COLLEGE OF THE CANYONS

# Substantive Change Proposal

Approval of the Bachelor of Arts in Sustainable Architecture –
New Baccalaureate Degree Program

**Submitted to:**

Accrediting Commission for Community and Junior Colleges
Western Association of Schools and Colleges

**Submitted by:**

Dr. Omar Torres, Assistant Superintendent/Vice President, Instruction
Accreditation Liaison Officer

Santa Clarita Community College District
College of the Canyons
26455 Rockwell Canyon Road
Santa Clarita, CA 91355

# Substantive Change Application Form

## New Baccalaureate Degree Program

**Directions**: This application should be submitted *at least* 30 days prior to the anticipated start date of the change. Applications must be complete and the required fees received in order to be scheduled for review.

Email completed application to substantivechange@accjc.org.
Fees must be submitted to ACCJC, P.O. Box 147, Novato, CA 94948

**Date of Inquiry:** October 14, 2022 **Anticipated Start Date:** Fall 2024 semester

**Institution Name:** College of the Canyons

**Address:** 26455 Rockwell Canyon Road, Santa Clarita, CA 91355

**ALO Name:** Dr. Omar Torres, Assistant Superintendent/Vice President of Instruction
**Telephone:** (661) 362-3410 **Email:** Omar.Torres@Canyons.edu

**Title of Application and Description of Proposal:**
College of the Canyons Approval of the Bachelor of Arts in Sustainable Architecture Degree Program

This proposal details the development of an applied Bachelor of Arts in Sustainable Architecture degree program in order for College of the Canyons to better serve its industry partners, local municipalities, and regional utility providers in meeting statewide mandates and regulations adopted to address the effects of climate change and global warming.

**Introduction:**

| **Concise description of the proposed program:** |
| --- |
| The Bachelor of Arts in Sustainable Architecture program (BASA) will educate a needed generation of A/E/C industry (Architecture/Engineering/Construction) technicians intimately fluent in application of the California Energy & Green Building Codes, local water conservation and air quality standards, the LEED Certification process, and resource efficient decarbonized building design and construction administration practices through iterative, data informed methodologies. Program graduates will be prepared to work alongside other A/E/C industry professionals in a firm or as independent consultants with immediate employment opportunities as Building Energy Modeler/BIM/CAD technicians, LEED AP consultants, and construction management or facility operations technicians for a broad range of employers throughout California. |

**Rationale for the proposed program:**

The wide range of crises being experienced worldwide due to the effects of climate change and global warming are well understood scientifically; yet, the impacts of these crises on the built environment remain largely unaddressed in regards to the resiliency and sustainability of our communities. Many governments and NGO entities have developed well-conceived plans as a means for guiding the transformative actions urgently needed to direct the world towards a coordinated response to these crises. Ranging in scale from the global leadership of the United Nations and their 2030 Agenda for Sustainable Development[1] all the way down to laws & mandates enacted at state, county, and municipal levels, these plans will help guide development of the built environment in ways intended to pursue the objectives and performance targets necessary to achieve global resiliency and sustainability. The California Community Colleges Chancellor's Office has similarly established Climate Action and Sustainability goals[2] which involve benchmarking and implementation strategies to "provide goals and guidance for districts to achieve energy conservation, sustainable building, and physical plant management best practices necessary to reduce energy consumption" and to "take every necessary step to conserve water resources". The expectation is that each campus of the California Community Colleges system not only follow the CCC Board of Governors Energy and Sustainability Policy[3] in the operations & maintenance of existing facilities, but also in the planning, design, and construction of new facilities as well.

An unintended consequence of the rapid deployment of wide ranging environmental laws and mandates such as these is that there now exists a demonstrable undersupply of candidates for current and future employment in occupations charged with developing this resiliency in the built environment and energy/water infrastructure, and more specifically, trained professionals in the field of Sustainable Architecture.[4] Graduates from educational programs associated with energy/water usually have their choice of multiple job offers upon graduation, and while this is good for students, it is indicative of a very tight labor market that is hungry for skilled technical workers. Additionally, employers in this field are frequently seeking candidates with a bachelor's degree and who possess applied skillsets in Building Energy Modeling as well as LEED Certification credit[5]/ California Green Building Code[6] compliance documentation. To address this unmet regional workforce need, there is a necessity for developing a Bachelor of Arts in Sustainable Architecture degree which will leverage the robust lower division sustainable design and development program currently established at College of the Canyons while expanding the program to offer a much-needed applied upper division educational opportunity for students interested in pursuing a career in Sustainable Architecture or related A/E/C fields.

The applied skillset focus for this program will be based on the premise that California is likely going to continue as a leader in energy code advancement and that utilization of Building Energy Modeling (BEM) will continue to grow as an iterative, data driven tool across the A/E/C professions to assist in the design and development of new buildings and as a means for benchmarking & simulating performance improvements to existing buildings. As explained in *Recommendations for Building Energy Education in California*, "because energy modeling can be conducted for different projects and a variety of purposes, there is a range of career pathways engaged in energy modeling...

[1] United Nations 2030 Agenda for Sustainable Development
[2] CCCCO Climate Action and Sustainability Plan
[3] California Community Colleges Board of Governors Energy and Sustainability Policy
[4] Labor Market Information Report - Sustainable Architecture (SCCLA May 2022)
[5] LEED Rating System (U.S. Green Building Council)
[6] California Green Building Standards Code (CALGreen) - California Code of Regulations

including Architecture and Environmental Design".[7] BEM is an essential tool for developing new energy-efficient buildings and renovating existing buildings in California and is growing increasingly important as the state moves to significantly reduce greenhouse gas emissions, and that "a trained BEM workforce is needed to meet the growing demand for high-quality energy modeling" for both residential and non-residential projects. Energy models are used by A/E/C firms to iteratively study different design alternatives and the effects of incorporating various energy-efficiency measures in order to compare and contrast the modeled energy use. Similarly, "[building energy] modelers may be contracted to provide energy code compliance analyses, conduct BEM for incentives and rebates, or to meet third-party certification standards" as the state moves towards the electrification of the built environment and carbon neutrality. In tandem with the industry ready BEM skill sets students will develop, the proposed Bachelor of Arts in Sustainable Architecture degree will also provide graduates with an ability to model water use and indoor air quality characteristics for both residential and non-residential projects to help guide the built environment towards resiliency and an ability to meet net-zero resource consumption requirements.

A distinguishing objective of this proposed degree program is the emphasis on industry-ready applied sustainable building design, development, and documentation skills. This focus contrasts and differentiates our proposed Bachelor of Arts degree program from the existing NAAB accredited[8] upper division public Architecture programs in California, which focus on general building design studies as well as preparing students for Architectural licensure and professional practice leadership positions. Particular to licensure, although not a specific emphasis of the proposed BASA Program, graduates will still be able to apply this proposed pre-professional Bachelor of Arts degree towards a portion of the educational requirement for pursuing architectural licensure through the California Architects Board, no different than they currently can after earning an Associate's Degree, albeit to a lesser extent than those graduating from a professional B.Arch program (Cal Poly, etc.). This is one example of how the proposed BASA Program is aligned with external industry standards (architectural licensure). Developing an applied baccalaureate degree program at a California Community College provides an extraordinary opportunity for students to gain training and access to in-demand employment opportunities that would otherwise be unavailable to them.

**Evidence of sufficient demand for proposed program:**

As identified in the Key Findings for the attached "Sustainable Architecture – Baccalaureate" Labor Market Report prepared by the South Central Coast Center of Excellence for Labor Market Research[1], the number of jobs related to Sustainable Architecture is expected to increase for Architects and Construction Managers in the near and long-term due to ever increasing environmental regulations at the federal, state, and local levels. This demand stems from a need in the A/E/C industry to forecast energy performance which is used to inform architectural design, modeling for energy code compliance and national green building standards (e.g., ENERGY STAR® and Home Energy Rating System [HERS] ratings). Similar industry demand was communicated during our consultation and discussions with career technical educators from the national NSF CREATE Energy network.[9] These demands have become acute in the A/E/C industry due to Architects and Contractors being key consumers and beneficiaries of building energy modeling. Furthermore, it follows that these professional entities will benefit directly from the development of this degree and the associated BEM education component, including the importance of project

[7] Recommendations for Building Energy Modeling Education in California
[8] National Architectural Accrediting Board (NAAB)
[9] Professionals consulted for BASA Program

stakeholders to understand the basics of BEM so they can appreciate the potential and limitations of BEM, as well as the importance of using BEM early in the design phase.[7]

Architectural industry technicians (whether involved with the design or documentation sides of the profession) similarly need to possess strong skills that are of direct value in implementing the Integrated Project Delivery (IPD) method necessary for the realization of effective sustainable design projects. IPD is a collaborative approach that requires a 'team' perspective for building design and construction projects quite different from 'traditional' design-build-bid project delivery methods as described by the U.S. Green Building Council, LEED Rating System[10]. With this in mind, Architectural interns (i.e., unlicensed professionals in the Architecture profession) and similar building project engineers are now required to be fluent in collaboration with a wide variety of consultants, engineers, contractors, and sub-trades from the very beginning of a project and to assist in an iterative, data-driven process which is needed to deliver cost-effective sustainable building projects with the least impactful environmental footprint. Sustainable building technician proficiencies prompted by the requirements of LEED and the California Green Building Code (CALGreen) are related to energy simulation aided design for buildings, building commissioning plan & report coordination, development of water use consumption projections, preparation of Life Cycle Assessments and demolition & construction waste management coordination. The existing College of the Canyons lower division Architecture and Interior Design program, with its established expertise in sustainable design and development education (including industry recognized LEED credential preparation) and extensive professional connections, provides an ideal foundation for development of this applied upper division degree opportunity for students needing these skills for employment. These are additional examples of how the proposed BASA Program is aligned with external industry standards (Title 24 - California Building Standards Code[11], LEED Accreditation[12]).

As an example of the scale of demand for these skills in the industry, the U.S. Department of Energy is encouraging sustainable building practices in all new construction and major renovation projects in response to carrying out Executive Order 13834, Efficient Federal Operations, which directs Federal agencies to manage their buildings, vehicles, and overall operations to optimize energy and environmental performance, reduce waste, and cut costs.[13] Similarly, private sector developers and building owners, in addition to public sector entities such as the California Department of Housing and Community Development (HCD), are involved in the planning, design, construction, operation and maintenance of many millions of square feet of building of each year worth over $100 billion in GDP for the state, the majority of which is mandated to demonstrate compliance with CALGreen.[14] Furthermore, according to the Better Buildings Workforce job perspective analysis prepared by the National Institute of Building Sciences, workers in building science occupations with Bachelor of Arts (BA) degrees or higher earn median wage rates 36% higher than the national average[15] which helps to reinforce the financial benefit justification of this proposed degree for students.

