



Swansea University
Prifysgol Abertawe

**FACULTY OF SCIENCE AND
ENGINEERING**

**UNDERGRADUATE STUDENT
HANDBOOK**

YEAR 1 (FHEQ LEVEL 4)

**BSC GEOGRAPHY AND GEOGRAPHICAL INFORMATION
SCIENCE**

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 students in 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 other resources:

<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 1 (FHEQ Level 4) 2022/23
Geography and Geographical Information Science
 BSc Geography and Geographical Information Science[F830]

Compulsory Modules

| Semester 1 Modules | Semester 2 Modules |
|--|--------------------|
| GEG236 Earth from Space: Monitoring Global Environmental Change 10 Credits Prof PRJ North | |
| Total 130 Credits | |

Optional Modules

Choose exactly 20 credits

| | | | | |
|---------------|---------------------|---|-----|----|
| GEC100 | Sgiliau Daearyddol | Dr RH Meara | TB1 | 20 |
| GEG100 | Geographical skills | Dr H Hallang/Dr KJ Ficken/Dr KG Rees/.. | TB1 | 20 |

And

Choose exactly 20 credits

| | | | | |
|---------------|---------------------------------|---|-----|----|
| GEC133 | Peryglon Naturiol a Chymdeithas | Dr RH Meara/Prof SM Davies/Dr KJ Preece/.. | TB2 | 20 |
| GEG133 | Natural Hazards and Society | Dr KJ Preece/Prof SM Davies/Prof MA Doel/.. | TB2 | 20 |

And

Choose exactly 20 credits

| | | | | |
|---------------|--|--|-----|----|
| GEC135 | Cynaliadwyedd a'r Argyfwng Hinsawdd | Dr RH Meara/Dr OH Elias/Dr KR Evans/.. | TB1 | 20 |
| GEG135 | Sustainability and the Climate Emergency | Dr KH Halfacree/Dr KJ Ficken/Prof PRJ North/.. | TB1 | 20 |

And

Choose exactly 20 credits

| | | | | |
|---------------|----------------------------|---|-----|----|
| GEC140 | Prosiect a Dulliau Ymchwil | Dr RH Meara/Dr OH Elias | TB2 | 20 |
| GEG140 | Project and Methods | Dr RG Smith/Prof T Murray/Dr JAB Rosette/.. | TB2 | 20 |

And

Choose exactly 40 credits

| | | | | |
|---------------|-------------------------------|--|-----|----|
| GEG130 | Globalisation | Dr KG Rees/Mr F Bernhardt/Prof MA Doel/.. | TB2 | 20 |
| GEG131 | Cities | Dr CM Muellerleile/Dr AL Pigott/Dr RG Smith/.. | TB1 | 20 |
| GEG132 | Introduction to Earth Systems | Dr E Urbanek/Dr NJ Felstead/Dr H Hallang/.. | TB1 | 20 |
| GEL121 | Introduction to Geology | Dr KJ Ficken/Dr KJ Preece | TB2 | 20 |

GEC100 Sgiliau Daearyddol

Credits: 20 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr RH Meara

Format: Darlithoedd: 11awr (in English)
Labordai: 27awr (yn Gymraeg)
Gwaith Maes: 6awr (yn Gymraeg)

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

Darlithoedd wedi eu darparu ar y campws.
Sesiynau ymarferol wedi eu darparu ar y campws.
Teithiau maes i'r ardal gyfagos.

(Lectures delivered on campus.
Practicals mainly on campus.
Fieldtrips to the surrounding area)

Module Aims: Bwriad y modiwl hwn yw cyflwyno myfyrwyr i sgiliau daearyddol craidd. Bydd y sgiliau gwerthfawr yma yn cael eu meithrin trwy gydol eu gradd ym Mhrifysgol Abertawe. Dylai myfyrwyr sy'n dilyn y modiwl gallu defnyddio'r technegau hyn i ddehongli a dadansoddi data o amrywiaeth o amgylcheddau a chyd-destunau. Trafodwyd sgiliau cyflwyno megis defnydd tablau a chreu mapiau.

(The aim of this module is to introduce the participants to essential geographical skills. These invaluable skills will become enhanced throughout their degree at Swansea University. Participants should be able to apply these techniques to data from a wide variety of environments and contexts. Presentation skills will be covered from the use of tables to the drawing of maps.)

Module Content: Bydd y modiwl yma yn cyflwyno rhai o'r sgiliau hanfodol sydd eu heisiau gan ddaearyddwyr. Mae'r gyfadran darlithoedd (11 awr) yn canolbwyntio ar ddadansoddi a dehongli data daearyddol ac fe roddwyd pwyslais arbennig ar dechnegau meintiol sylfaenol. Strwythurwyd sesiynau ymarferol (33 awr) er mwyn galluogi myfyrwyr i ddysgu'r technegau hyn. Anelwyd y modiwl at fyfyrwyr daearyddiaeth o bob maes er mwyn iddynt werthfawrogi sgiliau mathemategol, gwyddonol a mordwyol sylfaenol. Trafodwyd cyflwyno gwybodaeth daearyddol hefyd.

(This module introduces some of the essential skills required by geographers. The lecture component (11 hours) focuses upon the analysis of geographical data with a particulate emphasis on basic quantitative techniques. Practical (33 hours) are structured to enable students to learn these techniques. The module is directed towards all geography students to allow them to appreciate basic navigational, scientific and mathematical skills. Presentation of geographical information will also be covered.)

Intended Learning Outcomes: Dealltwriaeth eang o sgiliau trosglwyddadwy hanfodol
Hyder i ddefnyddio profion ystadegol meintiol i amrywiaeth o ddata
Dealltwriaeth ddofn o'r materion sy'n tanseilio problemau daearyddol
Y gallu i ddatblygu yn unigol ond ar yr un pryd cydnabod pwysigrwydd gweithio fel rhan o dîm
Datblygu ymwybyddiaeth beirniadol o ymchwil daearyddol.

