Integrated Design Initiative – Phase II
Integrated Design Task Force
# TASK FORCE MEMBERS

**Advisory Task Force Chair**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>JoAnn Browning</td>
<td>Dean, College of Engineering; Interim Dean, College of Architecture, Construction &amp; Planning; Professor, Civil Engineering</td>
</tr>
</tbody>
</table>

**Advisory Task Force**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taylor Adkins</td>
<td>Executive Director of Development, College of Engineering</td>
</tr>
<tr>
<td>Ibukun Awolusi</td>
<td>Assistant Professor, Construction Science</td>
</tr>
<tr>
<td>Saadet Beeson</td>
<td>Associate Professor, Architecture</td>
</tr>
<tr>
<td>Janis Bush</td>
<td>Associate Dean for Graduate Studies, College of Sciences; Professor and Chair, Environmental Science &amp; Ecology</td>
</tr>
<tr>
<td>Ian Caine</td>
<td>Associate Professor, Architecture; Director, Center for Urban and Regional Planning Research; College of Architecture, Construction &amp; Planning Faculty Senator</td>
</tr>
<tr>
<td>Krystel Castillo</td>
<td>Associate Professor, Mechanical Engineering; Director, Texas Sustainable Energy Research Institute</td>
</tr>
<tr>
<td>Debaditya Chakraborty</td>
<td>Assistant Professor, Construction Science</td>
</tr>
<tr>
<td>Sedef Doganer</td>
<td>Associate Dean for Design, Inclusion, and Engaged Scholarship, College of Architecture, Construction &amp; Planning; Chair, Architecture</td>
</tr>
<tr>
<td>Bill Dupont</td>
<td>Professor, Architecture; Director, Center for Cultural Sustainability</td>
</tr>
<tr>
<td>Roger Enriquez</td>
<td>Associate Professor, Criminal Justice and Criminology; Director, Center for Policy Studies; Executive Director, Westside Community Partnership; Representing Faculty Senate</td>
</tr>
<tr>
<td>Curtis Fish</td>
<td>Interim Program Co-Cordinator, Interior Design Lecturer, Architecture</td>
</tr>
<tr>
<td>Marcio Giacomoni</td>
<td>Associate Professor, Civil and Environmental Engineering</td>
</tr>
<tr>
<td>Bailey Greene</td>
<td>Student, College of Engineering, Representing Student Government Association</td>
</tr>
<tr>
<td>Albert Han</td>
<td>Assistant Professor, Urban and Regional Planning</td>
</tr>
<tr>
<td>Sean Kelly</td>
<td>Dean, Honors College; Interim Dean, College of Liberal and Fine Arts; Professor, Philosophy</td>
</tr>
<tr>
<td>TASK FORCE MEMBERS</td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td>Dhireesha Kudithipudi</td>
<td>Professor and Endowed Chair, Electrical and Computer Engineering; Director, AI Consortium</td>
</tr>
<tr>
<td>Elvira Leal</td>
<td>Asst. Vice President, Strategic Initiatives, Community Relations</td>
</tr>
<tr>
<td>Mark Leung</td>
<td>Chair and Associate Professor, Management Science &amp; Statistics</td>
</tr>
<tr>
<td>Arturo Montoya</td>
<td>Associate Professor, Civil and Environmental Engineering</td>
</tr>
<tr>
<td>John Murphy</td>
<td>Associate Vice Provost for Global Initiatives; Exec. Director, International Study Center Urbino; Interim Chair and Professor, Construction Science; Former Dean, College of Architecture, Construction &amp; Planning</td>
</tr>
<tr>
<td>Jianwei Niu</td>
<td>Associate Dean, University College; Professor, Computer Science; Interim Director, School of Data Science</td>
</tr>
<tr>
<td>Neda Norouzi</td>
<td>Assistant Professor, Architecture</td>
</tr>
<tr>
<td>Nathan Richardson</td>
<td>Chair, Modern Languages and Literatures; Representing Department Chairs Council</td>
</tr>
<tr>
<td>Humberto Saenz</td>
<td>Assistant Professor, Art &amp; Art History</td>
</tr>
<tr>
<td>Fidel Santamaria</td>
<td>Professor, Biology</td>
</tr>
<tr>
<td>Can Saygin</td>
<td>Senior Associate Vice President for Research; Professor, Mechanical Engineering</td>
</tr>
<tr>
<td>Hatim Sharif</td>
<td>Professor, Civil and Environmental Engineering</td>
</tr>
<tr>
<td>Corey Sparks</td>
<td>Associate Professor, Demography</td>
</tr>
<tr>
<td>Rebecca Weston</td>
<td>Associate Dean, Graduate School; Associate Professor, Psychology</td>
</tr>
<tr>
<td>Steve Wilkerson</td>
<td>Associate Vice Provost and Chief Analytic Officer, Institutional Research</td>
</tr>
</tbody>
</table>
BACKGROUND

