Swansea University
Prifysgol Abertawe

FACULTY OF SCIENCE AND ENGINEERING

UNDERGRADUATE STUDENT HANDBOOK

YEAR 2 (FHEQ LEVEL 5)

BSC ENVIRONMENTAL SCIENCE AND THE CLIMATE EMERGENCY
UNDERGRADUATE PROGRAMMES

SUBJECT SPECIFIC
PART TWO OF TWO
MODULE AND COURSE STRUCTURE
2022-23

DISCLAIMER

The Faculty of Science and Engineering has made all reasonable efforts to ensure that the information contained within this publication is accurate and up-to-date when published but can accept no responsibility for any errors or omissions.

The Faculty of Science and Engineering reserves the right to revise, alter or discontinue degree programmes or modules and to amend regulations and procedures at any time, but every effort will be made to notify interested parties.

It should be noted that not every module listed in this handbook may be available every year, and changes may be made to the details of the modules. You are advised to contact the Faculty of Science and Engineering directly if you require further information.

The 22-23 academic year begins on 19 September 2022

Full term dates can be found here

DATES OF 22-23 TERMS

19 September 2022 – 16 December 2022

9 January 2023 – 31 March 2023

24 April 2023 – 09 June 2023

SEMESTER 1

19 September 2022 – 27 January 2023

SEMESTER 2

30 January 2023 – 09 June 2023

SUMMER

12 June 2023 – 22 September 2023

IMPORTANT

Swansea University and the Faculty of Science of Engineering takes any form of **academic misconduct** very seriously. In order to maintain academic integrity and ensure that the quality of an Award from Swansea University is not diminished, it is important to ensure that all students are judged on their ability. No student should have an unfair advantage over another as a result of academic misconduct - whether this is in the form of **Plagiarism**, **Collusion** or **Commissioning**.

It is important that you are aware of the **guidelines** governing Academic Misconduct within the University/Faculty of Science and Engineering and the possible implications. The Faculty of Science and Engineering will not take intent into consideration and in relation to an allegation of academic misconduct - there can be no defence that the offence was committed unintentionally or accidentally.

Please ensure that you read the University webpages covering the topic – procedural guidance here and further information here. You should also read the Faculty Part One handbook fully, in particular the pages that concern Academic Misconduct/Academic Integrity. You should also refer to the Faculty of Science and Engineering proof-reading policy and this can be found on the Community HUB on Canvas, under Course Documents.

Welcome to the Faculty of Science and Engineering!

Whether you are a new or a returning student, we could not be happier to be on this journey with you.

This has been a challenging period for everyone. The COVID-19 pandemic has prompted a huge change in society as well as how we deliver our programmes at Swansea University and the way in which you study, research, learn and collaborate. We have been working hard to make sure you will have or continue to having an excellent experience with us.

We have further developed some exciting new approaches that I know you will enjoy, both on campus and online, and we cannot wait to share these with you.

At Swansea University and in the Faculty of Science & Engineering, we believe in working in partnership with students. We work hard to break down barriers and value the contribution of everyone. Our goal is an inclusive community where everyone is respected, and everyone's contributions are valued. Always feel free to talk to academic staff, administrators, and your fellow students - I'm sure you will find many friendly helping hands ready to assist you.

We all know this period of change will continue and we will need to adapt and innovate to continue to be supportive and successful. At Swansea we are committed to making sure our students are fully involved in and informed about our response to challenges.

In the meantime, learn, create, collaborate, and most of all – enjoy yourself!

Professor Johann (Hans) Sienz
Interim Pro-Vice Chancellor/Interim Executive Dean
Faculty of Science and Engineering

Faculty of Science and Engineering	
Interim Pro-Vice Chancellor/Interim Executive Dean	Professor Johann Sienz
Head of Operations	Mrs Ruth Bunting
Associate Dean – Student Learning and Experience (SLE)	Professor Paul Holland
School of Biosciences, Geography and Physics **Head of School: Siwan Davies**	
School Education Lead	Laura Roberts
Head of Geography	Kevin Rees
Geography Programme Director	Joanne Maddern
Year Coordinators	Year 0 – Dr Kath Ficken Year 1 – Dr Kath Ficken Year 2 – Dr Nick Felstead Year 3 – Professor Neil Loader PGT – Dr Iain Robertson

STUDENT SUPPORT

The Faculty of Science and Engineering has two **Reception** areas - Engineering Central (Bay Campus) and Wallace 223c (Singleton Park Campus).

Standard Reception opening hours are Monday-Friday 9am-5pm.

The **Student Support Team** provides dedicated and professional support to all studentsin the Faculty of Science and Engineering. Should you require assistance, have any questions, be unsure what to do or are experiencing difficulties with your studies or in your personal life, our team can offer direct help and advice, plus signpost you to further sources of support within the University. There are lots of ways to get information and contact the team:

Email: studentsupport-scienceengineering@swansea.ac.uk (Monday–Friday, 9am–5pm)

Call: +44 (0) 1792 295514 and 01792 6062522 (Monday-Friday, 10am–12pm, 2–4pm).

Zoom: By appointment. Students can email, and if appropriate we will share a link to our Zoom calendar for students to select a date/time to meet.

The current student **webpages** also contain useful information and links to otherresources:

https://myuni.swansea.ac.uk/fse/coe-student-info/

READING LISTS

Reading lists for each module are available on the course Canvas page and are also accessible via http://ifindreading.swan.ac.uk/. We've removed reading lists from the 22-23 handbooks to ensure that you have access to the most up-to-date versions. Access to print material in the library may be limited due to CV-19; your reading lists will link to on-line material whenever possible. We do not expect you to purchase textbooks, unless it is a specified key text for the course.

THE DIFFERENCE BETWEEN COMPULSORY AND CORE MODULES

Compulsory modules must be **pursued** by a student.

Core modules must not only be **pursued**, but also **passed** before a student can proceed to the next level of study or qualify for an award. Failures in core modules must be redeemed.