(A broad understanding of essential geographical skills
Confidence to apply quantitative statistical test to a wide range of data
An in-depth understanding of the issues underlying geographical problems
The ability to independently develop yet appreciate the importance of teamwork
Develop a critical awareness of geographical research)

Assessment: Coursework 1 (10%)
Coursework 2 (10%)
Coursework 3 (40%)
Coursework 4 (40%)

Assessment Description: Coursework 1: Field site leaflet (group assignment)
Coursework 2: Digimap project
Coursework 3: Online tests taken throughout the term
Coursework 4: Tutorial group essay

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

Assessment Feedback: Bydd myfyrwyr yn derbyn adborth ar asesu parhaus (Ymarferion a'r Adroddiad Prosiect) ac arholiadau trwy'r system tiwtorialau (modiwl GEC111).

(Students will receive feedback on continuous assessment (Practicals and Project Report) and examinations through the tutorial system)

Failure Redemption: Arholiad ailsefyll yn ystod y cyfnod arholi Awst.

(Resit examination in the August exam period.)

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 sy'n ymweld neu fyfyrwyr ar gynlluniau cyfnewid. Mae'r gallu i ysgrifennu yn y Gymraeg yn hanfodol.

(Not available to visiting or exchange students. Competence in written Welsh is a necessity.)

GEC133 Peryglon Naturiol a Chymdeithas

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr RH Meara, Prof SM Davies, Dr KJ Preece

Format: 20 darlith, 4 dosbarth ymarferol, 1 sesiwn 'diwrnod trychineb' diwrnod o hyd

1 hour lectures

2 x 2 practical classes

1 day long 'disaster day'

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

Ar y Campws

On Campus

Module Aims: .Bydd y modiwl hwn yn ymchwilio i agweddau peryglus amgylchedd y Ddaear a pherthynas y gymdeithas â nhw. Bydd egwyddorion cychwynnol yn cynnwys diffiniad o berygl naturiol, trychineb, risg a cholled ac ymagweddau at leihau risg a rheoli trychinebau. Mae'r prif fathau o berygl naturiol yn cael eu hastudio er mwyn deall sut maent yn gweithredu, ble, a pha mor aml maent yn debygol o ddigwydd. Caiff canlyniadau peryglus eu hystyried, yn ogystal â sut gall y gymdeithas ymateb i ddigwyddiadau peryglus. Mae agweddau allweddol yn cynnwys trafod peryglon cynradd ac eilradd, rhagweld a monitro peryglon, a deall sut y gellir lleihau eu heffeithiau niweidiol. Bydd y peryglon naturiol a fydd yn cael eu hystyried yn y modiwl hwn yn cynnwys ffrwydradau llosgfynyddoedd, daeargrynfeydd, tswnamiau, tanau gwyllt, tirlithriadau, digwyddiadau tywydd eithafol, llifogydd, cwmpfeydd eira a Pheryglon Mawr. Bydd y modiwl hefyd yn ystyried y cysyniad o "Bobl fel Peryglon". Bydd darlithoedd yn ymdrin ag egwyddorion cyffredinol ynghyd ag astudiaethau achos. Bydd dosbarthiadau ymarferol yn atgyfnerthu'r cysyniadau a drafodir mewn darlithoedd. Bydd agwedd ymarferol y gwaith hwn yn dod i uchafbwynt mewn diwrnod efelychu rheolaeth mewn trychineb.

This module investigates hazardous aspects of Earth's natural environment and how society relates to them. Introductory principles include the definition of natural hazard, disaster, risk and loss, and approaches to reducing risk and managing disasters. Major types of natural hazard are studied in order to understand how they operate, where, and how frequently they are likely to occur. Hazardous consequences are explored, as well as how society can respond to hazardous events. Key aspects include discussion of primary and secondary hazards, prediction, forecasting and monitoring of hazards, and understanding how their harmful effects can be minimised.

Natural hazards considered during this module include volcanic eruptions, earthquakes, tsunamis, wildfires, landslides, extreme weather events, flooding, avalanches and Mega Hazards. The module will also consider the concept of "Humans as Hazards". Lectures consider general principles as well as case studies. Practical classes reinforce concepts learned in lectures. The practical aspect of the work will culminate in a disaster management simulation day.

Module Content: Cyflwyniad i beryglon a thrychinebau

Peryglon naturiol – prosesau a chanlyniadau ffrwydradau llosgfynyddoedd, daeargrynfeydd, tswnamïau, tanau gwyllt, tirlithriadau, digwyddiadau tywydd eithafol, llifogydd, cwympfeydd eira a pheryglon mawr.

Agweddau thematig - cofnod daearegol o ddigwyddiadau trychinebus fel dangosydd o'r tebygrwydd y byddant yn digwydd yn y dyfodol;

monitro peryglon, newid byd-eang a pheryglon naturiol; byw gyda pheryglon naturiol.

Ymhlith y testunau y mae:

Cyflwyniad i beryglon a thrychinebau

Peryglon folcanig

Tanau gwyllt

Peryglon seismig

Peryglon sy'n gysylltiedig â goleddfau, Peryglon Mawr Peryglon Corwyntoedd

Arsylwi'r Ddaear o ran rheoli peryglon, newid a pheryglon amgylcheddol yn y dyfodol, llifogydd yn y dyfodol a pheryglon hydrolegol Tswnamïau

Risg i'r gymdeithas a chadernid

Introduction to hazards and disasters

Natural hazards - the processes and consequences of volcanic eruptions, earthquakes, tsunamis, wildfires, landslides, extreme weather events, flooding, avalanches and mega hazards

Thematic aspects - the geological record of catastrophic events as an indicator of their likely future occurrence; monitoring hazards, global change and natural hazards; living with natural hazards.

