

CST4350

Knowledge Management Strategies

Module Leader: Roman V.Belavkin

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Duration of the module: 24 weeks

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Other formats available

This handbook is available in a large print format. If you would like a large print copy or have other requirements for the handbook, please contact the Disability Support Service (disability@mdx.ac.uk, +44 (0)20 8411 4945).

Disclaimer

The material in this handbook is as accurate as possible at the date of production. You will be notified of any minor changes. If there are any major changes to the module you will be consulted prior to the changes being confirmed. Please check the version number on the front page of this handbook to ensure that you are using the most accurate information.

Other documents

Your module handbook should be read and used alongside your programme handbook and the information available to all students on My Learning, including the Academic Regulations. Your programme handbook can be found on the My Learning programme page.


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1 Module Introduction

This module introduces students to problems of knowledge management in modern organisations and strategies facilitating creation, documentation, communication, reuse and application of knowledge. Students will learn about the knowledge management systems and techniques for representation and documentation of explicit knowledge in information systems and about the challenges in representation or documentation of tacit (or implicit) knowledge. The dynamic and evolutionary aspects of knowledge and organisations will be discussed as well as the role of communication technologies and expert networks in knowledge economy.

2 The Module Team

Roman V. Belavkin	
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3 Staff Student Communication

Students may contact staff via e-mail, phone, by dropping in to staff office hours, and by making an appointment to see them outside office hours. Staff will contact students by e-mail, phone, the My Learning module page and via lectures and seminars.

The team may send urgent group and/or individual messages about the module to you by email, so it is important that you read your University email regularly. All staff have office hours, it is not necessary to book an appointment during these hours, you just need to drop-in.

In the first instance problems should be dealt with by talking to a member of the module team. You can give feedback on this module to the module leader, your Student Voice Leader, to your personal tutor, and through the end of module evaluation survey.

4 Module Overview

4.1 Aims

To maintain competitive advantage in the knowledge economy, organisations need a knowledge management strategy. The aim of this module is to enable participants to draw upon the latest theory and practice in knowledge management to be able to assist organisations in developing knowledge management systems that nurture and exploit business, social and technological aspects of the organisation

4.2 Learning outcomes

On completion of this module, the successful student will be able to:

Knowledge

1. Explain and reflect on various strategic knowledge-related notions.
2. Analyse and explain concepts and controversies in the study and practice of strategic KM.
3. Evaluate approaches and model types for knowledge management systems in organisations.

Skills

1. Work as part of an organisational team to design a knowledge management strategy that addresses challenges and opportunities in the organisation.
2. Actively participate in a community of practice.
3. Write authoritatively about knowledge management and critique the work of others on knowledge management in an organisational setting.

4.3 Syllabus

1. Knowledge in organisations
 - Explicit and tacit knowledge
 - The knowledge management cycle
 - Knowledge creation. Data, information and knowledge model
 - Knowledge management systems
2. Knowledge documentation
 - Introduction to set theory

- Knowledge representation
 - Formal concept analysis
 - Ontologies
3. Knowledge application
- Intelligence and expertise in problem solving
 - Introduction to logic
 - Expert systems
 - Uncertainty and information
 - Decision-making and decision support systems
4. Knowledge communication
- Introduction to knowledge communication and sharing
 - Social network analysis and communities of practice
 - Knowledge Sharing and Semantic Web
 - Groupware and Collaboration Technologies

4.4 Learning and teaching strategy

4.5 Assessment scheme

Knowledge and skills will be assessed against the learning outcomes by an individual course-work (Outcomes 3, 4, 5 and 6) and unseen examination (Outcomes 1, 2, 3 and 6).

Formative assessment will consist of guided and independent activities throughout the module. Feedback will be provided in subsequent seminars and workshops or on-line.

Summative assessment consists of two components selected in order to ensure students demonstrate an overall understanding of relevant concepts and techniques as well as the ability to apply and critique them in appropriate contexts.