Further information can be found under "Modular Terminology" on the following link - https://myuni.swansea.ac.uk/academic-life/academic-regulations/taught-guidance/essential-info-taught-students/your-programme-explained/

Year 2 (FHEQ Level 5) 2022/23
Environmental Science and the Climate Emergency
BSc Environmental Science and the Climate Emergency with a Foundation Year[F771]

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
BIO249 **Introduction to field ecology** **15 Credits** **Dr LJ Roberts/Dr AP Devine/Dr DW Forman/Dr SC Hocking/...**	**BIO232** **Plant Ecology** **15 Credits** **Dr PJ Neyland/Dr AP Devine/Prof CA Froyd**
Total 120 Credits	

Optional Modules
Choose exactly 20 credits
GEC277 is the welsh equivalent of GEG277

GEC277	Dulliau ac Ymagweddau Daearyddol	Dr RH Meara/Dr A Closs Stephens	TB1	20
GEG277	Geographical Methods and Approaches	Dr KJ Ficken/Prof SH Doerr/Dr KH Halfacree/..	TB1	20

And
Choose exactly 20 credits
GEC278 is the welsh equivalent of GEG278

GEC278	Sgiliau Dadansoddi Data a Pharatoi Traethawd Hir	Dr A Closs Stephens/Dr RH Meara	TB2	20
GEG278	Data Analysis and Dissertation Preparation Skills	Dr NJ Felstead/Dr A Closs Stephens/Dr KJ Ficken/..	TB2	20

And
Choose exactly 20 credits
Scilly Isles is the allotted trip for Environmental Science students

GEG252SI	Geographical Fieldwork Skills: Isles of Scilly	Dr AP Devine/Dr SL Cornford/Prof SM Davies/..	TB2	20

And
Choose exactly 30 credits
GEC276 is the welsh equivalent of GEG276

GEC276	Systemau Gwybodaeth Ddaearyddol	Dr RH Meara	TB2	20
GEG211	Glacial Environments	Dr J Hiemstra	TB1	10
GEG221	Regional Economic Development	Dr KG Rees	TB1	10
GEG230	Social Geographies	Prof SV Shubin	TB1	10
GEG236	Earth from Space: Monitoring Global Environmental Change	Prof PRJ North	TB1	10
GEG273	Geographies of Climate Action and Activism	Dr AL Pigott	TB1	10
GEG276	Introduction to Geographic Information Systems	Prof AJ Luckman	TB2	20
GEG283	Sustainable Land Management	Dr E Urbanek/Prof SH Doerr	TB1	10

Year 2 (FHEQ Level 5) 2022/23
Environmental Science and the Climate Emergency

BSc Environmental Science and the Climate Emergency[F770]
BSc Environmental Science and the Climate Emergency with a Year Abroad[F772]
BSc Environmental Science and the Climate Emergency with a Year in Industry[F773]

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
BIO249 **Introduction to field ecology** **15 Credits** **Dr LJ Roberts/Dr AP Devine/Dr DW Forman/Dr SC Hocking/...**	**BIO232** **Plant Ecology** **15 Credits** **Dr PJ Neyland/Dr AP Devine/Prof CA Froyd**
Total 120 Credits	

Optional Modules

Choose exactly 20 credits
GEC277 is the welsh equivalent of GEG277

GEC277	Dulliau ac Ymagweddau Daearyddol	Dr RH Meara/Dr A Closs Stephens	TB1	20
GEG277	Geographical Methods and Approaches	Dr KJ Ficken/Prof SH Doerr/Dr KH Halfacree/..	TB1	20

And

Choose exactly 20 credits
GEC278 is the welsh equivalent of GEG278

GEC278	Sgiliau Dadansoddi Data a Pharatoi Traethawd Hir	Dr A Closs Stephens/Dr RH Meara	TB2	20
GEG278	Data Analysis and Dissertation Preparation Skills	Dr NJ Felstead/Dr A Closs Stephens/Dr KJ Ficken/..	TB2	20

And

Choose exactly 20 credits
Scilly Isles is the allotted trip for Environmental Science students

GEG252SI	Geographical Fieldwork Skills: Isles of Scilly	Dr AP Devine/Dr SL Cornford/Prof SM Davies/..	TB2	20

And

Choose exactly 30 credits
GEC276 is the welsh equivalent of GEG276

GEC276	Systemau Gwybodaeth Ddaearyddol	Dr RH Meara	TB2	20
GEG211	Glacial Environments	Dr J Hiemstra	TB1	10
GEG221	Regional Economic Development	Dr KG Rees	TB1	10
GEG230	Social Geographies	Prof SV Shubin	TB1	10
GEG236	Earth from Space: Monitoring Global Environmental Change	Prof PRJ North	TB1	10
GEG273	Geographies of Climate Action and Activism	Dr AL Pigott	TB1	10
GEG276	Introduction to Geographic Information Systems	Prof AJ Luckman	TB2	20
GEG283	Sustainable Land Management	Dr E Urbanek/Prof SH Doerr	TB1	10

BIO232 Plant Ecology

Credits: 15 Session: 2022/23 January-June

Pre-requisite Modules: BIO111

Co-requisite Modules:

Lecturer(s): Dr PJ Neyland, Dr AP Devine, Prof CA Froyd

Format: In person lectures (~16 hours), computer practicals (2 hours), field trips (8 hours) and drop-in sessions. Contact Hours will be delivered through a blend of live activities on-campus.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. In person lectures (~16 hours), computer practicals (2 hours), field trips (8 hours) and drop-in sessions. Contact Hours will be delivered through a blend of live activities on-campus. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Composite, lectures and practicals

Module Aims: This module provides a holistic approach to plant ecology, including both classical ecological theory and practical surveying techniques. Students will become familiar with six major themes; plant formations and biomes, synecology, autecology, plant geography, paleoecology and modern plant ecology. Students will also be trained in plant taxonomy, field surveying techniques, data analysis and report writing that complement a future career in ecology, conservation or consultancy

Module Content:

This module will be taught holistically, adopting both a classical approach, which introduces students to plant ecological theory, together with a practical approach, which will impart students with transferable skills that are necessary for a career in ecology. The syllabus will be split into six major themes:

1. Plant formations and global vegetation patterns
 - Biomes, climate and plant distribution, productivity and reproduction, UK habitats
2. Synecological studies
 - Succession (sand dune and salt marsh), Clements and Gleason, plant communites and phytosociology, Braun Blanquet, National Vegetation Classification, Phase 2 community surveys, bryophyte communities
3. Autecological studies
 - Clapham and the Flora of the British Isles, comparative plant ecology; a functional approach (Grime), plant ecology data bases (e.g. Fitter), Ellenberg indicator values, Biological Flora of the British Isles, autecology of individual species
4. Plant Geography
 - Soils, distribution maps, distribution patterns (endemic versus disjunct), biogeographical elements
5. Palaeoecology
- Long-term vegetation dynamics of the continents, geologic timescales and ice ages, Holocene (last 11,000 years) history of the British flora, palaeoecological methodologies (palynology, chronology, sediments, proxies), tropical forest stability, human impact, natural disturbance, applications of long-term ecological information to conservation
6. Modern themes in plant ecology
- Invasive species, identification, legislation and mangement

Practicals

• Field sampling techniques and quantitative vegetation data collection
• Taxonomy and identification - excursion to National Botanic Garden Wales
• PC data analysis workshop

Intended Learning Outcomes: At the end of the module students will be able to:

LO1) Recognise plant formations and biomes
LO2) Classify important UK habitats
LO3) Compare and contrast synecology (plant communities) and autecology (single species)
LO4) Describe plant biogeography and distribution patterns
LO5) Describe history of the British flora and paleoecology
LO6) Undertake ecological surveys; interpret and analyse ecological data and produce a professional report
LO7) Outline modern plant ecology: identification, legislation and management of invasive species

Assessment:	Examination 1 (50%) Coursework 1 (20%) Coursework 2 (30%)

Assessment Description: 50% examination (1.5 hours; 30 MCQ plus one essay question)
50% coursework including:
CW1 Presentation/posters/scrapbook - plant identification, distribution and conservation (40% of coursework mark)
CW2 Woodland plant communities - ecological report, data analysis and interpretation data presentation (60% of coursework mark)

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Formative written feedback on coursework.
Contact with lecturer as required.
Summative mark for exams.