Topics include:

Introduction to natural hazards and disasters

Volcanic hazards

Wildfires

Seismic hazards

Slope-related hazards

Megahazards

Hurricane hazards

Future environmental change & hazards

Flood hazards & hydrological hazards

Tsunamis

Risk society and resilience

Intended Learning Outcomes: Erbyn diwedd y modiwl hwn, dylai cyfranogwyr allu:

- diffinio peryglon naturiol, trychinebau, colledion a risg;
- esbonio sut y gall prosesau naturiol effeithio'n andwyol ar bobl, eu heiddo a'r amgylchedd;
- esbonio'r prosesau ffisegol sy'n achosi ffrwydradau llosgfynyddoedd, daeargrynfeydd, tswnamiau, tanau gwyllt, tirlithriadau, y tywydd, llifogydd, cwmpfeydd eira a pheryglon mawr.
- asesu'r dystiolaeth ar gyfer, a risg sy'n deillio o, ddigwyddiadau amllder isel ond o bwysigrwydd mawr
- disgrifiad o ddosraniad digwyddiadau naturiol catastroffig mewn gofod ac amser;
- dangos sut mae effeithiau digwyddiadau peryglus yn dibynnu ar gamau gweithredu'r gymdeithas cyn ac yn ystod digwyddiadau ac esbonio rolau camau lliniaru, monitro, rhagweld a rhybuddio wrth leihau'r risg o beryglon naturiol;

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

- define natural hazards, disasters, losses and risk;
- explain how natural processes can adversely affect people, their property and the environment;
- explain the physical processes that cause volcanic eruptions, earthquakes, slope failures, tsunamis, avalanches, weather, flooding, megahazards and wildfires;
- assess the evidence for and risk from high-magnitude-low-frequency events;
- describe the distribution in space and time of catastrophic natural events;
- show how the effects of hazardous events depend on actions taken by society before and during the events and explain the roles of mitigation, monitoring, forecasting and warning in reducing the risk from natural hazards;

Assessment: Examination 1 (50%)
Coursework 1 (10%)
Coursework 2 (10%)
Coursework 3 (30%)

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

Assessment Description: Gwaith Cwrs 1 – Gwaith Ymarferol Archifau (10%)

Gwaith Cwrs 2 – Map peryglon folcanig (10%)

Gwaith Cwrs 3 – Adroddiad sy'n seiliedig ar efelychiadau trychinebau (30%)

Arholiad – Arholiad Aml-ddewis (50%)

Coursework 1 - Archive practical (10%)

Coursework 2 - Volcanic hazard map (10%)

Coursework 3 - Report based on disaster simulations (30%)

Exam - Multiple Choice Exam (50%)

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

Assessment Feedback: Darperir adborth grwp ar gyfer adroddiadau,r diwrnod trychineb gan ddefnyddio ffurflenni adborth safonol yr adran.

Bydd sylwadau unigol ar gyfer atebion arholiad; Bydd myfyrwyr yn gallu gweld y rhain mewn cyfarfodydd tiwtorial adrannol. Rhoddir adborth cyffredinol ar atebion arholiad drwy Blackboard.

Darpariaeth asesu ar gyfer myfyrwyr ag anabledau

Gwneir darpariaeth ar gyfer myfyrwyr ag anabledau yn unol â chynghor gan y Swyddfa Anabledau. Rhowch fanylion am sut y byddai myfyrwyr yn gwneud yn iawn am fethiant yn y modiwl

Group feedback is provided for the disaster day reports using standard departmental feedback forms.

Individual comments are written on examination answers; students will be able to view these in departmental tutorial meetings. General feedback on examination answers will be provided via Blackboard.

Failure Redemption:

Arholiad ail-leoli

Resit examination

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

Ar gael i fyfyrwyr gwadd a myfyrwyr cyfnewid.

Available to visiting and exchange students.

GEC135 Cynaliadwyedd a'r Argyfwng Hinsawdd

Credits: 20 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr RH Meara, Dr OH Elias, Dr KR Evans

Format: 36 o oriau cyswllt (32 awr o ddarlithoedd; 4 awr o weithdai)

36 contact hours (32 hours of lectures; 4 hours of workshops)

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

Ar y Campws

On Campus

Module Aims: Bydd y modiwl hwn yn gyflwyniad i newid amgylcheddol byd-eang a bydd yn ystyried agweddau ar gynaliadwyedd fel pwnc sy'n effeithio ar fywydau bob dydd. Mae her cynaliadwyedd yn sylweddol a bydd y darlithoedd yn eich darparu â'r wybodaeth a fydd ei hangen arnoch i ymwneud â Nodau Datblygu Cynaliadwy'r

This module is an introduction to global environmental change and explores aspects of the issue of sustainability as it affects everyday lives. The challenge of sustainability is significant and the lectures will provide you with the information needed to engage with the UN's Sustainable Development Goals.

Module Content: Wythnos

1-3 Cyflwyniad: Rhyngweithio dynol-ddaearyl

- Newid mewn poblogaethau ac effaith amgylcheddol

- Gwareiddiadau a'r hinsawdd

- System hinsoddol

- Newid yn yr hinsawdd

- Gwleidyddiaeth newid yn yr hinsawdd

- Her cynaliadwyedd

- Dirywiad amgylcheddol

- Y Nodau Datblygu Cynaliadwy

4-7 Defnydd tir a dirywiad

7-9 Materion trefol

9-11 Effeithiau newid yn yr hinsawdd

11 Casgliad: Tuag at brifysgol gynaliadwy?

Week

1-3 Introduction: human-earth interaction

- Population change and environmental impact

- Civilizations and climate

- Climate System

- Climate change

- Politics of climate change

- The challenge of sustainability

- Environmental degradation

- The Sustainable Development Goals

4-7 Land use and degradation

7-9 Urban issues

9-11 Climate change impacts

11 Conclusion: towards the sustainable university?

Intended Learning Outcomes: Erbyn diwedd y modiwl hwn, dylai cyfranogwyr allu:

1. Deall cysyniadau allweddol newid amgylcheddol byd-eang.
2. Dadansoddi pwysigrwydd perthynol ffactorau dynol a ffisegol wrth achosi newid amgylcheddol.
3. Deall bod agweddau diwylliannol, economaidd, cymdeithasol, gwleidyddol a ffisegol ar 'cynaliadwyedd'.
4. Gwerthuso agweddau ar 'cynaliadwyedd' o fewn ystod o gyd-destunau daearyddol.
5. Disgrifio dulliau diweddar i fonitro a modelu newid amgylcheddol byd-eang.
6. Adolygu'n feirniadol dystiolaeth canlyniadau newid amgylcheddol byd-eang a'r her sy'n wynebu datblygiad cynaliadwy.

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

1. Understand key concepts of global environmental change.
2. Analyse the relative importance of human and physical factors in causing environmental change.
3. Recognise that 'sustainability' has cultural, economic, social, political and physical dimensions.
4. Evaluate aspects of 'sustainability' within a range of geographical contexts.
5. Describe recent methods to monitor and model global environmental change.
6. Critically review the evidence of the consequences of global environmental change and the challenge facing sustainable development.

