

**THE UNIVERSITY OF HONG KONG
FACULTY OF EDUCATION**

**Master of Science in Information Technology in Education
Programme Learning Outcomes (PLOs)**

1. Examine issues on the implementation of IT in educational and organizational settings.
2. Apply IT to support teaching, learning, assessment and administration.
3. Design small scale evaluation and research studies involving IT in educational and organizational contexts.
4. Use critical intellectual enquiry methods and demonstrate up-to-date knowledge and skills in implementing appropriate learning experiences in a MSc(ITE) specialist area.
5. Demonstrate awareness of and adherence to personal and professional ethics in a selected MSc(ITE) specialist area.

Course List

MITE6023 Information technology and educational leadership	Core	2
MITE6024 Teaching and learning with information technology	Core	3
MITE6025 Methods of research and enquiry	Core	4
MITE6305 Digital culture and educational practice	e-leadership	5
MITE6310 Innovative practices in educational through information technology adoption	e-leadership	7
MITE6311 E-learning strategies and management	e-learning	8
MITE6328 Organisational learning	e-leadership	9
MITE6329 Multimedia in education	LTD	10
MITE6330 Learning design and technology	e-learning, LTD	11
MITE6332 Digital resources for learning	LTD	12
MITE6333 Mobile and ubiquitous technology in education	e-learning, LTD	13
MITE6334 Digital video & storytelling in education	LTD	15
MITE6335 Technology in education in China within a global context	e-leadership	16
MITE6338 Digital literacies	LTD	17
MITE6340 Research seminars and workshops	Elective, co-requisite for dissertation	18
MITE7341 Digital game-based learning	e-learning	20
MITE7345 Engaging adult learners	e-leadership, e-learning, LTD	21
MITE7347 Project management	e-leadership	22
MITE7349 Data science and learning analytics	e-learning, LTD	23
MITE7351 Information system analysis and development	e-leadership, e-learning, LTD	24
MITE7352 Information technology and intellectual property law in education	e-leadership, e-learning, LTD	25

Not all courses will necessarily be offered every year. Courses with low enrollment will be cancelled. The Faculty reserves the right to withdraw the above courses at any time.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6023	Information technology and educational leadership	Core	Prof. Nancy Law Dr Allan Yuen

Description

This course provides students with the necessary knowledge and working methods to implement local IT policies and strategies at the institutional level. The course offers a comparative perspective for benchmarking local and international practices and identifies contemporary leadership issues concerning the implementation of information technology in education across multiple levels.

Course Learning Outcomes (LOs)

Upon successful completion of this course, students should be able to:

- Compare, contrast, and critique local practices of ICT in education with other countries
- Demonstrate understanding of contemporary leadership concepts and issues related to policies and strategies of ICT implementation in education at different levels

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1.	Compare, contrast, and critique local practices of ICT in education with other countries	PLO #1. Examine issues on the implementation of IT in educational and organizational settings.	2,3
2.	Demonstrate understanding of contemporary leadership concepts and issues related to policies and strategies of ICT implementation in education at different levels and times	PLO #3: Design small scale evaluation and research studies involving IT in educational and organizational contexts. PLO #4: Use critical intellectual enquiry methods and demonstrate up-to-date knowledge and skills in implementing appropriate learning experiences in a MITE specialist area.	1, 2

Assessment

Task No.	Title	Mode of assessment	Weighting	Related LOs
1	Individual assignment	Individual	20%	2
2	Group assignment	Group	40%	1,2
3	Individual written assessment	Individual	40%	1

Selected References

To be advised by lecturer.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6024	Teaching and learning with information technology	Core	Dr Daniel Churchill Dr Natalia Churchill Ms Lucy Huang

Description

This course provides a comprehensive introduction to the use of information technology for teaching and learning. Topics range from traditional applications e.g., computer-based tutorials to more contemporary applications such as the use of learning objects, cognitive tools and collaborative technologies. The course highlights theories of learning underpinning technology integration and the educational contexts within which these are intended to be used.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Discuss effective technology uses in educational contexts	PLO 2	2
2	Develop lessons plans to engage students in use of technology		1
3	Harvest, manage, and apply digital media in teaching and learning		1
4	Demonstrate awareness of emerging technology and possibilities for educational applications		1,2

Assessment

Task No.	Title	Mode of assessment	Weighting	Related LOs
1	Learning design plan	Individual	60%	2,3,4
2	Digital portfolio	Group	40%	1,4

Key References

- Chai, C. S., & Quek, C. L. (2003). Using computers as cognitive tools. In S.C. Tan, Teaching and learning with technology: an Asia-pacific perspective (pp. 182-198). Singapore: Prentice Hall.
- Churchill, D. (2007). Towards a useful classification of learning objects. Education Technology Research & Development, 55(5), 479-497
- Churchill, D. (2007). Web 2.0 and Possibilities for Educational Applications. Educational Technology, 47(2), 24-29.
- Deubel, P. (2003). An Investigation of Behaviorist and Cognitive Approaches to Instructional Multimedia Design. Retrieved 5 August, 2005, from http://www.ct4me.net/multimedia_design.htm
- Education & Manpower Bureau. (2004). Empowering Learning and Teaching with IT. Retrieved 3 August, 2005 from <http://www.emb.gov.hk/elt>
- March, T. (2005). Working the web: theory and practice on integrating the web for learning. Retrieved on 5 August, 2005 from <http://www.ozline.com/learning/theory.html>
- Mayer, R. E. (2003). The premise of multimedia learning: using the same instructional design methods across different media. Learning and Instruction, 13(2), 125-139. ([http://dx.doi.org/10.1016/S0959-4752\(02\)00016-6](http://dx.doi.org/10.1016/S0959-4752(02)00016-6)).
- Scardamalia, M., & Bereiter, C. (2002). Knowledge building. Retrieved 5 August, 2005, from <http://www.abed.org.br/congresso2004/por/MC3b.pdf>
- Shelley, G. Cashman, T., Gunter, R., & Gunter, G. (2004). Teachers discovering computers. Integrating technology into the classroom (3rd ed.). Boston, MA: Course Technology Thomson Learning.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6025	Methods of research and enquiry	Core	Dr Timothy Hew Dr Jingyan Lu Dr Alvin Kwan

Description

This course introduces students to research methods, emphasising critical appraisal and an understanding multiple approaches to conducting research. The course also examines the conceptualization, planning and conduct of small-scale research in the integration of information technology in educational settings.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Identify and critique a small collection of research studies	2, 3	2
2	Conceptualize and plan a small empirical study		2
3	Interpret and communicate research findings		1
4	Discuss approaches and techniques for research on uses of IT in educational settings		1

Assessment

Task No.	Title	Mode of assessment	Weighting	Related LOs
1	Oral presentation	Group	40%	3,4
2	Written research proposal	Individual	60%	1,2

Key references

- Gay, L. R., Mills, G. E., & Airasian, P. (2006). *Educational Research: Competencies for Analysis and Applications*. Upper Saddle River, N.J.: Pearson/Merrill Prentice Hall
- Ravid, R. (2000). *Practical statistics for educators*. (2nd ed). New York, N.Y.: University Press of America, Inc.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6305	Digital culture and educational practice	E-leadership	Not offer in 2017-18

Description

This course explores with a multidisciplinary perspective the impact of digital technologies on society and the individuals. It examines ways in which information technology has affected global and local communities and cultures, home, leisure, work and educational practices as well as our conception of identity. Issues related to the evolution and impact of cyber-communities on adolescents and traditional educational communities will also be examined.