Failure Redemption: Re-submission of coursework, re-sit of examination

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

Normally available to elective, visiting or exchange students. Please note that any failures are redeemed during the August resit period, so you must ensure your availability.

BIO249 Introduction to field ecology

Credits: 15 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr LJ Roberts, Dr AP Devine, Dr DW Forman, Dr SC Hocking, Dr PJ Neyland, Dr GR Thomas

Format: Five day residential field based practicals
Contact Hours will be delivered through a blend of field trips, live activities, online and on-campus

Delivery Method: Field based practicals, lectures, demonstrations, workshops

Module Aims: This field course comprises practical work employing ecological techniques appropriate to sample biodiversity and environmental parameters from a range of terrestrial and freshwater habitats (freshwater systems, woodlands, sand dunes). You will learn techniques for the identification of species, practice recording accurate field notes, and gain experience in the analysis and presentation of ecological data. Furthermore, you will be able to recognise different British temperate wildlife, habitats and indicator species associated with them.

This five-day course will be residential and delivered in Stackpole National Trust Field centre in September.

Module Content: Prior to undertaking the field course asynchronous activities have been provided on Canvas;

Introduction to UK Biodiversity:
- Geological Factors that Influence UK habitats
- Introduction to UK habitats
- Introduction to UK terrestrial vertebrates

Field course syllabus:
Woodland ecology and sampling techniques
Freshwater ecology and sampling techniques
Grassland/sand dune ecology and sampling techniques
National Park Biodiversity Assessment

Workshops:
Bat ecology
Conservation volunteering
Biological monitoring

Intended Learning Outcomes: At the end of the module the student will:

1) Identify, describe and discuss a range of different UK temperate habitats, their associated biological diversity and wildlife
2) Work as a team and an individual to collect ecological field data using appropriate sampling techniques and be able to demonstrate, discuss and evaluate these techniques thereafter
3) Employ a range of employer relevant field techniques to accurately identify species such as dichotomous keys and field guides
4) Observe and record key scientific information on habitat and species features in a comprehensive field book
5) Analyse, present, interpret and appraise ecological data and synthesis into a comprehensive report.

Assessment: Coursework 1 (30%)
Coursework 2 (30%)
Coursework 3 (40%)

Assessment Description: Coursework 1: Field notebook
Coursework 2: Grassland or Woodland Report
Coursework 3: Freshwater Report

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Students will be provided with individual electronic feedback on submitted field reports and notebooks.

Failure Redemption: Resubmission of failed coursework or alternative assessment for the field notebook

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online, on-campus and in the field.

This is a Year 2 Biosciences module which is compulsory for biology students and will be held in September 2023 and will involve a residential field course to Stackpole National Trust Field Center.

The course is not open to visiting or exchange students due to the time of delivery. The course is run out of term time in September

GEC276 Systemau Gwybodaeth Ddaearyddol

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr RH Meara

Format: 11 hours lectures
22 hours computer lab exercises

Delivery Method: Lecture and computer practical

Module Aims: A Geographic Information System (GIS) is a computer-based technology for solving problems of a geographical nature – i.e. involving spatial relationships between people, places and objects. It can be applied to a wide range of disciplines within geography and has developed to provide a means to quickly and professionally produce maps from geospatial data. This module provides a basic grounding in GIS from the nature of spatial information, through the use of GIS in social and physical geography contexts, to the application of computers to solving complex geographical problems. Most importantly, it allows hands-on experience in using Quantum GIS (QGIS), the leading open-source GIS software package, and therefore provides a valuable skill for research and the for workplace.

Module Content: 1. Module introduction
2. A digital model of the real world
3. Comparing raster and vectors data models
4. Coordinates and geographic reference systems
5. Geographic presentation and map design
6. GIS data sources and formats
7. Digital land surface topography
8. The Global Positioning System (GPS)
9. Route-finding in a network
10. The future of GIS

Intended Learning Outcomes: • A broad understanding of the purpose and scope of Geographical Information Systems
• An appreciation of the way in which geographical entities can be represented in a computer
• A critical awareness of the increasing role of GIS in government, commerce and science
• The ability to use QGIS software to explore and analyse a range of geospatial data
• The ability to present geospatial data as a well constructed and complete map
• A basic understanding of GIS-related technologies such as route-finding and GPS
• An appreciation of the future direction of GIS in geography and beyond
All marking will be carried out on-line

Assessment: Coursework 1 (20%)
Coursework 2 (30%)
Coursework 3 (20%)
Coursework 4 (30%)

Assessment Description: Coursework 1: Map figure with caption using given datasets.
Project: Series of maps and captions to present and justify the best location for a windfarm in a region of Wales.

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Students will receive feedback on each piece of coursework within 3 weeks of the submission deadline.
Each student will receive individual comments on their work.
All feedback will be provided online

Failure Redemption: Resubmit failed components

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

Nid yw ar gael i fyfyrwyr ymweld a chyfnewid.

Available to visiting and exchange students.

GEC277 Dulliau ac Ymagweddau Daearyddol

Credits: 20 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr RH Meara, Dr A Closs Stephens

Format: Lectures: 11 hours
Practical Classes: 21 hours (desk and field based)

Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Cyflwynir y modiwl craidd hwn drwy gyfuniad o ddarlithoedd a sesiynau ymarferol (gan gynnwys rhywfaint o waith grp) ar Gampws Singleton ac mewn safleoedd maes lleol amrywiol. Caiff myfyrwyr ddewis o'r amrywiaeth o brosiectau sydd o ddiddordeb iddynt.

This core module will be delivered through a combination of lectures and practical sessions (including some group work) on Singleton campus and at various local field sites. Students will be able to select from the range of projects that interest them.

