

Overview of Year One:

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Lecturer in Health & Care Informatics, UWTSD



Audience Q&A Session

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Digital Technology in Health and Care: BMDS 7006

Level	7
Pre-Requisites	No
Status	Core module: MSc/PGDip/PGCerT/UniCert Digital Skills for the Health and Care Professions
Credits	40
Semester	AUTUMN & SPRING SEM
Timetabling	Weeks 1-19. Live sessions in Collaborate with recordings Live sessions (synchronous) Once a Month. Thursday 1:00 – 5.00 pm (UK time).
Module Coordinator	Muntaha Alam Nafisa
Other Lecturer	Dr Philip Scott, Dr Wendy Dearing, Dr Jodie Croxall, Guest Lecturer (TBC)
Version Date	4 th September 2022

Module Aims

To explore the role of digital technology within a whole systems approach to data use and management that is not dependent on individual sectors within the health or social care and which supports seamless care.

This will inform the provision of a digitally literate workforce that helps individuals interact with each other, patients and the public within their roles.

Learning Outcomes

Upon the successful completion of this module, the student should be able to:

- Demonstrate a systematic, extensive and comparative knowledge and understanding of how data is used safely, ethically and appropriately in a multidisciplinary care setting to support whole system change, improve outcomes and partnership working.
- Apply a project management methodology to develop a whole system improvement programme specifying the approach/research design, objectives and outcomes.
- Demonstrate a systematic understanding and knowledge of the concepts, methods and technological components of digital technology and evaluate critically its functionality, benefits and limitations in a specific context.

Learning Methods

- Combination of online lectures/seminars, case studies, and practical activities
- Learning materials will be included in most lectures and made available on moodle.
- Pre-or post-session work.
- Online discussion group and take part in the ongoing discussion.

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	60	15%
Independent learning	340	85%
Placement learning		
TOTAL	400	100%

Indicative Content to Achieve Learning outcome

(Subject to modification)

Learning Outcome	Content
Demonstrate a systematic, extensive and comparative knowledge and understanding of how data is used safely, ethically and appropriately in a multidisciplinary care setting to support whole system change, improve outcomes and partnership working.	Information organization & Exchange (Interoperability) • Interoperability Standard and • standard development organizations
	Information Governance & Ethics • Health & Social Care Information Governance • Laws and regulations • Confidentiality and data protection

Indicative Content to Achieve Learning outcome

(Subject to modification)

Learning Outcome	Content
Apply a project management methodology to develop a whole system improvement programme specifying the approach/research design, objectives and outcomes.	IS/IT project planning and Management:
	• Brief Overview
	• Principles & Practice
	• Implication and Use of Different Project management methodology
	• Project planning & Project management tool
	• Avoiding failure and Measuring Success
	• Project tracking and evaluation

Indicative Content to Achieve Learning outcome

(Subject to modification)

Learning Outcome	Content
Demonstrate a systematic understanding and knowledge of the concepts, methods and technological components of digital technology and evaluate critically its functionality, benefits and limitations in a specific context.	Introduction to IS & IT in Health & Social Care • Industry 4.0 technology in Health & Social Care

Assessments and Assessment summery:

Mode of assessment	Volume	Weighting	Submission Deadline	Return of Marks
Critical evaluation report CW1	5,000 words*	50%	TBA	TBA
Project Proposal CW2	5,000 words*	50%	TBA	TBA

- Excluding graphs, figures, tables, reference lists, and appendices

Activity type	Percentage
Written exam	
Coursework	100%
Practical	
TOTAL	100%

Assessment Component 1 :

A critical evaluation of a Real-life IS and IT project in Health and Social Care needs to be conducted in order to fulfil the scope of CW1. The report should include the following detail:

- Context: organization and existing IS and IT
- Information system and Information technology: type, management, interoperability, governance.
- Was the project a success/failure: reason (and your justification)
- What lessons have been learned

Assessment Component 2:

IS and IT project proposal:

- CW2 is a continuation of CW1. Write a project proposal for CW2 based on the outcome of the evaluation.
- The project proposal should include the following detail: (you must propose the most up-to-date IS and IT and must address interoperability and governance related to the project along with others)

Indicative Reading Materials

(Subject to modification) Available electronically via [Library and Learning Resources | University of Wales Trinity Saint David \(uwtsd.ac.uk\)](#)

Information organization & Exchange (Interoperability)

1. Oemig, F. and Snelick, R., 2016. Healthcare interoperability standards compliance handbook. *Cham: Springer international publishing AG*.
2. Tim Benson (2016) *Principles of Health Interoperability*. 3rd edition. Springer Cham. doi:10.1007/978-3-319-30370-3.
3. GOV.UK. 2022. *Integrated care partnership (ICP): engagement summary*. [online]. Available at: <https://www.gov.uk/government/publications/integrated-care-partnerships-engagement-findings/integrated-care-partnership-icp-engagement-summary> [Accessed 30 August 2022].

