



ENVIRONMENTAL RESEARCH LAB / COSTA RICA

2022 COTE International Student Design Competition

Advanced Architectural Design Studio investigating the Diverse Ecologies of Costa Rica
Cloud - Marine - Jungle - Coast

ARCH 5503 (5503 + 7000): Advanced Architectural Design (+ Research) Studio (graduate)
College of Architecture, Texas Tech University
Fall, 2021

Instructor:
Associate Professor Peter Raab

STUDIO PROMPT

Architects play a crucial role in addressing both the causes and effects of climate change through the design of the built environment. Innovative design thinking is key to producing architecture that meets human needs for both function and delight, adapts to climate change projections, continues to support the health and well-being of inhabitants despite natural and human-caused disasters, and minimizes contributions to further climate change through greenhouse gas emissions. Preparing architects to envision and create a climate adaptive, resilient, and carbon-neutral future must be an essential component and driving force for design discourse.

PROGRAM + SITE

Programmatic concerns will be developed individually through a series of investigations, research prompts, and an understanding of the issue that your research facility will impact within the initial three weeks. Based on your individual interests and foci, your research will culminate in the choosing of a specific site and the design of contextually relevant multi-story research facility and educational complex in Costa Rica. A series of specific and varied bio-climates of Costa Rica will be explored by the class – jungle, mountain, city, volcano, river, beach, sea – and students will develop site specific, climate adaptive, resilient, and carbon-neutral architectural propositions, each uniquely attuned to its surroundings.

2022 COTE DESIGN COMPETITION

This studio will develop innovative design proposals for an environmental research lab in Costa Rica for the 2022 COTE International Competition. The AIA COTE® Top Ten for Students Competition is sponsored by The American Institute of Architects Committee on the Environment (AIA COTE®), in partnership with the Association of Collegiate Schools of Architecture (ACSA).

Each project should be forward-thinking, embracing innovative technologies (both passive and active systems) to right-size your design solution while addressing several measures from the AIA Framework for Design Excellence (now adopted as the basis of professional practice and awards across the AIA).

AWARDS

Ten projects will be chosen for recognition at the discretion of the jury. Winning projects will be announced and displayed at the 2022 AIA National Convention. A total of \$5,000 will be distributed to the winning teams, with each of the top 10 winning projects will receive a \$500 stipend to attend the 2022 AIA National Convention. Winning students will be recognized during the 2022 AIA National Convention at the COTE reception.

STUDIO SCHEDULE

WK 1 - 3 TERRAIN / ECOLOGY RESEARCH + PROGRAM DEVELOPMENT

WK 4 - 6 FORMAL DESIGN STRATEGIES + SCHEME DESIGN

WK 7 - 9 ENVIRONMENT, LANDSCAPE + BUILDING INTEGRATION I

WK 10 - 12 TECHNICAL DOCUMENTATION + BUILDING INTEGRATION II

WK 13 - 15 FINAL RESOLUTION + FFAT EXHIBITION

Example of Final Submission (1 of 10 Winning Submissions to the 2021 COTE Competition) Andriani Sugianto, California Baptist University