The summative assessment components are:

1. Coursework consisting of two parts (see details below).
2. Two hour unseen examination (during the examination period), assessing key concepts throughout the module.

A minimum mark of 40% in each assessment component is required in order to pass the module.

4.6 Assessment Weighting

1. Coursework, 40% of the total mark as three assessed assignments.
2. Unseen two-hour examination, 60% of the total mark.

4.7 Learning hours

The study hours for each credit point is 10 hours. For a 30-credit module this equates to 300 hours. Therefore, if a module has time-tabled activities i.e. lecture/seminar/lab, of 3 hours per week for a 24 week period (total of 72 hours), then the out-of-class study commitment expected of students is 228 hours in total.

Research Ethics

- The teaching, learning, assessment and research activities undertaken in this module have been considered and are not likely to require ethical approval.
- However, please seek advice if undertaking the module entails carrying out any research activities involving human participants, human data, animals/animal products, precious artefacts, materials or data systems. If you submit work that includes data gathered from or about people, this may be treated as academic misconduct and could lead to fail grade being awarded.
- Research ethics approval seeks to ensure all research is designed and undertaken according to certain principles of ethical research. These include:
 1. Primary concern must be given to the safety, welfare and dignity of participants, researchers, colleagues, the environment and the wider community
 2. Consideration of risks should be undertaken before research commences with the aim of minimising risks to those involved – i.e. human participants or animal subjects, colleagues, the environment and the wider community, as well as actual or potential risks to those directly or indirectly affected by the research.
 3. Informed consent should be freely given by participants, and by a trained person when collecting or analysing human tissue (details on accessing and completing online training for gaining informed consent for HTA purposes can be found below in Section 8).
 4. Respect for the privacy, confidentiality and anonymity of participants
 5. Consideration of the rights of people who may be vulnerable (by virtue of perceived or actual differences in their social status, ethnic origin, gender, mental capacities, or other such characteristics) who may be less competent or able to refuse to give consent to participate
 6. Researchers have a responsibility to the general public and to their profession; as such they should balance the anticipated benefits of their research against potential harm, misuse or abuse which must be avoided
 7. Researchers must demonstrate the highest standards of ethical conduct and research integrity. They must work within the limits of their skills, training and experience, and refrain from exploitation, dishonesty, plagiarism, infringement of intellectual property rights and the fabrication of research results. They should declare any actual or potential conflicts of interest, and where necessary take steps to resolve them.

8. When using human tissues for research, Human Tissue Act and Human Tissue Authority (HTA) requirements must be met. Please contact the relevant designated person (DP) in your department or the HTA Designated Individual (DI) (Dr Lucy Ghali - L.Ghali@mdx.ac.uk). Further information is provided below in the section: "Human Tissue Authority Information", see "Governance Structure" document and SOPs etc.
 9. Research should not involve any illegal activity, and researchers must comply with all relevant laws.
- For more information about ethics go to the Middlesex Online Research Ethics (MORE) system which has information and guidance to help you meet the highest standards of ethical research using this link: <https://MOREform.mdx.ac.uk>
 - Information and further guidance on how to complete a research ethics application form (e.g., video guides and templates) can be found on the MORE MyLearning site*: <http://mdx.mrooms.net/enrol/index.php?id=12277> (Log in required) *Middlesex University Definition of Research document can be located on this site.

5 Learning Resources

Each topic of the syllabus supported by lecture slides, the handouts for which are available on *MyLearning* as well as the module leader's webpage:

<http://www.eis.mdx.ac.uk/staffpages/rvb/teaching/BIS4410/>

The key reading materials for the module are listed in the Reading list:

<http://readinglists.mdx.ac.uk>

Please, refer to the Lecture plan for specific chapters in each week.

6 Making the most of this module

One of the key elements to successfully completing this module is not only attending the lectures and labs, but also regularly (each week) reading research articles suggested after each lecture and contribute to group presentations that are delivered by students at the workshops each week. These presentations are peer-assessed, and they form the basis for the first part of the coursework mark.