Course Learning Outcomes (LOs)

LO No	Learning Outcome	Related PLO	Related Assessment Task(s)
1	Understand key schools of techno-philosophy in the conceptualization of educational IT	1,2,3,4,5	1,2,3
2	Use perspectives in sociology as frameworks for research/work on IT in education		1,2,3
3	Apply tenets of cross-cultural psychology in IT research/work		1,2,3
4	Identify research gaps and novel research topics in educational IT		1,2,3
5	Demonstrate awareness of environmental and health impacts of educational technologies and IT-mediated globalization		1,2,3

Assessment

Task No.	Title	Mode of assessment	Weighting	Related LOs
1	Essay	Individual	40%	1,2,3,4,5
2	Moodle forum posts	Individual	30%	1,2,3,4,5
3	Group presentation	Group	30%	1,2,3,4,5

Selected References

- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, N.J.: Prentice Hall.
- Bourdieu, P. (1984). *Distinction : a social critique of the judgement of taste*. Cambridge, Mass.: Harvard University Press.
- Bourdieu, P., & Passeron, J. C. (1977). *Reproduction in education, society and culture* (2nd ed.). London: Sage.
- Buckingham, D. (2007). *Beyond technology : children's learning in the age of digital culture*. Cambridge ; Malden, MA: Polity.
- Capodagli, B., & Jackson, L. (2010). *Innovate the Pixar way : business lessons from the world's most creative corporate playground*. New York: McGraw-Hill.
- Chen, S. (2016, April 28). The rise of China's millionaire research scientists : Government's push to put science and technology at forefront of nation's development is creating new breed of highly-paid scientific academics. *South China Morning Post*.
- Chua, B. H., & Iwabuchi, K. o. (2008). *East Asian pop culture : analysing the Korean wave*. Hong Kong: Hong Kong University Press.
- Creeber, G., & Martin, R. (2009). *Digital cultures*. Maidenhead, Berkshire, England ; New York: Open University Press.
- Gere, C. (2008). *Digital culture* (2nd ed.). London: Reaktion.
- Grossman, L. (2014). World War Zero: How Hackers Fight to Steal Your Secrets. *TIME*, 184, 16-23.
- Heidegger, M. (1977). *The question concerning technology, and other essays*. New York: Harper & Row.

- Heider, D., & Massanari, A. (2012). *Digital ethics : research & practice*. New York: Peter Lang.
- HKSAR. (2015). *Fourth Strategy on Information Technology in Education : Realising IT potential and unleashing the learning power of our students to learn and to excel*. Hong Kong: EDB HKSAR Government Retrieved from www.edb.gov.hk/ited/ite4/.
- Horst, H. A., & Miller, D. (2012). *Digital anthropology*. London: Berg.
- Ihde, D. (1993). *Philosophy of technology : an introduction* (1st ed.). New York: Paragon House.
- Johnson, S. (2009). *The best technology writing 2009*. New Haven, Conn.: Yale University Press.
- Karatzogianni, A., & Kuntsman, A. (2012). *Digital cultures and the politics of emotion : feelings, affect and technological change*. Basingstoke England: Palgrave Macmillan.
- Lim, C.-P., Zhao, Y., Tondeur, J., Chai, C.-S., & Tsai, C.-C. (2013). Bridging the Gap: Technology Trends and Use of Technology in Schools. *Educational Technology & Society*, 16 (2), 59-68.
- Miller, V. (2011). *Understanding digital culture*. London: SAGE.
- Morozov, E. (2011). *The net delusion : the dark side of internet freedom* (1st ed.). New York: Public Affairs.
- Morozov, E. (2014). *To save everything, click here : technology, solutionism, and the urge to fix problems that don't exist*. London: Penguin Books.
- Park, J. (2011). Metamorphosis of Confucian Heritage Culture and the Possibility of an Asian Education Research Methodology. *Comparative Education*, 47(3), 381-393.
- Peters, M. A. (2006). Towards Philosophy of Technology in Education: Mapping the Field. In J. Weiss, J. Nolan, J. Hunsinger & P. Trifonas (Eds.), *The international handbook of virtual learning environments* (pp. 95-116). Dordrecht: Springer.
- Pieper, J. (1952). *Leisure : the basis of culture*. London: Faber and Faber.
- Postman, N. (2006). *Amusing ourselves to death : public discourse in the age of show business* (20th anniversary ed.). New York, N.Y., U.S.A.: Penguin Books.
- Potter, W. J. (2004). *Theory of media literacy : a cognitive approach*. Thousand Oaks, Calif.: Sage Publications.
- Saffko, L. (2012). *The social media bible : tactics, tools, & strategies for business success* (3rd ed.). Hoboken, N.J.: John Wiley & Sons.
- Shirky, C. (2011). The Political Power of Social Media-Technology, the Public Sphere, and Political Change. *Foreign Affairs*, 90(1), 1-12.
- Shuker, R. (2013). *Understanding popular music culture* (4th ed.). Abingdon, Oxon ; New York: Routledge.
- Spector, J. M., Merrill, M. D., Ellen, J., & Bishop, M. J. (Eds.). (2014). *Handbook of research on educational communications and technology* (4th ed.). New York, N.Y.: Springer.
- Stanford. (2014). Phenomenological Approaches to Ethics and Information Technology. *Stanford Encyclopedia of Philosophy*.
- Storey, J. (2009). *Cultural theory and popular culture : a reader* (4th ed.). Harlow, England; New York: Pearson Longman.
- Veblen, T. (1899/1998). *The theory of the leisure class*. Amherst, NY: Prometheus Books. (Free electronic copy @ Pennsylvania State University)
- Vermaas, P. E. (2011). *A philosophy of technology : from technical artefacts to sociotechnical systems*. San Rafael, Calif.: Morgan & Claypool Publishers.
- Webster, F. (2010). *The Information Society Revisited*. In D. McQuail (Ed.), *McQuail's Mass Communication Theory* (6 ed., pp. 22-33). London: Sage.
- Weiss, J., Nolan, J., Hunsinger, J., & Trifonas, P. (Eds.). (2006). *The international handbook of virtual learning environments*. Dordrecht: Springer.
- Xu, B. (2014). *Media Censorship in China*: Council on Foreign Relations.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6310	Innovative practices in education through information technology adoption	E-leadership	Mr Anthony Woo