- The Integrated Design Initiative Task Force has concluded the second phase of its process. The following seven notional organizational models were developed in Phase II by three “design subcommittees” of the Task Force, based on Phase I findings. Comments following each model were developed by the subcommittee that submitted the model, with additional input from the full Task Force.

- In reviewing these models, please focus on the college structures rather than potential names, which will be discussed in the final phase of the initiative (Phase III).

- Provost Kimberly Andrews Espy and Dean JoAnn Browning will now seek input on the models in meetings and forums. Questions or input on the Initiative can be sent to IntegratedDesign@utsa.edu.

- [https://www.utsa.edu/strategicplan/initiatives/academic/integrated-design/index.html](https://www.utsa.edu/strategicplan/initiatives/academic/integrated-design/index.html)
DESIGN A
Model A Description

• Model A maintains the existing Departmental structure for all Engineering disciplines, adding the Department of Construction Science.

• Model A then consolidates the remaining CACP programs into The School of Architecture, Planning, and Preservation (SAPP). The SAPP is led by an endowed Director, who becomes the public face of the School and reports directly to the Dean. The SAPP Director sits alongside the Associate Deans within the College structure. The SAPP replaces the departmental structure with 4 programs: Architecture, Historic Preservation, Interior Design, and Urban and Regional Planning. Each of the programs is administered by a Director, who reports to the SAPP Director.

• Model A adds an Interdisciplinary Research Council, which functions as a platform to enhance interdisciplinary collaboration within the new College.

• Model A creates a Design and Planning Praxis Institute, modeled after Penn Praxis at the University of Pennsylvania.
Model A Details

• This model provides minimal disruption to the program structure of both Colleges.

• This model assumes that the College Dean will come from one of the Engineering disciplines. The administrative structure of Engineering disciplines will remain largely unchanged.

• This model assumes that the SAPP Director will come from one of the school disciplines (e.g., architecture, preservation, interior design, urban planning). The SAPP must be supported with an endowed position and merits a high-profile, international search. The successful SAPP Director will add an intellectual leader to the School, bring an extensive international network, and be responsible for maintaining a strong relationship in local professional communities.

• The SAPP Director will be assisted by Program Directors in Architecture, Historic Preservation, Interior Design, and Urban and Regional Planning. Although UTSA does not offer Degrees in Historic Preservation, San Antonio's rich history coupled with UTSA's faculty resources suggest the potential to do so in the future.

• The Interdisciplinary Research Council will consist of Directors from the existing Centers and Institutes. The Council will report to the Associate Dean of Research, and Associate Dean of Design, Inclusion, and Engaged Scholarship.

• The Design and Planning Praxis Institute, modeled after Penn Praxis at the University of Pennsylvania, will address societal needs related to the built environment, while capitalizing on opportunities for research and community outreach with external industry and professionals.
DESIGN B
Model B Description

- Model B creates a **College of the Built Environment** with two schools: **The School of Engineering** and **The School of Architecture, Planning, and Preservation**. Each School has a Director who reports to the Dean. Chairs and Program Directors in the Schools report to their respective School Directors. One of the School Directors can also serve as Dean, depending on disciplinary alignment and available budget.

- Each of the Schools is led by an endowed Director, who becomes the public face of the School and sits alongside the Associate Deans within the College structure.

- Model B locates the Department of Construction Science in the School of Engineering.

- Model B adds an Interdisciplinary Research Council, which functions as a platform to enhance interdisciplinary collaboration within the new College.

- Model B creates a Design and Planning Praxis Institute, modeled after Penn Praxis at the University of Pennsylvania.
Model B Diagram

College of the Built Environment
Dean

School Director
School of Engineering

Department Chair
Biomedical & Chemical
1C, 2 B.S., 2 M.S., 1 Ph.D.