Participation and engagement

This module is designed as a combination of contact sessions and independent study. This means you should attend all the allocated sessions, and you should work on your own outside them. Students are expected to take an active part in all learning sessions (lectures and workshops).

Student attendance is monitored during *lectures* and *workshops*, and any unexplained absences will be followed up via e-mail. If for any reason you are unable to attend a session, you please inform the module leader.

To make the most of this module please complete the following every week

- Read through the lecture notes making a note of any points you need to discuss with your tutor.
- Access through the library resource and read additional articles on each topic.
- Liaise with your group members and participate in preparing a short presentation on the topic to discuss at the weekly workshops.
- Complete further reading from the core text online.

The module team is committed to support you and your fellow students whilst you undertake this module. In order for you to get the most out of sessions, you need to come prepared and ready to contribute. Please ensure that any work set by the team has been completed before workshops. After each class please review what has been covered and make a note of anything you would like clarification on.

It is important that you are respectful and supportive to your fellow students and tutors. Adopting this approach will create a positive atmosphere within sessions and is something you can use in your professional life.

To access some of the rooms and specialist space used for this module you will need your University ID card. Please remember that your University ID should be carried with you always.

Lateness policy

Please, ensure you are on time to sessions as tutors will start sessions promptly.

Mobile phones

All mobile phones must be switched to silent during sessions unless directed by your tutor to do otherwise. Calls and texts cannot be made or received during sessions unless agreed with the tutor prior to the session starting. If you are observed using your mobile phone you can be asked to leave the session.

Academic misconduct

Academic misconduct is a breach of the values of academic integrity, and can occur when a student cheats in an assessment, or attempts to deliberately mislead an examiner that the work presented is their own when it is not. It includes, but is not limited to, plagiarism,

commissioning or buying work from a third party or copying the work of others, breach of examination room rules.

Students who attempt to gain unfair advantage over others through academic misconduct will be penalised by sanctions, according to the severity of the offence, which can include exclusion from the University. Links to the relevant University regulations and additional support resources can be found here:

- Academic Integrity Awareness Course. Access to course. (You will have to log into MyUniHub and then MyLearning to access the course)

- Section F: Infringement of Assessment Regulations/Academic Misconduct: <https://www.mdx.ac.uk/about-us/policies/university-regulations>

- Referencing and Plagiarism: Suspected of plagiarism?: <http://libguides.mdx.ac.uk/c.php?g=322119&p=2155601>

- Referencing and avoiding plagiarism: <http://unihub.mdx.ac.uk/your-study/learning-enhancement-team/online-resources/referencing-and-avoiding-plagiarism>

- The MDXSU Advice Service offers free and independent support face-to-face in making an appeal, complaint or responding to any allegations of academic or non-academic misconduct. <https://www.mdxsu.com/advice>

Extenuating circumstances

There may be difficult circumstances in your life that affect your ability to meet an assessment deadline or affect your performance in an assessment. These are known as extenuating circumstances or 'ECs'. Extenuating circumstances are exceptional, seriously adverse and outside of your control. Please see link for further information and guidelines: <https://unihub.mdx.ac.uk/your-study/assessment-and-regulations/extenuating-circumstances>