Description

This course explores innovative practices in education through the integration of information technology. The course investigates in detail case studies collected from around the world to examine concepts and models of what constitutes innovative practice in a variety of educational settings. The course examines the proposition that technology can act as a lever for innovation and change in education.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Evaluate and apply concepts and models of IT-based innovative practices in various education settings	1, 2, 5	1,2
2	Analyze IT-based innovative practices in education at classroom as well as school level	1, 2, 5	1, 2
3	Identify educational change issues in connection to innovative practices through ICT adoption	1, 2, 4	1, 2

Assessment

Task No	Title	Weighting	Related LOs
1	Group work	50%	1,2,3
2	Individual Task	50%	1,2,3

Selected References

- Anderson, R.E. (2002) (Ed.). Special Issue: International case studies of innovative uses of ICT in schools, *Journal of Computer Assisted Learning*, 18(4), pp. 381-502.
- Christensen, C. M. (1997). *The innovator's dilemma: when new technologies cause great firms to fail*. Boston: Harvard Business Press.
- Dowling, C., & Lai, K. (2003). *Information and Communication Technology and the Teacher of the Future*, Kluwer Academic Publishers.
- Hargreaves, A., & Goodson, I. (2006). Educational change over time? The sustainability and nonsustainability of three decades of secondary school change and continuity. *Educational Administration Quarterly*, 42(1), 3.
- Kozma, R. (2003) (Ed.). *Technology, Innovation, and Educational Change: A Global Perspective*, ISTE.
- Law, N., Pelgrum, W. J., & Plomp, T. (Eds.). (2008). *Pedagogy and ICT in schools around the world: findings from the SITES 2006 study*. Hong Kong: CERC and Springer.
- Law, N., Yuen, H.K., Ki, W.W., Li, S.C., Lee, Y., & Chow, Y. (2000) (Eds.). *Changing Classrooms & Changing Schools*, Hong Kong: CITE. Retrieved on 15 September, 2011 from http://sites-old.cite.hku.hk/index_eng.htm
- Law, N., Yuen, H.K., & Fox, R. (2011). *Educational Innovations Beyond Technology: nurturing leadership and establishing learning organizations*. New York: Springer. Retrieved on 9 September, 2011 from <http://www.springerlink.com/content/v12347/#section=841804&page=1&locus=0>
- Mishra, P., & Koehler, M. J. (2006). *Technological pedagogical content knowledge: A framework for teacher knowledge*. *Teachers College Record*, 108, 1017-1054.
- Rogers, E.M. (2003). *Diffusion of Innovations*, 5th Ed., NY: Free Press.
- Rowe, A.J. (2004). *Creative Intelligence: Discovering the Innovative Potential in Ourselves and Others*, NJ: Pearson-Prentice Hall.
- Shavinina, L.V. (Ed.) (2005). *The International Handbook on Innovation*, Oxford: Pergamon.
- Spence, W.R. (1994). *Innovation: The Communication of Change in Ideas, Practices and Products*, London: Chapman & Hall.
- Technology Enhanced Learning at HKU. <http://tel.cite.hku.hk/>
- Venezky, R.L., & Davis, C. (2002). Quo Vademus? The Transformation of Schooling in a Networked World, OECD. Retrieved on 15 September, 2011 from <http://www.oecd.org/dataoecd/48/20/2073054.pdf>
- Zhao, Y., & Frank, K. (2003). Factors Affecting Technology Uses in Schools: An Ecological Perspective. *American Educational Research Journal*, 40, 807-840.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6311	e-Learning strategies and management	E-learning	Dr Timothy Hew Ms Ivy Shi

Description

In recent years, we have witnessed an explosive growth in the use of e-learning. But how do we actually design e-learning courses that can engage learners? This course will explore important issues relevant to the design and management of e-learning in both school and organizational learning contexts. Participants will be introduced to six specific types of learning: (a) factual knowledge, (b) conceptual knowledge, (c) critical thinking ability, (d) problem solving, (e) procedural learning, and (f) attitude change. This course will investigate the various instructional strategies that can promote the mastery of each aforementioned six types of learning. Strategies to motivate students in e-learning contexts will also be discussed.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Explain six specific types of learning: (a) factual knowledge, (b) conceptual knowledge, (c) critical thinking ability, (d) problem solving, (e) procedural learning, and (f) attitude change.	MITE: 1, 2 MLIM: 4	1, 2, 3
2	Describe strategies including the use of IT that can promote mastery of six specific types of learning: (a) factual knowledge, (b) conceptual knowledge, (c) critical thinking ability, (d) problem solving, (e) procedural learning, and (f) attitude change.	MITE: 1, 2 MLIM: 4	1, 2, 3
3	Critically evaluate and reflect upon the practice, content and concepts learned in this course	MITE: 2 MLIM: 1,4,5	1, 2, 3
4	Propose, design, and evaluate e-learning models to achieve specific types of learning in a teaching & learning context	MITE: 1,2,5 MLIM: 2,3,4	3

Assessments

Task No.	Title	Mode of assessment	Weighting	Related LOs
1	Student-led teaching	Group	40%	1,2,3
2	Designing and evaluation an e-learning lesson	Individual	60%	1,2,3,4

Key References

Recommended Textbook

- Hew, K. F., & Cheung, W. S. (2014). Using blended learning: Evidence-based practices. Springer (available at <http://link.springer.com.eproxy2.lib.hku.hk/book/10.1007/978-981-287-089-6>)

Course Code	Course Title	Specialism	Lecturer(s)
MITE6328	Organisational learning	E-leadership	Dr Thomas Chiu Dr Natalia Churchill

Course Description

This course explores the concept and processes of organisational learning and the learning organisation. It examines the strategies and tools employed to create and manage a learning and innovative organisation. Topics include managing chaos and complexity; organisation culture and change, scenario planning, storytelling, professional development, training and learning (especially e-learning), performance and evaluation of learning, and others.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Identify challenges in implementing change in organizations	MITE: 1, 2 MLIM: 1,2	1
2	Evaluate and apply models of change to a learning organization	MITE: 5 MLIM: 6	1, 2
3	Develop strategies to support sustainable change in a learning organisation	MITE: 1, 3, 5 MLIM: 3,4,5	2

