University of California Education Abroad Program &
The University of Queensland

Australia- Solomon Islands Program in Local and Global
Environmental Health (ASIP - EGH)

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DRAFT SYLLABI*

(*Some content may change)
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COURSE OUTLINE AND DESCRIPTION

The UCEAP-UQ, Australia-Solomon Islands Program (ASIP) comprises five courses totalling 25 semester credits. ASIP001, ASIP002, ASIP003, ASIP004 and a Capstone Project ASIP005 are delivered throughout the program but will appear as distinct courses on academic transcripts. The program commences at The University of Queensland, Australia where 6 weeks of classroom, laboratory and field learning experiences will provide students with the skills relevant to working in the remarkable wilderness area and Pacific Island culture that is Solomon Islands. This period will also feature some basic language training in Pijin English – the *lingua franca* of Melanesia. When in the Solomon Islands, the group will initially be based at the Solomon Islands National University (SINU) undertaking field excursions in the area surrounding the nation’s capital, Honiara. UCEAP students will work alongside SINU undergraduate students who will facilitate their interactions with local communities and advise on local customs. Students will then move out to the World Heritage nominated Western Province where they will work with environmental health practitioners in remote communities using environmental survey techniques and community health studies focused on resilience and ultimately sustainability in the face of global, regional and local threats to environmental health, again in the company of SINU undergraduate students.

As students will be travelling in remote areas with few modern facilities, they must be physically fit, able to swim, and should not have serious medical conditions that require on-going medical supervision. SCUBA diving is not a part of the program but may be undertaken by private arrangement. Snorkelling will be encouraged, and training is available if a student has no prior snorkelling experience.

The first course investigates the connection between health and the environment on a global to local scale and the second course develops essential practical skills in environmental health and science assessment. The first two courses will provide students with a ‘bigger picture’ vision and training that will then be applied in the third and fourth courses. Students will be exposed to four types of field methods: environmental science, resource ecology ethnography and public health.

**SINU faculty** will be involved in the planning and execution of the program. A lead academic from SINU and one from UQ will work with the students in both phases of the program. It is important to appreciate however that SINU was recently formed from a College of Higher Education, the primary focus of which was the provision of vocational training in particular for government institutions. SINU programs are currently dominated by certificate and diploma courses with few bachelor level degrees and no RHD programs. UQ is currently working with SINU to develop the capacity of their faculty to engage in RHD-level research. Solomon Islands National University and The University of Queensland partnered to provide a *Workshop for Developing Research Capacity* from the 1-4 December 2014 in Honiara, at Solomon Islands National University. The partnership of SINU and UQ in delivering the ASIP program for EAP will further strengthen research capacity in the Solomon Islands through the pre-placement of UQ scientific and monitoring equipment at SINU and the Solomon Island Department of Fisheries and Marine Resources, which is adjacent to the main Kukum campus of SINU.
Internationalization opportunities for **Solomon Island undergraduate students** are few. SINU students will benefit from interactions with UCEAP students as will our students benefit from social and academic interactions with SINU students during the program. We have provided support for taking a ratio of 1 SINU student per group of 5 EAP students into the field in the Western Province component of the program. This will strengthen opportunities for cultural and social engagement. It is envisaged that selected Western Province SINU students from the School of Nursing & Allied Health Sciences and the School of Natural Resources & Applied Sciences will work alongside EAP students in the field supporting a transfer of knowledge and skills. The participation of SINU student will greatly enhance the quality of community and environmental health assessment by their knowledge of local customs, language, social structure and economy. For all these reasons, by participating in this program students will be making a direct and tangible contribution to bettering the quality of life for Solomon Island communities with whom they interact.

**PARTNERING, ETHICAL AND CULTURAL SENSITIVITIES**

In all aspects of engagement with people from any country, one must be sensitive to social mores, religious beliefs, dress codes and show respect for the local people and their traditions. The involvement of SINU students, SINU faculty, local health and environmental practitioners, and UQ faculty with long standing experience in the Solomon Islands will support EAP students in these regards. The objective in ASIP004 (see below) is to identify what community members wish to achieve in terms of community and environmental health outcomes and not to impose on them some particular pet project. This will mean that the development of community support activities must be respectful, reactive and responsive. Potential activities and the extent to which EAP students can engage directly with them (e.g. improving water quality or mosquito control) will depend on the skills and knowledge of accompanying SINU students and the teaching faculty. In addition there are important ethical guidelines for working with communities that must be followed. Questionnaires and other close-to-person data collection tools will be developed to assess community health priorities and perceptions of environmental health. These will have to first be approved be approved by the relevant Human Ethics and other committees of UQ and SINU.

