisions and recommendations of the Facilities Master Plan

**Dental Laboratory Technology – Dental Hygiene Clinic**
- Example of Center of Excellence model

**Center of Excellence Summits**
- Included input from Industry/Business Partners, Faculty, Staff and Students
- Programming Services

**District Master Plan Forums**
- Received district-wide feedback on Educational and Facilities Master Plan recommendations
- Published responses

10-year Master Plan adopted by Governing Board
$65M Revenue Bond
$20M Governor’s Budget
EARLY SUCCESSES

Educational Master Plan Implementation
• Actively engaging with partners to match education and training with jobs incorporating current labor market information
• Working with industry subject matter experts to help develop in-depth competency-based curricula and credentials
• Building local, regional, and national partnerships
• Program Review (3-yr cycle)
• Block Scheduling/Consistent Start Times
• Guided Pathways
• PimaOnline Expansion

Facilities Master Plan Implementation
• Real Estate acquisitions – expanding Downtown Campus footprint
• Center of Excellence - Applied Technology
  • Programming Services
  • Design
• Center of Excellence – Allied Health
  • Programming Services
• Center of Excellence – Public Safety
• Center of Excellence – Information Technology
• Partnerships with K-12 School Districts and State Universities/Colleges
KNOWLEDGE SHARING

Partner with your neighbors in groups of 3.

Discuss:
The primary challenges and opportunities your institution has faced in the past or may face in the future as you work to promote an integrated planning model. (5 Minutes)

Report Out:
Share key insights.
PAULIEN & ASSOCIATES HAS MERGED WITH SMITHGROUP!

PAULIEN & ASSOCIATES + SMITHGROUP
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