Module Aims:

Mae'r modiwl 20 credyd craidd hwn yn cyflwyno'r amrywiaeth o ymagweddau at Ddaearyddiaeth Ddynol a Ffisegol a geir, gan ddarparu trosolwg o'r prif ddulliau a ddefnyddir yn y ddisgyblaeth. Cyflwynir y paradeimau hyn a rhoddir cyfle i chi bwyso a mesur pa fathau o ddulliau sy'n cyd-fynd â'r ymagweddau daearyddol hyn. Mae'r modiwl yn cyflwyno dulliau data allweddol a'u gwreiddiau damcaniaethol a bydd cyfle i 'ymarfer' y dulliau allweddol hyn mewn gweithdai estynedig – yn yr ystafell ddosbarth ac yn y maes.

This core 20 credit module introduces the variety of approaches to Human and Physical Geography that exist, providing an overview of the key methods used in the discipline. These paradigms will be introduced and then you are given the opportunity to 'think through' what kinds of methods chime with these geographical approaches. The module introduces key data methods and their theoretical roots, with an opportunity to 'practice' these key methods extended workshops - both desk based and in the field.

Module Content:

Mae'r modiwl hwn yn cyflwyno rhai o'r prif ddulliau ymchwil a ddefnyddir ar hyn o bryd gan ddaearyddwyr dynol a ffisegol, ynghyd ag ystyriaethau cynllunio ymchwil, damcaniaethol a moesegol. Mae'r modiwl yn cynnwys darlithoedd a hyfforddiant ymarferol a gofynnir i'r myfyrwyr gynnal prosiect ymchwil mewn grwpiau bach ar y diwedd.
Bydd y maes llafur yn cynnwys:
Darlithoedd ar gynllun ymchwil; darlithoedd ar ddata meintiol ac ansoddol; darlithoedd ar foeseg ymchwil; sesiynau ymarferol ar holiaduron ac arolygon; data'r Cyfrifiad a ffynonellau eilaidd; y dull gwyddonol; prosiectau maes daearyddiaeth ffisegol; sgiliau adolygu llenyddiaeth.

This module introduces students to some of the main research methods in currently employed by human and physical geographers, along with research design, philosophical and ethical considerations. The module includes lectures and practical training, and culminates in a research project conducted in small-groups. The syllabus will include:
Research Design lectures;
Quantitative and Qualitative data lectures;
Research Ethics lectures;
Questionnaire surveys practicals;
Census data and secondary sources;
The scientific method;
Physical Geography Field Projects;
Literature Review Skills.

Intended Learning Outcomes:

Dangos ymwybyddiaeth o ymchwil effeithiol, gan gynnwys nodi cwestiwn, nodau ac amcanion ymchwil, cynllun ymchwil a dewis dull ymchwil priodol.
Arddangos gwerthfawrogiad o'r cyd-destunau cymdeithasol amrywiol lle defnyddir dulliau ymchwil mewn Daearyddiaeth Ddynol a'r cyd-destunau amgylcheddol lle defnyddir dulliau ymchwil mewn Daearyddiaeth Ffisegol.
Dangos y gallu i werthuso priodoldeb pob dull mewn cyd-destunau ymchwil gwahanol, boed yn yr ystafell ddosbarth neu yn y maes.
Dangos y gallu i adolygu'r llenyddiaeth mewn maes penodol er mwyn lleoli dull mewn cefndir gwyddonol neu wyddor gymdeithasol benodol.

By the end of this module you should be able to:
Demonstrate an awareness of effective research, including identification of a research question, aims and objectives, a research design and selection of an appropriate research methods.
Exhibit an appreciation of the varying social contexts within which research methods are used in Human Geography and the environmental contexts within which research methods are used in Physical Geography.
Illustrate the ability to evaluate the appropriateness of each method in different research contexts, whether desk or field based.
Evidence the ability to review the literature in a chosen field in order to situate a method within a particular scientific or social science background.

Assessment: Coursework 1 (50%)
Coursework 2 (50%)

Assessment Description:
50% Adolygiad llenyddiaeth ar sail maes astudio a ddewiswyd
50% Portffolio ar sail pynciau prosiect a ddewiswyd

50% Literature review

50% Portfolio based on chosen project topic

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback:
Rhoddir adborth ysgrifenedig parhaus ar asesiadau yn electronig, gan ddefnyddio templed safonol a blwch sylwadau. Darperir adborth yn y dosbarth hefyd, drwy werthuso gan gymheiriaid a¿r addysgwr, ar sail cryfderau a gwendidau cyffredin.

Continual assessment feedback is given in writing electronically using a standard rubric and comments box. Feedback also to be provided in class through peer evaluation and from the instructor on common strengths and weaknesses.

Failure Redemption: Ailsefyll arholiad neu ailgyflwyno gwaith asesiad parhaus, p¿un bynnag sy¿n berthnasol.

Resit examination or resubmit continual assessment whichever is applicable

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

Nid yw ar gael i fyfyrwyr ymweld a chyfnewid.

Not available to visiting and exchange students.

GEC278 Sgiliau Dadansoddi Data a Pharatoi Traethawd Hir

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr A Closs Stephens, Dr RH Meara

Format: Darlithoedd/gweithdai: 24 hours
Gwaith maes: 8 awr
Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Addysgir y modiwl hwn drwy gyfuniad o ddarlithoedd, sesiynau ymarferol a gweithdai cynllunio traethawd estynedig.

This module is to be delivered through a mixture of lectures, practical sessions and dissertation planning workshops.

Module Aims: Mae'r modiwl hwn yn adeiladu ar wybodaeth y myfyrwyr am ddulliau ymchwil gymdeithasol a dulliau amgylcheddol (a addysgir yn GEG277) i lunio cynnig am draethawd estynedig. Mae'r modiwl yn canolbwyntio ar sgiliau allweddol i gynllunio a pharatoi am draethawd estynedig a gyflwynir ar y cyd â'r Ganolfan Llwyddiant Academaidd, megis rheoli amser, meddwl yn greadigol ac yn feirniadol a datblygu ffocws, ysgrifennu cynnig etc. Mae'r modiwl yn canolbwyntio hefyd ar ddadansoddi data ansoddol a meintiol a sut i ddefnyddio data'n effeithiol wrth baratoi am brosiect traethawd estynedig yn y flwyddyn olaf.

This module builds upon student knowledge of social research methods and environmental methods (delivered in GEG277) through to the formulation of a dissertation proposal. The module focuses on key dissertation planning and preparation skills delivered in association with the Centre for Academic Success (CAS) such as time management, creative and critical thinking and developing a focus, writing a proposal etc.The module also focuses on qualitative and quantitative data analysis and how to use data effectively in preparedness for a final year dissertation project.

