

## MAEM 207 Course Outline

Topic No.	Topic	Articles	Activities
1	Technology for teaching and learning: An examination of Philippines' national educational priorities	Five-Year Information and Communication Technology for Education Strategic Plan (DepED ICT4E Strategic Plan)	How can the use of technology support improved teaching and learning in the Philippines?
2	What do research and international standards say about teaching and learning with technology?	<p>a. 'Success, Failure or No Significant Difference: Charting a Course for Successful Educational Technology Integration' (this is a free article but registration is required)  <a href="http://online-journals.org/ijet/login?source=%2Fijet%2Farticle%2Fview%2F2376%2F2522">http://online-journals.org/ijet/login?source=%2Fijet%2Farticle%2Fview%2F2376%2F2522</a></p> <p>b. Technology in Education: Debate between Sir John Daniel and Robert Kozma  <a href="http://www.economist.com/debate/days/view/120">http://www.economist.com/debate/days/view/120</a></p> <p>c. Framework for 21st Century Learning  <a href="http://www.p21.org/our-work/p21-framework">http://www.p21.org/our-work/p21-framework</a></p>	Briefly summarize the arguments that outline the strengths and weaknesses of technology for teaching and learning. As teachers, what strategies will you use to make sure you avoid these weaknesses?
3	Technology and active learning	<p>a. Connecting Student Learning and Technology:  <a href="http://www.sedl.org/pubs/cate_gory_technology.html">http://www.sedl.org/pubs/cate_gory_technology.html</a></p> <p>b. Finland: Discovery through Technology:  <a href="https://www.teachingchannel.org/videos/discovery-through-">https://www.teachingchannel.org/videos/discovery-through-</a></p>	<p>Based on what you have read and seen, what is your overall assessment of active learning? Is this really how children learn? Is it how they learn? Or, are there other, more effective strategies?</p> <p>As teachers, what concrete steps could you begin to take to set up a classroom that promotes active learning? (Think about the layout of the classroom,</p>

		<a href="#">technology</a>	materials, technology, communication, how students would act, etc.)
4	Teaching with technology: Using technology to find and evaluate content	<p>a. 'Developing Content' in Distance Education for Teacher Training: Modes, Models, and Methods'  <a href="http://idd.edc.org/resources/publications/modes-models-and-methods">http://idd.edc.org/resources/publications/modes-models-and-methods</a></p>	<p>Develop an annotated list of ten resources that you believe are most helpful in teaching a particular subject, or topic within a particular subject.</p> <p>Why did you choose these particular sites? What attributes do these sites have that would improve student learning? What attributes do these sites have that would improve student learning?</p> <p>Simulations</p> <ul style="list-style-type: none"> <li>• PhET offers interactive, research-based simulations of physical phenomena (from the University of Colorado): <a href="http://phet.colorado.edu">http://phet.colorado.edu</a></li> <li>• Molecular Workbench offers visual, interactive simulations for teaching and learning science: <a href="http://mw.concord.org/modeler">http://mw.concord.org/modeler</a></li> <li>• Brainpop provides animated films on a variety of topics for primary and lower secondary grades: <a href="http://www.brainpop.com">http://www.brainpop.com</a></li> </ul> <p>Virtual environments</p> <ul style="list-style-type: none"> <li>• EcoMUVE engages students in science-based inquiry activities mobile devices: <a href="http://ecomuve.gse.harvard.edu">http://ecomuve.gse.harvard.edu</a></li> <li>• Google Earth is Google's free digital atlas. It must be downloaded and installed on a computer: <a href="http://www.google.com/earth/index.html">http://www.google.com/earth/index.html</a></li> <li>• Ruby Realm is a free online science-based virtual environment developed by the Education</li> </ul>

