

OTHER AG, ENV AND RELATED (AGEN)

AGEN 1001 Water Quality Assessment and Management (10 Credit Points)

Legacy Code: 300814

Water is essential for all life on earth. This unit will equip students with skills in biological, chemical and physical water quality assessment for a sustainable water future. The unit introduces students to healthy natural waterways and contrasting degraded waters impacted by disturbance from human activities. A broad range of pollutants, their sources and the consequences for human health and the ecology of water ways will be investigated. Management strategies will also be examined based on the sound scientific assessment of water quality. Students in this unit will cover water quality legislation, regulation, policy, guidelines and develop competencies in water monitoring, regulation, treatment and management.

Level: Undergraduate Level 1 subject

Equivalent Subjects: AGEN 2002 - Water Quality Assessment and Management

Restrictions: Please see the Subject Details page for any restrictions for this subject

Subject Details (<https://hbook.westernsydney.edu.au/subject-details/agen1001/>)

AGEN 1002 Water Quality Assessment and Management (WSTC) (10 Credit Points)

Legacy Code: 700298

Water is essential for all life on earth. This unit will equip students with skills in biological, chemical and physical water quality assessment for a sustainable water future. The unit introduces students to healthy natural waterways and contrasting degraded waters impacted by disturbance from human activities. A broad range of pollutants, their sources and the consequences for human health and the ecology of water ways will be investigated. Management strategies will also be examined based on the sound scientific assessment of water quality. Students in this unit will cover water quality legislation, regulation, policy, guidelines and develop competencies in water monitoring, regulation, treatment and management.

Level: Undergraduate Level 1 subject

Equivalent Subjects: AGEN 2002 Water Quality Assessment and Management

AGEN 1001 Water Quality Assessment and Management

Restrictions: Please see the Subject Details page for any restrictions for this subject

Subject Details (<https://hbook.westernsydney.edu.au/subject-details/agen1002/>)

AGEN 1003 Water Quality Assessment and Management (UG Cert) (10 Credit Points)

Water is essential for all life on earth. This unit will equip students with skills in biological, chemical and physical water quality assessment for a sustainable water future. The unit introduces students to healthy natural waterways and contrasting degraded waters impacted by disturbance from human activities. A broad range of pollutants, their sources and the consequences for human health and the ecology of water ways will be investigated. Management strategies will also be examined based on the sound scientific assessment of water quality. Students in this unit will cover water quality legislation, regulation, policy, guidelines and develop competencies in water monitoring, regulation, treatment and management.

Level: Undergraduate Level 1 subject

Equivalent Subjects: AGEN 2002 Water Quality Assessment and Management AGEN 1002 Water Quality Assessment and Management

Restrictions: Please see the Subject Details page for any restrictions for this subject

Subject Details (<https://hbook.westernsydney.edu.au/subject-details/agen1003/>)

AGEN 3001 Animal Behaviour (10 Credit Points)

Legacy Code: 300878

Focusing on a variety of wildlife and domestic animal species, the unit addresses how classic ecological and evolutionary principles shape animal behaviour by weighing the experimental and observational evidence for each idea. We illustrate concepts with examples from a wide range of taxonomic groups of animals in diverse ecosystems. Students will conduct experimental field and laboratory procedures, as well as observe and work with groups of animals on the UWS Hawkesbury campus.

Level: Undergraduate Level 3 subject

Equivalent Subjects: AGEN 3002 - Animal Behaviour

Restrictions: Please see the Subject Details page for any restrictions for this subject

Subject Details (<https://hbook.westernsydney.edu.au/subject-details/agen3001/>)

AGEN 4001 Researching our Changing Environment (10 Credit Points)

This unit focuses on learning to critically evaluate current research in topics under study at the Hawkesbury Institute for the Environment and how advanced scholarship in your field of study is conducted. The Hawkesbury Institute for the Environment spans a broad set of fields from soil microbial genomics and microbial ecology to the biogeochemistry, ecology and physiology of plants and microbes, animal ecology and evolution, to ecosystems, landscapes and Australia-wide processes. Teaching sessions are designed around a thematic cross-section of research within HIE, representing many of these areas. The unit also involves enhancing skill in evaluating appropriate research methodologies for asking questions and testing hypotheses, including an introduction to some of the large-scale research facilities within HIE that students may be involved with.