Module Content: Darlith cyflwyno/paratoi: y pwnc ymchwil, y broses a disgwyliadau
Llunio cwestiwn ymchwil, nodau, amcanion a chynllun ymchwil
Dewis a datblygu eich dulliau casglu data / arolwg / rhannu tasgau mewn grp
Casglu data sylfaenol (gwaith maes mewn grp / sesiwn cymorth a chyngor
Codeiddio a rhannu data sylfaenol /sesiwn cymorth a chyngor
Dadansoddi data meintiol
Dadansoddi data ansoddol
Sesiwn cymorth a chyngor
Llunio a chyflwyno adroddiad ymchwil

Introductory / preparatory lecture: the research topic, process and expectations
Formulation of research question, aims, objectives and research design
Selecting and developing your data collection methods / survey / group division of labour
Primary data collection (group fieldwork) / help and advice session
Codifying and sharing of primary data / help and advice session
Quantitative data analysis
Qualitative data analysis
Help and advice session
Production and submission of research report

Intended Learning Outcomes: Erbyn diwedd y modiwl hwn, dylech allu:
• Dangos ymwybyddiaeth o natur fwriadus a strwythuredig ymchwil effeithiol, gan gynnwys nodi cwestiwn, nodau ac amcanion ymchwil, cynllun ymchwil a dewis dull ymchwil priodol;

• Datblygu cynnig ar gyfer darn o ymchwil ddaearyddol sy'n seiliedig ar gysyniad ar ffurf cynnig traethawd ymchwil;

• Dangos meistrolaeth o amrywiaeth o dechnegau addas ar gyfer dadansoddi data meintiol ac ansoddol;

By the end of this module you should be able to:
• Demonstrate an awareness of the considered and structure nature of effective research, including identification of a research question, aims and objectives, a research design and selection of an appropriate research method;
• Develop a proposal for a conceptually grounded piece of geographical research in the form of a dissertation proposal;
• Show mastery of a range of suitable techniques for the analysis of quantitative and qualitative data;

Assessment: Coursework 1 (40%)
Coursework 2 (40%)
Coursework 3 (20%)

Assessment Description: Gwaith cwrs 1: Prosiect a phoster (ffocws dadansoddi data). 1,500 o eiriau a phoster.

Gwaith cwrs 2: Cynnig am draethawd estynedig (gyda'r opsiwn i gael adborth ffurfiannol ar y drafft cyntaf). 1,500 o eiriau.

Gwaith Cwrs (Dadansoddi data) – 20%

Coursework 1: 1 project+1 poster (data analysis focus). 1,500 words plus poster.
Coursework 2: dissertation proposal (with option of formative feedback on first draft). 1,500 words.
Coursework 3 (Data Analysis)

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Adborth unigol a ddarperir yn electronig, o natur ffurfiannol a chrynodol

Individual typed electronic feedback which is formative and summative.

Failure Redemption: Ailgyflwyno cydrannau yn ôl yr angen.

Resubmit components as required.

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

Nid yw'r modiwl yma ar gael i fyfyrwyr cyfnewid na'r rheini sy'n ymweld dros dro.

GEG211 Glacial Environments

Credits: 10 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr J Hiemstra

Format: 15 hours lectures and 6 hours of seminars
Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Lectures and seminars on campus.

Module Aims: This module provides a comprehensive examination of processes, sediments and landforms associated with glacial, glacifluvial and glacilacustrine activity. It considers aspects of both past (Quaternary) and present-day glacial environments. The module also introduces basic glaciological concepts such as glacier mass balance, transformation of snow to ice, glacier hydrology and glacier thermal regime, and thus provides a foundation for Level 3 module GEG344 (Glaciology). The basic glaciological concepts are used to illustrate their implications for ice movement, glacial erosion and glacial deposition, and hence, their role in creating 'glacial' landscapes.
Teaching and Learning will be conducted via a combination of lectures, student-led seminars (not assessed) and fieldwork. The fieldwork elaborates on skills and experience acquired in the GEG108P module. The module is assessed through an May/June examination (1 from 3 essay questions, 50%), a poster (40%) and an individual oral 3-minute presentation (10%), based on data collected as a group in a guided fieldwork or laboratory exercise.

Module Content: Growth, development and behaviour of glacier ice are discussed (1 lectures).

Key components of water storage in glacial systems are described followed by an introduction to glacial hydrology (3 lectures).

Adoption of the landsystem-approach for studying ice-marginal, subglacial, glacifluvial and glacilacustrine environments, together with the most important processes, landforms and sediments are considered (6 lectures).

Processes of glacial erosion are described followed by the resulting landforms, which are considered with respect to scale (2 lectures).

Glacial depositional landforms are considered according to their orientation with respect to ice flow movement (2 lectures).

Intended Learning Outcomes:
At the end of this module the student should be able to:

1 Identify differences between temperate and cold ice masses in terms of movement characteristics.
2 Identify the different mechanisms of glacial erosion and present a reasoned account as regards their operation.
3 Discuss the form and typical dimensions of features and landforms formed by glacial erosion.
4 Evaluate critically different published views concerning the origins of various glacial erosional forms.
5 Discuss the typical locations, forms and dimensions of glacial depositional landforms.
6 Evaluate critically different published views concerning the origins of various glacial depositional features.
7 Describe the processes involved in the transformation from snow to glacier ice.
8 Identify and discuss the physical processes and factors that control glacier mass balance.
9 Describe in detail the basic principles of glacial hydrology.
10 Identify the role of water in the dynamics of glacier systems.
11 Discuss the range of glacifluvial processes and identify the products.
12 Discuss the range of glacilacustrine processes and identify the products.

Assessment: Examination 1 (50%)
Coursework 1 (40%)
Oral Examination (10%)

Resit Assessment: Examination (Resit instrument) (100%)

Assessment Description: One-hour, end-of-term examination. One from three essay-type answers. Weighting 50%

Coursework 1: poster. Weighting 40%.
Coursework 2: conference-style pitch (3-minute), Weighting 10%

Re-sit examination: two-hour exam, two essay-type answers from six. Weighting 100%.

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Students will receive examination feedback after exams (tutorial session). Continual assessment feedback is given in writing on standard departmental feedback forms. Additional oral feedback available on request.

Failure Redemption: Re-sit examination (2 hours instead of 1).

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

Available to visiting and exchange students, who are expected to be in Swansea for the exam.

GEG221 Regional Economic Development

Credits: 10 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr KG Rees

Format: 18 hours lectures
Contact Hours will be delivered through a blend of on-campus teaching (as permitted) and online learning materials.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

On Campus

Module Aims: This module is concerned with issues of regional economic development and government policy. The module explores the enduring spatial economic inequalities evident across the regions of the United Kingdom and how successive governments have intervened to alleviate these disparities. The ideological debate around whether, and on what basis, governments should intervene in the economy is examined. This debate is exemplified by contrasting the interventionist regional economic policies of post-war Britain whcih emphasized the mobility of labour and capital (firms), with more contemporary policies which have emphasized endogenous growth within regions through the promotion of entrepreneurship and innovation rather than equality between regions. The module concludes with an exploration and evaluation of policy approaches for the economic development of Wales.