To further solicit feedback on the local interest in offering this degree, an informal survey was conducted with current College of the Canyons Architecture students using SurveyMonkey, which showed strong interest (83% positive) in the proposed BASA degree and provided preliminary

[10] LEED v4.1 Building Design and Construction Reference Guide (pg. 14-17)
[11] California Green Building Standards Code, Title 24, Part 11 (CALGreen)
[12] LEED Accredited Professional (AP) credential
[13] 2020 Sustainability Report and Implementation Plan (U.S. Department of Energy)
[14] Economic Impact of Construction in the United States and California (American Assoc. General Contractors)
[15] Analyzing Building Energy Efficiency Job Opportunities (National Institute of Building Sciences)

feedback on the course modalities and scheduling patterns students would prefer.[16] Some of the responses received identifying enrollment and modality preferences, as well as the written responses at the end of the document, help portray some of the concerns and real-world constraints students face when considering a baccalaureate level education in preparation for a professional career. One of the concerns often faced by students relates to their inability to travel out of the immediate area in pursuit of an upper level education. Fortunately, College of the Canyons is located in northern Los Angeles County and easily accessed via the 405/5 freeways and within 45 minutes driving distance for over 3 million Southern California residents. Due to being heavily impacted, the closest Cal Poly B.Arch program (Pomona) and UC B.A. Architectural Studies program (UCLA) have very limited capacity to accept transfer students each year, so the proposed BASA Program will provide a large number of students in our service region and within reasonable travel distance with an opportunity to pursue a career in Sustainable Architecture that is otherwise unavailable to them through public higher education institutions. Approximately 25% of the current Architecture student population participated in this survey (30 out of 125), showing that this can serve as a good method for acquiring student feedback during further development of the degree to ensure alignment with student needs and preferences. Likewise, by projecting out this data, it shows substantial student interest in the proposed Bachelor of Arts degree and the opportunity for upper division study in the field of Sustainable Architecture.

The pent-up demand in California for students seeking a Bachelor's level degree related to the expanding industry of sustainable design provides a large ready population of potential students for this program. Similar to the relatively strong enrollment we have seen in the College of the Canyons lower division Associate's Degree in Architectural Drafting and CAD Certificate programs related to Sustainable Design and Development, we would similarly expect to see strong demand for this B.A. degree, particularly given the cost effectives of attending a community college in comparison to traditional upper division or private university programs. The multi-modal educational methods currently in use by our program as well as accessible course offerings on evenings and weekends will continue to attract working professionals and students over an ever wider geographic footprint throughout California. Enrollment and completer projections for the program are discussed in more detail below relative to the Planning Process for this degree.

**Standard I: Mission, Academic Quality and Institutional Effectiveness, and Integrity**

**Describe how the proposed program is consistent with college's mission and goals.**

The College of the Canyons Mission, revised in 2021 as part of its cyclical update, clearly identifies the values of the institution and provides a framework for all institutional goals and activities.[17] The primary purpose of the institution is to foster student learning and student achievement, ensuring academic quality and institutional effectiveness and integrity:

> *College of the Canyons delivers an accessible, holistic education for students to earn associate degrees, certificates, and credentials, to prepare for transfer, and to attain workforce skills. The College champions diversity, equity, inclusion, and global responsibility, while providing clear pathways in an engaging, supportive environment where all students can successfully achieve their educational goals.*

[16] Survey – Bachelor of Arts in Sustainable Architecture - 071322
[17] SCCCD BP 1200 District Mission

The addition of a Bachelor of Arts in Sustainable Architecture degree and the opportunities available through our industry partners and trade organizations, align with the Mission of the College to offer an accessible education to all students to help them earn certificates, degrees, and credentials and to attain workforce skills. The fields of study served by this new upper division degree are consistent with the institutional mission, as they help further the College's commitment to promoting learning for all students and providing a clear, accessible path to workforce preparation.

The College is unique amongst the California Community Colleges System in that it hosts a University Center which brings upper division and advanced degree educational programs from university partners to the local community. Through the University Center, the College is able to offer students bachelor's and advanced degrees from public and private universities. As of October 2022, the University Center offers 31 programs, including 16 undergraduate degrees, nine master's degree programs, one doctoral degree program, and five credential or certificate programs. Since opening in 2002, nearly 4,000 students have earned degrees or certificates through the College's University Center partnerships. These partnerships solved a major problem for the District's students, who identified commuting to Southern California universities as the major block in their ability to earn bachelor's degrees after finishing at the College to access advanced degree programs. With the proposal of the College's own baccalaureate degree in Sustainable Architecture, the College will now have a unique opportunity to add to the continuum of options for students seeking upper division coursework through a degree path that is offered by the College itself.

As noted in the 2016-2022 Educational and Facilities Master Plan,[18] the District has been working on four goals related to the mission of the College and this proposed Bachelor degree program:

1. Exploring additional ways to provide students with opportunities to apply and practice skills
2. Developing curriculum to meet industry demands relative to digital design tools and digital course offerings
3. Developing additional curriculum including Landscape Architecture
4. Developing garden space at the Valencia campus for sustainable landscape architecture instruction

The development and offering of a Bachelor of Arts in Sustainable Architecture degree will provide an opportunity for the District to further its educational mission and to better achieve its strategic goals of access, engagement, and success for all students.[19] The existing educational collaborations with industry partners and trade organizations, developed by the Architecture and Interior Design program, include faculty involvement with the CREATE Energy NSF ATE Center,[20] the Santa Clarita Environmental Education Consortium (SCEEC),[21] and the National Organization of Minority Architects (SoCal NOMA),[22] all important contributors to the College's comprehensive curricular offerings that allow the institution to serve an ever more diverse student population. Likewise, the College's on-going efforts towards achieving the CCCCO Climate Action and Sustainability Goals and objectives will provide robust educational and training opportunities for students in the program utilizing the campus and surrounding communities as Living Labs. An emphasis on offering course sections using the HyFlex teaching modality (where the instructor and some students are present in the classroom

[18] Educational & Facilities Master Plan 2016-2022
[19] Strategic Plan 2019-2022
[20] CREATE Energy NSF ATE Center
[21] Santa Clarita Environmental Education Consortium (SCEEC)
[22] The National Organization of Minority Architects – SoCal Chapter

on-campus while the remaining students participate live in the same class via Zoom) will provide broad access to the coursework for students who are unable to attend courses on-campus. When multiple sections of a class are offered (such as ARCHT-120, ARCHT-140, etc.), at least one of the sections will be offered in the OnlineLIVE or HyFlex modalities to support remote student access and degree completion. College of the Canyons has thorough experience delivering Career Technical Education courses using HyFlex, most notably in the Water Systems Technology program which was awarded a Strong Workforce Silver Star in 2018. The Water Systems Technology program is also a member of the College's School of Applied Technologies and effectively supports student cohorts from all over California as is proposed for the BASA Program.

**Describe the planning process that led to the proposed baccalaureate degree.**

A wide range of industry professionals, subject matter experts, academic partners, employers, and alumni were consulted throughout 2021-2022 in the planning process which has led to this submission to the Accrediting Commission for Community and Junior Colleges (ACCJC) for approval for College of the Canyons to offer a Bachelor of Arts in Sustainable Architecture degree.[23] Discussions began with members of the College's Architecture and Interior Design Advisory Board (both at our bi-annual meetings and throughout several years) which has provided rich industry input into the purpose and needs prompting the proposal and development of curriculum ideas for this degree program. As such, the need for expanded and enhanced education in the field of Sustainable Architecture has been articulated consistently as part of the College's annual Program Review[24] and regular Educational and Facilities Master Plan processes. To acquire employment and industry demand data necessary for providing an objective justification for offering this degree, a Labor Market Information Report was prepared in May 2022 which specifically focuses on the employment opportunities BASA graduates could pursue.[25] Concurrently, Administration and other high level stakeholders at the College were engaged in discussions about the development and implementation of the program and identifying the various on-campus and off-campus resources that would need to be marshaled for the program's success. The College's formal Program Viability process was pursued with an initial presentation on March 3rd, 2022[26] and a vote of approval on April 21, 2022[27]. Feedback received during the review and deliberations by the Program Viability committee were carefully considered and incorporated into the program vision which is articulated in this proposal. Continued support for the degree proposal was further confirmed by consent approval from the College's Academic Senate on May 12, 2022[28]

Upon approval from ACCJC, next steps in the planning and implementation process for this degree program include submitting a Baccalaureate Degree Program application to the California Community College Chancellor's Office for review and Board of Governors approval. Once secured, the College has committed to hiring a new full-time faculty member to assist with development of the upper division curriculum and marketing the BASA program so that a full cohort of students is in place to begin offering upper division coursework starting in the Fall 2024 semester.

Based on dialogue and feedback received from students, industry partners and transfer universities, strong demand for the proposed Bachelor of Arts in Sustainable Architecture degree program is expected starting year 1 (enrollment of the first upper division cohort Fall 2024). The targeted

[23] Professionals consulted for BASA Program planning
[24] Program Review - COC ARCH 2019-2022
[25] Labor Market Information Report - Sustainable Architecture (SCCLA May 2022)
[26] Program Viability Committee Summary 3.3.22
[27] PV Approval and COC Admin support
[28] COC Academic Senate Summary May 12 2022

annual cohort size is projected to be 24 students with growth up to 35 students estimated by years 3/4 (2026/2027) with commensurate faculty and program infrastructure capacity improvements. Completers (degrees awarded annually) is projected to be commensurate with the 85% graduation rate goal targeted by the CSU Graduation Initiative 2025[29] for transfer students into a 4-year degree program with an average Time-to-Degree duration of no more than 5 years. Upper division attrition will be offset by transfer students admitted during a second entry point into the program between years 3/4. These students transferring into the program can be characterized as having left a CSU/UC 4-year or 5-year architectural program seeking an alternate means for completing a baccalaureate degree. Strategies for better serving students within the program and supporting their eventual success will include a high percentage of both synchronous and asynchronous online courses and facilitated mentoring and support as they navigate the Project Based Learning requirement of the degree program and make their way into the workforce. Department faculty currently have a successful student advising program in place which compliments the course pathway advising students receive from College of the Canyons Counselors that not only helps guide them to the most effective pathway to completion accounting for their unique life circumstances, but also to help link them to industry employment and internship opportunities appropriate for their skill level. Similarly, College of the Canyons has already implemented robust concurrent enrollment programs which will help introduce prospective high school students to the foundational coursework in Sustainable Architecture (1xx series courses), which in turn should increase the likelihood of these students enrolling in the program fulltime upon their high school graduation and subsequently completing their Bachelor of Arts in Sustainable Architecture degree.

