









Architectural/Interior Design Occupations

Baccalaureate Labor Market Analysis

September 2023

SUMMARY

BDP PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED EDUCATION FOR MAJORITY OF OCCUPATIONS ANALYZED
 Proceed with Caution	 	 	<input type="checkbox"/> Doctorate Degree <input type="checkbox"/> Master's Degree <input checked="" type="checkbox"/> Bachelor's Degree <input checked="" type="checkbox"/> Associate Degree <input type="checkbox"/> Some College or Certificate <input type="checkbox"/> HS Diploma or Equivalent <input type="checkbox"/> Less than a HS Diploma <input type="checkbox"/> Apprenticeship
DOES A SIMILAR PROGRAM EXIST AT A UC OR CSU?	EXISTING ASSOCIATE DEGREE PROGRAM IN REGION?	NUMBER OF ANNUAL JOB OPENINGS	
YES, a UC or CSU currently offers a similar program	 	<div style="background-color: #4a7c9c; color: white; padding: 2px; display: inline-block;">HIGH</div> 	

The San Diego & Imperial Center of Excellence (COE) developed this brief to determine if an unmet workforce need exists for a baccalaureate degree program (BDP) for [Architectural/Interior Design Occupations](#). According to Assembly Bill No. 927, community college districts seeking approval for a BDP must 1) not offer “program curricula already offered by the California State University or the University of California” systems, 2) “continue to offer an associate degree program in the same academic subject”¹ of the proposed BDP, and 3) “provide evidence of unmet workforce needs.”²

This brief recommends that the San Diego & Imperial Counties Community Colleges to proceed with caution in developing a BDP for [Architectural/Interior Design Occupations](#) because similar programs exist in the UC or CSU systems although entry-level and median wages are above the living wage and a supply gap exists for these occupations. The colleges should also note that half of the occupations analyzed in this brief require an associate degree and half require a bachelor’s degree.

¹ “The bill would require a community college district to continue to offer an associate degree program in the same academic subject for which a baccalaureate degree program has been approved, unless the community college district has received approval from the chancellor to eliminate the associate degree program, as specified.”

² “AB-927 Public postsecondary education: community colleges: statewide baccalaureate degree.” California Legislative Information. Accessed 09/05/2023. leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB927

Table of Contents

Introduction	2
BDP Proposal Requirements.....	4
Workforce Needs Assessment: Supply vs. Demand.....	8
Other LMI to Consider for Program Development.....	11
Appendix	14

INTRODUCTION

According to Assembly Bill No. 927, community college districts seeking approval to offer a baccalaureate degree program (BDP) must:³

1. Not offer a BDP or “program curricula already offered by the California State University or the University of California”
2. “Continue to offer an associate degree program in the same academic subject for which a baccalaureate degree program has been approved”
3. Identify and document unmet workforce needs “in the local community or region of the district”

To determine the need for a new BDP, this brief examines labor market information (LMI) for **Architectural/Interior Design Occupations** using the following Standard Occupational Classification (SOC)⁴ codes:

- **Architectural and Civil Drafters (SOC 17-3011):** Prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works. Use knowledge of building materials, engineering practices, and mathematics to complete drawings.
- **Architectural and Engineering Managers (SOC 11-9041):** Plan, direct, or coordinate activities in such fields as architecture and engineering or research and development in these fields.

³ “AB-927 Public postsecondary education: community colleges: statewide baccalaureate degree.” California Legislative Information. Accessed 09/05/2023. [leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB927](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB927)

⁴ The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. [bls.gov/soc/](https://www.bls.gov/soc/).

- **Interior Designers** (SOC 27-1025): Plan, design, and furnish the internal space of rooms or buildings. Design interior environments or create physical layouts that are practical, aesthetic, and conducive to the intended purposes. May specialize in a particular field, style, or phase of interior design.
- **Drafters, All Other** (SOC 17-3019) All drafters not listed separately.