Module Content: Regional economic growth, disparity and intervention
• Introduction: what is Regional Economic Development?
• The North – South Divide: UK regional disparities in historical context
• Contemporary indicators of regional economic disparities in the UK
• How reliable is unemployment as an indicator of regional disparities?
• Causes of spatial economic disparities: theoretical perspectives.
• The case for and against government intervention
• Measuring regional disparities using ONS data

Factor mobility approaches to tackling regional economic disparities:
• Labour mobility policies: “Get on your bike!”
• Capital mobility policies: the Assisted Areas strategy and inward investment

Endogenous approaches to tackling regional economic disparities:
• Entrepreneurship: the key to regional prosperity?
• Innovation: Science park policy
• Industrial Clusters and the role of proximity
• Case study: economic development in Wales

Intended Learning Outcomes: At the end of this module students should be able to:
• discuss alternative explanations of the causes and endurance of spatial inequalities both theoretically and within the context of the UK economy.
• engage in ideological debates concerning government intervention in the economy.
• compare and assess the effectiveness of a selection of policy approaches implemented within the UK aimed at addressing spatial inequalities;
• discuss the strengths and weaknesses of factor (labour and capital) mobility approaches to regional economic development and inequalities;
• illustrate and discuss the merits of economic policies emphasizing endogenous growth by promoting entrepreneurship and innovation.
• demonstrate competence in collecting relevant socio-economic data from the Office of National Statistics website
• utilise relevant data to discuss indicators and influences of regional economic disparities.

Assessment: Examination 1 (50%)
Coursework 1 (50%)

Assessment Description: One hour examination
One piece of continual assessment (student choice of poster or seminar)

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Feedback on the continual assessment submission is provided to each student electronically on Canvas using a rubric and comments on the submission. Each students receives written feedback on their exam submission after the examination results are released.
Failure Redemption: resit examination or resubmit continual assessment, whichever is applicable
Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus. Available to visiting and exchange students.

GEG230 Social Geographies

Credits: 10 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Prof SV Shubin

Format:

Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Primarily on Campus

Module Aims: This module is an overview of the processes co-constructing space and social relations, providing different ways of understanding our contemporary world and how people live within it. The module explores the field of social geography across different geographical scales, and relationships and interdependencies existing between these scales, creating boundaries and connections. These scales and spaces include the body, the home, community, the street, city and nation. The module emphasizes the multiplicity of approaches, theories and arguments about human life in Social Geography, and the connections and interrelations which exist between different fields of geographical enquiry. This approach focuses on multiple economic, political and cultural interactions in varying contexts, defined via places, power relations and systems of organization and control. It encourages students to be open to this diversity of interpretations and living patterns, and to think critically about different issues related to the co-construction of space and society.

Module Content: Introduction to social geographies
• The body: body as a space
• The body: body in space and time
• The home: space and meanings
• The home: homelessness
• FILM: Thelma and Louise
• Community: lived space
• Community: imagined space
• Institutions: schools and workplace
• The street: experiences and visions
• The street: morality and exclusions
• The city: heterogeneous space
• The rural: meanings, visions, norms
• The rural: space of conflict?
The nation: identities and nationalism
• The nation: globalization
• Summary and review

Intended Learning Outcomes: By the end of this module students will be able to:
Demonstrate an awareness of and be able to evaluate the different theories and approaches human geographers have employed to make sense of space, place and society
• Explain the ways in which social identities and relations are constituted in and through different spaces at different geographical scales
• Assess the key economic, political and social activities shaping contemporary social geographies
• Demonstrate an awareness of the different ways space and society are represented through texts, discourses, visual images and moving visual texts
• Recognize and discuss the contested and provisional nature of knowledge and understanding
• Understand the diversity of specialized techniques involved in constructing different social geographies

Assessment: Examination 1 (50%)
Coursework 1 (50%)

Assessment Description: Exam 50% of your mark (choice of 1 question out of 3)
The final examination (1 hour) is a comprehensive final test: it assesses your knowledge of the subject and ability to convey your ideas. It consists of one essay question from a choice of three. Samples of the essay titles will be made available before the exam.

Essay 50 % of your mark (choice of 1 question out of 3)
Not more than 1,500 words

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Students will receive examination feedback after exams. Continual assessment feedback is given in writing on standard departmental feedback forms.

Failure Redemption: resit examination or resubmit continual assessment whichever if applicable

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

This module is available to visiting and exchange students, who must be present for the exam.

GEG236 Earth from Space: Monitoring Global Environmental Change

Credits: 10 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Prof PRJ North

Format: 20 (10 lecture + 10 small-group computer project)
Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Half lecture based and half computer based classes. On campus.

Module Aims: This module introduces the growing role of Earth Observation in Geography, in the context of monitoring global environmental change. Emphasis will be given to practical use of airborne and satellite imagery in a range of geographical applications. In addition to a grounding in the principles of remote sensing, the course will offer in-depth understanding of the use of satellite observations in the study of global change in particular of deforestation and desertification. Practical exercises will teach image processing skills and familiarity with the range of information sources available for remotely sensed imagery.

Module Content: Outline of lecture topics:
Overview and history of Earth Observation in geography.
Principles of airborne remote sensing, focusing on optical imagery and lidar.
Satellite remote sensing, focussing on Landsat imagery.
Methods for interpreting imagery and production of classified maps.
Study of deforestation using remote sensing.
Application to management and monitoring desertification.
Applications to climate change science and environmental modelling.

Example practical sessions:
Analysis of airborne and lidar aircraft imagery.
Familiarisation with different sources of satellite and aircraft imagery.
Image processing using Landsat imagery.
Interpretation and classification of imagery.
Monitoring global vegetation change.

Intended Learning Outcomes: By the end of this module students should be capable of demonstrating:

A broad understanding of the purpose and scope of Earth Observation in Geography.

A critical awareness of the range of modern geographical applications to which remote sensing contributes.

An ability to analyse remotely sensed data using image processing software.

An understanding of the technology behind satellite and aircraft imagery.

Assessment: Coursework 1 (50%)
Coursework 2 (50%)

Assessment Description:
Two items of coursework:
(i) Classification of imagery for land cover mapping
(ii) Global time series analysis

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Students will receive feedback after exams. Continual assessment feedback is given in writing on standard departmental feedback forms.

Failure Redemption: Resit examination or resubmit continual assessment whichever if applicable.

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

There are no pre- or co-requisites for this module. Available to visiting or exchange students

Module code reserved by l.hackling on 28/05/2013 11:33:09

GEG252SI Geographical Fieldwork Skills: Isles of Scilly

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr AP Devine, Dr SL Cornford, Prof SM Davies, Dr E Urbanek

Format: 60 hours in the field with 10 hours of blended learning online

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus.