Assessment

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	What strategies does your organization (or an organization of your choice) have in place to encourage development, change and innovation?	Group	40%	1,2,3
2	What organizational development plan will you use for the workplace to encourage change and innovation?	Individual	50%	2,3
3	Participation	Individual	10%	1,2,3

Key References

- Argyris, C. & Schon, D. (1978). *Organizational Learning: A theory of action perspective*. Reading MA: Addison-Wesley.
- Imants, J. (2003). Two basic mechanisms for organizational learning in schools. *European Journal of Teacher Education*, 26, 3, pp. 293-311.
- Flood, R.L. (2009). *Rethinking the Fifth Discipline: Learning within the unknowable*. London: Routledge.
- Fullan, M. (2001) *The new meaning of educational change*. London: RoutledgeFalmer.
- Law, N., Yuen, H.K., & Fox, R. (2011). *Educational Innovations Beyond Technology: nurturing leadership and establishing learning organizations*. New York: Springer.
- Lim, C.P., Ching, S.C., & Churchill, D. (2011). A framework for developing pre-service teachers' experiences in using technologies to enhance teaching and learning. *Educational Media International*, 48 (2), 69-83.
- Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed). New York: Free Press.
- Senge, P. (2000) (Ed). *Schools that Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares About Education*. New York: Doubleday.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6329	Multimedia in education	Learning technology design	Dr Thomas Chiu Dr Allan Yuen, Dr Vincent Lau, Dr Beta Yip

Description

This course examines methods for sourcing, selecting, using, adapting and evaluating educational multimedia. The course also explores processes and tools for designing and developing educational multimedia products.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO*	Related Assessment Task(s)
1	Design appropriate learning activities using various multimedia technology	1,2,3,4,5	1, 2
2	Use software tools to design prototypes of multimedia teaching and learning resources		1, 2
3	Critically evaluate the quality of educational multimedia products		1, 2, 3
4	Apply multimedia technology in teaching and learning		1, 2
5	Explain the cognitive and pedagogical theories that underpin the instructional design		1, 2, 3

Assessment

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Design a prototype of multimedia teaching and learning resource for supporting learning	Group	40%	1,2,3,4,5
2	Essay writing in relation to the area of "Multimedia in Education"	Individual	50%	1,2,3,4,5
3	Participation (In-class & online)	Individual	10%	3,4,5

Key References

Bent B. Andresen and Katja van den Brink (2013). *Multimedia in Education Curriculum*. UNESCO

Course Code	Course Title	Specialism	Lecturer(s)
MITE6330	Learning design and technology	E-learning Learning technology design	Prof. Nancy Law, Dr Ling Li Dr Michele Notari

Description

This course examines instructional design models and systematic approaches to design of learning environments and resources. The course introduces instructional design from a theoretical perspective as well as providing students with an opportunity to examine the stages of learning product development. The course aims to create a bridge between traditional approaches to instructional design and more contemporary approaches that involve the use of interactive and collaborative learning environments and tools.

Course Learning Outcomes (LOs)

LO No	LO Statement	Related PLO	Related Assessment Task(s)
1	Relate learning theories to different instructional design models	2,3,4	1,2,3
2	Recognize the importance of instructional design for development and delivery of technology-supported learning	1,5	1,2,3
3	Apply instructional design models to design and manage a learning product development	1,2,3	1,2,3

Assessment

Task No	Title	Mode of Assessment	Weighting	Related LOs
1	In-class presentation	Individual	25%	1,2,3
2	Online reflective essay	Individual	35%	1,2,3
3	Instructional product design and documentation	Group	40%	1,2,3

Selected References

- Dick, W., Carey, L., & Carey, J. O. (2001). The systematic design of instruction. New York, NY: Longman.
- Gagne, R., Briggs, L. J., & Wager, W. W. (1992). Principles of instructional design. Orlando, FL: Harcourt Brace College Publishers.
- Ertmer, P. A., & Quinn, J. (2007). The ID casebook: case studies in instructional design. Columbus, OH: Pearson.
- Wilson, B. G. (1996). Constructivist learning environments: case studies in instructional design. Englewood Cliffs, NJ: Education Technology Publications.
- Mayer, R. (2001). Multimedia learning. New York, NY: Cambridge University Press.
- Merrill, D. M., Tennyson, R. D., & Posey, L. O. (1992). Teaching concepts: an instructional design guide. Englewood Cliffs, NJ: Educational Technology Publications.
- Mason, R., & Rennie, F. (2008). E-learning and social networking handbook: resources for higher education. New York, NY: Taylor & Francis.
- Wong, G. K. W. (2015). Understanding technology acceptance in pre-service teachers of primary mathematics in Hong Kong. *Australasian Journal of Educational Technology (AJET)*, 32(6), 713-735.
- Wong, G. K. W. (2016). The behavioral intentions of Hong Kong primary teachers in adopting educational technology. *Educational Technology Research and Development (ETRD)*, 64(2), 313-338.
- Wong, G. K. W. (2016). A new wave of innovation using mobile learning analytics for flipped classroom. In D. Churchill, J. Lu, T. Chiu, & B. Fox (Eds.), *Mobile Learning Design: Theories and Applications* (189-218). Singapore: Springer.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6332	Digital resources for learning	Learning technology design	Dr Daniel Churchill

Description

This course explores the design and development of learning objects (LO) to support teaching and learning. LOs are also examined as a strategy for effective management and delivery of institutional educational resources. The course explores different forms of LOs and examines processes of their design. Students will engage in practical activities, using software tools to develop LOs, and strategies for repurposing their use. The course addresses relevant theoretical issues including multimedia learning and cognitive processing of multimodal information.

Course Learning Outcomes (LOs)

LO No	LO Statement	Related PLO	Related Assessment Task(s)
1	Discuss how interactive and visual capabilities of digital technologies support teaching and learning	4	2
2	Use software tools to design prototypes of learning objects		1
3	Apply learning objects in teaching and learning		1, 2

Assessment

Task No	Title	Mode of Assessment	Weighting	Related LOs
1	Digital portfolio	Group	40%	2,3
2	Learning Object/ DRL Design	Individual	60%	1,3

Key references

- B., & Shneiderman, B. (2003). The craft of information visualization: readings and reflections. San Francisco, CA: Morgan Kaufmann Publishers.
- Mayer, R (2005). The Cambridge handbook of multimedia learning. New York, NY: Cambridge University Press.
- Tufte, E (2001). The visual display of quantitative information. Graphics Press LLC.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6333	Mobile and ubiquitous technology in education	E-learning & Learning technology design	Dr Felix Siu