According to available LMI, employers require a minimum educational attainment ranging from an associate degree to a bachelor’s degree for [Architectural/Interior Design Occupations](#). On average, the entry-level hourly earnings for [Architectural/Interior Design Occupations](#) are \$36.37, which is more than the \$18.43 per hour living wage for a single adult in San Diego County.⁵

SOC Title (SOC Code)	Entry-Level Hourly Earnings ⁶	Median Hourly Earnings	Typical Entry-Level Education
Architectural and Engineering Managers (11-9041)	\$67.79	\$82.21	Bachelor's degree
Architectural and Civil Drafters (17-3011)	\$27.19	\$30.45	Associate degree
Drafters, All Other (17-3019)	\$27.11	\$36.03	Associate degree
Interior Designers (27-1025)	\$23.38	\$31.21	Bachelor's degree

The following sections “assess the workforce value of [a] proposed baccalaureate degree program” for [Architectural/Interior Design Occupations](#) in accordance with AB-927.⁷

⁵ Lightcast. 2023.03; QCEW, Non-QCEW, Self-Employed.

⁶ 25th Percentile. Lightcast. 2023.03; QCEW, Non-QCEW, Self-Employed.

⁷ “AB-927 Public postsecondary education: community colleges: statewide baccalaureate degree.” California Legislative Information. Accessed 09/05/2023. leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB927

BDP PROPOSAL REQUIREMENTS

UC and CSU Programs

According to AB-927, community colleges must not offer a BDP or program curricula already offered by the CSU or UC systems. To determine if a BDP already exists for [Architectural/Interior Design Occupations](#), the COE examined CSU and UC programs in related Classification of Instructional Programs (CIP) codes.⁸

According to CIP data, the following institutions from the UC and CSU systems offer programs related to [Architectural/Interior Design Occupations](#) (Exhibit 1). Refer to the Appendix at the end of the brief for a list of program titles and award types associated with the related UC and CSU programs.

Exhibit 1: California UC and CSU Institutions with Related Programs by CIP Code (2021)⁹

CIP Code and Title

[04.0201 Architecture](#)

- California State Polytechnic University-Pomona
- California State University-Fresno
- University of California-Berkeley
- University of California-Los Angeles

[04.0202 Architectural Design](#)

- No CSU or UC

[04.0401 Environmental Design/Architecture](#)

- University of California-Berkeley
- University of California-Davis
- University of California-Irvine

[04.0402 Healthcare Environment Design/Architecture](#)

- No CSU or UC

[04.0501 Interior Architecture](#)

- California State Polytechnic University-Pomona
- California State University-Sacramento

[04.0601 Landscape Architecture](#)

- California State Polytechnic University-Pomona
- University of California-Berkeley
- University of California-Davis

[04.0901 Architectural Technology/Technician](#)

⁸ CIP data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data). The COE uses the national SOC-CIP crosswalk to determine which programs could potentially train for the occupation in question. nces.ed.gov/ipeds/cipcode/post3.aspx?y=56

⁹ Lightcast. Q3 2023 Data Set. Program Overview. Completions by Institutions. Completions data for 2019 and 2021 to account for programs not captured after decline in enrollment from the COVID-19 pandemic.

CIP Code and Title

- University of California-Berkeley

[04.0902 Architectural and Building Sciences/Technology](#)

- University of California-Berkeley
- University of California-Los Angeles

[15.0101 Architectural Engineering Technologies/Technicians](#)

- No CSU or UC

[15.1301 Drafting and Design Technology/Technician, General](#)

- No CSU or UC

[15.1302 CAD/CADD Drafting and/or Design Technology/Technician](#)

- No CSU or UC

[15.1303 Architectural Drafting and Architectural CAD/CADD](#)

- No CSU or UC

[15.1307 3-D Modeling and Design Technology/Technician](#)

- No CSU or UC

[19.0904 Textile Science](#)

- No CSU or UC

[50.0408 Interior Design](#)

- California State University-Fresno
 - California State University-Long Beach
 - California State University-Sacramento
-

Existing Associate Degree Program(s)

AB-927 also states that districts should “continue to offer an associate degree program in the same academic subject for which a baccalaureate degree program has been approved.” To determine if an associate degree program in the same subject area exists, the COE reviewed the [California Community Colleges Chancellor’s Office’s official TOP-CIP crosswalk](#) and found that there are six TOP codes and 15 CIP codes related to *Architectural/Interior Design Occupations* (Exhibit 2).

