

## Sustainable Aquaculture Postgraduate Certificates Invertebrates or Vertebrates

### Programme Requirements

#### Sustainable Aquaculture (Invertebrates) - PG Cert

BL4801 (10 credits) and BL4803 (10 credits) and BL5806 (10 credits) and BL5808 (10 credits) and  
20 credits from Module List: BL5802, BL5804, BL5805

#### Sustainable Aquaculture (Vertebrates) - PG Cert

BL4801 (10 credits) and BL4804 (10 credits) and BL5807 (10 credits) and BL5809 (10 credits) and  
20 credits from Module List: BL5802, BL5804, BL5805

### Compulsory modules:

#### BL4801 Aquaculture and Fisheries

<b>SCOTCAT Credits:</b>	10	SCQF Level 10	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides an introduction to the global importance of aquaculture with fisheries industries worldwide. The module will compare both aquaculture and fishing industries with terrestrial, agricultural sources of food production. The global markets for aquaculture, fisheries and agricultural products will be assessed. The environmental interactions of aquaculture will be discussed with relation to the definition of, and development of, sustainable aquaculture practices. The principles of developing sustainable aquaculture in different global environments/conditions will be discussed.				
<b>Programme module type:</b>	Compulsory for all Sustainable Aquaculture Postgraduate Programmes. Optional as a stand alone module.			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> Distance Learning : 4 hours of lectures (x 5 weeks) and 3 hours of tutorials ( x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 60%, Coursework = 40%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

## Biology - Sustainable Aquaculture - Certificates - 2017/8 - August 2017

BL4803 Biology for Aquaculture - Invertebrates				
<b>SCOTCAT Credits:</b>	10	SCQF Level 10	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides an understanding of the fundamental biology of invertebrate aquaculture species. This includes the anatomy and physiology of appropriate aquaculture species. The interaction of aquaculture species with the aquatic environment and the requirements for developing sustainable aquaculture will be assessed.				
<b>Programme module type:</b>	Compulsory for Postgraduate Certificate in Sustainable Aquaculture (invertebrates). Either BL4802 or (BL4803 and BL4804) is compulsory for Sustainable Aquaculture Postgraduate Diploma and MSc Programmes Optional as a stand alone module.			
<b>Anti-requisite(s):</b>	BL4802			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 hours of lectures (x 5 weeks) and 3 hours of tutorials (x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 60%, Coursework = 40%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

BL4804 Biology for Aquaculture - Vertebrates				
<b>SCOTCAT Credits:</b>	10	SCQF Level 10	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides an understanding of the fundamental biology of vertebrate aquaculture species. This includes the anatomy and physiology of appropriate aquaculture species. The interaction of aquaculture species with the aquatic environment and the requirements for developing sustainable aquaculture will be assessed.				
<b>Programme module type:</b>	Compulsory for Postgraduate Certificate in Sustainable Aquaculture (vertebrates) Either BL4802 or (BL4803 and BL4804) is compulsory for Sustainable Aquaculture Postgraduate Diploma and MSc Programmes Optional as a stand alone module.			
<b>Anti-requisite(s):</b>	BL4802			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 hours of lectures (x 5 weeks), and 3 hours of tutorials (x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 60%, Coursework = 40%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

## Biology - Sustainable Aquaculture - Certificates - 2017/8 - August 2017

BL5806 Nutrition - Invertebrates				
<b>SCOTCAT Credits:</b>	10	SCQF Level 11	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides advanced knowledge of the anatomy, physiology and nutritional requirements of key invertebrate species and a critical assessment of the sustainability of feed production technology. It will also assess and discuss the relationship between clinical nutrition and animal health and the importance of nutrition in developing optimal animal welfare.				
<b>Programme module type:</b>	Compulsory for Postgraduate Certificate in Sustainable Aquaculture (Invertebrates). Either BL5801 or (BL5806 and BL5807) is compulsory for Sustainable Aquaculture Postgraduate Diploma and MSc Programmes Optional as a stand alone module.			
<b>Anti-requisite(s):</b>	BL5801			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 hours of lectures (x 5 weeks) and 3 hours of tutorials (x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 60%, Coursework = 40%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

BL5807 Nutrition - Vertebrates				
<b>SCOTCAT Credits:</b>	10	SCQF Level 11	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides advanced knowledge of the anatomy, physiology and nutritional requirements of key vertebrate species and a critical assessment of the sustainability of feed production technology. It will also assess and discuss the relationship between clinical nutrition and animal health and the importance of nutrition in developing optimal animal welfare.				
<b>Programme module type:</b>	Compulsory for Postgraduate Certificate in Sustainable Aquaculture (Vertebrates). Either BL5801 or (BL5806 and BL5807) is compulsory for Sustainable Aquaculture Postgraduate Diploma and MSc Programmes Optional as a stand alone module.			
<b>Anti-requisite(s):</b>	BL5801			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 hours of lectures (x 5 weeks) and 3 hours of tutorials (x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 60%, Coursework = 40%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