			<p>Development Center:  <a href="http://cct2.edc.org/rubyrealm/bin/RubyRealmFlash.html">http://cct2.edc.org/rubyrealm/bin/RubyRealmFlash.html</a></p> <p>Open Educational Resources</p> <ul style="list-style-type: none"> <li>• WikiEducator is an online community designed to help teachers plan and teach with open content: <a href="http://wikieducator.org/Main_Page">http://wikieducator.org/Main_Page</a></li> <li>• OER Commons is a database of open education content organized by subject area: <a href="http://www.oercommons.org">http://www.oercommons.org</a></li> </ul> <p>Multimedia</p> <ul style="list-style-type: none"> <li>• National Library of Virtual Manipulatives is a library of interactive, web-based virtual manipulatives or concept tutorials, mostly in the form of Java applets, for mathematics instruction: <a href="http://nlvm.usu.edu/en/nav/vlibrary.html">http://nlvm.usu.edu/en/nav/vlibrary.html</a></li> <li>• Owl &amp; Mouse Software offers free educational games and puzzles: <a href="http://www.yourchildlearns.com/owlmouse.htm">http://www.yourchildlearns.com/owlmouse.htm</a></li> <li>• Khan Academy offers thousands of free online tutorials across a range of subject areas: <a href="http://www.khanacademy.org">www.khanacademy.org</a></li> <li>• The Blood Typing Game is an online game that helps students understand blood types: <a href="http://www.nobelprize.org/educational/medicine/bloodtypinggame/game/index.html">http://www.nobelprize.org/educational/medicine/bloodtypinggame/game/index.html</a></li> </ul> <p>Lectures and lesson plans</p> <ul style="list-style-type: none"> <li>• MIT Blossoms is a Science, Technology,</li> </ul>
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5	Technology and instruction	<p>a. 'Technology, Teaching and Learning: Research, Experience and Global Lessons Learned' (pp. 56–86 only): <a href="http://www.unescobkk.org/education/ict/online-resources/databases/ict-in-education-database/item/article/technology-teaching-and-learning-research-experience-global-lessons-learned/">http://www.unescobkk.org/education/ict/online-resources/databases/ict-in-education-database/item/article/technology-teaching-and-learning-research-experience-global-lessons-learned/</a></p> <p>b. One Computer Classroom: The Possibilities <a href="http://eduscapes.com/tap/occ1.pdf">http://eduscapes.com/tap/occ1.pdf</a></p>	<p>The University of Southern Florida's Technology Integration Matrix (TIM) models how teachers can use technology to enhance learning for students in math, science, social studies, and language. <a href="http://fcit.usf.edu/matrix/matrix.php">http://fcit.usf.edu/matrix/matrix.php</a></p> <p>Analyze technology integration by subject area. Select one subject area (such as math, science, etc.) and examine the integration of technology within this particular subject area along a continuum, from entry, adoption, adaptation, infusion, and transformation. Use the Technology Integration Matrix to assess the level of technology integration.</p> <ol style="list-style-type: none"> <li>1. Copy of teacher lesson plan (PDF)</li> <li>2. Photos and/or video of teacher and students integrating technology in a classroom lesson. Describe what the photos show.</li> <li>3. Reflection:       <ol style="list-style-type: none"> <li>a. How would you rate your activity?</li> <li>b. How did it go? How did students react?</li> </ol> </li> </ol>