Exhibit 2: Chancellor’s Office TOP-CIP Crosswalk for Baccalaureate Degree Programs

TOP Code	TOP Title	CIP Code	CIP Title
	No Match	04.0201	Architecture
0201.00	Architecture and Architectural Technology	04.0202	Architectural Design
0201.00	Architecture and Architectural Technology	04.0401	Environmental Design/Architecture
	No Match	04.0402	Healthcare Environment Design/Architecture
	No Match	04.0501	Interior Architecture
0201.10	Landscape Architecture	04.0601	Landscape Architecture
0201.00	Architecture and Architectural Technology	04.0901	Architectural Technology/Technician
	No Match	04.0902	Architectural and Building Sciences/Technology
0201.00	Architecture and Architectural Technology	15.0101	Architectural Engineering Technologies/Technicians
0953.00	Drafting Technology	15.1301	Drafting and Design Technology/Technician, General
0953.00	Drafting Technology	15.1302	CAD/CADD Drafting and/or Design Technology/Technician
0953.10	Architectural Drafting	15.1303	Architectural Drafting and Architectural CAD/CADD
0956.00	Manufacturing and Industrial Technology	15.1307	3-D Modeling and Design Technology/Technician
	No Match	19.0904	Textile Science
1302.00	Interior Design and Merchandising	50.0408	Interior Design

According to the [Chancellor's Office Curriculum Inventory \(COCI\)](#), the following community colleges in San Diego County have programs in these CIP codes (Exhibit 3).¹⁰

Exhibit 3: San Diego Community Colleges with Associate Degree Programs in Related CIP Codes

CIP Code	CIP Title	Community College(s) with Existing Program in CIP Code
04.0201	Architecture	<ul style="list-style-type: none"> • None
04.0202	Architectural Design	<ul style="list-style-type: none"> • MiraCosta • Palomar • San Diego Mesa • Southwestern
04.0401	Environmental Design/Architecture	<ul style="list-style-type: none"> • MiraCosta • Palomar • San Diego Mesa • Southwestern
04.0402	Healthcare Environment Design/Architecture	<ul style="list-style-type: none"> • None
04.0501	Interior Architecture	<ul style="list-style-type: none"> • None
04.0601	Landscape Architecture	<ul style="list-style-type: none"> • MiraCosta • San Diego Mesa
04.0901	Architectural Technology/Technician	<ul style="list-style-type: none"> • MiraCosta • Palomar • San Diego Mesa • Southwestern
04.0902	Architectural and Building Sciences/Technology	<ul style="list-style-type: none"> • None
15.0101	Architectural Engineering Technologies/Technicians	<ul style="list-style-type: none"> • MiraCosta • Palomar • San Diego Mesa • Southwestern
15.1301	Drafting and Design Technology/Technician, General	<ul style="list-style-type: none"> • MiraCosta • Palomar • Southwestern
15.1302	CAD/CADD Drafting and/or Design Technology/Technician	<ul style="list-style-type: none"> • MiraCosta • Palomar • Southwestern
15.1303	Architectural Drafting and Architectural CAD/CADD	<ul style="list-style-type: none"> • Cuyamaca • Palomar
15.1307	3-D Modeling and Design Technology/Technician	<ul style="list-style-type: none"> • Palomar • San Diego City
19.0904	Textile Science	<ul style="list-style-type: none"> • None
50.0408	Interior Design	<ul style="list-style-type: none"> • Palomar • San Diego Mesa

¹⁰ "Programs. California Community Colleges Curriculum Inventory (COCI)." Accessed 09/05/2023. coci2.ccctechcenter.org/programs

WORKFORCE NEEDS ASSESSMENT: SUPPLY VS. DEMAND

According to AB-927, community colleges must identify and document unmet workforce needs “in the local community or region of the district.” To assess the regional workforce need for [Architectural/Interior Design Occupations](#), this section compares educational supply with labor market demand.

Educational Supply

Baccalaureate educational supply for an occupation can be estimated by analyzing the number of completions¹¹ in related CIP codes. According to CIP data, the following institutions supply [San Diego County](#) with awards for [Architectural/Interior Design Occupations](#) (Exhibit 4). With this, the estimated supply for San Diego County is 103 completions.

