IUPUI Principles of Undergraduate Learning

PUL 1: Core Communication and Quantitative Skills

PUL 2: Critical Thinking

PUL 3: Integration and Application of Knowledge

PUL 4: Intellectual Depth, Breadth, and Adaptiveness

PUL 5: Understanding Society and Culture

PUL 6: Values and Ethics

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PUL 1: Core Communication and Quantitative Skills

The ability of students to express and interpret information, perform quantitative analysis, and use information resources and technology.

Core communication and quantitative skills are demonstrated by the student's ability to:

1. express ideas and facts to others effectively in a variety of formats;
2. comprehend, interpret, and analyze ideas and facts;
3. communicate effectively in a range of settings;
4. propose solutions for problems using quantitative tools and reasoning;
5. make effective use of information resources and technology.

IUPUI Principles of Undergraduate Learning

PUL 4: Intellectual Depth, Breadth, and Adaptiveness

Intellectual Depth, Breadth, and Adaptiveness: The ability of students to examine and organize disciplinary ways of knowing and to apply them to specific issues and problems.

Intellectual depth, breadth, and adaptiveness are demonstrated by the student's ability to:

1. show substantial knowledge and understanding of at least one field of study;
2. compare and contrast approaches to knowledge in different disciplines;
3. modify one's approach to an issue or problem based on the contexts and requirements of particular situations.

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Geology major

IUPUI Principles of Undergraduate Learning: Earth Sciences

PUL 2: Critical Thinking
Retrieve, evaluate, and interpret information
Solve geological problems and draw conclusions through clear reasoning

PUL 3: Integration and Application of Knowledge
Integration of basic sciences and disciplinary skills

PUL 4: Intellectual Depth, Breadth, and Adaptiveness
Knowledge of basic physical sciences and Earth Sciences

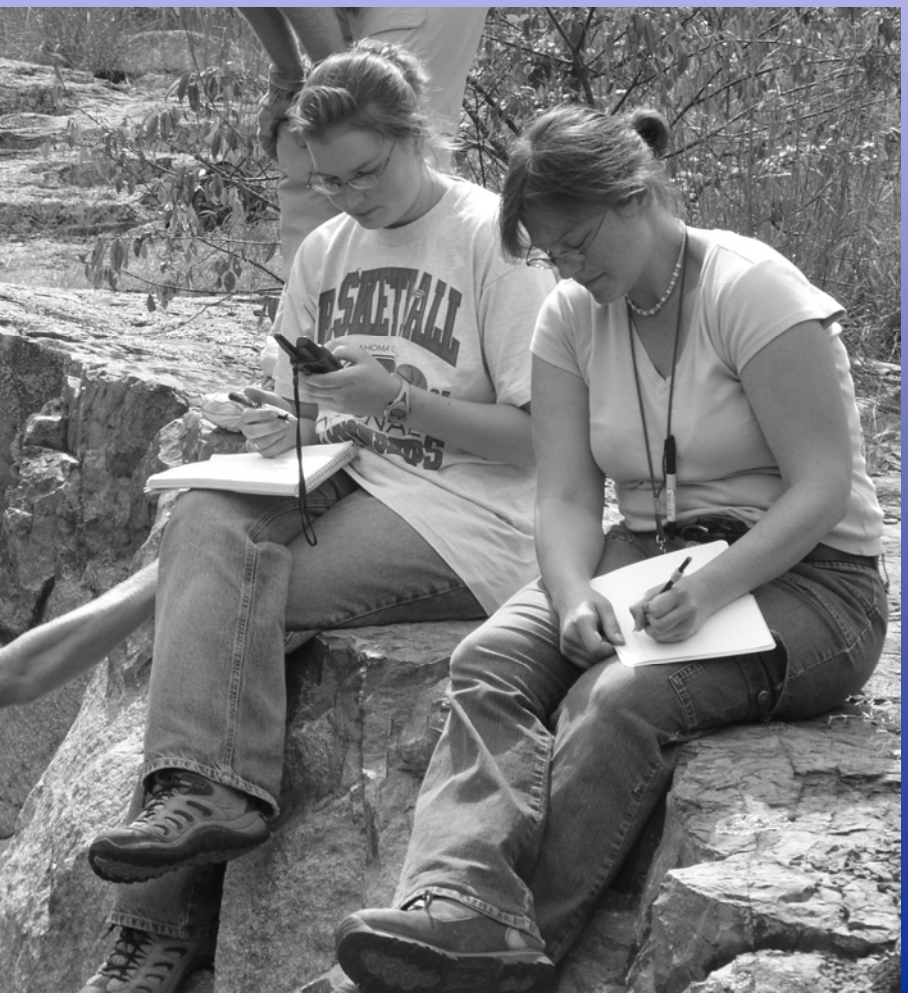
Example: Historical Geology

PUL 5: Understanding Society and Culture
Processes at work in the natural environment
Relationship to human activities at short time scales