Description

This course provides a hands-on oriented and in-depth exploration of smart-phone/mobile devices in general, together with essential concepts and the impact of ubiquitous technologies for education and training. The potential for this technology in the next-generation learning systems to impact socio-technological and educational developments will be investigated through real-life examples. In addition to the theoretical and conceptual issues, students will develop practical knowledge in the design and development of simple educational applications for delivery via mobile technologies (e.g., iPhone, iPads and iPods). Particular attention will be given to object-oriented programming and integration with cloud computing.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Develop a professional learning community and use it to discuss effective mobile technology uses in educational contexts	1,2,3,4,5	1,2,3
2	Design and develop a mobile app interface for the purposes of learning		3
3	Understand educational affordances of current mobile applications		1,2,3
4	Develop lesson plans to engage students in learning activities with mobile technologies		1,3
5	Demonstrate awareness of emerging mobile technologies and possibilities for educational applications		1,2,3

Assessment

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Developing an educational mobile app	Individual	50%	1,3,4,5
2	Participation in class and online task	Individual	10%	1,3,5
3	Design learning activities	Group	40%	1,2,3,4,5

Key References

- Park, Y. (2011). A Pedagogical Framework for Mobile Learning: Categorizing Educational Applications of Mobile Technologies into Four Types. *The International Review of Research in Open and Distance Learning*, Vol 12, No 2 (2011)
- Kearney, M., Schuck, S., Burden, K. & Aubusson, P. (2012). Viewing mobile learning from a pedagogical perspective. *Research in Learning Technology*, Vol 20, 2012.
- Dykes, G. and Knight, H. R. (2012). *Mobile Learning For Teachers: exploring the potential of mobile technologies to support teachers and improve practice*. UNESCO working paper series on mobile learning
- Wireless, Mobile and Ubiquitous Technology in Education (WMUTE), 2012 IEEE Seventh International Conference on Date27-30 March 2012
(Student may read the Abstracts to explore possible interesting research topics for your independent project.)
- Schunk, D. H. (1991). *Learning theories: an educational perspective*. New York Merrill.
- Kolb, L. (2011). *Cell Phones in the Classroom: A practical guide for educators*. ISTE
- Ableson, F., Coolins, C., & Sen, R. (2009) *Unlocking Android: A Developer's Guide*. Manning Publications
- John Krumm, “Ubiquitous Computing Fundamentals”, CRC Press, Taylor and Francis Group, (ISBN: 978-1-4200-9360-5), 2010.

- Teaching with iPads, available at <http://teachingwithipad.org/>
- Swan, K.; Van t'Hoofed, M.; & Kratcoski, A. (2005). *Uses and Effects of Mobile Computing Devices in K-8 Classrooms*. Journal of Research on Technology in Education 99 Copyright © 2005, ISTE (International Society for Technology in Education), 800.336.5191
- Uden, L. (2007). *Activity Theory for Designing Mobile Learning*. Int. J. Mobile Learning and Organisation, Vol. 1, No. 1, 2007
- Biggs, J. (1994). *Biggs' Structure of the Observed Learning Outcome (SOLO) taxonomy*. The University of Queensland Teaching and Educational Development Institute. http://www.tedi.uq.edu.au/downloads/biggs_solo.pdf
- David Wolber (2014) *App Inventor Book, AI 2 version*. Retrieved from URL <http://www.appinventor.org/book2>

Course Code	Course Title	Specialism	Lecturer(s)
MITE6334	Digital video and storytelling in education	Learning technology design	Dr Daniel Churchill Mr Landon Lan

Description

The most important component of any e-learning curriculum is content. The integration of digital video and storytelling in education, perhaps more than any other medium, has the power to engage, captivate and enlighten today's learners. This course aims not only to enable the development of media literacy and higher order thinking skills, but also to provide project-based learning experiences that have real world relevancy for contemporary educators. In this course, using the process Visualize – Analyze – Communicate – Apply, participants will explore the principles and application of effective digital video and storytelling in various pedagogical environments and identify and critically evaluate the pedagogical assumptions underlying various multimedia applications. Through the expression of creativity and multiple ways of thinking, participants in this course will engage and interact to develop the necessary skills and confidence to storyboard, plan, coordinate and produce digital video for education, as well as develop the technical capability to author original storytelling content using sound, graphics and video that will have significant implications for the learning experience of today's multimedia-savvy students.

Course Learning Outcomes (LOs)

LO No	Learning Outcome	Related PLO	Related Assessment Task(s)
1	Apply learning theories to design original digital video and storytelling content for education	4	1,2,3
2	Apply digital video, storytelling and other related technologies to learning and teaching	2	1,2
3	Demonstrate necessary skills and confidence to storyboard, plan, coordinate and produce digital video for education	4	2,3

Assessment

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Digital portfolio	Group	40%	1,2
2	Individually-completed tasks	Individual	20%	1,2,3
3	Digital media project	Individual	40%	1,3

Key References

- Fraze, M. (2010). *Digital storytelling guide for educators*. International Society for Technology in Education. Eugene.
- Pogue, D., & Miller, A. (2011). *iMovie '11 & iDVD: The Missing Manual*. Sebastopol, CA: O'Reilly Media, Inc.
- Greenwood, D. A. (2003). *Action! In the Classroom: A Guide to Student Produced Digital Video in K-12 Education*. Scarecrow Press. Note: Little bit old but still relevant.
- Potter, J W. (2012). *Media Literacy*. Thousand Oaks, CA: Sage Publications, Ltd.
- Baker, F. W. (2012). *Media Literacy in the K-12*. International Society for Technology in Education.
- Ohler, J. B. (2007). *Digital Storytelling in the Classroom: New Media Pathways to Literacy, Learning, and Creativity*. Thousand Oaks, CA: Corwin Press.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6335	Information Technology in Education in China within a Global Context	E-leadership	Not offer in 2017-18

Description

Rapid developments in the field of Information Technologies (IT) pose significant challenges to contemporary education systems. Many countries are engaged in developing education policies and pedagogical practices to transform these developments into tangible benefits. The role of IT in China's educational system has been increasing over the last two decades. Policies leveraging these developments have been implemented at both national and provincial levels. However, role of IT in Chinese educational contexts may differ from that in the educational contexts of other countries. In embracing educational opportunities provided by IT China also faces unique and significant challenges. Case-based and project-based approach will be adopted in this module.