5 preparatory lectures/group meetings on campus.
60 hours contact on the field course in the Isles of Scilly.

Module Aims: The module is concerned with identifying and defining climate and environment change questions within the Isle of Scilly, which serves as an example of a region with unique habitats and climate in the UK and applying relevant environmental and climate science skills, knowledge and techniques to these questions. The general aims are to observe, analyse and achieve an understanding of the varied micro-climates and habitat features of the Isle of Scilly. Students taking this module will gain experience in research design, methodologies, data analysis and presentation methods, including
seminars, posters and reports. Students taking this field course focus on both climate change, sustainable living and the environment and conduct project work appropriate to their specialism. The module comprises preparatory sessions in Swansea during teaching block 2 and one week field course, which typically runs in the last week of teaching block 2.

Module Content: Syllabus Teaching and learning will be centered on the one-week field-course to the Isles of Scilly, and supplemented by lectures and further study in Swansea before and after the field-course. Some of the learning will be undertaken in groups but, apart from where stated, the assessment will be your individual work. Assessment is via a portfolio of coursework (100%). There is no examination for this module.

Intended Learning Outcomes: On completion of the module, students should be able to do the following:
•Explain the main environmental features and past climate processes on the Isles of Scilly
•Explain the climate change and environmental challenges facing the Isles of Scilly
•Evaluate, where appropriate, the relevance of established models and theories related to climate change to local case studies
•Identify key issues facing the Isles of Scilly and assess the effectiveness of policy responses
•Use varied field methods for studying our designated field area and its landscape issues.

Assessment: Coursework 1 (50%)
Coursework 2 (30%)
Coursework 3 (20%)

Assessment Description: 1.Major Project report (50%)
2.Minor Project report (30%)
3.Field notebook (20%)

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Continual assessment feedback is given in writing on standard departmental feedback forms and electronically via Canvas or email.

Failure Redemption: Resubmit continual assessment.

Additional Notes: Module code reserved by r.muxworthy on 21/08/2020 10:54:38

Delivery of both teaching and assessment will be blended including live and self-directed activities online and on campus.

GEG273 Geographies of Climate Action and Activism

Credits: 10 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr AL Pigott

Format: Lectures 10 hrs
Seminars 10 hrs

Delivery Method: Predominantly lectures (including classroom discussions and group work)

Module Aims: This course will explore the kinds of knowledge, politics, and imaginations that underpin current responses to the climate crisis. It will engage critical and cutting-edge debates in Geography and related fields to help us grapple with the multiple ways we might understand and respond to a warming world. The module will begin by introducing climate change as a ‘hyperobject’ - that is, a phenomenon that is so vast in its temporality and scale that it is hard to grasp as a traditional ‘object', but nonetheless requires urgent and widespread action. We will explore the particular politics and imaginaries associated with past and recent prominent climate movements (Extinction Rebellion, Greta Thunberg, and the School Strikes, for example) whilst examining the various attempts at thinking environment and politics differently that some of these movements embody. The final part of the module will engage with the concepts of ecological anxiety and ecological citizenship. This is a crucial and exciting time to be studying the emerging responses to the climate crisis, as there are so many examples from the world around us, and geographers are especially well placed to explore their tensions and possibilities. This course will help students to develop their ‘climate change literacy’ and to learn how to navigate and contribute to the complex political worlds of climate science, activism, and agency.

Module Content: 1. Introduction to the climate crisis
2. Geographies of climate action: Key approaches
3. Geographies of climate action: Emergency politics
4. Geographies of climate action: Anthropocene imaginaries
5. Activism and agency: Climate Justice and Governance
6. Activism and agency: The New Climate Movements
7. Activism and agency: Activism and Agency
8. Ecological distress
9. Ecological citizenship
10. Citizens' assembly

Intended Learning Outcomes: · Explain key conceptual and theoretical debates in contemporary academic environmental politics and be able to apply those to the world around us;
· Critically evaluate key concepts including climate change, nature, activism, imaginaries, narrative, identity, agency, Anthropocene, as well as the relationship between them;
· Demonstrate a good awareness of cutting edge debates in the academic fields of cultural and critical geography as well as related debates in fields such as political ecology.
· Be able to critically reflect on our own positions in relation to political issues and environmental crises taking place in the world;
· Explain how approaches to environmental politics enable and disable different political possibilities in terms of policy and practice.

Assessment: Coursework 2 (40%)
Coursework 1 (60%)

Assessment Description: Coursework 1 (due in December 2022) 60%: Option 1 - this will require students to undertake a climate action of their choice and to write a reflective report. Option 2 - to imagine a carbon-free 2040 (1500 words) on it.

Online multiple choice questions (December 2022) 40%.

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Feedback on the Online MCQ will be provided via a recorded video published on Canvas

Failure Redemption: Projects continual assessments to be redeemed on an essay based on the topic covered by the project.

Additional Notes: Open to visiting and exchange students.

GEG276 Introduction to Geographic Information Systems

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Prof AJ Luckman

Format: 11 hours lectures
22 hours computer lab practicals
Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Lecture and computer practical

Module Aims: A Geographic Information System (GIS) is a computer-based technology for solving problems of a geographical nature – i.e. involving spatial relationships between people, places and objects. It can be applied to a wide range of disciplines within geography and has developed to provide a means to quickly and professionally produce maps from geospatial data. This module provides a basic grounding in GIS from the nature of spatial information, through the use of GIS in social and physical geography contexts, to the application of computers to solving complex geographical problems. Most importantly, it allows hands-on experience in using Quantum GIS (QGIS), the leading open-source GIS software package, and therefore provides a valuable skill for research and the for workplace.

Module Content: 1. Module introduction
2. A digital model of the real world
3. Comparing raster and vectors data models
4. Coordinates and geographic reference systems
5. Geographic presentation and map design
6. GIS data sources and formats
7. Digital land surface topography
8. The Global Positioning System (GPS)
9. Route-finding in a network
10. The future of GIS

Intended Learning Outcomes: • A broad understanding of the purpose and scope of Geographical Information Systems
• An appreciation of the way in which geographical entities can be represented in a computer
• A critical awareness of the increasing role of GIS in government, commerce and science
• The ability to use QGIS software to explore and analyse a range of geospatial data
• The ability to present geospatial data as a well constructed and functionally complete map
• A basic understanding of GIS-related technologies such as route-finding and GPS
• An appreciation of the future direction of GIS in geography and beyond

Assessment: Coursework 1 (20%)
Coursework 2 (30%)
Coursework 3 (20%)
Coursework 4 (30%)

Assessment Description: Coursework 1 - Project Figure 1
Coursework 2 - Project Figure 2
Coursework 3 - Multiple choice questions
Coursework 4 - Project Figure 3

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Students will receive feedback on each piece of coursework within 3 weeks of the submission deadline.
Each student will receive individual comments on their work.
The cohort will also receive general feedback in lectures, including an ideal example.
All feedback will be provided online.