Earth Sciences - Intellectual Depth

PUL 4: Intellectual Depth, Breadth, and Adaptiveness

Geologic timescales and Earth history



Students will understand the geologic time scale, including methods and uncertainties of relative and absolute dating

Students will be capable of placing changes to both the physical and biological structure of the earth within a geologic framework, in order to demonstrate the rate and patterns of change

Earth Sciences – Field Capstone Course

The capstone experience marks the transition to employment or graduate study

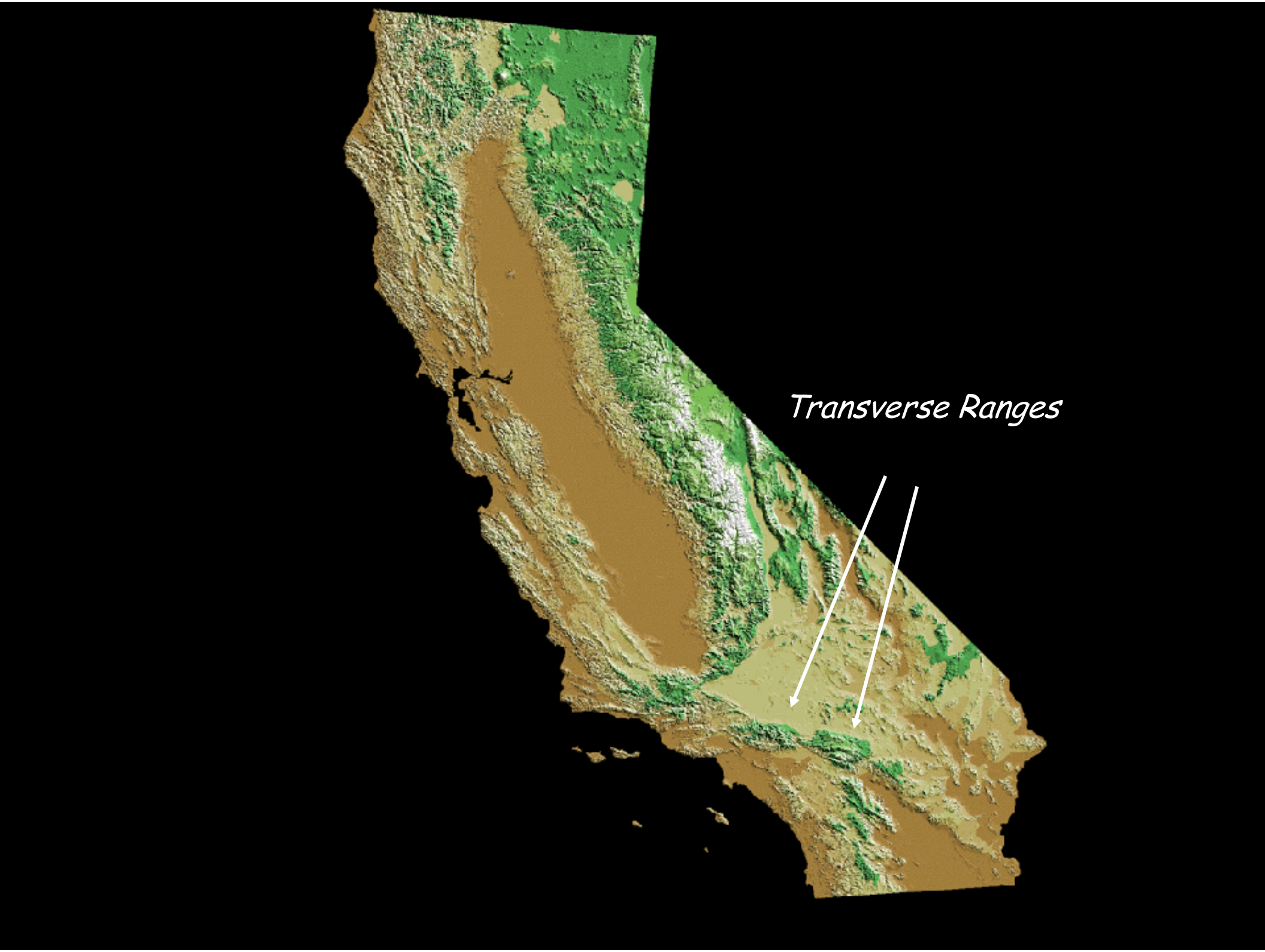
Field course designed to:

demand and measure depth and integration of Earth science knowledge
[PULs 3, 4]

draw upon critical thinking, writing, and collaboration skills
[PULs 1,2]

Field course integrates petrology and stratigraphy in an historical context-

<u>depth and integration of Earth science knowledge</u>


Transverse Ranges

Field course integrates petrology and stratigraphy in an historical context-

depth and integration of Earth science knowledge