



NEPAL FIELD PROGRAM · PROGRAM I

Biomimicry & Design

Observe. Extract. Translate. Apply.

The best design solutions already exist. They are running in forests, agricultural terraces, and river systems. This program is about learning to find them.

It is a design-focused, field-based learning experience that uses real-world systems as a foundation for developing new approaches to design and problem-solving.

In Nepal, forests, agricultural landscapes, and communities operate as interconnected systems. Students engage directly with these environments to understand how systems function, adapt, and sustain themselves — then translate those principles into design concepts and interventions. The goal is not to document these systems. It is to analyze them.

THREE-PART FIELD SEQUENCE

I

Kathmandu

Nepal's ancient capital is a living laboratory of urban systems. The city layers Newari architecture, religious infrastructure, and dense human activity across a valley inhabited for over a millennium. Students begin with structured observation exercises, learning to read the city as a system — its water channels, courtyard geometries, and the adaptive logic of its markets and sacred spaces. The surrounding valley rim offers early access to community forests and agricultural terraces that frame the work to come.

II

Nagarkot

Perched above the Kathmandu Valley, Nagarkot opens onto a landscape of stacked agricultural terraces carved into steep hillsides over centuries. Farming communities here manage soil, water, and forest in ways that reflect deep systems intelligence — drainage patterns that mirror watershed logic, polyculture arrangements that mimic forest stratification, and community forest governance that functions as adaptive management. Students work directly with these landscapes and the people who maintain them, observing how biological and social systems overlap and inform each other.

III

Bardia

Bardia National Park, in the lowland Terai, is one of the most intact wild ecosystems in South Asia. Home to Bengal tigers, one-horned rhinoceroses, elephants, gharial crocodiles, and over 400 bird species, the park offers direct exposure to large-scale ecological processes — predator-prey relationships, floodplain dynamics, grassland succession, and riparian system function. Students spend extended time here translating observations into the design principles that form the core output of the program.

THE PROCESS

STAGE 01 — OBSERVE

Sustained, structured observation of living systems. Field journaling, sketching, and systems mapping.

STAGE 02 — EXTRACT

Identify patterns, relationships, and adaptive strategies. Isolate principles that function across scales.

STAGE 03 — ABSTRACT

Convert biological strategies into transferable design principles. Strip context; retain function.

STAGE 04 — TRANSLATE & APPLY

Develop design concepts, proposals, or prototypes grounded in extracted principles.

DESIGN OUTPUTS

Students produce design work — not narrative projects. Outputs are analytical, speculative, or applied, demonstrating a clear relationship between observed systems and design response.

System Maps

Diagrams of observed ecological and social systems

Prototypes

Material, process, or speculative design experiments

Design Concepts

Biomimetic design proposals grounded in field research

Field Research

Pattern analysis and principle extraction documentation

“Nature has already solved many of the problems we are grappling with. The work is to learn how to ask the right questions.”

PROGRAM DETAILS

DURATION

14 Days

GROUP SIZE

~10 Students

ESTIMATED COST

\$6,000–\$6,400

Includes international airfare · All accommodation and meals · Local guides and facilitation

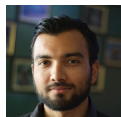
PROGRAM LEADERSHIP



Jennifer L. Berglund

PROGRAM DIRECTION & FIELD FACILITATION

National Geographic Explorer and science storyteller with extensive field experience across ecological and cultural systems. Jennifer facilitates the program — creating the conditions for learning, guiding field observation, and connecting students with the instructors, practitioners, and communities whose expertise shapes the work.



Manoj Gautam

FIELD SYSTEMS & COMMUNITY KNOWLEDGE

Nepal-based conservation practitioner and the on-the-ground expert at the heart of this program. Manoj brings deep knowledge of local ecological systems, agricultural practices, and community-based land management, along with longstanding relationships with the practitioners and communities whose traditional design knowledge and land practices are central to the curriculum.