Assessment: Coursework 1 (20%)
Online Multiple Choice Questions (40%)
Coursework 2 (40%)

Assessment Description: Arholiad Cwestiynau Aml-ddewis (Ionawr);

C1 1 x blog 500 gair

C2 2 x blog 500 gair (cyfanswm 1,000 o eiriau)

Bydd hwn yn asesiad ffurfiannol fel rhan o'r cwrs hwn.

Moderation approach to main assessment: Partial second marking

Assessment Feedback: Bydd myfyrwyr yn derbyn adborth electronig ar yr adroddiad unigol. Bydd myfyrwyr yn derbyn adborth arholiad yn dilyn yr arholiadau

Students will receive electronic feedback on the individual report.

Students will receive examination feedback after exams.

Failure Redemption: Ailsefyll arholiad neu ailgyflwyno gwaith cwrs

Resit examination or resubmit coursework

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

Ddim ar gael i fyfyrwyr ymweld neu fyfyrwyr cyfnewid. Nid oes rhagofynion na chydofynion ar gyfer y modiwl hwn.

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

GEC140 Prosiect a Dulliau Ymchwil

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr RH Meara, Dr OH Elias

Format: 26 awr ar gyfer penwythnos preswyl ac 11 awr ar gyfer prosiect GIS

Delivery Method: Darlithoedd, Sesiynau Ymarferol (ar y campws) a penwythnos preswyl o waith maes ym Mangor/Abertawe a'i ranbarth/Aberystwyth (lleoliad yn newid yn flynyddol).

Module Aims: Mae'r modiwl hwn yn cynnwys hyfforddiant gwaith maes a sgiliau GIS i ddaeyryddwyr dynol a ffisegol.

Rhan 1: Mae'r rhan yma yn cyflwyno egwyddorion a thechnegau allweddol a ddefnyddir mewn gwaith maes yn nisgyblaethau Daearyddiaeth, astudiaethau amgylcheddol ac astudiaethau defnyddio tir. Mae'n cynnig profiad o ddefnyddio amryw o ddulliau a thechnegau gwaith maes er mwyn casglu a dadansoddi gwybodaeth mewn perthynas â Daearyddiaeth, yr amgylchedd a defnyddio tir. Dysgir y modiwl ar y cyd â staff o Brifysgol Bangor a Phrifysgol Aberystwyth a dysgir y myfyrwyr o'r sefydliadau yma hefyd ar y modiwl. Dysgir rhan yma'r modiwl yn ystod penwythnos preswyl.

Rhan 2: Prosiect GIS. Bydd yr elfen hon o'r modiwl yn rhoi cyflwyniad i fyfyrwyr i sgiliau allweddol Mapio, Data Gofodol a GIS. Byddant yn ymchwilio i sut mae mapiau a dadansoddiad gofodol yn gallu ein helpu i ddeall a monitro ein byd. Bydd myfyrwyr yn ystyried y defnydd o fapio i ddadansoddi'r amgylchedd a rhannu'r canlyniadau yn y cyfryngau. Byddant yn archwilio i feddalwedd GIS Explore (arc Map, QGIS) a chymryd y camau cyntaf wrth arddangos data gofodol. Bydd myfyrwyr hefyd yn dysgu sut i gyfeirio lleoliad gofodol nodweddion amgylcheddol ar arwyneb y Ddaear, deall sut mae systemau cyfeirio'n berthnasol i leoliadau daearyddol ar fap gwastad a dysgu sut i weithio gyda data o amrywiaeth o systemau cyfeirio gofodol.

Module Content: Rhan 1: Penwythnos preswyl:

1. Cyflwyno a datblygu egwyddorion ac arferion technegau allweddol gwaith maes yn nisgyblaethau daearyddiaeth, astudiaethau amgylcheddol ac astudiaethau defnyddio tir;
2. Cynnig profiad o ddefnyddio amryw ddulliau a thechnegau gwaith maes er mwyn casglu gwybodaeth mewn perthynas â daearyddiaeth, yr amgylchedd a defnyddio tir;
3. Rhoi hyfforddiant wrth roi cyflwyniadau ar lafur ac ar bapur;
4. Rhoi hwb i allu myfyrwyr i ddehongli data maes;
5. Cynnig profiad a hyfforddiant wrth roi cyflwyniadau ar lafur ac ar bapur.

Trafodir cyfuniad o'r themau canlynol yn ystod y modiwl:

Gwerthuso biomas coetiroedd; Daearyddiaeth eithrio yn Aberystwyth; gwerthuso defnydd tir yng ngogledd-orllewin Cymru: ffactorau ffisegol a dynol; cymunedau gweldig Cymru: parhad a newid; newidiadau amgylcheddol yn Ne Cymru.

Rhan 2: Prosiect GIS.

Mapio, Data Gofodol a GIS

Data gofodol a Systemau Gwybodaeth Ddaearyddol

Ymchwilio i sut gall mapiau a dadansoddiad gofodol ein helpu i ddeall a monitro ein byd. Ystyried y defnydd o fapiau i ddadansoddi'r amgylchedd a rhannu'r canlyniadau yn y cyfryngau. Ymchwilio i feddalwedd GIS (arc Map, QGIS) a chymryd y camau cyntaf i arddangos data gofodol. Dysgu ac ymarfer gweithio gyda fformatiau gwahanol o ddata (fector a rhastr).

Dysgu sut i greu mapiau a chynnwys elfennau allweddol ar fap (bar graddfa, allwedd, graticwl). Galluogi darllenwyr i ddehongli eich map a deall eich canlyniadau.

Mae astudiaethau achos yn cynnwys rhestr Fforest a mapio defnydd tir a phoblogaeth a dosraniad dinasoedd byd-eang

Intended Learning Outcomes: Wrth gwblhau'r modiwl hwn dylai myfyrwyr fedru:

1. Trafod addasrwydd yr amryw ddulliau a thechnegau sy'n allweddol i waith maes Daearyddiaeth, yr amgylchedd a defnyddio tir;
2. Defnyddio technegau penodol er mwyn casglu gwybodaeth yn y maes;
3. Dadansoddi a chyflwyno canlyniadau gwaith maes;
4. Deall, dehongli a gwerthuso data maes;
5. Gywiro, defnyddio, dadansoddi a chyflwyno data daearyddol;
6. Dangos sgiliau allweddol wrth Fapio, Data Gofodol a GIS;
7. Trafod sut gall mapiau a dadansoddiad gofodol ein helpu i ddeall a monitro ein byd.