Department Chair
Mechanical
2 C, 1 B.S., 2 M.S., 1 Ph.D.

Department Chair
Civil & Environmental
1C, 1 B.S., 2 M.S., 2 Ph.D.

School Director
School of Architecture, Planning & Preservation

Department Chair
Architecture
B.S., 1 MArch, 1 M.S., 1 joint M.S.

Program Director
Interior Design
B.S.

Program Director
Urban & Regional Planning
1 C, 1 M.S., 1 joint M.S.

Potential Program
Historic Preservation
1 B.S., 1 M.S., 1 joint M.S.

College of X Interdisciplinary Research Council
Institute for Innovation and Technology Entrepreneurship, Institute for Excellence in Engineering Education, Institute for Open Cloud, Institute for Texas Sustainable Energy Research, Center for Advanced Manufacturing + Lean Systems, Institute for Simulation, Visualization, and Real-time Prediction, Institute for Urban Science Center for Urban and Regional Planning Research, Center for Cultural Sustainability, Center for Product Design, Center for Civic Engagement, Center for High Performance Building Design

Design and Planning Praxis
Externally focused leadership and innovation engaged on societal needs, integrating all elements of research and education.
Model B Details

• Model B assumes that each of the School Directors will be supported with an endowed position. The Directors will provide intellectual leadership for the respective Schools, maintain an extensive international network, and be responsible for maintaining a strong relationship with local professional communities.

• Model B maintains the Departmental structure of the College. Within the SAPP, the Chair of Architecture and Program Directors in Interior Design and Urban and Regional Planning will report to the Director. In the future, each of the Programs can grow into Departments.

• Although UTSA does not offer Degrees in Historic Preservation, San Antonio's rich history coupled with UTSA's faculty resources suggest the potential to do so in the future.

• The Interdisciplinary Research Council will consist of Directors from the existing Centers and Institutes. The Council will report to the Associate Dean of Research, Associate Dean of Design, Inclusion, and Engaged Scholarship.

• The Design and Planning Praxis Institute, modeled after Penn Praxis at the University of Pennsylvania, will address societal needs related to the built environment, while capitalizing on opportunities for research and community outreach with external industry and professionals.
DESIGN C
Model C Description

- Model C creates a College for Sustainable Environments which concentrates the University’s intellectual resources on the Grand Challenge of Environmental Sustainability.

- The College maintains separate schools for the engineering and design disciplines, but establishes a series of transdisciplinary topics, representing the shared interests of faculty and providing a framework for Transdisciplinary Research and Experiential Learning. The transdisciplinary culture manifests itself in Undergraduate Research Experiences, Graduate Certificates, Massive Online Open Courses, Lecture Series, Research Centers, and Research Institutes. Each of these platforms acts as a cross-pollinator, seeding the conversation about the Grand Challenge of Environmental Sustainability.

- College of the Built Environment has two schools: The School of Engineering and The School of Architecture, Planning, and Preservation. Each School has an endowed Director who reports to the Dean. Chairs and Program Directors in the Schools report to their respective School Directors. One of the School Directors can also serve as Dean, depending on disciplinary alignment and available budget. The School Directors will be seated equally alongside the Associate Deans.

- Model C locates the Department of Construction Science in the School of Engineering.

- Model C adds four Research Centers and Institutes: Urban Science Institute, Center for High-Performance Building Design, Center of Digital Fabrication and Assembly, Center for Product Design.
Model C Diagram

COLLEGE FOR SUSTAINABLE ENVIRONMENTS
ECONOMIC  ENVIRONMENTAL  SOCIAL

DEAN
DIRECTOR, SOE  AD, UNDERGRADUATE  AD, RESEARCH  AD, COMM. ENGAGEMENT  AD, GRADUATE  DIRECTOR, SAPP

TRANS DISCIPLINARY RESEARCH + LEARNING TO SOLVE GRAND CHALLENGE
INSTITUTES  CENTERS  RESEARCH EXPERIENCES
GRAD CERTIFICATES  MINORS  LECTURE SERIES

SCHOOL OF ENGINEERING
CHAIR, BIOMEDICAL AND CHEMICAL
CHAIR, CIVIL & ENVIRONMENTAL
CHAIR, CONSTRUCTION SCIENCE
CHAIR, ELECTRICAL & COMPUTER
CHAIR, MECHANICAL