7 Module overview and learning schedule

Week	Topic	Recommended reading
1	Introduction to module	Nonaka & Takeuchi, 1995.
2	Explicit and tacit knowledge	Schreiber et al., 1999 Ch. 4, 4.2, pp. 69 Dalkir, 2011 Ch. 1, pp. 9—11 Firestone & McElroy, 2003 Ch. 1, pp. 3—17, 20—21, Ch. 10. pp. 275—289
3	Knowledge creation. Data, information and knowledge model.	Schreiber et al., 1999 Ch. 1.2, pp. 3—5 Dalkir, 2011 Ch. 1, pp. 8—9 Firestone & McElroy, 2003 Ch. 1, pp. 17—21
4	The knowledge management cycle	Schreiber et al., 1999 Ch. 4, 4.3, 4.7 pp. 71—83 Dalkir, 2011 Ch. 2, pp. 31—58 Firestone & McElroy, 2003 Ch. 2, pp. 32—59
5–6	Knowledge management systems	Schreiber et al., 1999 Ch. 1.3, pp. 5, Ch. 2, pp. 13—23, Ch. 3, pp. 25—66 Dalkir, 2011 Ch. 2, pp. 85—88, Ch. 8, pp. 270—273 Firestone & McElroy, 2003 Ch. 3 pp. 61—87, 200—204, 206—210
7–8	Introduction to knowledge representation	Schreiber et al., 1999 Ch. 5, pp. 85—121 Dalkir, 2011 Ch. 4, 101—120, 121—124
9–10	Formal concept analysis	Schreiber et al., 1999 Ch. 5, pp. 91—93 Dalkir, 2011 Ch. 1, pp. 11—15
11–12	Ontologies	Schreiber et al., 1999 Ch. 13, pp. 317—345 Dalkir, 2011 Ch. 4, pp. 124—130 Passin, 2004 Ch. 7, pp. 141—169
13	Intelligence and expertise in problem solving.	Schreiber et al., 1999 Ch. 8, 8.3, pp. 189—191 Dalkir, 2011 Ch. 6, pp. 187—213
14	Introduction to logic	Passin, 2004 Ch. 6, pp. 127—137 Firestone & McElroy, 2003 Ch. 5, pp. 177—192
15–16	Expert systems	Schreiber et al., 1999 Ch. 5, 85—121 Schreiber et al., 1999 Ch. 8, 8.4, pp. 191—214
17–18	Uncertainty and information. Decision-Making and Decision Support Systems	Belavkin et al., 2005 Ch. 3 Schreiber et al., 1999 8.3.2, pp. 190—191
19	Groupware	Dalkir, 2011 Ch. 5, pp. 147—149, Ch. 8, pp. 281—291
20—21	Expert networks	Schreiber et al., 1999 Ch. 9, pp. 215—240 Dalkir, 2011 Ch. 5, pp. 149—175
22—24	Semantic Web	Passin, 2004 Ch. 1, pp. 3—18, Ch. 11, p. 237 Dalkir, 2011 Ch. 8, pp. 276—278

8 Assessment

Formative assessment: Formative assessments do not directly contribute to the overall module mark, but they do provide an important opportunity to receive feedback on your

learning. They provide an opportunity to evaluate and reflect on your understanding of what you have learnt. They also help your tutors identify what further support and guidance can be given to improve your grade.

On this module, you will receive formative assessment of your homework (problem solutions) during the lectures and feedback to your practical work during the lab sessions.

Summative assessment: Summative assessment is the assessed work that determines the overall module grade. It is the way the University verifies that students have met the learning outcomes at the appropriate level.

There are *two* assessment components in this module: coursework and exam.

9 Coursework

The coursework consists of two parts:

1. Short presentations on several specific topics studied in the module. The presentations are prepared by groups of 5–6 students.
2. Individual essay on any of the topics in the syllabus of the module.

9.1 Part 1 (group presentations) 20%

In the first week, students are split into groups of 5–6 students, and each group should prepare one small presentation each week. The topics should correspond to the material studied in each week (see Lecture plan). Students should read the relevant literature (individually), and then meet in their group to discuss and agree on what they would present. Typically, a presentation should briefly introduce the research question, overview relevant works on the topic, explain how these works answer the question and make some critical remarks. The presentation should be no longer than 10–15 minutes, which means it should not be longer than 10 slides. The presentations are given by students at the workshops, and are followed by questions and discussion. For each group, the presentation is assessed by the feedback from other students based on three factors:

1. How well did they review the literature? (out of 4)
2. How well did they explain and answer the research questions? (out of 4)
3. How well was it presented? (out of 2)

There are 24 weeks, which are split into 4 blocks, 6 weeks each. These four blocks are:

1. Knowledge in organisations
2. Knowledge documentation
3. Knowledge application

4. Knowledge communication

It is expected that each student presents on behalf of their group at least once in each block. The groups can be changed between the blocks. The marks for presentations, which are peer-assessed, will constitute half of the mark for the coursework of students in the group.

