<div align="center">**Course Description**</div>

<div align="center">==MEDD6442 Cognition, Learning, and Instruction==</div>

Course description
This course will be based on theories in Educational Psychology and Learning Sciences focusing on the interfaces of cognition, design and context to examine how students learn. The course will start with an overall framework introducing contemporary theories of learning and models of classroom instruction. The first component introduces research in student cognition and learning including conceptions and approaches to learning, epistemological beliefs, self-regulated learning and motivation. The second component addresses the question of design and examines how learning for 21st century education can be promoted. Theories, principles and practice related to higher order thinking, assessment for learning, and technology-supported learning will be introduced. This course also examines the influences of psychological factors and socio-cultural context and research on the Chinese Learner will be discussed. Throughout the course, students will be provided with learning experience that mirrors the theories discussed in the course.

Course objectives
1. To become familiarised with major concepts and principles in contemporary educational psychology and Learning Sciences relevant for understanding and developing 21st century education;
2. To examine how these concepts of cognition and learning can be investigated and how they may be applied to their own teaching and learning.
3. To develop collaborative learning and knowledge building working as a learning community

Course learning outcomes
1. to become familiarized with contemporary theories of learning of how people learn
2. to understand learner characteristics that influence learning process and outcomes
3. to become familiarized with major pedagogical models and approaches
4. to develop knowledge and understanding through reading professional and academic papers
5. to explore key themes of students learning in relation to theory and research and practice
6. to reflect on their own beliefs and practice when collaborating with class members

Course assessment methods
• Reading Task and Forum Discussion
• Group Presentation
• Summary of Learning (portfolio)

Course content and topics
• Introduction: What is Learning? Learning for 21st century education
• Conceptual Framework and How People Learn
• Changing Theories of learning and A New Science of Learning
• Beliefs about and Approaches to learning
• Self-Regulated Learning Strategies and Motivation
• Higher-Order Thinking and Metacognition
• Collaborative Learning and Communities of Learners
• Computer-Supported Knowledge Building
• Promoting Learning how to learn through Assessment

Required / recommended readings and online materials
Key References
Dumont, H, Istance, D. & Benavides, F. (2012) (Eds.). *The Nature of Learning: Using Research to Inspire Practice* (pp.48-53)*.* Paris: OECD. Retrieved from: http://dx.doi.org/10.1787/9789264086487-4-en

Sawyer, R. K. (2014) (Ed.). *The Cambridge Handbook of the Learning Sciences.* (2nd ed., pp. 1-18). Cambridge: Cambridge University Press. (Introduction provides overview)

Both contain updated ideas on research in student learning; accessible to educators and teachers

References

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Biggs, J. (1995). Learning in and out of school. In Biggs, J., & Watkins, D. (Eds.), *Classroom learning: Educational psychology for the Asian teacher* (pp. 7-11). Singapore: Prentice Hall.

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Chan, C.K.K., & Rao, N. (Eds.) (2008). *Revisiting the Chinese learners: Changing contexts, changing education.* Hong Kong: Comparative Education Research Centre, HKU. (Chapters 1, 3, 6, 8, and 9).

Chan, C.K.K. & van Aalst, J. (2018). Knowledge building: Theory, design and analysis. In Fischer, F., Hmelo-Silver, C., Goldman, S., & Reimann, P. (Eds.) International handbook of learning sciences. Routledge, Taylor and Francis.

De Corte, E. (2010), Historical developments in the understanding of learning. In H. Dumont, D. Istance & F. Benavides (Eds.). *The Nature of Learning: Using Research to Inspire Practice* (pp.48-53). Paris: OECD. Retrieved from: http://dx.doi.org/10.1787/9789264086487-4-en

Hattie, J., & Yates, G. (2014). *Visible learning and the science of how we learn.* Oxon: Routledge.

Hiebert, J., & Morris, A. K. (2012). Teaching, rather than teachers, as a path toward improving classroom instruction. *Journal of Teacher Education*, 63(2), 92–102.

Ho, S. M. (2014). The development of a school-based model of self-regulated learning in Hong Kong Secondary school classrooms. *Asia Pacific Journal of Educational Development*, *3* (2), 25-36.

Istance, D. and H. Dumont (2010). Future directions for learning environments in the 21st century. In *The Nature of Learning: Using Research to Inspire Practice*. Paris: OECD. Retrieved from: http://dx.doi.org/10.1787/9789264086487-15-en.

OECD. (2012). *Connected Minds: Technology and Today's Learners*, Educational Research and Innovation. Paris: OECD. Retrieved from: http://dx.doi.org/10.1787/9789264111011-en

OECD. (2017). *Handbook for Innovative Learning Environments*. Paris: OECD. Retrieved from:

https://read.oecd-ilibrary.org/education/the-oecd-handbook-for-innovative-learning-environments_9789264277274-en#page1

OECD. (2012). Profiles of Teachers' Professional Practices. In S. Vieluf, et al., *Teaching Practices and Pedagogical Innovations: Evidence from TALIS.* Paris: OECD. Retrieved from: http://dx.doi.org/10.1787/9789264123540-6-en.

Sawyer, R. K. (2014). The new science of learning. In R.K. Sawyer (Ed.), *The Cambridge Handbook of the Learning Sciences.* (2nd ed., pp. 1-18). Cambridge: Cambridge University Press.

Stigler, J., & Hiebert, J. (1999). *The Teaching Gap: Best Ideas from the World's Teachers for Improving Education in the Classroom.* New York: Free Press.
Watkins, D., & Biggs, J. (1996). *The Chinese learner: Cultural, psychological and contextual influences.* Hong Kong: Comparative Education Research Centre. HKU. (Chapters 4, 7, 9)

Watkins, D., & Biggs, J. (2001). *Teaching the Chinese learner: Psychological and pedagogical perspectives.* Hong Kong: Comparative Education Research Centre, HKU. (Chapters 1, 2, 11, 14)

Wiliam, D. (2010). The role of formative assessment in effective learning environments. In *The Nature of Learning: Using Research to Inspire Practice.* Paris: OECD. Retrieved from: http://dx.doi.org/10.1787/9789264086487-8-en.

Online Resources

Learning Theory Project Team, HKU. What teachers should know about learning theories. Retrieved from: https://kb.edu.hku.hk
Knowledge Building Research Team (HKU) Knowledge building and knowledge creation: https://kbkcc.edu.hku.hk
OECD. (2013). *Innovative Learning Environments.* Paris: OECD. Retrieved from http://www.oecd.org/education/ceri/innovativelearningenvironmentspublication.htm
UNESCO. (2019). How are you learning during the COVID-19 Pandemic? Retrieved from https://en.unesco.org/covid19/educationresponse/learningneverstops/

Other additional course information

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