

Rutgers University Senate
Instruction, Curricula and Advising Committee

MOOCs: Massive Open Online Courses

Massive Open Online Courses (MOOCs) use technology to deliver free course offerings globally. Initially developed by faculty at Stanford and MIT, MOOCs can deliver course offerings to 150,000+ students at a time; a company such as Coursera offers courses developed by its institutional partners to some 1.3 million registered students worldwide.

Initially MOOC offerings concentrated on subjects such as Math, Computer Programming, and other areas that focus on developing technical and professional skills that can be assessed relatively easily online, and on general enrichment courses. As institutions have scrambled not to be left off the fast-moving MOOC bandwagon, offerings have expanded to include a wide variety of courses, often being taught by senior faculty. Courses currently being offered by Coursera, for example, include:

- Artificial Intelligence Planning (Gerhard Wickler, senior researcher at the Artificial Intelligence Application Institute and Austin Tate, Director of the Artificial Intelligence Applications Institute (AIAI) and Personal Chair of Knowledge-Based Systems at the University of Edinburgh)
- Global History Since 1760 (Philip Zelikow, White Burkett Miller Professor of History, University of Virginia)
- Fantasy and Science Fiction (Eric S. Rabkin, Arthur F. Thurnau Professor, Professor of English Language and Literature, and Professor of Art and Design at the University of Michigan)
- Introduction to Finance (Gautam Kaul, John C. and Sally S. Morley Professor of Finance at the Ross School of Business (RSB), University of Michigan)
- The Modern and the Postmodern (Michael S. Roth, President and University Professor at Wesleyan University)
- Women and the Civil Rights Movement (Elsa Barkley Brown, University of Maryland)
- Healthcare Innovation and Entrepreneurship (Bob Barnes and Marilyn Lombardi, Duke University)
- English Common Law (Dame Hazel Genn, Dean of Laws, Professor of Socio-Legal Studies and co-director of the UCL Judicial Institute in the Faculty of Laws at University College London)

While MOOCs have extraordinarily high initial enrollments, only a very small percentage of those who enroll actually complete a course. Of the 160,000 students who registered for Stanford's initial Artificial Intelligence course, only about 35,000 (about 20 percent) actually completed the course. 154,763 registered for MIT's 'Circuits and Electronics;' only 7,157 passed

the course.¹ Often those that do may, generally for a nominal fee, receive a certificate stating that they have completed the course.

In recent months, interest on the part of institutions of higher education in participating in the delivery of MOOCs has intensified. Coursera recently announced agreements with sixteen new institutions, including Brown, Columbia, Vanderbilt, the University of Maryland, Ohio State, and the University of London.² In December Wellesley announced an agreement with EdX³, becoming the second liberal arts college (Wesleyan already offers courses through Coursera) to jump on the MOOC bandwagon. For the institutions the MOOC offers an opportunity to put their brand before a huge worldwide audience; for many faculty it's an opportunity to teach a course that they've always wanted to teach to students who are there just for the sake of learning.

Up to now MOOCs have only offered certificates of completion and not credits towards a degree. Recently the University of Texas System announced plans to develop MOOCs—especially certain 'bridge' courses--that could go through normal course approval channels and be offered for credit to UT students.⁴ Some of the Texas campuses are also looking at awarding credits for courses offered by other EdX partners.

In November the American Council of Education (ACE) announced that it would be working with Coursera and EdX to determine if specific MOOCs should be worth credit.⁵ This is one of several MOOC-related projects funded by the Gates Foundation.

Most recently, Georgia State University announced that, following the recommendation of the University Senate, it would allow students to receive class credit for MOOCs completed at other institutions.⁶

Current Rutgers Initiatives

At the October 19, 2012 meeting of the Instruction, Curricula and Advising Committee, David Finegold, Senior Vice President for Lifelong Learning and Strategic Growth, shared a memorandum entitled "Online Learning at Rutgers—MOOCs and COHLIT."

¹ Tamar Lewin. "Q&A with Anant Agarwal: One Course, 150,000 Students," *New York Times*, July 18, 2012. <http://www.nytimes.com/2012/07/20/education/edlife/anant-agarwal-discusses-free-online-courses-offered-by-a-harvard-mit-partnership.html?ref=education&_r=0>

² Steve Kolowich. "MOOC Host Expands," *Inside Higher Ed*, September 19, 2012 <<http://www.insidehighered.com/news/2012/09/19/coursera-doubles-university-partnerships>>

³ "Wellesley Joins edX," *Inside Higher Ed*, December 4, 2012 <<http://www.insidehighered.com/quicktakes/2012/12/04/wellesley-joins-edx>>

⁴ Steve Kolowich. "U. of Texas Aims to Use MOOCs to Reduce Costs, Increase Completion," *Inside Higher Ed*, October 26, 2012. <<http://www.insidehighered.com/news/2012/10/16/u-texas-aims-use-moocs-reduce-costs-increase-completion>>

⁵ Paul Fain. "Gates Foundation and ACE Go Big on MOOC-Related Grants," *Inside Higher Ed*, November 12, 2012 <<http://www.insidehighered.com/news/2012/11/14/gates-foundation-and-ace-go-big-mooc-related-grants>>

⁶ "Georgia State University Takes Major Step Toward Developing Online Course Learning Options." Press Release, January 22, 2013. <<http://www.gsu.edu/news/63587.html>>

The new Center for Online and Hybrid Learning and Instructional Technology (COHLIT) is partnering with CTAAR, the Center for Research on Educational Technology Innovation, the Libraries, and OIRT to create a community of practice focused on issues of educational technology. They are proposing a two-tier governance structure (the COHLIT Advisory Council) with representation from across the three campuses and the Senate that would, among other things, look at issues like Rutgers strategy for MOOCs.