Indicative Reading Materials

(Subject to modification) Available electronically via [Library and Learning Resources | University of Wales Trinity Saint David \(uwtsd.ac.uk\)](#)

4. NHS England. 2022. *Integrated Care Systems: design framework*. [online]. Available at: <https://www.england.nhs.uk/wp-content/uploads/2021/06/B0642-ics-design-framework-june-2021.pdf> [Accessed 30 August 2022].
5. NHS England. 2022. *Integrated care*. [online]. Available at: <https://www.england.nhs.uk/integratedcare/> [Accessed 30 August 2022]
6. Hl7.org. 2022. *Overview-clinical - FHIR v4.3.0*. [online]. Available at: <https://hl7.org/fhir/overview-clinical.html> [Accessed 30 August 2022].
7. SNOMED. 2022. [online]. Available at: <https://www.snomed.org/snomed-ct/five-step-briefing> [Accessed 30 August 2022].

Indicative Reading Materials

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Information Governance & Ethics

1. Ansell, C. and Torfing, J. eds., 2022. *Handbook on theories of governance*. Edward Elgar Publishing.
2. Kooiman, J., 2003. *Governing as governance*. Sage.
3. Ammenwerth, E. and Rigby, M. eds., 2016. *Evidence-based health informatics: Promoting safety and efficiency through scientific methods and ethical policy* (Vol. 222). IOS press.
4. Ico.org.uk. 2022. *Guide to Data Protection*. [online]. Available at: < <https://ico.org.uk/for-organisations/guide-to-data-protection/> > [Accessed 30 August 2022].
5. Breaux, R.W., Black, E.W. & Newman, T. (2014) *A guide to data protection and breach response*. Aspen Publishers, Inc.

Indicative Reading Materials

(Subject to modification) Available electronically via [Library and Learning Resources | University of Wales Trinity Saint David \(uwtsd.ac.uk\)](#)

6. Mitchell, S., 2009. *How to Survive a Data Breach: A Pocket Guide*. IT Governance Ltd.
7. Wacks, R., 2015. *Privacy: A very short introduction*. OUP Oxford.
8. Sujan, M., Scott, P. and Cresswell, K., 2020. Digital health and patient safety: technology is not a magic wand. *Health Informatics Journal*, 26(4), pp.2295-2299.
9. Tallon, P.P., Ramirez, R.V. and Short, J.E., 2013. The information artifact in IT governance: Toward a theory of information governance. *Journal of Management Information Systems*, 30(3), pp.141-178.

IS/IT project planning and Management

1. The Topol Review: NHS Health Education England. 2022. *The Topol Review*. [online]. Available at: <https://topol.hee.nhs.uk/the-topol-review/> [Accessed 30 August 2022].

Indicative Reading Materials

(Subject to modification) Available electronically via [Library and Learning Resources | University of Wales Trinity Saint David \(uwtsd.ac.uk\)](#)

2. Ahmed, A., 2011. *Software project management: A process-driven approach*. CRC Press.
3. Cresswell, K.M., Bates, D.W. and Sheikh, A., 2013. Ten key considerations for the successful implementation and adoption of large-scale health information technology. *Journal of the American Medical Informatics Association*, 20(e1), pp.e9-e13.
4. Thamhain, H.J., 2014. *Managing technology-based projects: Tools, techniques, people and business processes*. John Wiley & Sons.
5. Greenhalgh, T. and Abimbola, S., 2019. The NASSS framework-a synthesis of multiple theories of technology implementation. *Stud Health Technol Inform*, 263, pp.193-204.