**Describe how the baccalaureate degree program will be evaluated and fit into the existing college planning process.**

College of the Canyons has a well-established administrative procedure (AP 4021) on Program Viability – Initiation, Modification, Discontinuance, and Revitalization. This procedure requires that any new program initiation be deemed a "pilot" for a period of three years as regular reporting updates and evaluations occur to ensure the integrity of the proposed new program. An annual status report must be provided to the College's Academic Senate at the conclusion of the first, second, and third year of the new program's existence through the Program Viability Committee. The original proposing author overseeing the program shall present the reports to the Academic Senate via its Program Viability Committee. The content of the reports shall correlate to the nature and context of the original proposal and the program content's historical existence on campus. The first year report shall be an informational status update to include evidence of the program's growth, success and challenges to date. During the second year, the report shall quantify the original proposal's projections that were included in the quantitative and qualitative evidentiary requests noted in the procedure, addressing items such as:

- Enrollment trends
- Projected demand
- Frequency of course section offerings and implementation of new courses timeline
- Term-to-term student persistence
- Student completion rates
- Productivity (WSCH/FTEF)
- Success rates on associated licensure exam(s)
- Regional Labor Market Data demand
- Ongoing Career Education Advisory Committee support demonstration

[29] CSU Graduation Initiative 2025

- DEIAA (Diversity, Equity, Inclusion, Accessibility, Antiracism) considerations
- Results from student evaluations
- Articulation implications
- Relationship to Strategic and Master Plans
- Ability for the College to absorb/institutionalize campus instructional and support services without significantly diminishing the effectiveness of existing services and increasing workload detrimentally

The report shall also include a substantiated projection as to the program's likelihood for sustainable success by the end of its third year. The third year report shall also include a substantiated projection as to the program's immediate institutional sustainability.

In addition, students of the BASA program will also be anonymously evaluated at the end of each semester through the College's Institutional Research Department. The purpose of these surveys is to validate the overall student experience, taking into account their experiences in the in-person and virtual classrooms, access to out-of-class resources through the Library and Learning Resources, perspectives on the upper division major preparation classes as well as complementary General Education courses, and input to teaching faculty focused on pedagogy, content knowledge, and organization of presentation and activities.

Finally, a separate academic program review will be set up for the BASA program that addresses the particulars of hosting a baccalaureate degree program. The College hosts annual updates to its program reviews on a three-year cycle, where year one features the start of the new cycle, accompanied by updates in years two and three. Faculty and administrators make annual updates to the budget via budget augmentation requests, and various evaluation prompts are noted throughout the program review that provide an opportunity for reflection, appreciative inquiry, and continuous quality improvement of our programs and services.

**Standard II: Student Learning Programs and Support Services**

**Explain the program requirements (include program sheet for the college catalog).**

- **Must provide evidence Baccalaureate Degree has 120 credits**
- **Must provide evidence degree has 36 units of General Education**

The Bachelor of Arts in Sustainable Architecture Degree program prepares students for the LEED Green Associate & LEED AP with Specialty credential exams and employment in the A/E/C industry (Architecture/Engineering/Construction) as Building Energy Modeler/BIM/CAD technicians, LEED AP consultants, or construction management/facility operations technicians. The BASA Program curriculum, an integration of educational lectures, design studios (labs) and Project Based Learning experiences, fosters development of analytical, problem solving, and graphic communication skills required in this profession.

**Upper Division Coursework Prerequisites** – completed with minimum 2.50 GPA include:

1. Design Studio = 12 semester or 16 quarter units
2. Sustainable Development = 3 semester or 4 quarter units
3. Graphic Representation/Digital 3d Modeling & Simulation = 18 semester or 24 quarter units
4. Architectural History = 3 semester or 4 quarter units
5. Construction Means & Methods / Environmental Controls = 3 semester or 4 quarter units

Note that completing these program prerequisites does not assure admission into the program.

BASA Upper Division Admissions Process:
Application cycle will be open from February 1st until May 1st for Fall semester enrollment. Students will follow the BASA Program Application Checklist step-by-step and online program application process which will be managed by the College's BASA Program Coordinator. All required documents, including official transcripts are due in Admission & Records by May 1st. Applicants who have cleared the minimum 60 semester (90 quarter) units of transferrable coursework threshold and prerequisite confirmation will be contacted via email within four weeks after submitting a complete application to request that they submit a digital portfolio of their collegiate work which demonstrates their development in the areas of architectural technology, graphic representation/ digital modeling & simulation, building design, and sustainability.

Portfolios should be formatted in either portrait or landscape orientation with an 8.5"x11" page size and submitted in the .pdf file format. A Table of Contents should be included which includes the student's full name along with the course codes & names for any college level courses taken as well as the date and name of the college. Students are encouraged to focus portfolio content on design studio and technical course work completed which is equivalent to College of the Canyons first and second year courses: ARCHT-120, ARCHT-160/220, ARCHT-190, ARCHT-207, ARCHT-200B, ARCHT-260, ARCHT-270/290. Generally, no more than 2 or 3 pages are necessary for each course. Portfolios should be organized in a way that helps College of the Canyons clearly understand how the student advanced academically in each course, either in creative abilities or technical skills.

Portfolios submitted by applicants will be reviewed by a committee comprised of BASA Program Faculty using a rubric based on course objectives that addresses the student's demonstrated communication (graphic/written) and design skills as well as content specific to each course represented in their portfolio. Results of the BASA Program Application review and ranking process will be reported to Admissions & Records for determining student admittance into the program and informing applicants via email of their admission status (no later than July 1st). Not all qualified students may be admitted, as the number of students admitted each year is based on the number of spaces available. Students not admitted into the Upper Division Program may reapply in subsequent years. All dates are tentative and may change depending on number of applications received.

SAVE THE DATE - If admitted into the BASA Program, a mandatory Student Orientation will be held August 1st (date tentative)

International Students will be encouraged to contact the International Services & Programs office to arrange to become a student at the College of the Canyons. International students who already have a degree related to Architecture should consider contacting the Education Evaluation Services for Architects (EESA) for evaluation of their degree for acceptance.

**Program Learning Outcomes**

The Sustainable Architecture major offers students a multidisciplinary understanding of the challenges being confronted by the field of sustainable design and construction in California and beyond to provide a resilient built environment in response to the effects of global warming and climate change. Students will be equipped with the analytical, problem solving, and graphic communication skills required for immediate employment in the profession.

Students who complete this program will:

1. Understand the effects of environmental factors and resource consumption on building and site design using a variety of analysis and simulation methodologies;
2. Evaluate and apply resilient/sustainable building design principles to the design, documentation, code compliance, and presentation of an architectural building project;
3. Understand the use and effectiveness of passive and active environmental control systems and resource conservation strategies to achieve resilient/sustainable building design;
4. Demonstrate both advanced Building Energy Modeling (BEM) and Building Information Modeling (BIM) techniques for implementation in commercial and/or residential building projects using Integrative Process methodologies to achieve code compliance/sustainable rating system certification; and
5. Apply professional practice knowledge and skills during required Project Based Learning internship to demonstrate employment readiness for the field of Sustainable Architecture.

| Program Requirements: | | | |
|---|---|---|---|
| **Major Specific** | **Course Number** | **Course Name** | **Units** |
| | ARCHT-110 or ARCHT-104** | Architectural Drafting or Rapid Visualization | 3 |
| | ARCHT-114 or ARCHT-115 | History of Architecture (satisfies CSU GEN. ED: AREA C-1) | 3 |
| | ARCHT-120 | Design I: Elements of Architectural Design | 3 |
| | ARCHT-140 | Materials & Methods of Construction | 3 |
| | ARCHT-160 | 2-D CAD for Architecture and Interior Design | 3 |
| | ARCHT-180 | Codes and Zoning Regulations | 3 |
| | ARCHT-190 | Design II: Space Planning | 3 |
| | ARCHT-200A | Sustianable Development and Environmental Design | 3 |
| | ARCHT-200B | Design III: Environmental Design Lab | 3 |
| | ARCHT-207** | Residential Design | 3 |
| | ARCHT-217** | Advanced Residential Interior Design Studio | 3 |
| | ARCHT-220 | Advanced 2-D CAD for Architecture and Interior Design | 3 |
| | ARCHT-240 | Architectural Portfolio | 3 |
| | ARCHT-250 | LEED Green Associate Prep | 3 |
| | ARCHT-260 | 3-D Modeling and Rendering | 3 |
| | ARCHT-270 | Intro to Building Information Modeling (BIM) | 3 |
| | ARCHT-280 | Design IV: Advanced Architectural Design | 3 |
| | ARCHT-290 | Advanced Building Information Modeling (BIM) | 3 |
| | **ARCHT-320*** | **Sustainable Landscape Design (Lec/Lab)** | **3** |
| | **ARCHT-350*** | **Environmental Control Systems for Net-Zero Buildings (Lec)** | **3** |
| | **ARCHT-370*** | **Building Energy Modeling and Environmental Simulation (Lec/Lab)** | **3** |
| | **ARCHT-450 LEED AP*** | **LEED AP w/ Specialty Prep (4xx level course)** | **3** |
| | **ARCHT-490*** | **Professional Practices in Sustainable Architecture (Lec)** | **3** |
| | | | |
| | CONST-101 | Intro to Construction & Const. Engineer | 3 |
| | CONST-102 | Construction Management Principles | 3 |
| | **CWE-486/488 PBL*** | **Cooperative Work Experience - Project Based Learning (un-paid/paid)** | **3** |
| | | Total number of units - Major Specific | 78 |
| | | | |
| **General Education** | | | |
| *(based on current CSU GE Breadth requirements and articulation with Cal Poly Pomona B. Arch program)* | CSU GEN. ED: AREA A-1 | COMS-120 Small Group Communication | 3 |
| | CSU GEN. ED: AREA A-2 | ENGL-101 English Composition | 4 |
| | CSU GEN. ED: AREA A-3 | ENGL-103 or COMS-225 Critical Reading, Writing, Thinking/Argumentation | 3 |
| | CSU GEN. ED: AREA B-1 | PHYSIC-101 or 110 Introduction to Physics / General Physics I | 4 |
| | CSU GEN. ED: AREA B-2 | ANTH-101 Physical Anthropology | 3 |
| | CSU GEN. ED: AREA B-3 | ANTH-101L Physical Anthropology Lab | 1 |
| | CSU GEN. ED: AREA B-4 | MATH-100 or 102, 102X Liberal Art Mathmatics / Trigonometry (w/ Support) | 3 |
| | CSU GEN. ED: AREA C-2 | HIST-111 United States History I | 3 |
| | CSU GEN. ED: AREA D | HIST-112 United States History II | 3 |
| | CSU GEN. ED: AREA E | COUNS-150 Student Success | 3 |
| | CSU GEN. ED: AREA F | ETHNST-290 or POLISC-290 Ethnic and Gender Politics | 3 |
| | **BIOSCI-330*** | **Environmental Biology** | **3** |
| | **HIST-350*** | **Environmental History of the World** | **3** |
| | **PHILO-450*** | **Environmental Ethics** | **3** |
| | | Total number of units - General Education | 42 |
| | | | |
| | | Total number of units - Bachelor of Arts in Sustainable Architecture Degree | 120 |
| | | | |
| | * | **New Upper Division course curriculum** | |
| | ** | **Existing Lower Division course, but cross-listed ARCHT version to be added** | |

Refer to the *Program of Study Flow Chart*[30] and the *Catalog Program Sheet*[31] for more info relative to course selection guidance in pursuing the Bachelor of Arts in Sustainable Architecture degree.