SCHOOL OF ARCHITECTURE, PLANNING & PRESERVATION
CHAIR, ARCHITECTURE
COORDINATOR, HISTORIC PRESERVATION
COORDINATOR, INTERIOR DESIGN
COORDINATOR, URBAN AND REGIONAL PLANNING

SUSTAINABLE

MATERIALS
MULTI-MATERIALS
ADVANCED MATERIALS
INTEGRATED BIOMEDICINE

PRODUCTS
FURNITURE DESIGN
INDUSTRIAL DESIGN
LIGHTING DESIGN

BUILDINGS
BUILDING PERFORMANCE
CONSTRUCTION SCIENCE
HISTORIC PRESERVATION

INFRASTRUCTURES
TRANSPORTATION
WATER
ENERGY

PROCESSES
CLIMATE, ENERGY, COMPUTING, ANALYTICS
CLEAN PRODUCTION

CITIES
URBAN SCIENCE
URBAN DESIGN
URBAN & REGIONAL PLANNING
Model C Details

- Model C addresses the Grand Challenge of Environmental Sustainability. This is a Big idea can attract significant capital support.

- Model C offers The School of Architecture, Planning, and Preservation and the School of Engineering significant opportunity for individual branding, identity, and fundraising.

- The College offers Transdisciplinary Graduate Certificates and Undergraduate Research Opportunities, drawing students from across UTSA and deepening student connections to Research Centers, Institutes.

- Freshman from all disciplines take a MOOC called Critical Discussions in Sustainability, which provide different UTSA faculty members an opportunity to address contemporary issues related to sustainability. UTSA markets the MOOC internationally, creating large-scale exposure for new College.

- Model C assumes that each of the School Directors will be supported with an endowed position. The Directors will provide intellectual leadership for the Schools, maintain an extensive international network and high profile in local professional communities.

- Model C maintains the Departmental structure of the College. Within the SAPP, the Chair of Architecture and Program Directors in Interior Design and Urban and Regional Planning will report to the Director. In the future, each of the Programs can grow into a Department.

- Although UTSA does not offer Degrees in Historic Preservation, San Antonio's rich history couple with UTSA's faculty resources suggest the potential to add HP Degrees in the future.
DESIGN D
College Structure – Model D

• We are proposing four departments and one school.
• The chairs of four engineering departments and a chair of a School of Design will report to the dean.
• There will be four associate deans reporting to the dean.
• There will be a director of centers who will report to the associate dean for research.
Model D

Dean
College of X

Sr Admin Dean
Assoc Dean for Research
Assoc Dean for Undergraduate
Associate Dean of Design, Inclusion and Engaged Scholarship

Dept. of Biomedical and Chemical Engineering
Chair and Support Staff

Dept. of Electrical, Computer, and AI Engineering
Chair and Support Staff

Dept. of Mechanical and Manufacturing Engineering
Chair and Support Staff

Dept. of Civil, Environmental, and Construction Chair and Support Staff

School of Design Chair and Support Staff

Degree Programs
Grad Cert MDCE
BS Biomed Engineering (232)
BS in Chemical Engineering (110)
MS Biomed Engineering (22)
MS Biomed Tech Commercial (new, 6 in 2020)
PhD Biomed Engineering (32)
1,548: 116, 163, 71

Degree Programs
Cert in AI
Cert in Data Center Design
Grad. Cert in Cloud Computing
BS in Computer Eng. (307)
BS in Electrical Eng. (414)
MS in Electrical Eng. (59)
MS in Computer Eng. (24)
MS in Advanced Materials Eng. (16)
PhD in Electrical Eng. (132)
ME AI
6,376, 465, 527, 142

Degree Programs
Cert. in Aerospace Engineering
Cert. in Ind. and Manuf. Engineering
Cert. in Oil/Gas
BS Mechanical Engineering (1,047)
MS in Adv. Manufact. and Enter. Eng. (139)
MS of Science in Mechanical Eng. (42)
PhD in Mechanical Eng. (47)
6,590; 457.1; 28.3; 16.2