Indicative Reading Materials

(Subject to modification) Available electronically via [Library and Learning Resources | University of Wales Trinity Saint David \(uwtsd.ac.uk\)](#)

6. Core.ac.uk. 2022. *Application of the FITT framework to evaluate a prototype health information system*. [online]
Available at: < <https://core.ac.uk/download/pdf/268002475.pdf> > [Accessed 30 August 2022].
7. Kendall K. E. & Kendall J. E. (2020). *Systems analysis and design* (Tenth edition global). Pearson Education Limited.
8. Scott, P.J. and Briggs, J.S., 2010. STAT-HI: a socio-technical assessment tool for health informatics implementations. *The open medical informatics journal*, 4, p.214.
9. Michie, S., Van Stralen, M.M. and West, R., 2011. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science*, 6(1), pp.1-12.

Indicative Reading Materials

(Subject to modification) Available electronically via [Library and Learning Resources | University of Wales Trinity Saint David \(uwtsd.ac.uk\)](#)

- **Introduction to IS & IT in Health & Social Care**

1. Javaid, M. and Haleem, A., 2019. Industry 4.0 applications in medical field: A brief review. *Current Medicine Research and Practice*, 9(3), pp.102-109.
2. Blobel, B., 2020, September. Application of industry 4.0 concept to health care. In *pHealth 2020: Proceedings of the 17th International Conference on Wearable Micro and Nano Technologies for Personalized Health* (Vol. 273, p. 23). IOS Press.
3. Ahsan, M.M. and Siddique, Z., 2022. Industry 4.0 in Healthcare: A systematic review. *International Journal of Information Management Data Insights*, 2(1), p.100079.
4. Mohamed, N. and Al-Jaroodi, J., 2019, April. The impact of Industry 4.0 on healthcare system engineering. In *2019 IEEE international systems conference (SysCon)* (pp. 1-7). IEEE.
5. Popov, V.V., Kudryavtseva, E.V., Kumar Katiyar, N., Shishkin, A., Stepanov, S.I. and Goel, S., 2022. Industry 4.0 and Digitalisation in Healthcare. *Materials*, 15(6), p.2140.

Managing Digital Strategy to Enhance Health and Care: BMDS 7007

Level	7
Pre-Requisites	No
Status	Core module: MSc/PGDip/PGCerT/UniCert Digital Skills for the Health and Care Professions
Credits	20
Semester	SPRING SEM
Timetabling	Weeks 20-29. Live sessions in Collaborate with recordings Live sessions (synchronous) Once a Month. Thursday 1:00 – 5.00 pm (UK time).
Module Coordinator	Muntaha Alam Nafisa
Other Lecturer	Dr Philip Scott, Dr Wendy Dearing, Dr Jodie Croxall, Guest Lecturer (TBC)
Version Date	4 th September 2022

Module Aims

To examine the dimensions of digital strategy that support continuous improvement in the quality of health and social care services.

Learning Outcomes

Upon the successful completion of this module, the student should be able to:

- Explore current and emerging technologies that can be strategically deployed to improve decision-making, delivery and communication between health and social care professionals, patients and citizens at local and national levels.
- Analyse the challenges related to designing, developing and procuring digital technology effectively in health and care services.
- Reflect on methods of multi- and inter-disciplinary working between healthcare professionals, system developers and stakeholders in order to optimise digital strategy development and implementation in the health and social care sector.

Learning Methods

- Combination of online lectures/seminars, case studies, and practical activities
- Learning materials will be included in most lectures and made available on moodle.
- Pre-or post-session work.
- Online discussion group and take part in the ongoing discussion.

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	30	15%
Independent learning	170	85%
Placement learning		
TOTAL	200	100%

Indicative Content to Achieve Learning outcome

(Subject to modification)

Strategic planning & management

1. Evolution & Overview of Digital Strategy
2. Digital Strategy development, Analysis & Choice
3. Strategy Toolkit
4. Digital Strategy implementation
5. Digital Strategy evaluation & Governance

Assessments and Assessment summary:

Mode of assessment	Volume	Weighting	Submission Deadline	Return of Marks
Critical evaluation report CW1	3,500 words*	75%	TBA	TBA
Project Proposal CW2	1,500 words*	25%	TBA	TBA

- Excluding graphs, figures, tables, reference lists, and appendices

Activity type	Percentage
Written exam	
Coursework	100%
Practical	
TOTAL	100%

Assessment Component 1 :

A critical evaluation of an IS/IT/ICT/Digital transformation strategy of a real Healthcare organization

Assessment Component 2:

Write an evidence-based technology/IS/IT/ICT/Digital transformation strategy proposal for a real Healthcare organisation of your choice.