[30] College of the Canyons – Bachelor of Arts in Sustainable Architecture - Program of Study Flow Chart
[31] College of the Canyons – Bachelor of Arts in Sustainable Architecture - Catalog Program Sheet

Students matriculated at an Associate degree program related to Architecture or Interior Design (either College of the Canyons or another community college) will be eligible to apply for admission to the proposed upper division program. Consideration has been given in the proposed course sequence so that winter and summer intersessions are largely left 'open' so that students can have rest breaks between semesters, or these intersessions can provide an opportunity for a student to repeat a class with a deficient grade or to take class(es) out of sequence. The BASA upper division admissions and portfolio review process will adhere to best practices and methodologies currently being used by the Cal Poly San Luis Obispo College of Architecture and Environmental Design.

Although this could serve as a terminal degree for some students, there are opportunities for students to continue with their education at other universities, and careful consideration has been given in the development of the course selection and course sequence for the BASA degree in order to align with both the B.Arch program transfer with advanced standing and M.Arch program application requirements for both Cal Poly (San Luis Obispo & Pomona) and the M.Arch program at UCLA should a student choose to apply for one of those universities, either during or after completing our College's proposed Bachelor of Arts degree. Similarly, all the major specific coursework and a majority of the general education coursework required to earn our program's existing Associates degree are completed in the first two years of the BASA Program, thereby supporting a student's ability to efficiently transition to the pursuit of an A.S. degree in Architectural Drafting & Technology should it become necessary or desired at any point in their education.

**Provide evidence that program learning outcomes are the appropriate level for Baccalaureate Degree.**

The program learning outcomes developed for the applied Bachelor of Arts in Sustainable Architecture degree are appropriate for both upper division study and immediate employment in the A/E/C industry. These learning outcomes and the academic pathway students will be on while matriculated in the BASA program are directly scaffolded from the College's existing Associate of Science Degree in Architectural Drafting and Technology[32] and our articulations with CSU transfer partners as described below.

A/E/C industry professionals and upper division educators with expertise in sustainable architecture and Building Energy Modeling were consulted over several years in the preparation of this Baccalaureate Degree proposal.[33] These professionals all stressed the need to close the educational and applied skills gap which currently exists between 2-year community college Associate Degree programs and 5-year professional B.Arch programs in California with resepect to the multidisciplinary technical skill sets necessary for the design and construction of resilient sustainable buildings. This proposed 4-year pre-professional Bachelor of Arts degree is intended to specifically fill the gap, providing added benefits for unparalleled access and cost of attendance value only available from a community college in a way that will ensure that this degree is recognized as equal to our other system partners as expressed by the Academic Senate for California Community Colleges.

Specific to the proposed program learning outcomes, each one rests on an educational foundation provided by the lower division coursework already in place at College of the Canyons, which is then expanded upon in the upper division coursework to provide advanced level opportunities to

[32] Associate in Science Degree-Architectural Drafting and Technology
[33] Professionals consulted for BASA Program planning process

addresses cutting-edge technical knowledge and applied skillsets needed in the A/E/C industry to produce resilient sustainable buildings. The rigor of upper division coursework in this Bachelor of Arts degree program will allow for examination of more complex topics & building science information whilst developing applied skills which students will encounter in the profession. The two years of upper division study also provide students with commensurate development of their generalized and technical communication skills (verbal/written/graphic). The appropriateness of the analytical, problem solving, and communication proficiencies gained in the upper division program are further explained as follows:

1. *Understand the effects of environmental factors and resource consumption on building and site design using a variety of analysis and simulation methodologies*

   The creation of Sustainable Architecture requires broad knowledge of both the natural and built environments as well as an ability to harness iterative, data-driven design processes that respond intelligently to the variable conditions of an ever-changing world. Practitioners leverage their knowledge and familiarity of emerging industry trends and fact-based environmental science to advance the effectiveness and resiliency of building projects. As a means to prepare students for careers with these professional characteristics, the upper division courses all scaffold knowledge and skills gained in the lower division coursework they will have completed, either at College of the Canyons, or as a student transferring into the upper division program from another academic institution. For instance, prior to enrolling in the upper division ARCHT-320 Sustainable Landscape Architecture course, students will be required to have a foundational understanding of site analysis, solar exposure, soil characteristics, and water conservation practices which are gained in the lower division ARCHT-140 Materials & Methods of Construction and ARCHT-200A Sustainable Development and Environmental Design courses. Likewise, both the lower division ARCHT-250 LEED Green Associate and upper division BIOSCI-330 Environmental Biology course, as well as concurrent enrollment in the HIST-350 Environmental History of the World course, will help prepare students for the diverse consideration of climate science, technical building considerations, and societal implications examined in the upper division ARCHT-450 LEED AP with Specialty Prep course, which introduces students to an understanding of how to analyze sustainable building systems and strategies and how these elements are applied by professionals in the industry. This upper division coursework also prepares students specifically for the rigorous LEED Accredited Professional exam administered by the U.S. Green Building Council/GBCI, which is an important credential demonstrating high level currency in the field of sustainable architecture.

2. *Evaluate and apply resilient/sustainable building design principles to the design, documentation, code compliance, and presentation of an architectural building project*

   As part of their lower division coursework, students will receive a solid foundational understanding of the various technical & environmental considerations and decision making challenges necessary to pursue sustainable architecture. The lower division ARCHT-140 Materials & Methods of Construction, ARCHT-180 Codes & Zoning, and ARCHT-200A Sustainable Design and Environmental Development courses, in conjunction with the software skills students will gain in the ARCHT-270/290 Building Information Modeling courses, will ready them to employ iterative, data-driven processes in navigating these considerations through the design and development of sustainable building projects. Concurrently, the ARCHT-240 Architectural Portfolio course serves to not only prepare lower

division students for employment interviews and the application process for admittance into the upper division program of study, but also enhances their capabilities in communicating architectural form, space, and concepts through an aesthetic lens. Once a student has been admitted into the upper division program, the coursework taken in years 3 & 4 will expand their perspective of the built environment through practical trade related courses such as those from the COC Construction Technology & Management program (CONST-101 Intro to Construction and CONST-102 Construction Management Principles) as well as the new upper division courses BIOSCI-330 Environmental Biology, HIST-350 Environmental History of the World and PHILOS-450 Environmental Ethics. Students will leave the BASA program competent, articulate, and industry ready.

3. *Understand the use and effectiveness of passive and active environmental control systems and resource conservation strategies to achieve resilient/sustainable building design*

   Prior to enrolling in the upper division ARCHT-350 Environmental Control Systems for Net-Zero Buildings course, students will be required to demonstrate a fundamental understanding of Sustainable Design and Development concepts (provided by lower division ARCHT-200A course), thermal heat transfer and air flow characteristics (PHYSIC-101 Intro to Physics), and an understanding of the Materials & Methods of Construction (ARCHT-140). This knowledge will be further enhanced by each student's application of sustainable building design concepts and skills in preparation of their capstone project for the lower division Environmental Design Lab course (ARCHT-200B). Implementation of the ARCHT-350 curriculum will include collaboration with the College's Facilities Department exposing students to advanced functionality and programming of the campus energy management system and central plant/building operations, which will enhance their ability to perform energy/water/material consumption audits for benchmarking and to identify opportunities for improved building efficiencies, promoting renewable resources, and minimizing the social, environmental, and financial impacts of the College's operations. This will not only benefit each student academically, but will also yield an important synergy for the College to help address the CCCCO Climate Action and Sustainability Goals. In this capacity, College of the Canyons campuses & facilities will serve as a LIVING LAB for the BASA program yielding educational and training opportunities that are both sophisticated in nature and allow for scaffolding of lower division/upper division program learning outcomes.

4. *Demonstrate both advanced Building Energy Modeling (BEM) and Building Information Modeling (BIM) techniques for implementation in commercial and/or residential building projects using Integrative Process methodologies to achieve code compliance/sustainable rating system certification*

   Being able to effectively integrate BEM into the sustainable building process requires applied knowledge of the architectural design and construction processes so that one can address those aspects together with a range of site specific environmental and climatic factors. Competencies necessary for becoming an industry-ready building energy modeler include established skillset in the creation and manipulation of digital 3-D space & form as well as a firm grasp of environmental influences such as the path of the sun both daily and throughout the year, understanding wind and air-flow pressures and patterns, the physics of heat transfer, and much more.[34] As such, the upper division ARCHT-370 Building Energy

[34] Recommendations for Building Energy Modeling Education in California

Modeling course rests upon knowledge and applied skills gained in the following courses: ARCHT-140 Materials & Methods of Construction, ARCHT-200A Sustainable Development and Environmental Design, ARCHT-260 3-D Modeling/Rendering, ARCHT-270/290 Building Information Modeling, and PHYSIC-101 Introduction to Physics. Students will learn how to utilize industry standard BEM software as a data-driven iterative design tool for architectural project. BEM platforms being considered for ARCHT-370 will include Autodesk Insight, Sefaira, NRL Open Studio, and DOE 2.0 EnergyPro to create simulations of energy use, natural/artificial lighting, natural ventilation strategies, and more. Additionally, students will be required to complete the upper division ARCHT-350 Environmental Control Systems for Net-Zero Buildings course as a pre-requisite for ARCHT-370 to ensure their understanding of the means for manipulating the interior environmental conditions in a building and methods for evaluating design strategies and technologies in the pursuit of net-zero designs that are carbon neutral and include on-site energy generation. Although not a specific focus of this degree program, BASA graduates will also be well prepared for pursuing popular BEM industry certifications such as Certified Energy Analyst (CEA) offered by the California Association of Building Energy Consultants (CABEC) or as a Building Energy Modeling Professional (BEMP) offered by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). During discussions with our academic partners from the Cal Poly San Luis Obispo Architecture program, it was remarked that the 5-year B.Arch course sequencing delineated by the National Architectural Accrediting Board (NAAB) doesn't allow for coursework dedicated to Building Energy Modeling and that these applied skills will not only be highly beneficial for students in the BASA Program, but would also be valuable for B.Arch students throughout the state of California. Dissemination of the BEM learning modules and resources will be made available once fully developed for the BASA Program.