Exhibit 4: Number of Completions by Postsecondary Institutions (San Diego County, 2021)

CIP Code	CIP Title	Completions (2021)
04.0902	Architectural and Building Sciences/Technology	
	• Newschool of Architecture and Design	66
50.0408	Interior Design	
	• Design Institute of San Diego	18
	• Newschool of Architecture and Design	19
Total		103

¹¹ Completion numbers include bachelor's degree programs or higher.

In California, the estimated supply for Architectural/Interior Design Occupations is 1,888 completions (Exhibit 5).

Exhibit 5: Number of Completions by Postsecondary Institutions (California, 2021)

CIP Code	CIP Title	Completions (2021)
04.0201	Architecture	335
04.0401	Environmental Design/Architecture	49
04.0501	Interior Architecture	77
04.0601	Landscape Architecture	154
04.0901	Architectural Technology/Technician	0
04.0902	Architectural and Building Sciences/Technology	822
15.1301	Drafting and Design Technology/Technician, General	142
15.1302	CAD/CADD Drafting and/or Design Technology/Technician	49
15.1303	Architectural Drafting and Architectural CAD/CADD	43
50.0408	Interior Design	217
Total		1,888

Labor Market Demand

Between 2022 and 2027, employers in San Diego County will need to hire 650 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement for Architectural/Interior Design Occupations (Exhibit 6).

Exhibit 6: Labor Demand (Annual Job Openings) for Architectural/Interior Design Occupations

SOC Code	Occupational Title	Average Annual Job Openings (2022-2027)	
		San Diego County	California
11-9041	Architectural and Engineering Managers	338	2,883
17-3011	Architectural and Civil Drafters	152	1,570
27-1025	Interior Designers	136	277
17-3019	Drafters, All Other	24	1,444
		650	6,174

Demand vs. Supply

Comparing labor market demand (annual job openings) with educational supply (bachelor's degree completions) suggests that there is a **supply gap** for **Architectural/Interior Design Occupations** in San Diego County, with **650** annual openings and **103** awards. Comparatively, there are **6,174** annual openings in California and **1,888** awards, suggesting that there is also a **supply gap** across the state ¹² (Exhibit 7).

Exhibit 7: Labor Demand (Job Openings) vs. Educational Supply (Completions)¹³

	Demand (Job Openings)	Supply (Completions)	Supply Gap or Oversupply
San Diego	650	103	547
California	6,174	1,888	4,286

¹² "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/our-resources

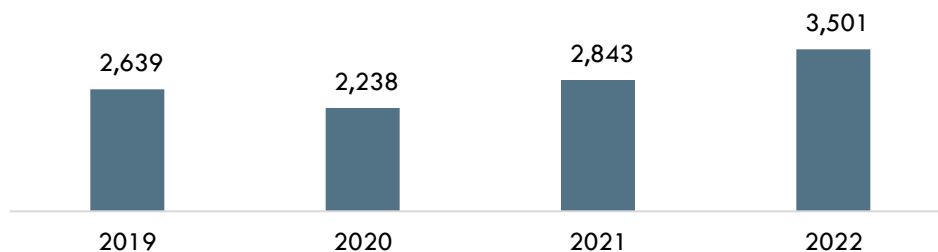
¹³ This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers; however, it should not be the only basis for determining whether or not a program should be developed.

OTHER LMI TO CONSIDER FOR PROGRAM DEVELOPMENT

Online Job Postings

This report analyzes not only historical and projected (traditional LMI) data, but also recent data from online job postings (real-time LMI). Online job postings may provide additional insight about recent changes in the labor market that are not captured by historical data. Between 2019 and 2022, there was an average of 2,805 online job postings per year for *Architectural/Interior Design Occupations* in San Diego County (Exhibit 8). Please note that online job postings do **not** equal labor market demand; demand is represented by annual job openings (see Exhibit 6). While this brief includes online jobs postings data to help with curriculum development, the community colleges should note that this type of data is impacted by several variables: employers may post a position multiple times to increase the pool of applicants; a job posting can remain posted after a business decides not to fill a position; or an employer may use one posting to fill multiple positions, for example.

Exhibit 8: Number of Online Job Postings for Architectural/Interior Design Occupations in San Diego County (2019-2022)¹⁴



¹⁴ Lightcast; "Job Posting Analytics." 2019-2022.