## Biology - Sustainable Aquaculture - Certificates - 2017/8 - August 2017

BL5808 Health and Disease - Invertebrates				
<b>SCOTCAT Credits:</b>	10	SCQF Level 11	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides advanced knowledge of the factors that influence disease processes in cultured invertebrate species including viral, bacterial, parasitic and non-infectious disease. The wide range of specific causes of disease and pathology in farmed species will be discussed and the importance of operations and management on the development and impact of disease in optimising welfare and developing sustainable and ethical aquaculture practices will be assessed critically.				
<b>Programme module type:</b>	Compulsory for Postgraduate Certificate in Sustainable Aquaculture (Invertebrates). Either BL5803 or (BL5808 and BL5809) is compulsory for Sustainable Aquaculture Postgraduate Diploma and MSc Programmes Optional as a stand alone module.			
<b>Anti-requisite(s):</b>	BL5803			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 hours of lectures (x 5 weeks) and 3 hours of tutorials (x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 60%, Coursework = 40%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

BL5809 Health and Disease - Vertebrates				
<b>SCOTCAT Credits:</b>	10	SCQF Level 11	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides advanced knowledge of the factors that influence disease processes in cultured fish species including viral, bacterial, parasitic and non-infectious disease. The wide range of specific causes of disease and pathology in farmed species will be discussed and the importance of operations and management on the development and impact of disease in optimising fish welfare and developing sustainable and ethical aquaculture practices will be assessed critically.				
<b>Programme module type:</b>	Compulsory for Postgraduate Certificate in Sustainable Aquaculture (Vertebrates). Either BL5803 or (BL5808 and BL5809) is compulsory for Sustainable Aquaculture Postgraduate Diploma and MSc Programmes Optional as a stand alone module.			
<b>Anti-requisite(s):</b>	BL5803			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 hours of lectures (x 5 weeks) and 3 hours of tutorials (x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 60%, Coursework = 40%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

Optional modules:

BL5802 Management, Husbandry and Sustainability				
<b>SCOTCAT Credits:</b>	10	SCQF Level 11	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides advanced knowledge of production management and business management of modern aquaculture practices. Environmental, social and economic sustainability of aquaculture depends on an understanding of the interactions of differing but complementary management structures.				
<b>Programme module type:</b>	Compulsory for Sustainable Aquaculture Postgraduate Diploma and MSc Programmes. Optional for both Sustainable Aquaculture Postgraduate Certificates. Optional as a stand alone module.			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 hours of lectures (x 5 weeks) and 3 hours of tutorials (x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 40%, Coursework = 60%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

BL5804 Markets, Products, Processing and Food Safety				
<b>SCOTCAT Credits:</b>	10	SCQF Level 11	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides advanced knowledge of aquaculture markets, products, processing and food safety. Understanding the processes of ensuring the safety and quality of aquaculture products is central to establishing efficient and sustainable aquaculture practices.				
<b>Programme module type:</b>	Compulsory for Sustainable Aquaculture Postgraduate Diploma and MSc Programmes. Optional for both Sustainable Aquaculture Postgraduate Certificates. Optional as a stand alone module.			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 hours of lectures (x 5 weeks) and 3 hours of tutorials (x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 40%, Coursework = 60%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

BL5805 Local and Global Impacts of Aquaculture				
<b>SCOTCAT Credits:</b>	10	SCQF Level 11	<b>Semester:</b>	Distance learning
<b>Planned timetable:</b>	To be arranged.			
This module provides advanced knowledge of the environmental impact of aquaculture practices on both local and global scales. Understanding the environmental impact of aquaculture practices is central to improving and developing sustainable aquaculture.				
<b>Programme module type:</b>	Compulsory for Sustainable Aquaculture Postgraduate Diploma and MSc Programmes. Optional for both Sustainable Aquaculture Postgraduate Certificates. Optional as a stand alone module.			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 hours of lectures (x 5 weeks) and 3 hours of tutorials (x 3 weeks).			
<b>Assessment pattern:</b>	2-hour Written Examination = 40%, Coursework = 60%			
<b>Module coordinator:</b>	Dr N Hazon			
<b>Module teaching staff:</b>	Dr J A David			