Failure Redemption: Resubmit failed components.

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

Available to visiting and exchange students.

GEG277 Geographical Methods and Approaches

Credits: 20 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr KJ Ficken, Prof SH Doerr, Dr KH Halfacree, Dr H Hallang, Prof NJ Loader, Dr JF Maddern, Dr KG Rees, Dr I Robertson, Dr E Urbanek

Format: 11 hours of lectures
21 hours of workshops (desk based and field based).

Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

This core module will be delivered through a combination of lectures and practical sessions (including some group work) on Singleton campus and at various local field sites. Students will be able to select from the range of projects that interest them.

Module Aims:

This core 20 credit module introduces the variety of approaches to Human and Physical Geography that exist, providing an overview of the key methods used in the discipline. These paradigms will be introduced and then you are given the opportunity to 'think through' what kinds of methods chime with these geographical approaches. The module introduces key data methods and their theoretical roots, with an opportunity to 'practice' these key methods extended workshops - both desk based and in the field.

Module Content:

This module introduces students to some of the main research methods in currently employed by human and physical geographers, along with research design, philosophical and ethical considerations. The module includes lectures and practical training, and culminates in a research project conducted in small-groups. The syllabus will include:

Research Design lectures;
Quantitative and Qualitative data lectures;
Research Ethics lectures;
Questionnaire surveys practicals;
Census data and secondary sources;
The scientific method;
Physical Geography Field Projects;
Literature Review Skills.

Intended Learning Outcomes:

By the end of this module you should be able to:

Demonstrate an awareness of effective research, including identification of a research question, aims and objectives, a research design and selection of an appropriate research methods.

Exhibit an appreciation of the varying social contexts within which research methods are used in Human Geography and the environmental contexts within which research methods are used in Physical Geography.

Illustrate the ability to evaluate the appropriateness of each method in different research contexts, whether desk or field based.

Evidence the ability to review the literature in a chosen field in order to situate a method within a particular scientific or social science background.

Assessment: Coursework 1 (50%)
Coursework 2 (50%)

Assessment Description:
Coursework 1 Literature review based on a chosen field of study.

Coursework 2 Either Human Geography or Physical Geography projects

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Continual assessment feedback is given in writing electronically using a standard rubric and comments box.
Feedback also to be provided in class through peer evaluation and from the instructor on common strengths and weaknesses.

Failure Redemption: Resit examination or resubmit continual assessment whichever is applicable

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

Not available to visiting and exchange students.

GEG278 Data Analysis and Dissertation Preparation Skills

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr NJ Felstead, Dr A Closs Stephens, Dr KJ Ficken, Dr J Hiemstra

Format: Lectures/practicals: 17 hours
Dissertation preparation lectures and workshops: 15
Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

This module is to be delivered through a mixture of lectures, practical sessions and dissertation planning workshops.

Module Aims: This module builds upon student knowledge of social research methods and environmental methods (delivered in GEG277) through to the formulation of a dissertation proposal. The module focuses on key dissertation planning and preparation skills delivered in association with the Centre for Academic Success (CAS) such as time management, creative and critical thinking and developing a focus, writing a proposal etc.The module also focuses on qualitative and quantitative data analysis and how to use data effectively in preparedness for a final year dissertation project.

Module Content: Introductory / preparatory lecture: the research topic, process and expectations

Formulation of research question, aims, objectives and research design

Selecting and developing your data collection methods / survey / group division of labour

Primary data collection (group fieldwork) / help and advice session

Codifying and sharing of primary data / help and advice session

Quantitative data analysis

Qualitative data analysis

Help and advice session

Production and submission of research report

Intended Learning Outcomes: By the end of this module you should be able to:

• Demonstrate an awareness of the considered and structure nature of effective research, including identification of a research question, aims and objectives, a research design and selection of an appropriate research method;

• develop a proposal for a conceptually grounded piece of geographical research in the form of a dissertation proposal;

• Show mastery of a range of suitable techniques for the analysis of quantitative and qualitative data;

Assessment: Coursework 1 (40%)
Coursework 2 (40%)
Coursework 3 (20%)

Assessment Description: Coursework 1: 1 project+1 poster (data analysis focus). 1,500 words plus poster.

Coursework 2: dissertation proposal (with option of formative feedback on first draft). 1,500 words.

Coursework 3 (Data Analysis)

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Individual typed electronic feedback which is formative and summative.

Failure Redemption: Resubmit components as required.
Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus. This module is not available to visiting or exchange students.

GEG283 Sustainable Land Management

Credits: 10 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules: GEG264

Lecturer(s): Dr E Urbanek, Prof SH Doerr

Format: lectures, workshops, field visits
Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

The module will be taught, but will include some practical aspects and field visit.

Module Aims: Sustainable Land Management course focuses on the understanding and maintaining of the environmental values of LAND and SOIL for food production, water quality, flood defence and climate regulation. To understand the Sustainable Land Management the basic understanding of SOIL properties, functions will be introduced followed by the main threads and challenges to soil health connected with climate change and incorrect land management. Case studies of Sustainable Land Management in agriculture, fire prevention and mitigation, peatland restoration and land remediation will be showcased and discussed.
The module will contain a series of lectures, workshops and field visit.
Students are recommended to sign up to the GEG277 Environmental Research Methods - Soil, but the knowledge from the GEG277 sessions are not essential to complete the module.

Module Content: 1 (2hrs) Sustainable land management, soil functions
2 (2hrs) Soil components, soil formation, soil classification
3 (2hrs) Soil hydrology;
4 (2hrs) Greenhouse gas emissions from land, Carbon and Nitrogen cycle;
5 (2hrs) Climate change adaptation and mitigation
6 (2hrs) Land degradation and global challenges
7 (2+4hrs) Sustainable land management - agriculture + Field visit to sustainable farm
8 (2hrs) Fire prevention and mitigation
9 (2hrs) Land reclamation, peatland restoration

Intended Learning Outcomes: On successfully completing this module, students will be able to:
- Understand main soil properties and processes occurring in healthy and degraded soils;
- Understand and describe key soil functions and ecosystem services;
- Describe the main land-related challenges and suggest mitigation strategies to improve soil health and functioning of land;
- Recommend sustainable solutions for prevention and mitigation of soil problems related to land mismanagement and climate change.

Assessment: Online Multiple Choice Questions (30%)
Examination (70%)

Assessment Description: 3 MCQ tests (30%) following each learning block
Essay exam (70%)

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Written feedback on exam.

Failure Redemption: Exam resit

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

Available to visiting and exchange students.