Level: Undergraduate Level 4 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

Subject Details (<https://hbook.westernsydney.edu.au/subject-details/agen4001/>)

AGEN 7001 Bushfire Behaviour (10 Credit Points)**Legacy Code:** 200457

This unit describes the factors affecting bushfire behaviour and the models which are used to predict bushfire behaviour, the principles of fire ecology, and the assessment of bushfire hazards on property and the environment. Topics include the measurement of fuel, rates of spread and flame length equations, fire danger indices and landscape issues, topographical influences on fire behaviour, the importance of fire regimes and fire thresholds on flora and fauna, habitat and fire impacts on environmental services such as soils and water catchments. The role of fire behaviour in determining impacts on structures is also described.

Level: Postgraduate Coursework Level 7 subject**Restrictions:** Please see the Subject Details page for any restrictions for this subjectSubject Details (<https://hbook.westernsydney.edu.au/subject-details/agen7001/>)**AGEN 7002 Ecosystems in a Changing World (10 Credit Points)****Legacy Code:** 800170

Natural and managed ecosystems on our planet are experiencing a rapidly changing environment as a consequence of changing patterns of land and resource use, loss of biodiversity, altered atmospheric composition and anthropogenic climate change. This unit will introduce students to ecosystem concepts in the context of ecological and evolutionary responses to global change. Students will obtain practical experience in quantitative analysis of carbon, nutrient, water and energy budgets, and explore the consequences of global change for ecosystem services and biodiversity over a range of spatial and temporal scales. Teaching will be led by HIE staff with expertise in ecosystem responses to environmental change, soil microbial contributions to ecosystem function and the impacts of environmental change on plants, animals and their interactions.

Level: Postgraduate Coursework Level 7 subject**Restrictions:** Please see the Subject Details page for any restrictions for this subjectSubject Details (<https://hbook.westernsydney.edu.au/subject-details/agen7002/>)**AGEN 7004 Perspectives of Sustainable Development (10 Credit Points)****Legacy Code:** 300397

This unit explores the philosophy, policies and practice of sustainable development. In exploring environmental philosophy the unit provides students with an understanding of the nature and emergence of both modern and post-modern paradigms that influence the direction and nature of current development policy. The nature of environmental policy is examined by developing an understanding of how values and attitudes shape a governing ethic about environmental management. The social, political, economic and ecological elements of sustainable development are unfolded to aid students understanding of what needs to be managed. Particular attention is given to those issues confronting developing countries as they move to become industrialised nations yet have high levels of poverty. Finally, the unit introduces the practice of environmental impact assessment as one management tool used in the management process.

Level: Postgraduate Coursework Level 7 subject**Equivalent Subjects:** LGYB 8266 - Environmental Management Core Studies 1 LGYB 8275 - Environmental Management**Restrictions:** Please see the Subject Details page for any restrictions for this subjectSubject Details (<https://hbook.westernsydney.edu.au/subject-details/agen7004/>)**AGEN 7005 Research Protocol Design and Practice (10 Credit Points)****Legacy Code:** 401080

In this unit postgraduate students develop a proposal for a research study in an area of interest, drawing upon their knowledge and experiences from other units in their program of study. Students learn how to apply research methods to a variety of research situations and questions; to understand how research questions are developed and answered empirically through suitable choice of research methodology, design and method; and how research findings are validated and communicated.

Level: Postgraduate Coursework Level 7 subject**Co-requisite(s):** PUBH 7016 AND

HLTH 7008

Equivalent Subjects: AGEN 7003 - Methods of Researching**Restrictions:** Please see the Subject Details page for any restrictions for this subjectSubject Details (<https://hbook.westernsydney.edu.au/subject-details/agen7005/>)**AGEN 9001 HDR Thesis Hawkesbury Institute for the Environment (20 Credit Points)****Legacy Code:** 800148**Level:** PhD and Research Masters Level 9 subject**Restrictions:** Please see the Subject Details page for any restrictions for this subjectSubject Details (<https://hbook.westernsydney.edu.au/subject-details/agen9001/>)**AGEN 9002 Higher Degree Research Thesis - Agriculture and Environment (20 Credit Points)****Legacy Code:** 800203**Level:** PhD and Research Masters Level 9 subject**Restrictions:** Please see the Subject Details page for any restrictions for this subjectSubject Details (<https://hbook.westernsydney.edu.au/subject-details/agen9002/>)**AGEN 9003 Higher Degree Research Thesis - Agriculture and Environment (20 Credit Points)****Legacy Code:** 800180**Level:** PhD and Research Masters Level 9 subject**Restrictions:** Please see the Subject Details page for any restrictions for this subjectSubject Details (<https://hbook.westernsydney.edu.au/subject-details/agen9003/>)