9.2 Part 2 (individual essay) 20%

Each student will have to write an individual essay on any of the topics they studied in the module. The essay should have the format of a research paper, and can be based on and extend the work students did for their presentations in Part 1. The paper has to formulate a research question, review relevant literature and summarise their findings. Students are encouraged to critically evaluate the topic, but any criticism has to be supported either by examples, case studies or by other academic work. The essay should be about 3000 words long or about 10 pages. Note that the essay should not contain any figures or materials other than those produced by the student. Diagrams or data tables from other works in public domain can be reproduced (but not copied) and given appropriate references. In addition, students are required to support their essay by a Turnitin report (www.turnitin.com). The essay will be marked by the tutor, and it carries the second half of the mark for the coursework.

Presentation

Your report should be well presented. A good guide is the *Publication Manual* of the American Psychological Association (e.g. see <http://www.apastyle.org/>). At the very least, your report should be clear, typed or nicely hand-written document with good spelling, grammar and easy to understand English. There is no word limit, but a useful report should be just long enough to describe the work. A sensible limit is about 10 pages of typed text. Beyond this, you are probably being a bit too verbose. Tables, graphs, careful labelling and numbering are all well established and effective presentation tools.

Things to avoid are:

- Including images or diagrams that you did not create yourself or did not obtain the permission to use from the author (even if the image is from the Internet).
- Including graphs or diagrams that you do not describe in the text.
- Forgetting to label the axes on the charts.
- Using 3D charts to display 2D information.
- Including material irrelevant to the work.

Assignment Submissions

Submit your report to the Coursework submission link on My Learning or Unihelp office by **Week 24, Friday, 19:00 April 3, 2020.**

Assessment guidelines

The following are key aspects of the marking strategy for the written coursework:

- Topic, relevance, research question and originality - up to 5 marks
- Literature review - up to 5 marks
- Critique, analysis, depth, conclusions - up to 5 marks
- Presentation, language, grammar - up to 5 marks

Total: up to 20 marks, which contribute to 20% of the total grade.

10 Exam

- 2 hours written exam.
- You will need to answer 2 questions out of 3.

Feedback on your assignments

You will be provided with feedback on all assessment that is helpful and informative, consistent with aiding the learning and development process.

Feedback will normally be provided within 15 working days of the published assessment component submission date.

Overall module grade

Indicate how the overall module grade will be calculated. For example

Each component of assessment will be marked directly onto the 20-point scale based on the assessment criteria. To produce the overall module grade a weighted average percentage will be calculated using the midpoint percentage in the scale below and then converted to a 20-point grade.

In order to pass this module, you need to pass all assessment tasks with a minimum grade of 16 or equivalent.

Before you submit your work for final grading, please ensure that you have accurately referenced the work. It is your responsibility to check the spelling and grammar. If you have submitted a formative or draft assessment, you will receive feedback but no grade. The comments should inform you about how well you have done or tell you about the areas for improvement. All assignments should be submitted online unless specified in assessment briefs.