5. *Apply professional practice knowledge and skills during required Project Based Learning internship to demonstrate employment readiness for the field of Sustainable Architecture*

Architecture, particularly when practiced in pursuit of resilient and sustainable outcomes, is a collaborative, inclusive, creative, and empathetic enterprise which engages with other disciplines in addition to a wide variety of stakeholders in the conception and development of a building project. To simulate this unique professional mode of working, our program will utilize Project Based Learning (PBL) internships as a means for providing every matriculated student with facilitated and direct exposure to real-world projects, applications, and working environments in the A/E/C industry. The College's Architecture & Interior Design program already has many years of experience developing and conducting innovative lower division opportunities for students to participate in PBL and Cooperative Work Experience (CWE) such as the EPA Campus RainWorks Challenge,[35] CA Higher Education Sustainability Competition,[36] AMS Fulfillment Internships,[37] Sustainable Santa Clarita,[38] WaterTalks,[39] in addition to international educational collaborations to support student participation in the annual NREL Solar Decathlon.[40] Lower division PBL opportunities such as these will continue to be offered as a means for introducing students to special

[35] EPA Campus RainWorks Challenge
[36] CA Higher Education Sustainability Competition
[37] AMS Fulfillment Sustainability Internships
[38] Sustainable Santa Clarita
[39] WaterTalks
[40] NREL Solar Decathlon

topics, field work, and the unique learning opportunities and teamwork requirements provided by PBL prior to their enrollment in the upper division CWE-486/488 PBL course. Commitment has already been secured from the U.S. Green Building Council-Los Angeles and their Green Building Corps program to assist College of the Canyons in developing and coordinating PBL opportunities for students with industry partners.[41] Student preparedness for immediate employment upon graduation will also be reinforced by the upper division ARCHT-490 Professional Practices in Sustainable Architecture course which will familiarize them with the fundamental principles of architectural practice with an emphasis on projects pursuing LEED certification as well as adherence to requirements of the California Green Building Code (CALGreen) and emerging Federal & State mandates for the development of resilient/sustainable buildings. Specific to this last item, the broad range of industry-ready skills students will be developing in this degree program will ensure they are prepared for traditional employment as well as for opportunities in emerging fields across the broader A/E/C industry.[42]

**Describe the impact on Student Services (counseling/advising, etc.), Learning Support Services (tutoring, etc.), Library Services, and other activities that will support students.**

**Instructional Services Support**

Standard IIC will be impacted by the offering of this Bachelor's degree including Financial Aid, Admissions & Records, and Student Services in general as described below.

The College supports student learning and achievement by providing library and other learning support services to students and to personnel responsible for student learning and support, regardless of location. Learning support services include, but are not limited to: library collections, tutoring, learning centers, computer laboratories, learning technology, and ongoing instruction for users of library and other learning support services. Students enrolled in upper division courses at College of the Canyons, like any other students enrolled in courses at our college, will have full and equitable access to learning services at the College. Many of these services are now offered both in-person as well as virtually, recognizing that our society is forever changed as a result of the current pandemic.

The Library[43] and The Learning Center (TLC)[44] at the College are well positioned to meet the needs of students enrolled in upper division courses and the Sustainable Architecture program. Through the TLC, students have access to free online tutoring offered during the day, in the afternoon, into the evening, and on the weekend in addition to traditional in-person tutoring during these times, both as a drop-in and through appointment. These services also include supplemental classroom instruction to help students reach their educational goals.

The College is committed to serving all students through high quality instructional programs and services. The College's partnership with its industry partners and transfer institutions demonstrates its commitment to its mission of providing quality education to all students.

[41] USGBC-LA Support for BASA-COC
[42] U.S. Department of Energy – Energy/Sustainability Manager Job Analysis
[43] College of the Canyons Library homepage
[44] College of the Canyons TLC homepage

The College has planning processes to ensure quality programs continuously improve. Each course must meet standards developed by the College faculty to ensure student achievement of learning outcomes and competencies in alignment with expectations published by the College's Curriculum Committee.[45] Moreover, all upper division courses to be taught must meet all the same standards used by the College to ensure quality education for all students.[46] Each upper division course to be offered will have approved student learning outcomes, instructional methods, and assessment methods established in the official Course Outline of Record and approved by the Curriculum Committee, Academic Senate, and, ultimately, the SCCCD Board of Trustees. The faculty assigned to upper division courses (similar to lower division courses offered in this degree program) will be responsible for ensuring assessment of the student learning outcomes for these courses. This assessment is verified through input into the eLumen assessment module and reviewed by faculty coordinators. All courses offered throughout the District also have syllabi as required. Syllabi include course descriptions, student learning outcomes from the official Course Outline of Records, policies, grading systems, available student support resources, and schedules. Syllabi often include academic honesty statements which make it clear to students that neither plagiarism nor cheating will be tolerated. The College also provides year-round professional development to all its faculty as related to best practices associated with pedagogy, andragogy, and all instructional teaching modalities (including virtual) to address anticipated student and instructional delivery needs. In addition, categorical funding available through Perkins and the Strong Workforce Program also allow faculty to attend conferences specific to their career technical education disciplines as part of their ongoing professional development.

The College's Board policies and administrative regulations clearly convey its commitment to the pursuit and dissemination of knowledge, regardless of modality or location. As outlined in the College's current Strategic Plan, the College's mission, vision, values, and goals communicate its institutional worldviews and beliefs.[47] The College maintains an institutional culture in which intellectual freedom exists; policies set by the Board of Trustees explicitly address academic freedom. SCCCD Board Policy 4030 states adoption of the definition of academic freedom provided by the 1940 Statement of Principles on Academic Freedom and Tenure, which declares that "academic freedom is the freedom to teach, both in and outside the classroom, to conduct research and to publish the results of those investigations, and to address any matter of institutional policy or action whether or not as a member of an agency of institutional governance."[48] Academic freedom extends to all those teaching and learning within the College and will be applied just as equally towards those served by this Bachelor degree program.

The College will continue to assess its educational quality using methods accepted in higher education, make the results of its assessments known to the public through the Committee for Assessment of Student Learning website, use program review and the assessment of student learning outcomes to improve educational quality and institutional effectiveness, and ensure that all degrees include a general education component and a focused area of inquiry.

**Student Services Support**

The institution has a responsibility to assure equitable access to all students by providing appropriate, comprehensive, and reliable student services regardless of the service location

[45] Curriculum Committee Handbook 2021
[46] Curriculum Committee New Course Documentation Form
[47] Strategic Plan 2019-2022
[48] Board Policy 4030 on Academic Freedom

(Standard II.C.3). We currently meet this standard through a robust array of services offered both in-person and virtually through asynchronous and synchronous methods using video conferencing software (Zoom). At College of the Canyons, orientation, admissions, financial aid, assessment, advising, and educational planning services are provided by student services personnel in both credit and noncredit offices. Special services are offered regularly, both virtually and in-person, such as financial aid workshops, Virtual Job Fairs, Open Houses, College Nights, career exploration workshops, etc. Students who will be enrolled in upper division courses or any other academic programming to be a part of this degree, like any other student enrolled at College of the Canyons, will have full and equitable access to support services at the College. Additionally, the Canyons Architecture and Interior Design program actively utilizes a LinkedIn Group[49] to broadcast and help coordinate local employment opportunities to current students and alumni which continue to be used for the benefit of BASA students and graduates in addition to providing a means for staying in contact with them after graduation. This resource is in addition to the traditional and comprehensive employment coordination services available through the College's Employment Center.[50]

Publications outlining available instructional and student support services are available on the College website and include but are not limited to the Schedule of Classes, the College Catalog, and the Student Conduct Code Handbook. The College published and prominently placed a Student Resource Guide on the website that outlines 40 services available to all students, regardless of the type of courses and level of programs.[51]

Using the MyCanyons (Colleague) system, which is one click away from the homepage, all students can access email, begin an online orientation, apply for admission, register for classes, access the college calendar, access financial aid, access or request academic records and official transcripts, and much more. College staff have already begun the Colleague upper division set-up process to support Student Service needs and data management for the BASA program, such as being able to separate for record keeping purposes BASA students from those in lower division programs, tracking Academic Program Requirements, generating cohort MIS reports, creation of an upper division transcript, etc. College of the Canyons current student support services are able to provide ample support to the students of the BASA program in support of their success. The student support services personnel will coordinate with the BASA personnel, much like our existing Nursing program, to ensure students have all necessary support services while in the upper division program.

Additionally, the College continues to evaluate the quality of its student support services on an ongoing basis using in-house student surveys, to provide for co-curricular and athletic programs appropriate to its mission, and it continues to evaluate placement instruments, maintain student records, etc.