Course Learning Outcomes (LOs)

LO No	Learning Outcome	Related PLO	Related Assessment Task(s)
1.	Discuss pedagogical and policy issues in IT implementation in education in China	2, 4	1, 2, 3
2.	Recognize the potential research and practice opportunities with impact on IT in education in China	2, 3, 4	1, 2, 3
3.	Evaluate and compare IT adoption in China with regional and major western countries from national policy and education practice perspectives	2, 3, 4	1, 2, 3

Assessment

Task No	Title	Mode of Assessment	Weighting	Related LOs
1	Group portfolio	Group	50%	1,2,3
2	Proposal	Individual	40%	1,2,3
3	Peer assessment	Individual	10%	1,2,3

Key References

There is no single textbook or reference that adequately covers the topics in this course. You will be provided with references in each session and will be expected to read key references in preparation for each session. The readings, along with online resources, will give you the necessary information to successfully complete the course.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6338	Digital literacies	Learning technology design	Dr Natalia Churchill Dr Michele Notari

Course Description

Digital Literacies comprise of information literacy, ICT literacy and media literacy. They are some of the core 21st century workplace skills. Students as well as knowledge workers need to equip with such skills so that they will be able to define and solve a problem or challenge at hand, and analyze suitable electronic and print information resources, manage resources efficiently and use the sources ethically. The course will also introduce the effective applications of social media for enhancing communication among different groups of an organization.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Discuss digital literacies in educational contexts	1	2
2	Develop action plans to engage your target audience in use of digital media		1,2,3
3	Harvest, manage, and apply digital media in own context (for learning or work e.g. teaching)		1,2,3
4	Demonstrate awareness of emerging technology and possibilities for educational and non-educational applications		1,2,3

Assessment Tasks

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Creation of a multimedia artifact and a reflection paper	Individual	60%	2,3,4
2	Class participation and presentation of weekly group activities	Group	40%	1,2,3,4

Key References and Resources

- Covello, S. (2010). A review of digital literacy instruments. IDE-712 Front-End Analysis. Retrieved http://www.academia.edu/7935447/A_Review_of_Digital_Literacy_Assessment_Instruments
- Fu, J. & Pow, J. (2011). Fostering Digital Literacy through Web-based Collaborative Inquiry Learning - A Case Study. Journal of Information technology Education: Innovations in Practice, 10.
- Honan, E. (2012). 'A whole new literacy': teachers' understanding of students' digital learning at home. Australian Journal of Language and Literacy, 35(1), 82-98.
- Hague, C & Payton, S. (2010). Digital literacy across the curriculum. Retrieved https://www.nfer.ac.uk/publications/FUTL06/FUTL06_home.cfm
- Jenkins, H. (2011). Confronting the Challenges of Participatory Culture: Media Education for the 21st Century. Retrieved <http://files.eric.ed.gov/fulltext/ED536086.pdf>
- Media Smarts: Canada's Centre for Digital and Media Literacy. (2009). A Digital Literacy Model.
- Media Smarts. Retrieved December, 2008, from <http://mediasmarts.ca/digital-media-literacyfundamentals/digital-literacy-fundamentals>
- Pinkard, N. (2008). Digital Youth Network. Retrieved from <http://digitalyouthnetwork.org/>
- Redmond, T. (2012). The pedagogy of critical enjoyment: Teaching and reaching the hearts and minds of adolescent learners through media literacy education. Journal of Media Literacy Education, 4(2), 106-120. Retrieved from <http://digitalcommons.uri.edu/jmle/vol4/iss2/2>
- Richards, R. (2010). Digital Citizenship and Web 2.0 Tools. MERLOT Journal of Online Learning and Teaching, 6(2), 516-522.
- Ruy, S. (2010). A case study of constructivist instructional strategies for adult online learning. British Journal of Educational Technology, 41(5), 706-720.
- Xu, Y., Park, H., & Baek, Y. (2011). A New Approach Toward Digital Storytelling: An Activity Focused on Writing Self- efficacy in a Virtual Learning Environment. Educational Technology & Society, 14 (4), 181-191.

Course Code	Course Title	Specialism	Lecturer(s)
MITE6340	Research seminars and workshops	Elective course (co-requisite for dissertation)	Prof. Liaquat Hossain

Course Description

This course focus on the development of specific research skills, including both qualitative and quantitative skills, and help students develop high quality research proposals for dissertations or independent projects. The aim of the course would be to provide a comprehensive overview of transdisciplinary science approach to studying complex social networks (CSN). We will engage the students and create awareness of the fundamentals of investigating CSN, highlight the overall approach to design of the instrument or procedure for observing/collecting data from existing sources, and discuss the process involved in analysis of CSN dataset. We will then orient students with a number of existing research, which provides a good coverage of broader context of CSN in life, engineering, information, physical as well as organizational science so that students are able to appreciate the applications of CSN theory and methods using the basis of transdisciplinary science.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Acquire an enhanced understanding of key approaches and techniques for research in their major fields of ITE / LIM	MITE: 2,3,4 MLIM:1,2,6	1,2
2	Analyze and criticize research studies and proposals		1,2
3	Collect, analyze and interpret research data of a pilot study		1,2,3
4	Enhance a research proposal based on peer reviews and feedbacks		1,2,3
5	Organize and communicate research findings		1,2,3

Assessment Tasks

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Participation (In-class tasks)	Group	30%	1,2,3,4,5
2	Presentation of research proposal	Individual	20%	1,2,3,4,5
3	Written research proposal	Individual	50%	3,4,5

Key References and Resources

- Spector, J.M. & Yuen, A.H.K. (2016). Educational Technology Program and Project Evaluation, London: Routledge, Taylor & Francis Group. <http://library.hku.hk/record=b5739447>
- Locke, L.F., Silverman, S.J. & Spirduso, W.W. (2004). Reading and Understanding Research, 2nd Ed., Sage.
- Egghe, L., & Rousseau, R. (2001). Elementary statistics for library and information service management. London: Aslib-IMI.
- Gorman, G. E., Clayton, P., Rice-Lively, M. L., & Gorman, L. (1997). Qualitative research for the information professional: A practical handbook. London: Library Association Publishing.
- Powell, R. R., & Connaway, L. S. (2004). Basic research methods for librarians. Westport, CT: Libraries Unlimited.
- Williamson, K. (2002). Research methods for students, academics and professionals: Information management and systems (2nd ed.). Wagga Wagga, NSW: Centre for Information Studies.
- W.K. Kellogg Foundation Evaluation Handbook (2004)
- W.K. Kellogg Foundation Logic Model Development Guide (2004)
- Gay, L. R., Mills, G. E., & Airasian, P. (2006). Educational Research: Competencies for Analysis and Applications. Upper Saddle River, N.J.: Pearson/Merrill Prentice Hall
- Ravid, R. (2000). Practical statistics for educators. (2nd ed). New York, N.Y.: University Press of America, Inc.
- Anderson, L.W. & Burns, R.B. (1989). Research in Classrooms: the study of teachers, teaching and instruction. Oxford: Pergamon Press.

