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| Swansea University L#583059 | | | | | |
| PRO-FORMA FOR A NEW MODULE/*FFURFLEN AR GYFER MODIWL NEWYDD*SESSION/*SESIWN* 2011-12 | | | | | |
| Module Title: Data Visualization  *Teitl y Modiwl*: | | | | | Module Code: CSC337  *Côd y Modiwl*: |
| College: College of Science  *Coleg:*  Subject Area: (e.g. Department) Computer Science  *Maes Punc: (e.e. Adran)* | | Level: 6  *Lefel*: | | Credit Points: 15  *Pwyntiau Credyd*:  ECTS Credits: 7.5 Credydau ECTS | |
| **Academic Information**  ***Gwybodaeth Academaid*** | | | | | |
| Type of Module: Blended learning (Taught + Peer feedback)  *Math o Fodiwl:* | Formal Contact Hours: 30  *Oriau Cyswllt Ffurfiol*: | | Total Notional Hours: 150  *Amcan o Gyfanswm yr Oriau:* | | |
| Method of Delivery: On campus lectures  *Dull Cyflwyno:* | | | | | |
| Volume of e-learning anticipated: eg Use of Blackboard etc/  *Maint disgwyliedig yr e-ddysgu e.e. Defnyddio Bwrdd du a.y.b*  Blackboard/Canvas used for lecture slides, recorded lectures, assigning peer markers, and assignment submission | | | | | |
| Intended Learning Outcomes: (See guidance notes to accompany this proforma)  Deilliannau Dysgu Bwriadedig: (Gweler y nodiadau cyfarwyddyd a anfonwyd ynghyd â'r ffurflen hon)  After taking this module, students will be able to:   * Explain the basic elements of designing a visualization * Match effective visualization techniques with data types * Constructively critique visualization designs * Produce an effective visualization given a dataset and tasks | | | | | |
| Transferable skills/Sgiliau trosglwyddadwy:  The ability to identify and generate advanced visualizations of data, comparative analysis, the ability to identify sources of data and the challenges when visualizing data as well as the challenges that scientists and practitioners from other disciplines face. | | | | | |
| Main recommended texts/Prif destunau a argymhellir: | | | | | |
| Syllabus:  Maes Llafur:  Learning visualization is a trial and error process. This module embraces that fact; it will be conducted in the fashion of a graphic design module. Students will create a portfolio of visualization designs as they progress through the module. This will culminate in a final report, reflecting on the development of your visualizations throughout the module.  The first part of the module will be a set of lectures discussing basic principles of visualization design.  The rest of the module will be designed around 6 mini-projects. Each mini project will take two weeks. It will start with a lecture introducing a topic, challenges, and the coursework will be handed out. The next lecture will be a student-led discussion where we will discuss data and user modelling specific to the topic. Then there will be another lecture giving advanced visualization design ideas. The final lecture of the block will serve as a surgery session for general questions that have arisen during the last 2 weeks.  There will be 3 main sections to the module: abstract data, volume data, and flow data. There will be two mini-projects for each.  Lab sessions will serve for tutorials for the software packages in the module as well as ‘surgery’ sessions to get specific feedback or advice on the project.  Marking for the mini-projects will be conducted using peer marking. This will give you an opportunity to practive (constructive) criticism of visualization designs. | | | | | |

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| **Method of Assessment**  ***Dulliau Asesu*** | |
| Method of Double Marking to be used for the predominant assessment method:  (Please select **ONE** of the following)  *Dull Marcio Dwbl i’w ddefnyddio fel prif ddull asesu:*  *(****Dewiswch UN o'r canlynol os gwelwch yn dda****)*  (Please select ONE – note in the case of PGTM dissertations, the only acceptable form is universal blind or non-blind double  marking)/*(Dewiswch UN os gwelwch yn dda – sylwer yn achos traethodau hir Gradd Meistr* ô*l-raddedig a addysgir, yn unig ffurf*  *dderbyniol yw marcio dwbl cyffredinol dall nad yw’n ddall.)*  Universal double-blind marking/*Marcio dwbl dall cyffredin*   Universal non-blind double marking/*Marcio dwbl cyffredin nad yw’n ddall*   Universal second marking as check or audit/*Ail farcio cyffredin i wirio neu archwirio*   Second marking as sampling or moderation/*Ail farcio i samplu neu safoni* *X*  Partial second marking/*Ail farcio rhannol*  | |
| Type of Assignment: eg Essay etc/*Math o aseiniad e.e. Traethawd a.y.b.*  Peer marking of 6 courseworks (2 weeks for each) plus final portfolio report marked by the coordinator | |
| Duration of examination and date of assessment (if relevant):  *Hyd yr arholiad a dyddiad yr asesiad (os yn berthnasol):*  *N/A* | Length of assignment (if relevant):  *Hyd yr aseiniad (os yn berthnasol):*  *2 weeks each + 1 week for peer marking* |
| In what ways will students receive feedback on assessed work, including formal examinations?/  *Ym mha ffyrdd ybydd myfyrwyr yn derbyn adborth ar waith a asesir, gan ynnwys arholiadau*  *ffurfiol?*  Assessment approach 1/ *Dull asesu 1*: peer marked assessment after each coursework using standardized feedback questionnaire  Assessment approach 2/*Dull asesu 2*: | |
| **Higher Education Institutions are expected to take anticipatory action to ensure that disabled students are not disadvantaged in accessing the curriculum.** **Colleges are required to provide details of how students with Disabilities would be accommodated within these Assessments:**  Disgwylir i Sefydliadau Addysg Uwch gymryd camau disgwylgar i wneud yn siŵr nad yw myfyrwyr anabl dan anfantais wrth gael mynediad i’r cwricwlwm. Mae’n ofynnol i Golegau ddarparu manylion ynghylch sut y caiff myfyrwyr ag Anableddau eu cynnwys yn yr Asesiadau hyn:  The College Disability Link Tutor works closely with the Disability Office to ensure that no students are disadvantaged and all reasonable adjustments required are made, within the possibilities of professional competency standards.  *Suggested text: T**he College Disability Link Tutor works closely with the Disability Office to ensure that no students are disadvantaged and all reasonable adjustments required are made, within the possibilities of professional competency standards.* | |
| Please provide details of how students would redeem a failure in the module.  *A fyddech cystal â chynnwys manylion i ddangos sut y byddai myfyrwyr yn gwneud iawn am fethiant yn y modiwl.* | |