Degree Programs
BS in Civil Engineering (510)
BS in Construction Science (269)
MS in Civil Engineering (42)
PhD in Civil Engineering (27)
MS in Env. Sust. and Engineering (10)
BS in Environmental Engineering
MS Facilities Management?
MS in Sustainable Engineering and Built Environment?
Cert. in Construction
3,384; 240; 20; 12.1

Degree Programs
BS in Architecture (399)
BS in Interior Design (126)
Cert in Historic Preservation
Cert in High Performance Design
MArch 2 (96)
MArch 3
MS in Architecture (4)
Masters of Healthcare Design
MS in Urban and Regional Planning (15)
BS Sustainable Design
Arch
5,611; 399; 36; 10.7

Number at bottom of departments:
SCH
Student FTE
Faculty FTE
Student:Faculty Ratio

Director of Centers: Center for Interdisciplinary research
We Recommend for Model D:

- The Department of Construction Science be moved under the Department of Civil, Environmental, and Construction.
- Renaming Department of Electrical and Computer Engineering to Electrical, Computer, and AI Engineering.
- The current Department of Architecture function as a department, but be named a School, to help with identity and recognition.
- A Director of Centers for all research and outreach centers to:
  - Provide technical leadership
  - Foster collaboration among faculty members
  - Create synergy
  - Create partnerships (internal and external)
College Structure – Model E

• We are proposing three departments and one school.
• The chairs of three engineering departments and a director of a School of Architecture, Design, and Planning will report to the dean.
• There will be four associate deans reporting to the dean.
• There will be a director of interdisciplinary research centers who will report to the associate dean for research.
• There will be a director of community engagement and service who will report to the associate dean for design, inclusion, and engaged scholarship.
We Recommend for Model E:

• Consolidating the Departments of Mechanical Engineering, Civil Engineering, and Construction Science.

• Renaming Department of Electrical and Computer Engineering to Electrical, Computer, and AI Engineering.

• Renaming the Department of Biomedical and Chemical Engineering to Department of Environmental, Biomedical, and Chemical Engineering.
  • The PhD in Environmental Engineering will be housed in this department.

• The current Department of Architecture function as a department, but be named a School, to help with identity and recognition.
We Recommend for Model E:

• A Director of Research Centers for all research centers to:
  • Provide technical leadership
  • Foster collaboration among faculty members
  • Create synergy

• A Director of Community Engagement and Service to oversee college’s outreach mission
  • Create partnerships with industry and local governments
  • Build K–12 relationships
  • Promote Service learning and engaged scholarship
The college is a horizontal organizational structure that allows programs to cluster into schools.

There are three schools: School of Design & Architecture, School of Construction & Civil Engineering and School of Engineering.

- Each School has a Director that reports to the Dean.
- Each program has a program coordinator that reports to the Director.
- Each Department has a chair that reports to the Director.

School of Design and Arch: Arch, Interior Design, Planning

School of Construction & Civil: construction, civil engineering, environmental engineering

School of “Y” Engineering:

- Dept BME & CME
- Dept ME
- Dept ECE
Model F: "Orbital" model

- Three orbits: Center, Intermediate, Perimeter
- Horizontal structure retains individual identity with curricular themes while encouraging interdisciplinary collaboration between programs by breaking down silos between domains.
- Schools facilitate the creation of new programs & certificates.
- Trans-orbital pathways establish navigation routes for faculty and students belonging to the perimeter domains to find research collaborations through the intermediary orbit.
- Faculty will identify opportunities to engage in disciplines outside their traditional appointment domains by finding linkages to grand challenges through the intermediary orbit.
- The nucleus contains the associate deans, student success, administrative excellence (business services and HR), and faculty mentors providing leadership and direction for the rest of the system.
Model G
Matrix

This model addresses grand challenges with institutes that will be developed around the grand challenges and connect in an interdisciplinary way to the departments and schools.

Large engineering programs are maintained as they currently exist.

Schools cluster synergistic programs in a way that equalizes the size and resources for students and faculty in those programs.

Schools facilitate the creation of new programming within that synergistic body.
Model G
Org chart

The college contains two schools: the School of Civil and Environmental Engineering and Construction and the School of Design, Architecture, and Planning.

The two school directors as well as the chairs of the departments of Biomedical and Chemical Engineering, Electrical and Computer Engineering, and Mechanical Engineering report to the Dean.

Program coordinators in the schools report to the school directors.