- Berg, B.L. (1995). *Qualitative Research Methods for the social sciences*, 2nd edition. Boston: Allyn & Bacon.
- Blaxter, L., Hughes, D. & Tight, M. (2001). *How to research*. (2nd ed). Buckingham: Open University Press.
- Bogdan, R. C., & Biklen, S. K. (1992). *Qualitative research for education: an introduction to theory and methods*. (2nd ed). Needham Heights, M.A.: Allyn and Bacon.
- Cohen, L., Manion, L. & Morrison, K. (2000). *Research methods in education*. (5th ed). New York, N.Y.: Routledge Falmer.
- Gall, J. P., Gall, M. D., & Borg, W. R. (1999). *Applying Educational Research: a practical guide* (4th ed.). New York: Longman.
- Carr, W. & Kemmis, S. (1994). *Becoming Critical. Education, Knowledge and Action Research*. Geelong, Victoria: Deakin University Press.
- Creswell, J. (1997). *Qualitative Inquiry and Research Design*. Newbury Park, California: Sage Publications.
- Denzin, N.K. & Lincoln, Y.S. (2000). *Handbook of Qualitative Research*. Thousand Oaks, California: Sage Publications.
- Hitchcock, G. & Hughes, D. (1995). *Research and the Teacher. A Qualitative Introduction to School-Based Research*. (2nd ed). New York: Routledge.
- Krathwohl, D.R. (1998). *Methods of educational and social research: an integrated approach*. (2nd ed). New York: Longman.
- Locke, L. F., Silverman, S. J., & Spirduso, W. W. (2004). *Reading and understanding research*. (2nd ed). Thousand Oaks: Sage Publications.
- Madsen, D. (1992). *Successful dissertations and theses: a guide to graduate student research from proposal to completion*. (2nd ed). San Francisco: Joseey-Bass.
- Maxwell, J.A. (1996). *Qualitative Research Design: An Interactive Approach*. London: Sage. Van Maanen, J., Dabbs, J. M. & Faulkner, R.R. (1982). *Varieties of Qualitative Research*. London: Sage.

Course Code	Course Title	Specialism	Lecturer(s)
MITE7341	Digital Game-Based Learning	E-learning	Dr Daniel Churchill Mr Benny Chan

Description

This course aims to introduce the main idea behind Digital Game-Based Learning (DGBL). It will investigate the pedagogical aspects of using games for learning, including commercial games in education settings and games that are created specifically for educational purpose. This course will review current techniques and trends in educational games. Issues related to design, enhancement implementation and evaluation of DGBL will also be examined.

Aims

- Introduce students to digital game-based learning
- Review current techniques and pedagogy for implementing digital game-based learning
- Understand learning game design through hands-on activities

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Evaluate the features, terminology and history and how this relates to the effective use of games in educational contexts	1,2	1,2,3
2	Design a framework and develop simple learning games based on a chosen game concept	2,3	2,3
3	Demonstrate awareness of DGBL and its possibilities for education and business settings	1, 4	1,2,3

Assessment

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Participate in online forums and in-class discussions using Moodle discussion forums and post forum questions in-class sessions. Weekly online assignments.	Individual	30%	1,3
2	Game design plan	Individual	40%	1,2,3
3	Game development project based on chosen game concept and design framework	Group	30%	1,2,3

Key Readings and Resources

- Gee, P.G. (2007). *Good Video Games and Good Learning: Collected Essays on Video Games, Learning and Literacy*. New York, NY: Peter Lang Publishing Inc.
- Shrier, K. (2014). *Learning, Education and Games*. Pittsburgh, PA: ETC Press.
- Prensky, M. (2007). *Digital Game-Based Learning*. St. Paul, Minnesota: Paragon House.
- Barab, S., Dodge, T., Tuzun, H., Job-Sluder, K., Jr., R. C., Gilbertson, J., et al. (2007). The Quest Atlantis Project: A socially-responsive play space for learning. In B. E. Shelton & D. Wiley (Eds.), *The Design and Use of Simulation Computer Games in Education* (pp. 159-186). Rotterdam, The Netherlands: Sense Publishers.
- Kafai, Y.B. (2008). *Beyond Barbie and Mortal Kombat: New Perspectives on Gender and Gaming*. Cambridge, MA: MIT Press.

Course Code	Course Title	Specialism	Lecturer(s)
MITE7345	Engaging adult learners	e-leadership, e-learning, Learning technology design	Dr Timothy Hew Ms Tang Ying

Course description

Adult learning takes place in a wide variety of settings and contexts, such as higher education, adult literacy, continuing professional training (CPT), or workplace education. This course explores issues related to the process of engaging an adult learner. This course will examine the perspectives, as well as the different theories which describe adult learning. This course is ideal for you if you are currently or planning to work in an adult teaching or training capacity in an organization or educational institution, and would be responsible for designing, developing, or implementing training/educational-related programmes

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Explain the characteristics of adult learners and how it differs from young learners	2	1, 2, 3
2	Discuss the various important theories/concepts pertinent to adult learning	2	1, 2, 3
3	Apply perspectives of adult learning to the design of instruction for their own organizations/schools/ institutes	1, 2	2

Assessment tasks

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Reflection on articles	Individual	30%	1,2
2	Reflection on 3 course topics	Individual	30%	1,2,3
3	Course design project	Group	20%	1,2
4	Team presentation	Group	20%	

Key References and Resources

To be advised by lecturer.

Course Code	Course Title	Specialism	Lecturer(s)
MITE7347	Project management	e-leadership	Miss Feng Shihui

Course Description

This course explores the project life cycle and PM techniques for managing & planning successful projects in organizations. Conceptual foundations from the PMBOK and their application are stressed, and applied using PM software. This course will run in project based, experiential learning mode (PBL) with participants completing a project for an external client.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Acquire the basic knowledge of the nature of printed and non-printed materials	MITE: 1 – 5 MLIM: 1 - 6	1, 2
2	Critically analyze the concept of project management program & project	MITE: 1,4 MLIM: 1,2,6	2
3	Apply the models and concepts of project management program & policy to different types of organizations	MITE: 1,3,4 MLIM: 2,5	2
4	Learn the basic concepts and techniques in project management	MITE: 4,5 MLIM: 1,2,6	1, 2
5	Understand clearly the concepts and practices of project management as well as critically evaluate their effectiveness of these practices	MITE: 1,2,3 MLIM: 3,4,5	1, 2,3

Assessment Tasks

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Project documentation, completion and reporting	Group	50%	1,4,5
2	Class discussion and presentation	Individual	20%	1,2,3,4,5
3	Mid-term quiz	Individual	30%	5

Key References and Resources

Forrest, J., "The Space Shuttle Challenger Disaster: A failure in decision support system and human factors management", originally prepared November 26, 1996, published October 7, 2005 at URL DSSResources.COM.