			c. What went well and what would you change?
6	Technology and assessment	<p>a. Tools for Assessment  <a href="http://tep.uoregon.edu/technology/assessment/assessment.html">http://tep.uoregon.edu/technology/assessment/assessment.html</a></p> <p>b. Rubistar is an online rubric maker  <a href="http://rubistar.4teachers.org/index.php">http://rubistar.4teachers.org/index.php</a></p>	Technology is only a tool, but assessment is a practice designed by teachers. Based on what you have read, examined, and watched, how can technology used as part of assessment check for student understanding, monitor student progress, and ultimately improve student learning? Provide examples from the resources you have accessed, in addition to other resources you have come across.
7	Alternatives to computers and the Internet: Interactive Radio Instruction	<p>a. Interactive Radio Instruction (IRI) Improves Indian Student Learning  <a href="https://edutechdebate.org/ict-tools-for-south-asia/interactive-radio-instruction-iri-improves-indian-student-learning/">https://edutechdebate.org/ict-tools-for-south-asia/interactive-radio-instruction-iri-improves-indian-student-learning/</a></p> <p>b. Tuned In To Student Success: Assessing the Impact of Interactive Radio Instruction for the Hardest-to-Reach  <a href="http://www.equip123.net/JEID/articles/4_2/HoThukral.pdf">http://www.equip123.net/JEID/articles/4_2/HoThukral.pdf</a></p>	What ideas do IRI and IAI give you about using technology for your own teaching practice. Do you see any learning advantages of audio over video? How might you incorporate audio into your teaching?
8	Emerging technologies and technology trends	<p>a. A teacher talks about middle school robotics  <a href="http://www.schooltube.com/video/079bc2fffdca43ba8cd8/Changing%20Classrooms%20with%20Robotics">http://www.schooltube.com/video/079bc2fffdca43ba8cd8/Changing%20Classrooms%20with%20Robotics</a></p> <p>b. Changing Classrooms with Robotics  <a href="http://www.schooltube.com/video/079bc2fffdca43ba8cd8/Changing%20Classrooms%20">http://www.schooltube.com/video/079bc2fffdca43ba8cd8/Changing%20Classrooms%20</a></p>	<p>Think of the emerging technologies you have seen and read about. Discuss which you believed to hold the most promise for improved student learning, and why. As a teacher, which of these technologies would help you most with content, instruction and assessment?</p> <p>Tablets: Video and website</p> <ul style="list-style-type: none"> <li>A teacher talks about using the iPad in her classroom (some commercial content):  <a href="http://vimeo.com/51486168">http://vimeo.com/51486168</a></li> </ul>

		<p><a href="#">with%20Robotics</a></p>	<ul style="list-style-type: none"> <li>Teachers Guide on the Use of the iPad in Education: <a href="http://www.educatorstechnology.com/2012/06/teachers-guides-on-use-of-ipad-in.html">http://www.educatorstechnology.com/2012/06/teachers-guides-on-use-of-ipad-in.html</a></li> <li>The Best Education Apps for iPad: <a href="http://www.educatorstechnology.com/2012/12/a-list-of-all-best-ipad-apps-teachers.html">http://www.educatorstechnology.com/2012/12/a-list-of-all-best-ipad-apps-teachers.html</a></li> <li>The Best Education Apps (Android): <a href="http://www.edudemic.com/best-education-technology/the-best-education-apps-android/">http://www.edudemic.com/best-education-technology/the-best-education-apps-android/</a></li> </ul> <p>Mobile phones: Videos</p> <ul style="list-style-type: none"> <li>Cell phones for learning: <a href="http://depts.washington.edu/etuwbltblog/?p=1553">http://depts.washington.edu/etuwbltblog/?p=1553</a></li> <li>SmartPhones for literacy: <a href="http://www.youtube.com/watch?v=Z2ADAnJo4XQ">http://www.youtube.com/watch?v=Z2ADAnJo4XQ</a></li> <li>Mobile learning for adult education: <a href="http://www.youtube.com/watch?v=6JbN16oL3Ho">http://www.youtube.com/watch?v=6JbN16oL3Ho</a></li> </ul> <p>Digital games: Websites</p> <ul style="list-style-type: none"> <li>Educational Games from Canada's Centre for Digital and Media Literacy: <a href="http://mediasmarts.ca/digital-media-literacy/educational-games">http://mediasmarts.ca/digital-media-literacy/educational-games</a></li> <li>PBS Kids: Games <a href="http://pbskids.org/lab">http://pbskids.org/lab</a></li> </ul> <p>Flipped learning: Websites</p> <ul style="list-style-type: none"> <li>What is 'flipped learning'?: <a href="http://www.youtube.com/watch?v=ojiebVw8O0g">http://www.youtube.com/watch?v=ojiebVw8O0g</a></li> </ul>
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