[49] College of the Canyons – Architecture and Interior Design Program LinkedIn Group
[50] College of the Canyons Employment Center
[51] Student Resource Guide 2020

**Standard III: Resources**

| **Please describe the staffing plan to support the proposed program.** |
|---|
| **Faculty:** |
| The College of the Canyons Architecture and Interior Design Program currently has two full-time faculty who will be teaching in the proposed Bachelor degree program (Jason Oliver, Holly Hitt-Zuniga) in addition to 11 adjunct faculty. Due to the increase in course offerings, and to assist with curriculum development, marketing/outreach, and development of Project Based Learning opportunities for the proposed program, a new full-time faculty position has been requested which is anticipated to be filled prior to the Fall 2023 semester. Similarly, to assist with further growth of the Bachelor degree program, an additional full-time teaching position will be requested for fulfillment in academic year 2025-26. The college administration has already expressed strong support for these new full-time positions to ensure long term student success in the program. Any additional faculty load generated by the growth of the program (i.e., increased course sections) will be supported through the hiring of additional adjunct faculty. |
| **Staff:** |
| The College of the Canyons Architecture and Interior Design Program is a member of the College's School of Applied Technologies, which is supported by a dedicated staff of full-time administrative assistants. Additionally, our program also currently employs two Short Term Employees who serve as peer tutors to provide support for students 7 days per week. A full-time Program Coordinator, dedicated exclusively to support of the Bachelor Degree program, will be hired prior to the Fall 2023 semester. This full-time staff member will assist with coordination and communications related to the annual application/portfolio review process, similar to what is currently in place for the College of the Canyons Nursing program as well as development and coordination of program resources and social media/marketing.<br><br>Conducting a portfolio review process at the end of a student's completion of the second year of study are an accepted practice at many Bachelor level programs in California (Cal Poly Pomona, UCLA, CSULB) to assess student competency prior to them proceeding with upper division coursework. This industry recognized assessment method is commensurate with the selection criteria for admission described on page 7 of the "CCC-Baccalaureate Degree Pilot Program Handbook"[52] and the unique creative STEM nature of the Architecture profession and will require the assistance of the BASA Program Coordinator. The portfolio submittal and review process that will be developed for approving students to register for upper division coursework, either as an existing/current College of the Canyons lower division student or for a student interested in transferring in with equivalent lower division education (such as an A.S. degree in Architecture or a related field), will be based upon accepted academic practices. We have consulted with our upper division academic partners to understand their procedures & processes for portfolio review as well as resulting staffing needs so we can implement a portfolio review process that is fair and equitable to the capacities of the program and as regulated by the state educational code and other applicable requirements. This Portfolio review will also help 'bookend' the stackable/scaffolded nature of the program and clearly delineate the transition of a student from lower division to upper division coursework.<br><br>The college administration has expressed strong support for this new full-time Program Coordinator position to ensure long term student success in the BASA program and to ease the |

[52] CCC-Baccalaureate Degree Pilot Program Handbook

burden/duplication of efforts for other College staff (i.e., Student Services). Staffing support for the BASA program will further take the form of Short Term Employees, College Assistants, and/or Federal Work-study students serving as peer tutors and/or Teaching Assistants (TA) to assist faculty with A/V technology (zoom) when conducting classes in the HyFlex modality.

**Administration:**

The College assures the integrity and quality of its programs and services by employing administrators, faculty, and staff who are qualified by appropriate education, training, and experience to provide and support all programs and services. The Board of Trustees and the SCCCD have established guidelines on the type and number of personnel needed to meet the College's mission and student needs. Staffing for administrative support is addressed in long and short-range District planning documents. Requests for new personnel are reviewed and evaluated by the appropriate academic or classified staffing committees, Executive Cabinet members, and the Human Resources Office. The administration is enthusiastic and strongly supports the BASA Program as well as being committed to hiring a full-time faculty member during the 2023-24 academic year to prepare for a Fall 2024 cohort start. This full-time faculty member will be involved in instruction, curriculum, and on-going program development. In addition, a laboratory technician and an office staff member will be hired. The laboratory technician will provide specialized support to students in the classroom, and the staff member will support the application review, processing, and onboarding process for the new program.

**Provide faculty qualifications.**

The College has qualified faculty and administrators to operate and support all courses, programs, and services, including specific professional and academic expertise in the field of Sustainable Architecture. All instructors, including those who will teach in the Bachelor of Arts in Sustainable Architecture Program, must meet minimum qualifications in their disciplines and be Board-approved. Similarly, all faculty, staff, and managers/administrators are evaluated systematically and at stated intervals. College of the Canyons has developed a proven practice for assessing personnel. Faculty working in the new degree program will be evaluated according to this practice and as outlined in the respective collective bargaining agreements for full-time[53] and part-time faculty[54] for both peer evaluation and student evaluation.

As identified in the Baccalaureate Pilot Program Handbook prepared by the CCCCO,[55] faculty who will be teaching the upper division coursework are required to meet specific minimum qualifications such as possession of a master's degree or bachelor's degree in the discipline and six years of professional experience directly related to the faculty members teaching assignment and any appropriate licensure. For the field of Sustainable Architecture, generally a bachelor's or master's degree in Architecture or the directly related fields of Environmental Design or Interior Design along with professional work experience and an industry recognized sustainability credential such as LEED Green Associate/LEED AP with Specialty would be acceptable. Subject matter for specific BASA courses may allow for consideration of additional or alternate qualifications such as architectural licensure in the state of California (appropriate for the ARCHT-490 Professional Practices in Sustainable Architecture course), a degree in Mechanical Engineering or similar Architectural Engineering discipline (appropriate for the ARCHT-350 Environmental Control Systems and ARCHT-370 Building Energy Modeling courses), a degree in Landscape Architecture (appropriate for the

[53] Full-time Faculty Collective Bargaining Agreement
[54] Part-time Faculty Collective Bargaining Agreement
[55] CCC-Baccalaureate Degree Pilot Program Handbook

ARCHT-320 Sustainable Landscape Design course), or a LEED AP with Specialty credential (appropriate for the ARCHT-450 LEED AP with Specialty prep course). Existing full-time COC Architecture and Interior Design program faculty currently meet these minimum qualifications as do many of the program's current adjunct instructors.

Current full-time BASA faculty bios and qualifications:

**Jason Oliver**, *AIA, LEED AP BD+C, CA Licensed Architect (C 30260)*

*Jason Oliver is a full-time Architecture professor and Chair of the Architecture and Interior Design Program at College of the Canyons. He is a California licensed Architect with over 25 years of professional experience and LEED Accredited Professional in Building Design and Construction. Jason's experience as an Architect includes being on design teams for numerous projects in the United States and Japan ranging from small residential additions all the way up to international airports and major hospitals, some of which have included LEED Certification. He began his education studying architectural drafting at Los Angeles Pierce College in the early 1990s and then transferred to earn a Bachelor's degree in Environmental Design and Master's degree in Architecture from the University of Colorado. As an educator, Jason focuses on the synergy between sustainable building design and every phase of each student's learning process.*

**Holly Hitt-Zuniga**, *CID, LEED AP BD+C, WELL AP*

*Holly Hitt-Zuniga is full-time Interior Design professor at College of the Canyons and member of the college's Sustainable Development and Curriculum Committees. She is a Certified Interior Designer with 20 years of professional experience and LEED Accredited Professional in Building Design and Construction. Holly's experience as an Interior Designer and LEED AP includes a wide range of commercial and institutional work for major clients throughout California and the western United States, of which some projects have achieved LEED Certification. She began her education at Moorpark Community College before transferring to Woodbury University to earn a Bachelor of Science degree in Interior Design and then earning a Master's of Science degree in Sustainable Design from Philadelphia University. Holly is an active proponent of net-zero building design and aggressive water conservation measures for interior, exterior, and site landscaping applications.*

Jason and Holly currently collaborate in leading the Architecture and Interior Design program at College of the Canyons. This COC program is one of the most robust and active community college architectural technology and interior design programs in California and includes 44 distinct for-credit courses with a current annual combined FTES of 155. As educators, they have broad instructional development experience and strong industry relationships which well-position them for leadership roles on this project. Please refer to the curriculum vitae for Jason Oliver[56] and Holly Hitt-Zuniga[57] for more detailed information regarding their qualifications and experience as industry professionals and educators in the field of Sustainable Architecture.

New full-time faculty hired specifically in support of the BASA Program will be chosen for their industry experience and expertise related to building resource efficiencies (on-site electricity generation/storage/ conservation, water capture/conservation/reuse, indoor air quality) for teaching the new upper division coursework as well as their ability to teach from the department's

[56] Curriculum Vitae - Jason Oliver
[57] Curriculum Vitae - Holly Hitt-Zuniga

existing catalog of lower division courses. The administration has expressed a commitment to hire one full-time faculty in 2023 and another to support cohort growth up to 35 students estimated by years 3/4 of the program (2026/2027).

Current adjunct BASA faculty:

**Victor Corona**, *AIA, CA Licensed Architect (C 25767)*
**Cesia Lopez-Angel**, *AIA, NCARB, CA Licensed Architect (C 39873)*
**Orlando Flores**, *ASID*
**Alex Dorfman**
**Carlos Gomez**, *B.Arch, M.Arch*
**Leigh Nicolai-Moon**
**John Turturro**, *B.Arch, M.Arch*
**Debra Heller**, *BFA Int. Architecture*
**Patrick Tremblay**, *MBA*
**Lindsey McPhail**, *BFA Int. Design*
**Robert Wolfe**

All College of the Canyons personnel are provided with orientation, oversight, and professional development. The District provides orientation for all employees through the Office of Instruction. The Office of Instruction provides training to all adjunct faculty hired by the District before the start of the Fall and Spring terms. Full-time faculty are provided an intensive two-day orientation led, in part, by faculty coordinators of the Center for Excellence in Teaching and Learning (CETL). The Office of Instruction offers both a Fall and a Spring convocation to address instructional practices, pedagogy, and andragogy. Hundreds of workshops and professional development opportunities are available to all faculty throughout the year and full-time faculty are compensated to complete 40 hours of these "FLEX" activities each academic year which align with department goals. These professional development opportunities help College faculty continually develop and improve their capabilities as educators as well as maintain currency in their respective professional fields. Additionally, professional development training initiated in 2021 specifically for expanding Online and OnlineLIVE faculty expertise during the pandemic continues to help maintain faculty proficiency in remote delivery educational modalities. This on-going training will particularly benefit the HyFlex delivery methods currently in use which are an important means for providing broad access to this proposed Bachelor of Arts degree. In addition, categorical funding available through Perkins and the Strong Workforce Program also allow faculty to attend conferences specific to their career technical education disciplines as part of their ongoing professional development.

The College recognizes that faculty diversity fosters cultural awareness, promotes mutual understanding and respect, and provides necessary role models for students. It is committed to hiring practices and staff development that support equal opportunity and diversity. The College's partnership and collaborations with industry partners and trade organizations, including the National Organization of Minority Architects, helps further its commitment to diversity, student/faculty equity, and providing an inclusive learning environment.

