WM241-18 Human Behavior in Cyber Systems

21/22

Department
WMG
Level
Undergraduate Level 2
Module leader
Magda Zajaczkowska
Credit value
18
Module duration
30 weeks
Assessment
Multiple
Study location
University of Warwick main campus, Coventry

Description

Introductory description

Human-computer interaction (HCI) is concerned with designing interactions between human activities and the computational systems that support them, and with constructing interfaces to afford those interactions. Interaction between users and computational artefacts occurs at an interface that includes both software and hardware. Human behaviour should influence interface design and implementation of core functionality. For end-users, the interface is the system. So design in this domain must be interaction-focused and human-centred. It is imperative that during the design phase of this human-computer interface that human behaviour with regard to cyber security is addressed. One of the most significant challenges in the cyber domain is the transfer of meaning between the fully human agent, and the fully digital sub-system. Failure to correctly align human behaviour with computing sub-system behaviour has contributed to numerous, historic cyber security problems. This module places the person at the centre of the cyber domain.

Module aims

1 – Design, implement and evaluate an interface for a well-defined community of users to interact with an application to achieve worthwhile user objectives.
2 - Analyse the relationship between the human-computer interface, user behaviour and cyber

security consequences.

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.

Outline content
The content of this module will be taught from a cyber security perspective.

- foundations
- designing interaction
- programming interactive systems
- user-centred design and testing
- human factors and security

Learning outcomes

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

- 1 – Design, implement and evaluate an interface for a well-defined community of users to interact with an application to achieve worthwhile user objectives.
- 2 - Analyse the relationship between the human-computer interface, user behaviour and cyber security consequences.

Indicative reading list

Eysenck, Michael W. and Keane, Mark T., “Cognitive Psychology: A Student's Handbook”, 7 Ed, Psychology Press (2015)

Nussbaumer Knaflic, Cole, “Storytelling with Data”, Wiley (2015)

Preece, Jenny, Sharp, Helen and Rogers, Yvonne, “Interaction Design: Beyond Human-Computer Interaction”, 4 Ed, Wiley (2015)

Subject specific skills

1 – Design, implement and evaluate an interface for a well-defined community of users to interact with an application to achieve worthwhile user objectives.
2 - Analyse the relationship between the human-computer interface, user behaviour and cyber security consequences.

Transferable skills

digital literacy, communication

Study

Study time

Type	Required
Supervised practical classes	18 sessions of 2 hours 30 minutes (22%)
Private study	45 hours (22%)
Assessment	116 hours (56%)
Total	206 hours

Private study description

Independent activity between workshops, following up on activities initiated in previous workshops or preparing for upcoming workshops.

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 A2

	Weighting	Study time
Contribution in learning activities 1	20%	18 hours
Contribution in learning activities 2	20%	18 hours
Assignment 1	30%	40 hours
Assignment 2	30%	40 hours

Assessment group R

	Weighting	Study time
Reassessment assignment	100%	

Feedback on assessment

Written feedback for each assignment
Verbal feedback during tutorial sessions
Summative feedback on assignments

Availability

Courses

This module is Core for:

- UWMA-H651 Undergraduate Cyber Security
  - Year 2 of H651 Cyber Security
  - Year 2 of H651 Cyber Security
  - Year 2 of H651 Cyber Security