Indicative Reading Materials

(Subject to modification) Available electronically via [Library and Learning Resources | University of Wales Trinity Saint David \(uwtsd.ac.uk\)](#)

1. NHS England. 2015. *MDT Development -Working toward an effective multidisciplinary/multiagency team*. [online]. Available at: <https://www.england.nhs.uk/wp-content/uploads/2015/01/mdt-dev-guid-flat-fin.pdf> [Accessed 30 August 2022].
2. NHS England. 2019. *Multi-disciplinary teams Liaison and Diversion Manager and Practitioner Resources*. [online] Available at: <https://www.england.nhs.uk/wp-content/uploads/2020/01/Multidisciplinary-Teams.pdf> [Accessed 30 August 2022].
3. GOV.UK. 2015. *Strategy development: a toolkit for NHS providers*. [online] Available at: <https://www.gov.uk/government/publications/strategy-development-a-toolkit-for-nhs-providers> [Accessed 30 August 2022].
4. Sigmaweb.org. 2022. *Strategy Toolkit - OECD*. [online] Available at: < <https://www.sigmaweb.org/publications/strategy-toolkit.html> > [Accessed 30 August 2022].

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5. Davies, A., Mueller, J., Hassey, A. and Moulton, G., 2021. Development of a core competency framework for clinical informatics. *BMJ Health & Care Informatics*, 28(1).
6. FEDIP (2022) *Becoming the Profession*. <https://www.fedip.org/consultation>.
7. GOV.UK. 2022. *The Digital, Data and Technology Playbook*. [online] Available at: <
<https://www.gov.uk/government/publications/the-digital-data-and-technology-playbook/the-digital-data-and-technology-playbook> > [Accessed 30 August 2022].
8. Yancey, K. ed., 2016. *A rhetoric of reflection*. University Press of Colorado.
9. National Audit Office (2020.) *Digital Transformation in the NHS*. [online] Available at: <
<https://www.nao.org.uk/reports/the-use-of-digital-technology-in-the-nhs/> > [Accessed 30 August 2022].

Indicative Reading Materials

(Subject to modification) Available electronically via [Library and Learning Resources | University of Wales Trinity Saint David \(uwtsd.ac.uk\)](#)

10. Nhsproviders.org. 2022. *Building a digital strategy*. [online] Available at: <https://nhsproviders.org/building-a-digital-strategy> [Accessed 30 August 2022].
11. Peppard, J. and Ward, J., 2016. *The strategic management of information systems: Building a digital strategy*. John Wiley & Sons.
12. Sommerville, I., 2016. *Software Engineering* (tenth edn. global edition).
13. Tanguay, E., Hanratty, P. and Martin, B., 2020. *Reflective Writing for Nursing, Health and Social Work*. Bloomsbury Publishing.
14. GOV.UK., 2021. *Define your purchasing strategy*. Available at: <https://www.gov.uk/guidance/define-your-purchasing-strategy> [Accessed August 30, 2022].

Coursework Submission Requirements

- No Plagiarism (The University's and School's advice on unfair means can be found in UWTSD Academic Quality Handbook, available via [Academic Quality Handbook | UWTSD](#))
- Your assignment has a word count limit. 10% above or below the stated word count is permitted.
e. g. assignment word count 100 words (word count 90-110 are permitted)
- Ensure Submission before the deadline
- Late submission is capped at 50 unless there is a valid EC

Coursework Submission Requirements

- No Plagiarism (The University's and School's advice on unfair means can be found in UWTSD Academic Quality Handbook, available via [Academic Quality Handbook | UWTSD](#))
- Your assignment has a word count limit. 10% above or below the stated word count is permitted.
e.g. assignment word count 100 words (word count 90-110 are permitted)
- Ensure Submission before the deadline
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Coursework Submission Requirements

- Work submitted electronically, including through Turnitin, should be reviewed to ensure it appears as you intended.
- Before the submission deadline, you can submit coursework to Turnitin at least once. Each submission will overwrite the previous submission. Only your most recent submission will be assessed. However, after the submission deadline, the coursework can only be submitted once.

Coursework Submission Requirements



Submit your Assignment to Turnitin



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Review

1. Module summaries.
2. Assessment descriptions.
3. Reading: core and supplementary.
4. Peer support.
5. *Masterliness.*



Audience Q&A Session