

# TRANSBORDER BUILDING DESIGN AND TECHNOLOGY, B.S.

The Bachelor of Science in Transborder Building Design and Technology focuses on meeting regional workforce needs through the study of the unique transborder region between Southern California and Baja California Norte. The program is designed to provide students with foundational knowledge of building materials, construction methods, sustainable design practices, and innovative technologies specific to the area. The curriculum prepares students with creative problem-solving and critical thinking skills, working knowledge of construction documentation, and technical skills necessary to successfully enter a graduate program or begin a career in architecture, construction, environmental design, or engineering.

## Program Student Learning Outcomes

- Demonstrate competence in technical skills and knowledge of regional professional practices to accurately document design concepts and construction methods through the use of industry-standard software and equipment.
- Enrich their transborder regional perspective through direct involvement in group discussions, participating in design projects, assessing historical design solutions, and understanding social, cultural, and political factors that are international in scope, including issues of sustainability and environmental sensitivity.
- Develop a greater sense of self-awareness and interpersonal skills by participating in design critiques, receiving and responding to design criticism, reflecting on the feedback provided, and revising project deliverables as deemed necessary.
- Acquire technical writing skills necessary to produce architectural contracts and specifications, and understand building codes.
- Further enhance critical communication skills by orally, graphically, and physically presenting their design processes and solutions to architectural and urban planning problems to faculty, industry professionals, and peers.
- Refine critical thinking skills in a problem/project-based curriculum that requires solving transborder design problems by developing innovative solutions through research, graphic representation, and model-making skills used in the profession.

Code	Title	Units
<b>First Year - Lower Division</b>		
<i>First Semester</i>		
ENGL 115	COLLEGE COMPOSITION: READING AND WRITING ANALYTICALLY	4
COMM 104	PUBLIC SPEAKING	3
MATH 101	COLLEGE ALGEBRA	3
ARCH 101	INTRODUCTION TO ARCHITECTURE AND ENVIRONMENTAL DESIGN	1
ARCH 208	WORLD ARCHITECTURE I	3
<i>Second Semester</i>		
ENGL 116	CRITICAL THINKING AND ARGUMENT	4
MATH 104	TRIGONOMETRY	3

ARCH 115	GRAPHIC COMMUNICATION FOR ARCHITECTS AND DESIGNERS	3
ARCH 210	WORLD ARCHITECTURE II	3
Any <b>AREA 3A: Arts Course</b>		3

### Second Year - Lower Division

#### *First Semester*

ARCH 110	FREEHAND DRAWING FOR DESIGNERS	2
ARCH 150	ARCHITECTURAL DESIGN I	5
MAS/HIST 141	MEXICAN-AMERICAN HISTORY I	3
PHYS 125	GENERAL PHYSICS *	5

\* PHYS 125 is not available at SWC. However, you can take this course by enrolling at the San Diego Community College District (Mesa, Miramar, or City). For more information, please contact Professor Diana Arredondo (darredondo@swccd.edu)

#### *Second Semester*

ARCH 112	ARCHITECTURAL RENDERING	3
ARCH 151	ARCHITECTURAL DESIGN II	3
ARCH 165	ARCHITECTURAL PRACTICE I	3
MAS/HIST 142	MEXICAN-AMERICAN HISTORY II	3
Any <b>AREA 6: Languages Other Than English</b> course		5

### Third Year - Upper Division

*Notes: Apply for transfer (Fall of third year/November) . Begin seeking internships (Spring of third year/March-April).*

#### *First Semester*

ARCH 200	INTRODUCTION TO COMPUTER AIDED DESIGN	3
ARCH 252	ARCHITECTURAL DESIGN III	3
ARCH 265	ARCHITECTURAL PRACTICE II	3
ARCH 120	PORTFOLIO DEVELOPMENT FOR ARCHITECTS AND DESIGNERS	1
BIOL 140	ENVIRONMENTAL BIOLOGY	3
Any <b>AREA 4: Social and Behavioral Sciences</b> course: other than HIST/MAS 141 or 142		3

#### *Second Semester*

ARCH 201	BEGINNING BUILDING INFORMATION MODELING	3
ARCH 222	ENVIRONMENTAL CONTROLS	2
ARCH 235	STRUCTURES	3
ARCH 253	ARCHITECTURAL DESIGN IV	3
ARCH 266	ARCHITECTURAL PRACTICE III	2

#### *Summer Semester*

ARCH 301	ADVANCED BUILDING INFORMATION MODELING	3
ARCH 310	CONSTRUCTION DOCUMENTS PRODUCTION	3

### Fourth Year - Upper Division

#### *First Semester*

COMM 304	ADVANCED PUBLIC SPEAKING	3
ARCH 365	REGIONAL BUILDING MATERIALS AND METHODS	3
ARCH 350	TRANSBORDER ARCHITECTURAL DESIGN I	3

ARCH 322	SUSTAINABLE DESIGN AND CONSTRUCTION	3
LDR 300	SPECIAL TOPICS IN URBANISM AND PLANNING	3
ARCH 390	INTERNSHIP I *	2
• Firms that work in different countries or work with border areas		
<i>Winter Intersession</i>		
ENGL 301	TECHNICAL WRITING (CONTRACT WRITING, SPECIFICATIONS, BUILDING CODES)	3
<i>Second Semester</i>		
ARCH 312	THE ARCHITECTURAL EXPERIENCE AND URBAN THEORY	3
ARCH 340	REGIONAL BUILDING SITE PREPARATION AND MANAGEMENT	3
ARCH 351	TRANSBORDER ARCHITECTURAL DESIGN II	3
ARCH 335	BUILDING SYSTEMS INTEGRATION	3
ARCH 391	INTERNSHIP II *	2
• Work in Mexico Option or another border region		
<b>Total Units</b>		<b>131</b>