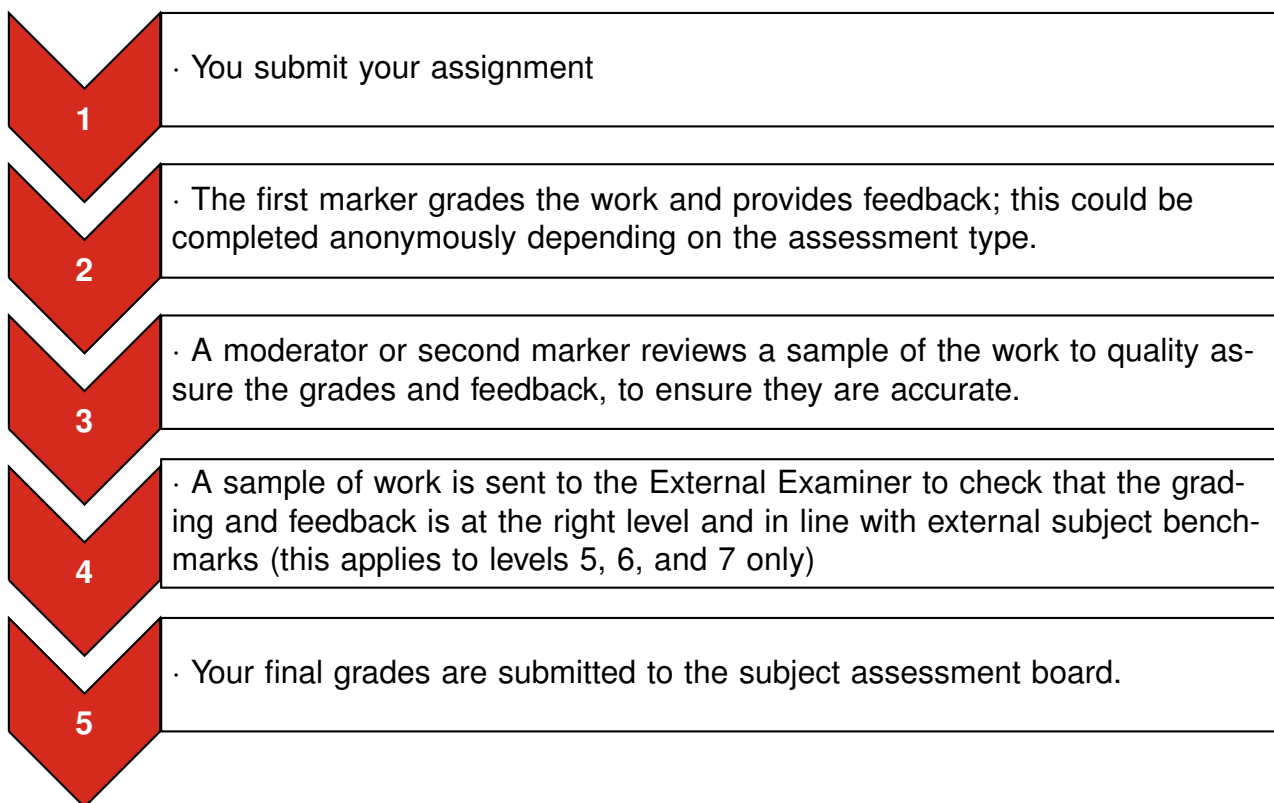
Further information is available at <https://unihub.mdx.ac.uk/study/assessment/regulations>

Classification	Grade	Percentages		Midpoint
Distinction	1	90	100	95.0
	2	80	89	84.5
	3	72	79	75.5
	4	70	71	70.5
Merit	5	68	69	68.5
	6	65	67	66.0
	7	62	64	63.0
	8	60	61	60.5
Pass	9	58	59	58.5
	10	55	57	56.0
	11	52	54	53.0
	12	50	51	50.5
	13	48	49	48.5
	14	45	47	46.0
	15	42	44	43.0
	16	40	41	40.5
Compensatable fail	17	35	39	37.0
	18	30	34	32.0
Uncompensatable fail	19	0	29	14.5

Assessment process

The following diagram provides an overview of the marking process for your module assessment. Details of the programme external examiner can be found in the programme handbook.

Further information on the role of external examiners can be found at. <http://unihub.mdx.ac.uk/your-study/ensuring-quality/external-examiners>



References

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