Assessment: Coursework 1 (5%)
Coursework 2 (23%)
Coursework 3 (23%)
Coursework 4 (50%)

Assessment Description: C1 - Cyflwyniad grp, 5%

C2 – Adroddiad, 22.5%

C3 – Poster academaidd 22.5%

C4 – adroddiad GIS – 50%

Ymgymerir â C1 yn ystod y cwrs maes preswyl. Mae C2 fel arfer yn 1,500 o eiriau. Mae C4 yn adlewyrchu GEG140.

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

Assessment Feedback: Bydd myfyrwyr yn derbyn adborth electronig ar eu gwaith cwrs ac adborth ysgrifenedig ar y cyflwyniad grwp, ac ar lafar gan eu tiwtor ar eu perfformiad.

Failure Redemption: Ailsefyll yr holl elfennau

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

Dysgir y modiwl yma drwy gyfrwng y Gymraeg. Not normally available to visiting or exchange students. Competence in written and spoken Welsh is essential for this module

GEG100 Geographical skills

Credits: 20 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr H Hallang, Dr KJ Ficken, Dr KG Rees, Dr I Robertson

Format: Lectures = 11 hours
Practicals = 26 hours
(Help sessions: 18 hours)
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, computer practicals and tutorials are delivered on the Singleton Campus. There will be field trips to the surrounding area

Module Aims: The aim of this module is to introduce the participants to essential geographical skills. These invaluable skills will become enhanced throughout their degree at Swansea University. Participants should be able to apply these techniques in a wide variety of environments and contexts. Skills covered include essay writing, data analysis and map making

Module Content: This module introduces some of the essential skills required by geographers. The lecture component (11 hours) focuses upon the analysis of geographical evidence including basic quantitative techniques. Practical (33 hours) are structured to enable students to learn these techniques. The module is directed towards all geography students to allow them to appreciate basic navigational, scientific and mathematical skills. Presentation of geographical information will also be covered in conjunction with tutorials.

Intended Learning Outcomes: A broad understanding of essential geographical skills

Confidence in constructing arguments based on evidence

Confidence to apply quantitative statistical tests to a wide range of data

An in-depth understanding of the issues underlying geographical problems

The ability to independently develop yet appreciate the importance of teamwork

Assessment: Coursework 1 (10%)
Coursework 2 (10%)
Coursework 3 (40%)
Coursework 4 (40%)

Assessment Description: Coursework 1: Field site leaflet (group assignment)

Coursework 2: Digimap project

Coursework 3: Online tests taken throughout the term

Coursework 4: Tutorial group essay

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

Assessment Feedback: Students will receive feedback on continuous assessment via Canvas.

Failure Redemption: Resit examination in the May/June exam period.

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 or exchange students.

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| GEG130 Globalisation |
| Credits: 20 Session: 2022/23 January-June |
| Pre-requisite Modules: |
| Co-requisite Modules: |
| Lecturer(s): Dr KG Rees, Mr F Bernhardt, Prof MA Doel |
| Format: 30 hours lectures 3 hours group seminars |
| Delivery Method: Lectures (30 hours) and group seminars (3 hours) |
| Module Aims: This module explores the fundamental geographical concept of globalisation, introduces students to theories seeking to explain the processes of globalisation, and examines the implications of globalisation for the geography of the global economy, health, and human and non-human mobility and migration. |
| Module Content: Globalisation and the global economy (10 hours) <ul style="list-style-type: none"> - Globalisation and Capitalism - The emergence of a New Global Division of Labour - Governance of the global economy: transnational corporations, - Governance of the global economy: supra-national institutions - Governance of the global economy: the nation state - The re-emergence of China as a global economic super-power - Globalised production systems: the clothing industry - Globalised production systems: the automobile industry <p>Globalisation, health and well-being (10 hours)</p> <ul style="list-style-type: none"> - Globalisation and health - Spatial distributions of (ill)health - Mobility and Covid-19: a global perspective - Organisation of attendance to (ill)health and care - Impact of globalisation on health - Exploring health futures: Global well-being? <p>Global mobility (10 hours)</p> <ul style="list-style-type: none"> - Critique of the dominant account of globalisation - The character of the original world island - The collision of many worlds - The ongoing fabrication of a self-enclosed globe - Technologies of tele-vision and tele-communication - Dispersal - Concentration <p>There will be three x one-hour small(er) group seminars during the semester (one for each section).</p> |
| Intended Learning Outcomes: By the end of this unit, students should be able to: <ol style="list-style-type: none"> 1. Define the concept of globalisation and identify its role in shaping the geography of contemporary Capitalism 2. Assess the role of transnational corporations, supra-national institutions, and nation-states in globalisation processes. 3. Illustrate the implications of globalisation for the geography of production in specific industries. 4. Demonstrate an understanding of the relationships between globalisation, health and disease. 5. Define the concepts of 'world' and 'globe,' and appreciate the ongoing transformation of many worlds into a self-enclosed globe. 6. Assess the role of technologies of tele-vision and tele-communication in the pursuit of globalisation. 7. Illustrate the implications of globalisation for human mobility and migration. |
| Assessment: Assignment 1 (20%) Assignment 2 (20%) Assignment 3 (20%) Exam - open book (40%) |
| Resit Assessment: Examination (Resit instrument) (100%) |
| Assessment Description: 3 x Online Multiple Choice tests 1 essay as an open-book exam |
| Moderation approach to main assessment: Second marking as sampling or moderation |

Assessment Feedback: Continual assessment tests are delivered using the Canvas VLE and feedback is provided automatically by this system.

Feedback on the coursework is provided through comments on the electronic submission and a feedback rubric.

Failure Redemption: Resit examination as redemption instrument.

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 home and visiting students.