Top Employers

Between January 1, 2020 and December 31, 2022, the top five employers in San Diego County were General Atomics, Northrop Grumman, Apple, GPAC, and The Home Depot based on online job postings (Exhibit 9).

Exhibit 9: Top Employers for Architectural/Interior Design Occupations in San Diego County¹⁵

Top Employers	
<ul style="list-style-type: none"> • General Atomics • Northrop Grumman • Apple • GPAC • The Home Depot 	<ul style="list-style-type: none"> • CyberCoders • Qualcomm • NV5 • Marriott International • Illumina

Skills and Certifications

Exhibit 10 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2020 and December 31, 2022.

Exhibit 10: Top Skills for Architectural/Interior Design Occupations in San Diego County¹⁶

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> • Project Management • Computer-Aided Design • Engineering Management • New Product Development • Construction • Project Engineering • Computer Science • Agile Methodology • Automation • Electrical Engineering • Mechanical Engineering • Software Engineering • Marketing • Software Development • HVAC 	<ul style="list-style-type: none"> • Communications • Management • Leadership • Planning • Operations • Coordinating • Customer Service • Problem Solving • Presentations • Writing • Interpersonal Communications • Detail Oriented • Self-Motivation • Sales • Microsoft Office 	<ul style="list-style-type: none"> • AutoCAD • Microsoft Excel • Autodesk Revit • Microsoft PowerPoint • Python • Microsoft Outlook • SolidWorks • SketchUp • Amazon Web Services • Microsoft Project • Microsoft Word • Java • C++ • AutoCAD Civil 3D • Adobe Photoshop

¹⁵ Lightcast; "Job Posting Analytics," 2020-2022.

¹⁶ Lightcast; "Job Posting Analytics," 2020-2022.

Exhibit 11 lists the top certification that appeared in online job postings between January 1, 2020 and December 31, 2022.

Exhibit 11: Top Certification for Architectural/Interior Design Occupations in San Diego County¹⁷

Top Certification in Online Job Postings

1. Security Clearance
 2. Secret Clearance
 3. Project Management Professional Certification
 4. Master Of Business Administration (MBA)
 5. Professional Engineer (PE) License
 6. Top Secret-Sensitive Compartmented Information (TS/SCI Clearance)
 7. Top Secret Clearance
 8. LEED Accredited Professional (AP)
 9. Enterprise Desktop Administrator (Microsoft Certified IT Professional)
 10. Architecture License
 11. Engineer in Training
 12. National Council For Interior Design Qualification (NCIDQ)
 13. Certified Information Systems Security Professional
 14. First Aid Certification
 15. Standards Of Training Certification and Watchkeeping
-

¹⁷ Lightcast; "Job Posting Analytics." 2020-2022.

APPENDIX A

The following table lists the California UC and CSU Institutions with related programs, program title, website, and award type for Architectural and Interior Design as of September 2023.

Exhibit A: California UC and CSU Institutions with Related Programs, Program Title, Website and Award Type

Institution	Program Title	Award Type
California State Polytechnic University-Pomona	Bachelor of Architecture	Bachelor's Degree
	Master of Architecture	Master's Degree
	Master of Interior Architecture	Master's Degree
California State University-Fresno	Architectural Studies	Bachelor's Degree
California State University-Long Beach	Interior Design	Bachelor's Degree
California State University-Sacramento	Interior Design	Bachelor's Degree
University of California-Berkeley	Interior Design and Interior Architecture	Certificate
	Bachelor of Arts in Architecture	Bachelor's Degree
	Master of Architecture	Master's Degree
	Master of Science in Architecture	Master's Degree
	Ph.D. in Architecture	Doctoral Degree
University of California-Davis	Landscape Architecture	Bachelor's Degree
	Interior Architecture	Master's Degree
University of California-Irvine	Environmental Analysis & Design	Bachelor's Degree
University of California-Los Angeles	Bachelor of Arts in Architectural Studies	Bachelor's Degree
	MS in Architecture and Urban Design	Master's Degree
	Doctor of Philosophy in Architecture	Doctoral Degree

Prepared by:

Tina Ngo Bartel, Director (tngobartel@miracosta.edu)

John Edwards, Research Analyst (jedwards@miracosta.edu)

San Diego & Imperial Center of Excellence

Important Disclaimers

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the Regional Centers of Excellence (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.