

# Developing a Doctorate-Level Interdisciplinary SES Research Peer Group

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## Interdisciplinary Research

integrates content and methodologies from two or more academic disciplines to answer questions that cannot be fully addressed using one discipline.

## Cohort (Peer Group)-Based Learning

enables students to support each other as they participate in a shared set of classes and a shared timeline for degree completion.

## Social-Ecological Systems (SES)

is the study of the intersection between the human sciences and the natural sciences (social systems and ecosystems).

## UAF Social-Ecological Systems Peer Group Common Core and Timeline

### YEAR 1 - RESEARCH DESIGN (4 cr.)

#### Seminars:

- Arctic Policy
- Complex Dynamic Systems

### YEAR 2 - DATA COLLECTION (4 cr.)

#### Seminars:

- Mapping and Remote Sensing
- Arctic Leadership

### YEAR 3 - DATA ANALYSIS (4 cr.)

#### Seminars:

- Research Collaborations
- Data Visualization

## Ph.D. Peer Groups Work!

The history of interdisciplinary Ph.D. peer groups at UAF:

Cohort One: 4 admitted; 4 graduated

Cohort Two: 10 admitted; 8 graduated

#### Factors that contribute to the success rate:

- Rigorous applicant screening
- Pre-entry meeting outlining cohort expectations
- Student commitment to group success
- Proven leadership skills of participants
- Dedicated peer group coordinator
- Consistent research course instructor

## UAF Peer Group Dissertation Topics



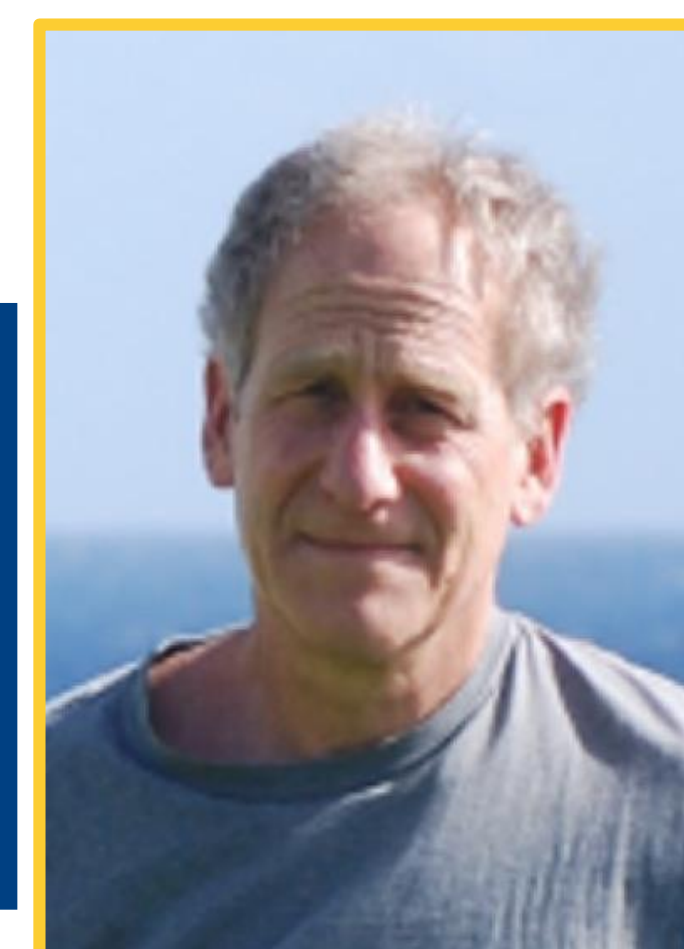
Jessica Garron

**“Integration of Synthetic Aperture Radar (SAR) Oil Spill Detection Techniques into Off-Shore Arctic Planning and Policy”**

Disciplines:  
Geophysics, Remote Sensing,  
Disaster Response Policy

**“Role of Perception in Determining Adaptive Capacity: Alaskan Communities Adapting to Environmental Change”**

Disciplines:  
Fisheries, Remote Sensing/GIS, Communication,  
Environmental Anthropology, SES



Jesse Grunblatt

**“Flooding Hazards -- Geospatial Preparedness Policy”**

Disciplines:  
Civil and Environmental Engineering,  
Geophysics, Geography,  
Political Science



Timothy Petty

**“Russian Capacity to Develop Offshore Oil Reserves in the Kara Sea: Strategic Implications”**

Disciplines:  
Geography, Political Science,  
Economics



Jon Skinner

**“Stimulating and Facilitating Interdisciplinary Team Science, The Role of the Project Manager”**

Disciplines:  
Education, Communication,  
Research Leadership, SES



Pips Veazey



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## Overview

### Purpose

- To provide training and education for a cohort of professionals who will lead future Alaskan social-ecological systems research.

### Participants

- Mid-career professionals who want to make a difference with real world issues and contribute to the literature in their field.

### Program

- Students take a 3-year (6 course) series of mixed methods research courses -- Research Design, Data Collection, Data Analysis -- and participate in SES seminars.
- Each participant has an individual study plan of interdisciplinary courses relating to their research, taken concurrently with the research and seminar courses.
- Each participant has an interdisciplinary graduate advisory committee.

### Perks

- Students are fully supported by a program coordinator who helps to organize key pieces of the Ph.D. program, such as annual meetings and comprehensive exam procedures.
- Peer group structure and firm time frame keeps participant motivation high throughout coursework and research.

### Product

- New Ph.D.'s who are leaders in Alaska and elsewhere.
- The creation of cross-discipline work that contributes to multiple fields.