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| **Information for Catalogue:**  ***Gwybodaeth ar gyfer y Catalog*:** | | |
| Module Synopsis to be printed in the catalogue: (Please keep relatively short)  *Crynodeb o'r Modiwl i’w argraffu yn y catalog: (Disgrifiad cryno)*  *Data Visualization is concerned with the automatic or semi-automatic generation of digital images that depict data in a meaningful way(s). It is a relatively new field of computer science that is rapidly evolving and expanding. It is also very application oriented, i.e., real tools are built in order to help scientists from other disciplines.* | | |
| Notes to be printed in Catalogue (e.g. availability to visiting and exchange students):  *Nodiadau i'w hargraffu yn y Catalog (e.e. a ydynt ar gael ar gyfer myfyrwyr cyfnewid a rhai ar ymweliad):*  Available to visiting and exchange students | | |
| **Module Rules [Please use module codes only]**  ***Rheolau'r Modiwl [Defnyddiwch godau modiwlau yn unig]:*** | | |
| When Taught TB1/TB2/TB1+2:  *Amser Addysgu BA1/BA2/BA1+2:* | Lecturer:  *Darlithydd*: | % Taught in Welsh:  *% yn y Gymraeg:* |
| TB2 | Thomas Torsney-Weir | 0 |
| Co-requisite:/*Cydofynion:*  *N/A* | Pre-requisite/*Rhagofynion:*  *N/A* | Incompatibles/*Modiwlau Anghydnaws*:     N/A |

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| **Administrative Information:**  ***Gwybodaeth Weinyddol*:** | | | | | |
| How often will the module run during each session?  *Pa mor aml y cynhelir y modiwl yn ystod pob sesiwn?*  *once* | | If more than once:/*Os mwy nag unwaith*: | | | |
| How often?  *Pa mor aml*? | |  | |
| When?  *Pryd?* | |  | |
| Where?(e.g. Franchised Inst.): *Ble? (ee Sefydliad Etholfraint):* | |  | |
| Module topic(s) (if more than one subject area teaches the module please indicate % of teaching):  *Pwnc y Modiwl (os oes mwy nag un maes pwnc yn addysgu'r modiwl, nodwch % yr addysgu):*  Please refer to [www.hesa.ac.uk/jacs](http://www.hesa.ac.uk/jacs) or Mr A Phillips, Student Records Officer  ***Ewch i*** [***www.hesa.ac.uk/jacs***](http://www.hesa.ac.uk/jacs) ***neu cysylltwch â Mr A Phillips, Swyddog Cofnodion Myfyrwyr*** | | | | | |
| **JACS Code**  *Côd JACS* | **Topic(s)Subject(s)**  *Pwnc / Pynciau* | | **Subject Area (e.g. Department)**  *Maes Pwnc (e.e. Adran)* | | **%** |
| I710 | Computer generated imagery | | Computer Science | | 100 |
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| Does the module encroach on other subject areas? no  A yw’r modiwl yn gorgyffwrdd ag unrhyw feysydd pwnc eraill?  If yes then the module proposer MUST discuss the proposal with an appropriate representative from the home subject area to confirm that this module is not already taught and will not interfere with current teaching arrangements.  Os felly mae’n RHAID i’r sawl sy’n cynnig y modiwl drafod y cynnig â chynrychiolydd priodol o’r maes pwnc cartref er mwyn cadarnhau nad yw’r modiwl eisoes yn cael ei ddysgu ac na fydd yn ymyrryd â’r trefniadau dysgu presennol. | | | |
| Signature of home subject representative  Llofnod cynrychiolydd y pwnc cartref |  | | |
| Does the module replace an existing module? If so which one? *A yw'r modiwl yn cymryd lle modiwl sy'n bodoli eisoes? Os felly, pa un?* | no | | Existing Module Code  Côd Presennol y Modiwl |
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| Has the module been approved by College Learning and Teaching Committee?  *A dderbyniwyd y modiwl gan Bwyllgor Dysgu ac Addysgu'r Coleg?* |  | Date of Meeting  Dyddiad y Cyfarfod | |
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| Signature of Chair of College Learning and Teaching CommitteeLlofnod Cadeirydd Pwyllgor Dysgu ac Addysgu’r Coleg If submitting electronically please type name and date. Teipiwch eich enw a'r dyddiad os ydych yn cyflwyno'n electronig |  | DateDyddiad |  |
| Any conditions/*Unrhyw amodau*: | | | |
| Database updated/*Diweddarwyd y gronfa ddata*: | | Initials/*Llythrennau:* | |