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| GEG131 Cities | |
| Credits: 20 Session: 2022/23 September-January | |
| Pre-requisite Modules: | |
| Co-requisite Modules: | |
| Lecturer(s): Dr CM Muellerleile, Dr AL Pigott, Dr RG Smith | |
| Format: | Lectures (31 hours) and group seminars/workshops (2 hours) 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: There may be some content delivered only through virtual means, via Canvas, but this module is mainly taught by in person lecture. | |
| Module Aims: There has never been a more exciting time to study cities. Since antiquity cities have been the site of disproportionate amounts of human production and consumption of all kinds, and within the last generation, they have become the places where most people on Earth live. They are also the places of the most pressing social struggles of our time. Cities afford boundless opportunities, but are also the sites of the most stark inequality on the planet. Partly as a result, cities are sites of social, political, and economic struggle, innovation, creativity and deprivation. For at least the last two hundred years, cities, modernity, globalisation, colonisation, and capitalism have been highly dependent upon each other, and as a result, making sense of cities cannot be separated from questions of cultural transformation, global capital, political upheaval, and technological change. This module will introduce you to these and related issues. | |
| Module Content: Section 1: Political Economy and Cities | |
| <p>The first lecturer will provide a broad overview of the history of cities, and then introduce some of the most contemporary issues related to urbanisation. Many of the questions covered in this section will consider the political economy of cities, or put differently, the ways that cities and capitalism rely upon and contradict each other. The lectures concentrate on Western European and U.S. cities, and will consider the relationship between urbanisation and neoliberalism, financialization, austerity, and most recently, digitalism.</p> <p>Section 2: Global Cities (Weeks 23-26)</p> <p>The second lecturer will consider the rise and development of Global cities. Everybody talks about them but few people understand what they are, why they are special, what makes them global, where they came from, and how they differ from cities that have been with us for millennia. Richard introduces you to the foundational concepts and latest thinking, scholarship and reporting on global cities; about how globalization is transforming some cities – economically, physically, politically, socially, culturally – more than others into something new, something global.</p> <p>Section 3: Colonialism, Postcolonialism and Difference in the City (Weeks 26-28)</p> <p>The third lecturer will consider histories of race and difference in the city. This section of the course begins with how cities were designed according to ideologies around race during the Age of Empire, and then explores how this shifted during the era of decolonisation. However, by taking a postcolonial perspective, this part of the course also emphasises the continuities of colonial and imperial logics in the built environment today, and how capitalism continues to promote various forms of segregation and difference in the city. The course then moves on to explore how else we might view the city - particularly through the lens of blackness - and discusses contemporary narratives around segregation and 'parallel lives'. It ends with a more hopeful discussion of interethnic encounter and mixing, and opens up questions of who has the right to the city via a discussion of urban citizenship.</p> | |
| Intended Learning Outcomes: By the end of this module students should be able to: | |
| <ul style="list-style-type: none"> - Compare different approaches to understanding cities from across the field of urban studies - Explain the relationship between cities and capitalism, and economic production and consumption - Understand how the rise of global cities is linked to other global issues and pathologies. - Explain the evolution of the urban imagination in the nineteenth and twentieth centuries. - Understand the urban experience and the structures shaping it through the use of urban theory | |
| Assessment: | <p>Online Multiple Choice Questions (40%)</p> <p>Online Multiple Choice Questions (30%)</p> <p>Online Multiple Choice Questions (30%)</p> |

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| Assessment Description: Quiz 1: 40% (~35 MCQs), Quiz 2: 30% (~25 MCQs) Quiz 3: 30% (~25 MCQs). |
| Moderation approach to main assessment: Partial second marking |
| Assessment Feedback: Feedback on project report/essay provided using Grademark via the Canvas system. Feedback on examination performance in a meeting with their academic mentor. |
| Failure Redemption: Submit any missing coursework. Resit examination. |
| Additional Notes: This module is mainly taught by in person lectures. There will also be several in person seminars, or interactive sessions, during the term. Normally available to elective visiting or exchange students. |

GEG132 Introduction to Earth Systems

Credits: 20 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr E Urbanek, Dr NJ Felstead, Dr H Hallang, Dr I Robertson

Format: Lectures

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

On campus

Module Aims: This module forms an essential foundation for more advanced study of physical geography and environmental sciences. It introduces the four main Earth systems: the atmosphere, hydrosphere, biosphere and geosphere. It provides a sound understanding of the processes within each system, and the interactions between them. The geosphere section introduces topics like the origin of Earth, plate tectonics and describes the distribution of different rock types and processes occurring in the geosphere. The biosphere section deals mainly with flows of energy and nutrients between Earth systems.

The atmosphere section deals with flows of energy and moisture and their role in controlling climate over both space and time. The hydrosphere section focuses on the concepts of the hydrological cycle and the main processes associated with the water fluxes.

In addition, the main properties and functions of soil, and the formation of different soil types worldwide are introduced. At the end of the module the changes in climate in the past, current and future, proxies of climate change are included.

Module Content: 1 Introduction - Interactions between Earths systems

2 Atmosphere - Structure, energy budget

3 Atmosphere - GHG effect, clouds

4 Atmosphere - General circulation and world climate

5 Atmosphere - Weather, fronts, storms

6 Hydrosphere - Water cycle

7 Hydrosphere - Precipitation

8 Hydrosphere - Evapotranspiration

9 Hydrosphere - Hillslope runoff

10 Hydrosphere - Catchments and rivers

11 Hydrosphere - Groundwater

12 Pedosphere - Soil formation

13 Pedosphere - Soil function and services

14 Pedosphere - Soil & Climate change

15 Biosphere - Photosynthesis

16 Biosphere - Vegetation zones

17 Biosphere - C cycle

18 Biosphere - N cycle

19 Biosphere - Biogeochemical cycles

20 Biosphere - Biogeography

21 Geosphere - Earth origin

22 Geosphere - Rock formation

23 Geosphere - Weathering

24 Geosphere - Erosion

25 Geosphere - Karst

26 Geosphere - Glacial

27 Geosphere - Coastal Environments

28 Climate change in the past

29 Climate proxies

30 Climate change present and future

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

1. Explain the origin of the Earth, including rock formation, and give examples of specific landforms produced by Earth's surface processes
2. Describe and explain variations in topography, weathering and erosion across the Earth's surface
3. Explain the relationship between atmospheric chemistry, atmospheric circulation and world climate; Describe the evolution of common weather events
4. Describe the main features of the hydrological cycle, main hydrological processes, their controls and variation across the Earth's surface; explain the dynamics of sea ice and permafrost on global ocean dynamics and sea level fluctuations.
5. Explain how energy and nutrients flow through Earth's ecosystems.
6. Describe the interactions between reservoirs and fluxes in the primary biogeochemical cycles

Assessment: Online Class Test (20%)
Online Class Test (20%)
Exam - Multiple choice questions (60%)

Assessment Description: 2 Canvas tests to be completed in students' own time. (20% each)
Exam - Multiple choice questions (60%)

Resit:
Coursework 1 - Essay (1200 words) on a provided question. (100%)

Moderation approach to main assessment: Partial second marking

Assessment Feedback: Students will receive feedback on their online tests within 3 weeks after their submission.

