IM946-20 Advanced Visualisation Design Labs

26/27

Department
Centre for Interdisciplinary Methodologies
Level
Taught Postgraduate Level
Module leader
Greg McInerny
Credit value
20
Module duration
10 weeks
Assessment
100% coursework
Study location
University of Warwick main campus, Coventry

Description

Introductory description

The Advanced Visualisation Design Labs module develops students' independence in visualisation design, development, analysis and critique, through the development of three visualisation projects which further advance students' portfolio of work. Each project will focus on a visualisation challenge drawn from methodological, societal, scientific and policy topics, with at least one of the challenges driven by a real-world problem proposed by an external partner. Students will develop their response to a project brief through hands-on workshops that enable students to learn-by-doing, and allow students to expand their design and technical skills in dialogue with their methodological and critical understanding. Master classes will expand student's methodological and technical repertoire in areas such as human-centred design, typography, storytelling, stencilling, and digital cartography. Students will examine their designs as prototypes and probes, and reflect on design-ing as a means to create, but also as a means to apply and interrogate theory, knowledge and methods. In combination with the curation of their portfolios, students will develop their own design manifesto which puts their methodological and aesthetic approaches, and final outcomes, in relation with design norms and ethics, and visual cultures and style.

Module aims

(1) To develop a critical approach to visualising data;
(2) To develop an appreciation of theoretical, methodological, ethical and practice-based considerations in designing and producing visualisations;
(3) To develop practical and organisational skills through project work.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

The module is structured around three visualisation challenges, each of which having three weeks devoted to developing a student-led project. Each 3 week project cycle begins with an introduction & mini lecture and initial design lab to develop ideas and form an initial project proposal. The second week of the project cycle involves a masterclass in technique, method or tool related to the challenge, covering, for instance, topics such as human-centred design, typography, storytelling. And finally, the third week of the cycle involves project feedback. The visualisation challenges will be selected from methodological, societal, scientific and policy topics, with at least one of the challenges driven by a real-world problem proposed by an external partner. As such, the readings and discussion topics will be determined by each challenge, and integrate with the key themes around design and critical approaches to visualising data, and the methodological issues involved in visualisation. The final week involves presentations of student projects and design manifesto for formative feedback before submitting assessments.
Week 1 Introduction to challenge I, Mini lecture, discussion & design lab
Week 2 Master Class & design Lab
Week 3 Peer feedback and design lab
Week 4 Introduction to challenge II, Mini lecture, discussion & design lab
Week 5 Master Class & design Lab
Week 6 Peer feedback and design lab
Week 7 Introduction to challenge III, Mini lecture, discussion & design lab
Week 8 Master Class & design Lab
Week 9 Peer feedback and design lab
Week 10 Portfolio & Design Manifesto presentations

Learning outcomes

By the end of the module, students should be able to:

- Demonstrate an understanding of visualisation practices in terms of ethics, aesthetics, methods and contemporary debates.
- Demonstrate an ability to critically analyse visualisation practices in terms of theory, methods, materials and technologies.
- Explain visualisation as an interdisciplinary subject.
- Evaluate own practice within the interdisciplinarity of visualisation.
- Create visualisations through code and other materials.

- Demonstrate an ability to research and develop projects from an initial brief.
- Evaluate visualisations and prototypes in terms of users/audiences, and tasks/affordances.
- Understand and demonstrate the core skills required to create effective visualisations.
- Demonstrate an appreciation of prototypes and design processes in developing visualisations.
- Demonstrate a critical approach to visulisation that introduces concepts and theory within methodological approaches and development of techniques.

Indicative reading list

Reading lists can be found in Talis

Research element

Students will develop 3 visulisation projects, each of which involves research from an initial project brief.

Interdisciplinary

The module explores visualisation as a highly interdisciplinary subject from a wide variety of views - from science to the arts, cartography to statistics, and from computing to information design.

Subject specific skills

- Demonstrate computing and practical skills to create data visualisations.
- Demonstrate critical skills and methodological awareness in visualisation design and analysis.
- Develop and evaluate visualisations through an iterated design process.
- Demonstrate an understanding of design as a process of learning and the role of prototypes within that learning process.

Transferable skills

- Demonstrate critical, creative and independent thinking when researching project proposals.
- Make productive links between theoretical ideas, methodological concepts and practice.
- Demonstrate written, oral and visual communication skills: to articulate arguments visually, orally and through writing, supported by wide reading and research.
- Demonstrate time management skills.
- Generate and evaluate project ideas.
- Demonstrate problem solving skills.
- Demonstrate independent learning skills.
- Participate in class discussions.

Study

Study time

Type	Required
Lectures	3 sessions of 30 minutes (0%)
Seminars	3 sessions of 30 minutes (0%)
Practical classes	24 sessions of 1 hour (12%)
Other activity	3 hours (2%)
Private study	170 hours (85%)
Total	200 hours

Private study description

Prescribed reading and self-directed study for assessments.
Design research and development for projects.

Other activity description

Portfolio & Design Manifesto presentations

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group A

Assessment component	Weighting	Study time	Eligible for self-certification
Design Manifesto Design Manifesto, 1200 Words	30%		Yes (extension)

Reassessment component is the same

	Weighting	Study time	Eligible for self-certification
Assessment component			
Portfolio Portfolio -1000 words, 2 projects	70%		Yes (extension)
Reassessment component is the same			

Feedback on assessment

Ongoing, weekly studio feedback from teaching staff and peers: Verbal feedback provided from staff and peers in situ in class in response to class discussion, findings, visualisations produced and self-formulated weekly project goals.

Design Manifesto: a) Written feedback provided to each student online via Tabula;

Portfolio and Design Manifesto Presentation: a) Written feedback provided to each student online via Tabula; b) Aggregate/general verbal feedback provided in class.

Portfolio Review: a) Written feedback provided to each student online via Tabula

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Availability

Courses

This module is Core optional for:

- TIMA-L995 Postgraduate Taught Data Visualisation
  - Year 1 of L995 Data Visualisation
  - Year 2 of L995 Data Visualisation

This module is Optional for:

- Year 1 of TIMS-I401 MASc in AI and Society
- Year 2 of TIMS-L990 Postgraduate Big Data and Digital Futures
- TIMA-L99A Postgraduate Taught Digital Media and Culture
  - Year 1 of L99A Digital Media and Culture
  - Year 2 of L99A Digital Media and Culture

This module is Option list A for:

- Year 1 of TIMS-L990 Postgraduate Big Data and Digital Futures