**PREREQUISITES**

Minimum GPA of 2.85 and at least one lower division class in statistics, and one lower division class from the following: biology, ecology, environmental studies, environmental science, or written permission from a UC campus academic advisor.

Students must be physically fit, able to swim, and should not have serious medical conditions that require on-going medical supervision.
LEARNING ACTIVITIES AND OBJECTIVES

Learning activities will comprise the full range of contemporary lecture, laboratory and field studies as modes of content delivery and skills development. The initial 6 weeks and final week (week 11) of the program is based from The University of Queensland, to take advantage of its state-of-the-art learning support facilities, research stations and excellent teaching and research faculty. This preparation will allow students to maximise the value of their time in the Solomons. Weeks 7-10 will be based in Solomon Islands, with a more practical and experiential learning mode given that the infrastructure there is less able to support formal class teaching, and where opportunities abound for direct, in-field and in-community learning and skills development.

EVALUATION AND ASSESSMENT

Students will be assessed using the full range of assessment tools including exams written reports, performance in small group field research and monitoring projects, the quality of oral presentations of field work activities, and a field diary/note book.
ASIP001: Global to Local Environment and Health Issues

Coordinator: Dr Paul Jagals

Description
This course introduces the challenges facing environments globally such as warming seas, climate change, ocean acidification and rising sea levels. It examines the health consequences of threats to crops, forest, field and marine resources and approaches to combating or adapting to them in developed nation and developing nation contexts. Regional and local anthropogenic threats to key structuring elements and processes of rainforest and reef systems will also be examined. In all instances the current and impact of these on human health is discussed from the increase potential of infectious disease to the rise in non-communicable disease that will result from these environmental changes. The course assesses various management responses to these threats and compares the various resource management strategies applied in active examples from across the world, emphasising successful approaches. This course is largely delivered in the Australian component of the program with lectures and tutorials delivered at UQ.

Lectures
Module 1: Drivers and pressures of environmental change
1. Historical drivers and patterns in world climate: the last 200,000 years
2. Population growth and is impacts: resource depletion and wastes
3. Poverty, the economic growth imperative and the effects of global trade deregulation

Module 2: State of the environment
4. Global warming – upsetting the balance and scenarios for the next 100 years
5. Environmental change – change in climate, severity and frequency of droughts, floods, storms and shifting weather patterns
6. Ecological resilience, functional redundancy and strength in biodiversity
7. Impacts on key systems:
   a. Coral reefs
   b. Tropical rainforests
   c. Wetlands, seagrasses and mangroves
   d. Agriculture, crops and gardens
   e. Anthropogenic environs

Module 3: Vulnerabilities and exposure
8. Climate driven human migration – rural to urban, and nation to nation, and the effects of the brain drain on community health
9. Human movement and Urbanisation
10. Subsistence community needs and vulnerabilities

Module 4: Impacts
11. Disease: Global demographic trends in communicable disease, lifestyle diseases and the burden of disease
12. Resource conflicts
Learning Activities
Contact class time (lectures) 20 hours

Learning Resources


Location
Learning activities split between UQ and SINU, with observation time allocated during the Solomon Islands component of the program.

Assessment
- Exam (50%) 2 hour
- Practical Assessment (50%) TBC

Credit:
4.5 Semester Units.
ASIP002: Methods in Environmental Health and Science

Coordinators: Dr Patrick Pikacha & Dr Simon Albert

Description
This course provides essential practical knowledge and skills for assessing ecosystem health, environmental health and human community functionality. It has a primary aim of skills development so is largely laboratory and field based. It explicitly identifies linkages with learning elements from the lecture courses (ASIP001, 003 and 004) and provides training that underpins research project development for ASIP005.

Lectures and Learning Activities
Practical application of terrestrial and marine survey techniques and applications in the field in Australia, with contact class time in labs (15 hours); and field work (14 days) including:

1. Course overview and health and safety induction (1 hr)
2. Human-environmental linkages in Melanesia at Lamington(2 hrs)
3. Invertebrate survey and identification workshop at Lamington National Park Rainforest (1 day);
4. Small mammal and amphibian surveys. (1 day) Lamington National Park
5. Forest and understory complexity and integrity measures (1 day) Lamington National Park
6. Tropical South Pacific crop disease and insect pest identification lab at UQ (3 hrs);
7. Remotely sensed data skills lab at the Moreton Bay Research Station (MBRS)
8. (3 hrs);
9. Coastal water quality issues including lecture and method training (3 hrs) at the Moreton Bay Research Station (MBRS)
10. Marine vertebrate collection and identification lab (3 hrs) at the Moreton Bay Research Station (MBRS)
11. Marine invertebrate collection and identification lab (3 hrs) at MBRS
12. Marine benthic survey skills (1 day) at MBRS
13. Fisheries resource surveys (1 day MBRS including estimates of biomass from field survey data and class activity on fish length weight relationships from the Marine Verts lab)
14. Indigenous knowledge and use of coastal environments: Guest lecture by representative of the Quandamooka people (traditional custodians of Stradbroke Island) (3 hrs)
15. Practical application of environmental health survey skills will be conducted in the field in the Solomon Islands including:
   a. Assessment of environmental quality and related community health concerns in urban and peri-urban settings (6 days):
      i. Honiara- Matanikau River transect from pure source to urbanised mouth; Honiara Referral Hospital and environs; Port development, marine pollution, water quality (including ecoli counts) and littoral resources; Kukum Market survey (food quality, food resource identification and quantification)
ii. Gold Ridge Mine-Matepono River Transect from mine to mouth examining water quality and community health concerns and forestry affected communities, mining.

b. Team exercise focussed on a particular remote community in Roviana Lagoon to quantify levels of use current resource use, assess community perceptions of change in resource availability, survey local living resources and produce a draft environmental action plan in the context of the local social milieu. (3 days marine + 3 days terrestrial/ garden/forest)

16. Comparison of impacted systems with pristine managed systems at Tetepare Island- coral reef carrying capacity, seagrass and mangrove nursery habitats (3 days) and Kolombangara Island- tropical forest plant and animal biodiversity (3 days)

Location
Learning activities are split between UQ and SINU, with training field work to be carried out at Lamington National Park and North Stradbroke Island and practical application of skills during the Solomon Islands component of the program.

Assessment
- Exam (50%) 2 hours
- Magazine Submission: groups of 2-3 writing a magazine article on a specific topic of their choice (e.g. water quality or links between marine ecosystem health and human diets etc.) for general public based on results and observations from field work in Solomon Islands. The magazine articles would then be compiled into a special issue of Melanesian Geo for distribution in Solomon Islands (as a way of giving back to the community) (50%)

Credit
4.5 Semester Units.
Description
This course provides an introduction to the peoples of the Solomon Islands and the South Pacific more generally (with a focus on Melanesia). Addressing ecosystem and environmental health issues requires a sound knowledge of the social, historical, economic and political factors that have informed contemporary life-ways. Drawing on a wide range of ethnographic and historical sources and working at the intersections of anthropology, human geography, political science and development studies, this course offers students a critical overview of (many of) the myriad factors that have shaped human-environment relations and well-being in the Pacific, both past and present. Questions explored include: How, when and why have consumption patterns, livelihood strategies and resource use and governance systems changed? How might human health, environmental sustainability, local definitions of value and systems of social order be inter-connected? What, if any, are the linkages between linguistic and ecological diversity? How might local/indigenous (or ‘traditional’) ecological knowledge (LEK) systems differ from ‘Western’ or scientific ‘ways of knowing’ and what are the consequences for human and environmental health? These and other questions are explored through an examination of regional and local case-studies. Thematic topics include: socio-cultural and historical particulars; kinship and personhood; missionisation and colonialism; the role(s) of chiefs [Ji]; church [Lotu/Jois] and custom [kastom] in shaping contemporary life; regional and local economics; cultural heritage; ‘traditional’ resource use and governance; post-Independence development initiatives (with a focus on marine conservation); and local perceptions of environmental change.

Lectures
1. Regional overview, geography, prehistory and early European exploration
2. From headhunting, traders and missionaries to colonial governance and Independence
3. Language, culture, personhood and kinship (Part 1 – South Pacific overview)
4. Language, culture, personhood and kinship (Part 2 –Solomon Islands and Melanesia)
5. ‘Laef hemi mo fri’: Contemporary urban life
6. The ‘resource rush’: Tuna, timber and minerals
7. Foreign aid in the South Pacific (history, overview and case-studies)
8. Tourism: From eco-lodges to cruise ships (overview and case-studies)
9. Community perspectives on environmental, social and economic change
10. The ‘tensions’: Civil unrest in the Solomon Islands, 1998-2003
11. Climate change in the South Pacific
12. Introduction to ethnographic field methods (Part 1)
13. Introduction to ethnographic methods (some classic & contemporary examples) (Part 2)
14. ‘Chiefs [Ji], Church [Lotu], custom [kastom] and village governance today (SI)
15. Rural livelihood strategies and changing consumption patterns (past and present) (SI)
16. Resource use and resource governance (overview and case-studies) (SI)
17. ‘Local [or ‘Traditional’] Ecological Knowledge’ (LEK) in Melanesia (SI)
18. Social and physical well-being: Health, aetiologies of disease and sorcery (SI)
Tutorials
1. Communication: An Introduction to Pidgin (2 hrs)
2. Fitting in: Dress, behavioural codes, personal safety, and social awareness (2 hrs)

Learning Activities
Contact class time (lectures, tutorials, some small in-class group work/discussion) - 16 hours to be completed at UQ, 6 hours in Solomon Islands; field-based observation, reflection and analysis during the Solomon Islands component of the program (15-30 minutes per day).