Failure Redemption: Resit:
Coursework 1 - Essay (1200 words) on a chosen topic. (100%)

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.

GEG133 Natural Hazards and Society

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr KJ Preece, Prof SM Davies, Prof MA Doel, Prof SH Doerr, Dr NJ Felstead, Dr J Hiemstra, Dr RH Meara, Prof RPD Walsh

Format: Online lecture content
10 x 2 hour synchronous sessions
20 hours enquiry-based field course
5 x 1 hour long disaster scenarios

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 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 investigates hazardous aspects of Earth's natural environment and how society relates to them. Introductory principles include the definition of natural hazard, disaster, risk and loss, and approaches to reducing risk and managing disasters. Major types of natural hazard are studied in order to understand how they operate, where, and how frequently they are likely to occur. Hazardous consequences are explored, as well as how society can respond to hazardous events. Key aspects include discussion of primary and secondary hazards, prediction, forecasting and monitoring of hazards, and understanding how their harmful effects can be minimised.

Natural hazards considered during this module include volcanic eruptions, earthquakes, tsunamis, wildfires, landslides, extreme weather events, flooding, avalanches and Mega Hazards. Lecture material considers general principles as well as case studies. The module is compulsory for students taking BSc Environmental Geoscience.

Module Content: Introduction to hazards and disasters

Natural hazards - the processes and consequences of volcanic eruptions, earthquakes, tsunamis, wildfires, landslides, extreme weather events, flooding, avalanches and mega hazards

Thematic aspects - the geological record of catastrophic events as an indicator of their likely future occurrence; monitoring hazards, global change and natural hazards; living with natural hazards.

Topics include:

Introduction to natural hazards and disasters

Volcanic hazards

Wildfires

Seismic hazards

Slope-related hazards

Megahazards

Hurricane hazards

Future environmental change & hazards

Flood hazards & hydrological hazards

Tsunamis

Risk society and resilience

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

- define natural hazards, disasters, losses and risk;
- explain how natural processes can adversely affect people, their property and the environment;
- explain the physical processes that cause volcanic eruptions, earthquakes, slope failures, tsunamis, avalanches, weather, flooding, megahazards and wildfires;
- assess the evidence for and risk from high-magnitude-low-frequency events;
- describe the distribution in space and time of catastrophic natural events;
- show how the effects of hazardous events depend on actions taken by society before and during the events and explain the roles of mitigation, monitoring, forecasting and warning in reducing the risk from natural hazards;

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| Assessment: Examination 1 (50%) Coursework 1 (10%) Coursework 2 (10%) Coursework 3 (30%) |
| Resit Assessment: Examination (Resit instrument) (100%) |
| Assessment Description: Coursework 1 - Archive practical (10%) Coursework 2 - Volcanic hazard map (10%) Coursework 3 - Report based on disaster simulations (30%) Exam - Multiple Choice Exam (50%) |
| Moderation approach to main assessment: Second marking as sampling or moderation |
| Assessment Feedback: Individual marks and feedback will be given for the archives exercise, hazard map exercise and write up of disaster scenario. Individual marks for examination answers. |
| Failure Redemption: Resit examination |
| Additional Notes: This module is compulsory for students enrolled for the BSc Environmental Geoscience degree scheme. This module is not available to visiting or exchange students. |

GEG135 Sustainability and the Climate Emergency

Credits: 20 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr KH Halfacree, Dr KJ Ficken, Prof PRJ North

Format: 36 contact hours (32 hours of lectures; 4 hours of workshops)
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

On Campus

Module Aims: This module is an introduction to global environmental change and explores aspects of the issue of sustainability as it affects everyday lives. The challenge of sustainability is significant and the lectures will provide you with the information needed to engage with the UN's Sustainable Development Goals.

Module Content: Week

1-3 Introduction: human-earth interaction

- Population change and environmental impact
- Civilizations and climate
- Climate System
- Climate change
- Politics of climate change
- The challenge of sustainability
- Environmental degradation
- The Sustainable Development Goals

4-7 Land use and degradation

7-9 Urban issues

9-11 Climate change impacts

11 Conclusion: towards the sustainable university?

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

1. Understand key concepts of global environmental change.
2. Analyse the relative importance of human and physical factors in causing environmental change.
3. Recognise that 'sustainability' has cultural, economic, social, political and physical dimensions.
4. Evaluate aspects of 'sustainability' within a range of geographical contexts.
5. Describe recent methods to monitor and model global environmental change.
6. Critically review the evidence of the consequences of global environmental change and the challenge facing sustainable development.

Assessment: Coursework 1 (20%)
Online Multiple Choice Questions (40%)
Coursework 2 (40%)

Assessment Description: Multiple Choice Exam (in January);

Blog 1 500 words

Blog 2 500 words

Blog 3 500 words

There will also be formative assessment on this course.

Moderation approach to main assessment: Partial second marking

Assessment Feedback: Students will receive electronic feedback on the individual report.
Students will receive examination feedback after exams.

Failure Redemption: Resit examination or resubmit coursework

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. There are no pre- or co-requisites for this module.

GEG140 Project and Methods

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr RG Smith, Prof T Murray, Dr JAB Rosette

Format: 23 hrs of either a human geography or physical geography project and 11 hrs GIS project for all students

Delivery Method: Lectures, Practicals (on campus) and Fieldwork (local, Gower, Swansea City Centre)

Module Aims: This module involves training in fieldwork and GIS skills for both human and physical geographers.