**Explain the impact on the following resources:**

**Physical Resources**

College of the Canyons has the capacity to assure safe and effective physical resources for the proposed program. Additionally, the institution has established physical resources and a location in northern Los Angeles County which provide certain advantages that will benefit the development and on-going success of a Bachelor degree program in Sustainable Architecture. Firstly, as part of our on-going efforts implementing the Climate Action and Sustainability Goals prepared by the California Community Colleges Chancellors Office (CCCCO),[58] College of the Canyons has a long history of embracing sustainable strategies and technologies that are friendly to the environment as well as cost- and energy-efficient, all of which will be leveraged as educational resources for the bachelor degree program. A recent example from 2020 of these efforts includes development of an on-campus 1.5 megawatt fuel cell electricity generation/battery storage plant which has reduced our dependence on the electrical utility grid and brings the college closer to energy independence and Zero Net Energy (ZNE) operations in addition to reducing greenhouse gas emissions. Similarly, the district has long leveraged efficiencies provided by our on-campus central plants which incorporate technologies for waste heat capture in the generation of hot and cold water and utilization of variable frequency drives & power conditioners throughout the campus-wide mechanical HVAC systems. All of the College's M/E/P infrastructure is linked to a campus-wide building automation system which monitors and regulates the air/water systems along with the campus' energy-efficient lighting systems. Credit bearing Project Based Learning (PBL) internships will provide students with a capstone learning experience in their senior year of the bachelor degree program. As such, shadowing and assisting the College's Facilities staff for the goal of benchmarking campus energy, water, and waste operations by 2025, followed by building and institutionalizing the identified sustainability goals by 2030, and finally the improvement and reassessment of the implemented strategies by 2035 will serve as one form of PBL opportunity for students. Faculty in the Canyons Architecture and Interior Design Program, along with industry partners and the U.S. Green Building Council-Los Angeles, have already begun developing capacity for weaving student learning outcomes focused on these campus-wide sustainability efforts into our existing lower division curriculum and, when available, into the new upper division curriculum as well.

Secondly, since 2016 College of the Canyons has engaged in a Biodiversity Initiative[59] with the goal of reintroducing and reinforcing ecological biodiversity on campus and throughout the Santa Clarita Valley. The Biodiversity Initiative is a collaboration between facilities, students, faculty, and the local community which manifests the College's commitment to increasing campus biodiversity through student projects, research, and leadership opportunities. The Canyons Biodiversity Initiative will provide unique collaborative educational opportunities and resources for the Bachelor of Arts in Sustainable Architecture Program. In particular, the proposed upper division Sustainable Landscape Architecture course will include student learning objectives relative to eco-friendly, fire-resistant landscape design and water conserving irrigation practices which will benefit from the campus' role as a Living Lab. A proposal is currently underway to develop an Outdoor Classroom which will provide additional opportunities for the campus to provide examples of sustainable landscape design and as a potential learning area for the proposed upper division Environmental Biology and Environmental Ethics courses in addition to providing land management and field study opportunities for the overall Sustainable Architecture program. This Outdoor Classroom, in concert with the Biodiversity Initiative and Network of Native Gardens identified in the College's Educational

[58] CCCCO and Climate Action and Sustainability Goals
[59] COC Biodiversity Initiative

and Facilities Master Plan,[60] will help support the College's goal for biodiversity and help showcase native and drought-resistant plant schemes as a "palette of plants" for other functioning landscape areas on campus which dramatically reduce the need for water and can survive the great temperature swings found throughout Southern California.

Next, College of the Canyons has developed a robust and innovative Makerspace community emanating from a CCC Maker grant awarded by the California Community Colleges Chancellor's Office in 2016-2017. The Canyons Makerspace facility was established as part of this initiative and supports a range of courses in addition to special focus projects such as the COC NASA/HASP team and an Intersect Lab for Graphic Media and Design Project Based Learning internships. There is a strong synergy between the Canyons Architecture and Interior Design program and the College's Makerspace, resulting in regular and on-going faculty involvement in the planning and further development of this physical campus resource. This involvement will continue to strengthen as Bachelor of Arts in Sustainable Architecture Program courses and PBL internships are developed and offered in the Makerspace.

Lastly, although not a physical resource developed by College of the Canyons, a unique strategic benefit of our location in northern Los Angeles County is the many learning opportunities available nearby which are directly related to the study of Sustainable Architecture:

- Our campus is in close proximity to a diverse range of land uses from dense urban (downtown Los Angeles), medium density suburban & mixed-use (Santa Clarita, San Fernando, and Antelope Valleys), to rural/wildland and agricultural uses (The California Central Valley, Angeles Forest, Mojave Desert, etc.). Additionally, Santa Clarita is also home to Southern California's largest predominately natural running river (the Santa Clara river), which will serve as an educational resource for the proposed upper division General Education courses (Environmental Biology and Environmental Ethics).
- Cutting edge sustainable design case studies and project examples, whether in the Santa Clarita Valley (such as the nearby LEED Gold Certified SC Transit Maintenance Facility)[61] or throughout Southern California, are readily available as educational resources for the program. Our on-going educational and outreach collaborations with the L.A. Chapter of the U.S. Green Building Council and its industry partners ensure that our faculty maintain currency in state of the art sustainable building design and development subject matter.
- A wide range of utility scale energy generation projects are located within close proximity to College of the Canyons. Examples include cutting edge photovoltaic solar farms operated by SoCal Edison and L.A. Dept. of Water & Power in the nearby Mojave Desert, the 710 megawatt Tehachapi wind farm, and extensive water resource management and hydroelectric projects such as the California State Water Project, the Castaic pumped-storage hydroelectric plant, and the Los Angeles County Sanitation District Valencia Wastewater Treatment Facility. College of the Canyons students benefit from seeing these large sustainable infrastructure projects up-close in order to enhance their understanding of the role public utility services provide in our states move towards 100% renewable energy infrastructure by 2045.[62]

These many physical resources, whether on-campus or throughout the surrounding Southern California region, provide a series of Living Labs which are ever evolving and which will be fully

[60] Educational & Facilities Master Plan 2016-2022
[61] Santa Clarita Transit Maintenance Facility – LEED Gold Certified
[62] California Senate Bill SB-1020 Clean Energy, Jobs, and Affordability Act of 2022

leveraged to the benefit of learning objectives and skills development for students in the Bachelor of Arts in Sustainable Architecture Program. The nominal program facility needs for starting and maintaining the BASA Program over time will make this an effective and cost-efficient program to support for College of the Canyons.

**Technology**

Standard IIIC will be impacted by the offering of this Bachelor's degree including Information Technology as described below.

College of the Canyons' technology infrastructure is well positioned to support the BASA program. Our facilities offer state-of-the-art technology to support effective teaching and learning for all programs and services. Computer hardware used in the course of instruction and supplemental learning activities are replaced on a regular basis to ensure compatibility with required curriculum. Software licenses are renewed annually to maintain currency with versions necessary to support the course and provide relevant preparation for enrolled students. The College maintains a ten gigabit redundant connection to the Internet to facilitate access to resources on the web with a robust local area network to support connectivity across the campus. Since 2001, the College has operated a University Center on the Valencia campus, providing our students with access to bachelors, masters, and doctorate programs offered through four-year partner universities. Technology needs for these programs are provided through the College's Information Technology department, affording the College the opportunity to understand the technical support needs of both undergraduate and graduate programs, thus further preparing us to support the technological needs of a local Bachelor of Arts in Sustainable Architecture program.

College of the Canyons also regularly updates and enhances the college and individual department websites, understanding that these often serve as the first substantive point of contact prospective students and employers may have with a program. Enhancements will be made over 2022-23 upon approval of this baccalaureate degree program to promote the program and provide clear info to prospective students about admissions requirements and processes. Similarly, on-going marketing and social media campaigns, both campus-wide and specific to individual academic programs, are supported by the College to highlight enrollment and career pathways opportunities for students.

**Equipment**

The equipment needs for the BASA Program are minimal and easily achievable by the College prior to the Fall 2024 upper division start. The COC Architecture and Interior Design program currently utilizes a lecture classroom which was outfitted in 2021 to support the HyFlex teaching modality with state-of-the-art tracking web cameras, wireless microphones, and Smart Board touch screen equipment, all of which are easily controlled from the Instructor Station. A request has been made for (24) high-performance laptops with charging cart for student use in this classroom, so that BASA lab classes can be conducted using BEM/BIM software. A second department dedicated Lecture/Lab classroom (which already has full high-performance computer support for each student) is scheduled to receive similar HyFlex A/V equipment upgrades prior to the Fall 2024 start of upper division coursework.

The nominal equipment needs for starting and maintaining the BASA Program over time will make this an effective and cost-efficient program to support for College of the Canyons.

| **Explain the impact on financial resources.**<br>**Provide a budget showing evidence the institution has the capacity to start and maintain the proposed program.** |
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| College of the Canyons demonstrates its ability to support and sustain student learning programs and services while improving institutional effectiveness through its proactive approach to identifying funding, developed in response to student and community needs. Financial resources are sufficient to support and sustain student learning programs and services and improve institutional effectiveness. Funds are distributed in support of the development, maintenance, improvement, and enhancement of programs and services by integrating financial resources with institutional planning through Annual Program Review. Funding for the Baccalaureate program will be provided through a combination of district and grant funding. Existing ARCH/ID district and lottery funds include $31,734.00 for equipment, instructional supplies, college assistant hourly wages, and software licensing, which will effectively support all the budgetary needs of the BASA Program as described.[63] These annual funds will be supplemented by Perkins and Strong Workforce allocations currently totaling $35,500 that include:<br><br>$10,000 – Supplementary Services for lead faculty and one-on-one student advising<br>$4,000 – Development and enhancement of Sustainability Program curriculum<br>$10,000 – Supplementary Services for faculty mentoring in work-based learning & CWE internships<br>$10,000 – Travel & conference expenses for student participation in national design competitions<br>$1,500 – Trade Organization Memberships |

**Standard IV: Leadership and Governance**

| **Describe the leadership and governance structure that will ensure academic quality and institutional effectiveness are sustained and maintained.** |
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| The College's governance process adheres to Assembly Bill 1725 (CA 1989) and is outlined in the Decision Making Guide governance handbook.[64] The College maintains an open and inclusive organizational structure that enables staff members to participate in collegial consultation, decision making, and putting decisions into actions. COC's organizational effectiveness is rooted in our strategic planning focus on enhancing access, engagement and success for our students. The College designs the organizational structure with a flexible approach that encourages the development of professional and productive relationships while striving to enhance the capacity of our human resources to foster participation and input to the decision-making processes of the district while seizing opportunities as they present themselves. Student learning is the College's focus, and decision making is guided by the philosophy that diverse perspectives lead to better choices. In view of this, community, faculty, and student input are regularly sought and accepted.<br><br>Decision making and governance at the College are guided by key beliefs:<br>• Institutional direction is driven by information received from staff, students and the community and that helps us deliver a clear vision for our future;<br>• All employees should have a clear understanding of how they are connected to the decision-making processes; |

[63] ARCHT-ID Budget Report - School of Applied Tech FY22-23
[64] Decision Making Guide at COC governance handbook

- It is important to achieve a balance of decentralized and centralized decision making that is coordinated between parts of the college community;
- Dynamic and continuous organizational improvement must be supported through fine-tuning and adjusting our structure and accountability processes by continually evaluating and redesigning what we do;
- In the importance of being flexible, responsive, and implementing contingency plans to adjust to changing environments and ambiguous circumstances;
- In using "common sense" to guide what we do;
- In communicating accurately, respectfully, and in context;
- In ensuring that our structures enhance our ability to maximize opportunities;
- We can seize the opportunity to define, explore and respond to emerging new developments and unforeseen challenges as they arise;
- We are capable of welcoming and making the most of opportunities, whether they are unexpected or planned; and
- It is important to seek input from members of the college and community in the development of policy, curriculum, and program development.