Learning Resources
A small compendium of required and optional readings, a comprehensive thematic bibliography (to assist with essay topics) and language resource materials will be disseminated during the first lecture.

Location
Learning activities are to be completed at UQ, with immersion learning time during the Solomon Islands component of the program.

Assessment
- Exam (50%) 2 hours
- Essay (30%) 2000 words selected from a range of topics
- Field Jottings (20%) A notebook of ‘field jottings’ will be assessed on students return from the Solomon Islands. Students are expected to record a reasonable number of local social observations and then reflect on and analyse these observations, drawing on the knowledge and skills developed. Examples might include: gender relations, livelihood particulars, resource use, Solomon islander-student interaction, vernacular language particulars, village patterns, and more. This will be discussed in more detail prior to leaving for the Solomon Islands (in lecture 12 on basic ethnographic methods).

Credit
4.5 Semester Units.
ASIP004: Solomon Islands Community Health – Resilience and Sustainability

Coordinator: Dr Paul Jagals

Description
This course deals with the vital issue of the scale of health concerns and how they can be addressed in a developing country with few resources. It covers contemporary approaches to address environmental health using a combination of low and high technology approaches. It seeks to deliver knowledge and skills to students that are applicable globally while using field opportunities to protect and improve the health of local communities. Ethics and community health training will be incorporated into this course.

Lectures
1. Demography of Solomon Island communities
2. Health protective infrastructure, workforce and foreign aid programs
3. The local disease burden
4. Reducing the local disease burden
5. Healthy environments for healthy people
6. Ethical considerations in environmental health investigations and interventions
7. Health risk and impact assessment in human settlements: Dense urban
8. Health risk and impact assessment in human settlements: Remote and rural communities
9. Interventions: Health related environmental quality management: Water
10. Interventions: Health related environmental quality management: Air
11. Interventions: Health related environmental quality management: Food and nutrition
12. Interventions: Health and Hygiene education
13. Measuring the impacts of interventions

Tutorials
1. Senior First Aid (half day)
2. Practical demonstrations of low technology community health mitigation/ Dealing with catastrophes (3 hrs)
3. Workshop on the ethics of community health intervention (2 hrs)

Learning activities
Contact class time (lectures and tutorials) 20 hours and 3 days focused observation in the field (Solomon Islands): Human community perceptions of ecosystem health and resource issues - Group activity: Using techniques from at least two of the core topics (environmental science, environmental health, and community health) you will participate in a group project in support of community health in a remote community in the Western Province of the Solomon Islands. Some examples include: Teaching school children the importance of clean hands, assessment surveys of key threats to human health in remote communities and urban communities, involvement in a community clean up activity.
Learning Resources
https://www.usaid.gov

Location
Learning activities split between UQ and SINU, with observation time and group activity to be carried out during the Solomon Islands component of the program.

Assessment
- Exam 2 hours (50%)
- Visual Presentation/Field notebook (50%)

Credit
4.5 Semester Units.
ASIP005 Capstone Research Project

**Description**
This course code is indicative of a group research project focusing on a specific topic chosen from a list of approved topics selected by the participating faculty coordinators prior to the commencement of the program. Data collection and research activities are carried out as a group throughout the duration of the program, with the final research report completed independently. The research reports are submitted individually, with students presenting their research in their groups within a seminar structure. The project topic can come from any of the themes delivered throughout the program and will be developed based on factors such as faculty and local expertise, equipment availability and ethical considerations. This project represents an outstanding opportunity for students to develop real-world research skills and practical solutions for challenging problems.

**Learning activities**
Project proposal development and independent research report writing; field research and data collection in a collaborative group setting (working with and assisting other students with practical research elements).

**Location**
Learning activities undertaken throughout the duration of the program – both at UQ and in the Solomon Islands, with field observations and write-up time allocated during the Solomon Islands component of the program.

**Assessment**
- Final research report (5000 word limit) (80%)
- Formal seminar delivered (and video recorded for marking purposes) to a relevant UQ faculty lab group upon return to Brisbane (20%)

**Credit: 4.5 Semester Units.**