In part 1, students can choose from a physical or human geography project option:

Part 1: Physical Geography

In the physical geography component we will look at sea-level change and its impacts on communities and ecosystems. During classroom sessions we will consider the causes of sea-level change and how it is measured. We use the technique of Stakeholder Analysis to look at the economic and social impacts of sea-level change in different regions. We will then undergo local visits to explore the potential impacts of sea level to our locality and on our coastal university. We'll look at both urban and rural environments and different mitigation policies that may be used.

Part 1: Human Geography

The human geography project focusses on Cities and Photography. Students will investigate the use of photography through three Visual Methodologies: Photo-Documentation, Photo-Elicitation, and Photo-Essays. Students will take part in a photo documentation workshop and group photography fieldwork in Swansea City Centre. They will also complete a photo essay aided by group discussion to select concept, theme, whether analytical or evocative photographs (or both), and discussion of the links between practice and visual methodologies literature.

Part 2: GIS Project.

This element of the module will introduce students to key skills in Mapping, Spatial Data and GIS. They will explore how

maps and spatial analysis can help us to understand and monitor our world. Students will consider the use of maps to analyse the environment and share the results in the media. They will Explore GIS software (arc Map, QGIS) and take their first steps in displaying spatial data. Students will also learn how to refer to the spatial location of environmental features on the earth's surface, understand how references systems translate geographical locations on a flat map and learn how to work with data from a range of spatial reference systems.

Module Content: 1) Physical Geography Project

Introduction lecture
Gower Fieldtrips
PC practical workshops

2) Human Geography Project

Lectures

Cities and Photography

Making Photographs as a part of a research project: Three Visual Methodologies: Photo-Documentation, Photo-Elicitation, and Photo-Essays

Photo Documentation Workshop 1

Photo Documentation of the Built Environment

Urban Decline, Decay, Ruins, Regeneration

Development of Swansea City Centre Shooting Script

Group Photography Fieldwork in Swansea City Centre

Photo Documentation Workshop 2

Group Discussion/Image Selection/Narrative Writing Ideas/Link to Literature

Photo Essay Workshop 1

Urban Photo Essay

Group Discussion to select concept, theme, whether analytical or evocative photographs (or both), etc. Understanding of links to literature.

3) GIS Project

Mapping, Spatial Data and GIS

Spatial data and Geographic Information Systems

Exploring how maps and spatial analysis can help us to understand and monitor our world.

Considering the use of maps to analyse the environment and share the results in the media.

Exploring GIS software (arc Map, QGIS) and taking your first steps in displaying spatial data.

Learn and practice working with different data formats (vector and raster).

Learn how to create maps and include key elements of a map (scale bar, legend, graticule). Allow viewers to interpret your map and understand your results.

Case studies include Forest inventory and land use mapping and Global cities population and distribution

Intended Learning Outcomes: By the end of this module, students will have demonstrated the ability to:

- Collect, manipulate, analyse and present geographical data;
- Demonstrate competence in fundamental techniques that are used in the field for description, measurement and inference in Quaternary studies OR visual analysis of photography in human geography;
- Show key skills in Mapping, Spatial Data and GIS
- Discuss how maps and spatial analysis can help us to understand and monitor our world.

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

Assessment Description: 1 x fieldwork report or photo documentation task / photo essay
1 x GIS report

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

Assessment Feedback: Students will receive written feedback on their coursework and oral feedback from their tutor about their performance.

Failure Redemption: Resit all failed elements

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

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

GEL121 Introduction to Geology

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr KJ Ficken, Dr KJ Preece

Format: 18 hours lectures; 15 hours practical classes; 9 hours fieldwork teaching
Contact hours will be delivered through on campus lectures, practical sessions, field 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

18 x 1-hour lecture sessions
1 x revision sessions
5 x 3-hour practical sessions
2 x afternoon field classes

Module Aims: Geology is the study of the composition and history of planet Earth and the processes that operate within the planet and on its surface. This module provides an overview of geology, with a strong emphasis on practical and fieldwork. By the end of the module you will be able to identify minerals and rocks, and know how to interpret them to understand the behaviour of volcanoes and earthquakes, and the formation of mountain belts. Teaching through lectures is supplemented by regular practical classes and five half-day field classes. Taking this module alongside Year One Geography modules will complete your credit requirements at Year One. The module is recommended if you have an interest in physical geography, although it is accessible to all students. No previous experience of geology is needed.

Module Content: Introduction to geology;
Minerals, their properties and identification;
Plate tectonics as the foundation of geology;
Igneous rocks and their significance;
Metamorphic rocks and their origins;
Sedimentary rocks and past environments;
Deformation
Revision;
2 Field classes
3 Multiple choice tests
Class-test: practical questions;
Final exam: essay questions.

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

- demonstrate awareness of geological time and the distinction between relative and absolute dating.
- relate major features of the Earth's land surfaces and ocean floors, and aspects of tectonic activity experienced at the Earth's surface, to the major processes of plate tectonics.
- distinguish between minerals, rocks and fossils, and between igneous, sedimentary and metamorphic rocks.
- relate the physical properties of minerals to their internal structure.
- classify igneous rocks and relate different types of igneous rocks to specific types of igneous activity.
- identify the main types of metamorphic rocks and explain how they form.
- use evidence from sedimentary rocks to interpret past environmental conditions on the Earth's surface.
- understand how layered rocks become deformed and the types of structures that result.
- understand the significance and main subdivisions of geophysics.
- draw up orderly, illustrated field notes, sketch maps and graphic logs based on careful observations of relevant data and interpret field relationships between groups of rocks.
- draw a simple geological map from field evidence and interpret a geological map in terms of sub-surface structure.

Assessment: In class test (Invigilated on campus) (30%)
Coursework 1 (30%)
Examination 1 (40%)

Assessment Description: IT1E In-class test 30%
001 Coursework 30% - includes 3x on-line quizzes (5% each) and field class (15%)
002 Open book essay in exam period 40% - summer exam period

Moderation approach to main assessment: Partial second marking

Assessment Feedback: Written comments and generic feedback on field notes.

Oral feedback on in-class test in April

Examination of June scripts in tutorials at start of Level 2.

Failure Redemption: Supplementary examinations (one written, one practical) for 100% that is exam-based.

Field classes cannot be redeemed.

Additional Notes: Delivery of both teaching and assessment will be on-campus.

Available to visiting and exchange students and as an optional module for students from other disciplines. Students must be available for all examinations.