Course Code	Course Title	Specialism	Lecturer(s)
MITE7349	Data science and learning analytics	e-learning Learning technology design	Dr Xiao Hu

Course Description

This course provides a broad overview of the key concepts, skills, technologies and applications in data science, with an emphasis on learning analytics and educational data mining. Learners will explore principles, methods and application cases in data pre-processing and storage, inferential and predictive analytics, supervised and unsupervised machine learning, association rule mining, text analytics, network analysis, data visualization, as well as data ethics and privacy. Example cases will be discussed to illustrate how learning analytics needs to be connected to the targeted learning outcomes and pedagogical design considerations. Students will conduct labs, tutorials and group project to gain hands-on experience on using industry-standard data mining and/or learning analytics packages to solve practical data-driven problems. It is strongly recommended that students have basic knowledge of statistics (equivalent to undergraduate level of introductory course on statistics) and are comfortable of using new IT tools.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Describe basic concepts, principles and techniques in data science	MLIM: 1, 2 MITE: 5	1, 2
2	Identify data science principles, techniques and tools suitable for cases in learning and other contexts	MLIM: 3, 6 MITE: 1,2,3,4,5	2, 3
3	Apply data science principles and techniques to practical problems and interpret the results.	MLIM: 1,2,3,4,5 MITE: 2, 3, 4	3, 4

Assessment

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Labs/forums	Individual	25%	1
2	Assignment (question solving)	Individual	20%	1,2
3	Case Analysis	Individual	15%	2,3
4	Project	Group	40%	3

Key Readings and Resources

- Han, J. et al., (2012) *Data Mining: Concepts and Techniques*, Morgan Kaufmann; 3rd edition.
- Schutt, R., & O'Neil, C. (2013). *Doing data science: Straight talk from the frontline*. "O'Reilly Media, Inc.
- Ferguson, R. (2012). The state of learning analytics in 2012: A review and future challenges. *Knowledge Media Institute, Technical Report KMI-2012-01*.
- Provost, F., & Fawcett, T. (2013). Data science and its relationship to big data and data-driven decision making. *Big Data*, 1(1), 51-59.

Course Code	Course Title	Specialism	Lecturer(s)
MITE7351	Information system Analysis and Development	e-leadership, e-learning, Learning technology design	Dr Alvin Kwan

Course Description

The student should after the course have a basic knowledge of models, methods and tools to be able to independently apply the principles for selection and evaluation of systems development methods..

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related assessment task(s)
1.	demonstrate familiarity with the major issues of information systems development	MLIM: 1, 2 MITE: 1	1
2.	be able to select appropriate approaches and /or tools to support information systems development	MLIM: 1, 2, 3, 4, 5, 6 MITE: 1,2,3	1,2,3
3.	use various modeling tools to help identify and describe information systems requirements and specifications	MLIM: 1, 2, 3, 4, 5, 6 MITE: 1,2,3	1,2,3
4.	apply basic software testing principles to support development of quality information systems	MLIM: 3, 4, 5 MITE: 1,2	1

Assessment Tasks

Task no.	Title	Weighting	Related LOs
1	Mini-tasks (including forum discussions) on various topics of information systems development (individual and/or group basis)	40%	1,2,3
2	Individual assignment	30%	2,3
3	Group assignment	30%	2,3

Key References and Resources

- Dennis, A., Wixom, B.H. & Roth, R. (2015). *Systems Analysis and Design, 6th ed.*, Wiley. (Earlier editions of the book, e.g., 3rd and subsequent editions, are fine as a general reference.)³
- Avison, D. & Fitzgerald, G. (2006). *Information Systems Development, 4th ed.*, McGraw Hill.
- Maciaszek, L.A. (2007). *Requirements Analysis and System Design, 3rd ed.*, Addison Wesley.

Pointers to online materials and resources can be found in the presentation slides and Moodle.

Course Code	Course Title	Specialism	Lecturer(s)
MITE7352	Information technology and intellectual property law in education	e-leadership, e-learning, Learning technology design	Dr Gary Wong

Course Description

This course explores the legal issues and ethical challenges related to information technology (IT) and intellectual property (IP) law which is often involved in education. It investigates the introductory legal and ethical knowledge in relation to the design and implementation of educational technology and digital learning environment in both schools and organizational learning contexts. This course offers opportunities to students with non-legal background to consider IT policies and strategies from legal perspectives, and equips them with a sound understanding of legal principles in using IT to support the innovation in IP through leadership roles at institutional level. Legal and ethical issues in IT and IP such as digital ownership, cyber-speech, cyberbullying in social networks, cybercrimes, copyright infringement and software, copyright in the digital environment, fair use of copyrighted work, the database right, privacy and data protection, and law enforcement in the information society as well as other emerging issues will be examined.

Course Learning Outcomes (LOs)

LO No.	LO Statement	Related PLO	Related Assessment Task(s)
1	Describe the legal issues in terms of IT and IP in education and organizational learning contexts	MITE: 1, 5 MLIM: 2	1, 2, 3
2	Identify and reflect on the law and local ordinances that govern the IT and IP policies for educational purposes	MITE: 1, 3, 5 MLIM: 2, 3, 6	1, 2
3	Demonstrate awareness of the potential legal and ethical issues and/or challenges when designing and implementing instructional and learning artifacts with technology	MITE: 4, 5 MLIM: 2, 3, 6	2, 3
4	Analyze and evaluate school or organizational policies and practices to formulate a strategic and legal use of IT and IP to facilitate ethical instructional design, and enhance the information literacy of learners	MITE: 1, 2, 3, 5 MLIM: 2, 5, 6	3

Assessment Tasks

Task No.	Title	Mode of Assessment	Weighting	Related LOs
1	Participate in online discussion forums and in-class discussion on legal cases and ethical issues related to IT and IP law in education	Individual	20%	1,2
2	Essay paper on selected topic in IT and IP in education	Individual	40%	1,2,3
3	Case analysis and presentation	Group	40%	1,3,4

Key References and Resources

- Moore, S. L., & Ellsworth, J. B. (2014). Ethics of educational technology. *Handbook of research on educational communications and technology* (pp. 113-127). New York: Springer.
- Murray, A. (2013). *Information technology law: The law and society* (2nd ed.). United Kingdom: Oxford University Press.
- Simpson, C. (2010). *Copyright for Schools: A Practical Guide* (5th ed.). Santa Barbara, CA: Linworth.
- Quinn, D. M. (2003). Legal issues in educational technology: Implications for school leaders. *Educational Administration Quarterly*, 39(2), 187-207.