As demonstrated through an integrated planning model,[65] planning is driven by the College's Mission, Vision, Values and Philosophy. The mission paves the way for the Strategic Plan, which is the primary planning document for the institution. The strategic plan identifies primary institutional focus goals (Access, Engagement, and Success in the current plan), as well as measurable objectives for each of the three goals. College committees, divisions, and key planning groups are then responsible for incorporating these goals and objectives into their planning efforts in order to help the institution achieve the strategic plan goals. The combined Educational & Facilities Master plan both informs and is informed by the Strategic Plan, containing detailed needs and projections from annual program planning, design, and review. Ongoing analysis, assessment, and improvement is facilitated by dialogue, use of data, and thoughtful connections between plans.

As illustrated by this conceptual model, College of the Canyons follows a comprehensive planning process to ensure its programs and services are aligned to meet the needs of the dynamic, growing community we serve. Organizational functions, based on the College's mission, vision, values, and strategic plan, ensure the quality, integrity, and effectiveness of all student learning programs. The College leadership encourages the development of teamwork among administrators, faculty, staff, and students. The College Planning Team (CPT), which is co-chaired by the Chancellor (formerly the Superintendent-President) and a faculty member, is the umbrella decision-making group, consisting of campus-wide representation that serves as the venue in which the campus collectively assesses, plans, and evaluates how and in what ways the College is achieving its mission, purpose, and strategic goals. This group synthesizes and articulates the College's priorities based upon the planning activities of the academic, student services, fiscal, human resources, and research and development departments, and also considers external community, state, and national factors that impact institutional planning. It promotes coordination among collegial consultation committees, ensures that policies and procedures are considered and discussed, and that goals, objectives, and action plans of other committees and work units are integrated into overall strategic planning and budgeting processes. Internal and external information sources, such as local workforce and economic trends, accreditation requirements, enrollment analyses, state policies, and program review data and recommendations, form the basis of department plans, which roll up into district-

[65] Decision Making Guide at COC governance handbook

wide plans like the Educational & Facilities Master Plan[66] and Technology Master Plan[67] governance documents. Because form follows function, the College uses the district-wide plans to create our Facilities Master Plan. In addition, the College designs and builds classrooms, labs, and offices that will enable implementation of its Strategic Plan, Technology Master Plan, and Educational & Facilities Master Plan. Planning at College of the Canyons is a loop of continuous feedback. The College regularly analyzes the results of its planning, and uses the data and outcomes to inform the development of future plans. In addition, working in concert with the Academic Senate and the Committee for Assessing Student Learning (CASL), results from student performance on course, program, and institutional-learning outcomes also inform program planning efforts. The College determines what worked, what didn't, and makes adjustments to ensure continued efficiency and effectiveness in programs and services. District-wide plans also drive the budget development process. Individual college units develop their budget priorities in alignment with district-wide plans and program review. Those plans are reviewed by the President's Advisory Council – Budget (PAC-B), which then makes recommendations to the Chancellor. The Chancellor submits the budget to the Board of Trustees for final approval. Once the board has approved the budget, individual units move forward with their spending plans to achieve their goals. The Bachelor of Arts in Sustainable Architecture Program has a faculty department chair with reassigned time. The program falls under the School of Applied Technologies and is supervised by an instructional dean and a team of 3.7 support staff. The College will continue to engage in continuous quality improvement of all of its programs, including those that will be offering upper division courses. Program data, including Key Performance Indicators, will continue to be gathered and analyzed as part of the annual program review to assure quality and effectiveness. Advisory Board meetings which include student graduates will continue to be held to assess impact of changes on the program. Through a participatory governance process that is led by faculty, the institution will examine additional, future curriculum offerings for the Bachelor of Arts in Sustainable Architecture Program and ensure that these are reviewed rigorously by the Curriculum Committee and the College's Office of Instruction to assure compliance with the Chancellor's Office guidelines, Education Code, and Title 5 Regulations. The District Chancellor supports the proposed upper division curriculum and the on-going collaborations between the College and industry partners and appreciates that these collaborations help further the College's mission. Regarding decision making, ultimately the Chancellor and Board of Trustees are responsible for decisions affecting these collaborations with industry partners. However, there are many governing processes in place, as previously stated, to ensure sound decision making. Systematic participative process will continue to be used to assure effective discussion, planning, and implementation of improvement in practice, programs, and services for the new upper division program. Finally, the Board of Trustees is responsible for establishing policies to assure the quality, integrity, and effectiveness of all programs associated with the College. The Board maintains a comprehensive manual of policies governing all district operations. It is the Board's responsibility to evaluate, correct, and revise its policies as needed.

[66] Educational & Facilities Master Plan 2016-2022
[67] Technology Master Plan 2017-2022

| **Describe the internal approval process.** |
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| College of the Canyons has a well-established administrative procedure (AP 4021)[68] on Program Viability – Initiation, Modification, Discontinuance, and Revitalization. This procedure requires that any new program initiation be deemed a "pilot" for a period of three years as regular reporting updates and evaluations occur to ensure the integrity of the proposed new program. A more complete description of the college's program review and approval process is described above, under Standard I.<br><br>The curriculum committee reviews and approves course proposals and submits them to the appropriate state authorities and the Board of Trustees for ultimate approval. The effectiveness of delivery methods for proposed courses are evaluated by the curriculum committee in a number of ways. This review process ensures that the basic requirements for both face-to-face and distance education courses, such as regular and substantive interaction as well as accessibility being addressed via 508 compliance, are specifically referenced in the curriculum approval process. |
| **Describe the external approval process (state/federal approvals, etc.).** |
| The external approval process for the proposed Bachelor of Arts in Sustainable Architecture Degree has proceeded following the California Community Colleges Chancellor's Office (CCCCO) Baccalaureate Degree Program Application requirements. These requirements include providing evidence of approval to offer the proposed degree through the Accrediting Commission for Community and Junior Colleges (ACCJC) which will in turn prompt participation in the on-going, college-wide ACCJC comprehensive review process to ensure that this program will continue to meet the established standards of quality and that the College is able to provide the necessary educational programs, services, credentials, and credits to students matriculating in the program for their success. Upon approval from ACCJC, our CCCCO Baccalaureate Degree Program Application will be submitted in early 2023 for review and approval by the California Community Colleges Board of Governors. Note that since this proposed degree is a pre-professional 4-year Bachelor of Arts, and not a 5-year professional Bachelor of Architecture (B.Arch) degree, approval and accreditation from the National Architectural Accrediting Board (NAAB) is not required.<br><br>The proposed Bachelor of Arts degree in Sustainable Architecture program has been specifically conceived and subsequently reviewed & considered by numerous relevant California State University (CSU) and University of California (UC) programs to ensure non-duplication of their already existing programs. Please refer to the letters of support from these universities.[69, 70, 71, 72]<br><br>External approval of curriculum for lower division courses in the program will continue to be submitted to the State Chancellor's Office Curriculum Inventory (COCI) System for approval and cataloging. External approval of curriculum for upper division courses will follow a similar, albeit separate, process for review and approval through the State Chancellor's Office. Once approved, a control number will be assigned to the courses and/or program, ACCJC will be notified once more for student financial aid purposes (i.e., notification to the Department of Education), and sent to the program contact at the College for implementation. |

[68] AP 4021 Program Viability – Initiation, Modification, Discontinuance, and Revitalization
[69] Letter of Support – Cal Poly San Luis Obispo
[70] Letter of Support – Cal State University Northridge
[71] Letter of Support – Fresno State University
[72] Letter of Support - UCLA

**Evidence**

**Please include documentation that will help the Committee understand the process by which the change was developed, such as former and proposed mission and/or objectives, summary of discussions and approvals with campus constituents, (Board of Trustees, Academic Senate, students, community members), strategic plans, financial plans, copies of Board minutes, as appropriate, copies of draft legal documents regarding the new location, copies of draft legal documents dealing with matters of facilities and other institutional property, as appropriate. Please include documentation of all state and/or federal approvals, as appropriate.**

Articulation - Cal Poly SLO Architecture and COC 2022-23
Articulation - Cal Poly Pomona Architecture and COC 2022-23
Board Policy 4030 on Academic Freedom
Bachelor of Arts in Sustainable Architecture - Catalog Program Sheet
Bachelor of Arts in Sustainable Architecture - Program of Study
California Architects Board - Education Overview
California Community Colleges Board of Governors Energy and Sustainability Policy
California Green Building Standards Code, Title 24, Part 11 (CALGreen)
CCCCO and Climate Action and Sustainability Goals
College Catalog 2022-2023
College of the Canyons Library homepage
College of the Canyons TLC homepage
College of the Canyons New Student Financial Aid
Curriculum Committee Handbook 2021
Decision Making Guide at COC governance handbook
District Mission Spring 2021 Revision
Educational & Facilities Master Plan 2007-2012
Educational & Facilities Master Plan 2012-2018
Educational & Facilities Master Plan 2016-2022
Feedback from Advisory Board
Full-time Faculty Collective Bargaining Agreement
LEED Accredited Professional (AP) credential
LEED v4.1 Building Design and Construction Reference Guide (pg. 14-17)
Letter of Support - Cal Poly San Luis Obispo
Letter of Support - Cal State University Northridge
Letter of Support - Fresno State University
Letter of Support - UCLA
Letter of Support - U.S. Green Building Council - Los Angeles
New Course Documentation Form
Part-time Faculty Collective Bargaining Agreement
Program Review - COC ARCH 2019-2022
Program Viability Initiation for Bachelor of Arts in Sustainable Architecture
SCCCD Final Audit Report Measure E
SCCCD Final Audit Report Measure M
Strategic Plan 2019-2022
Student Resource Guide 2020
Technology Master Plan 2017-2022
United Nations 2030 Agenda for Sustainable Development