COHLIT's current vision for MOOCs at Rutgers is to move away from the "technical skills" model and exploit the greater potential of the format.

We see a role for MOOCs that would be distinctive from existing offerings and would exploit more powerfully the potential of the new medium: to use the online courses as the basis for creating global communities of individuals who share an interest in common issues. Our initial course candidates are:

- *The Meaning of the 21st Century* with Dr. James Martin (who gave \$150 million to Oxford to found the Martin School) and Rutgers and Oxford professors
- *Research Methods in X-Ray Astrophysics* – Prof. Terry Matilsky, in partnership with community colleges, high school AP Physics teachers

We view MOOCs as a way to market our new *RutgersOnline* offerings and to showcase our research and teaching excellence.

Matilsky's course was originally developed with NASA, and was designed to promote interest in STEM (Science, Technology, Engineering and Mathematics) studies. This would be an expansion of a course that he currently offers that generally enrolls 40-50 Rutgers students. Martin's course on the other hand, would look at topics such as "Why is the 21st Century so Critical?," "Future Energy," "Healthcare and Life Expectancy," "Transhumanism; Redesigning Homo Sapiens," "Future Corporations and Work," and "Managing the Cyber-Planet."

A third course, "Soul Beliefs: Causes and Consequences," has since been proposed as a Rutgers MOOC course. Taught by Daniel Ogilvie and Leonard Hamilton of the SAS Department of Psychology, "Soul Beliefs" is a very popular and long-established course that looks at the causes and consequences of various beliefs about the soul.

Rutgers as a MOOC Creator

Rutgers has been invited and is currently (January 2013) considering joining Coursera. The notion of Rutgers as a MOOC developer is both intriguing and daunting. This could be an opportunity for Rutgers to participate in a venture that not only has the potential to offer educational opportunities to thousands of people worldwide, but to also enhance the university's reputation worldwide. On the other hand, there are many issues that would need to be addressed especially as the nature and use of MOOCs evolve. How should such courses be selected? How would course development be supported? How would such courses be assessed? Would any of

these courses be offered for credit? How do we ensure that once a course is developed course materials are updated regularly?

These are questions that require sustained focused discussion. For the most part they are not questions that the Instruction, Curricula, and Advising Committee feels that they can adequately deal with and we would support the development of a COHLIT Advisory Council as a forum for developing a Rutgers approach to MOOCs. Presumably much of this Council's efforts would focus on the technical, administrative, legal and financial aspects of MOOC development. There may also be a need to set up a Faculty Advisory Group that could serve as a resource for academic questions relating to MOOCs. Such a group could, for example, be available to help advise academic curriculum committees on issues relating to MOOCs and the assessment of MOOCs for which transfer credit has been requested.

COHLIT Advisory Council

There should be significant academic representation—faculty and students--on this Council. The development of a MOOC as a serious course offering is not uncontroversial. For faculty—who are likely to be the most resistant—to buy into “a Rutgers MOOC” they need to know that they were truly part of the planning and development process. The Council should also have at least one student member. A student who has participated in MOOCs offered by other institutions might be a particularly valuable asset to the Council.

Once the Advisory Council has developed MOOC guidelines and strategies, there should be an opportunity for review by appropriate university bodies, including the Senate Instruction, Curricula, and Advising Committee.

MOOCs as Credit-bearing Courses

The majority of those currently enrolling in MOOCs clearly have no expectation of earning credits.⁷ However there is clearly a move toward offering credits to those who are interested. Generally there are different expectations of those seeking credit, with greater interaction and different levels of assessment.

A course being offered under the Rutgers name and offering Rutgers credits should be subject to the same rigorous scrutiny as any other Rutgers course. How you approach, organize, present and assess a course going out to tens or even hundreds of thousands is very different from what you do with 20, 50, or 100 students in a classroom or online. Therefore any Rutgers MOOC being offered for credit should go through the normal approval process of the academic unit through which it is being offered. Credit-bearing MOOC courses need to be approved as MOOCs even if that course was previously approved as a face-to-face, hybrid, or online course. This is akin to Winter Session courses that need to be approved as specifically Winter Session courses even if they are courses that have been on the books for years. Proposals should include an assessment of how learning goals are to be met, and how the instructor is to evaluate student learning.

⁷ A student member of ICA who has enrolled in numerous MOOCs saw them as “promoting awareness” and offering the opportunity to learn about new subjects without the pressure of worrying about grades or credits.

If there is a desire to change a non-credit Rutgers MOOC to a credit-bearing course, that course should go through the regular approval process of the academic unit and school through which it would be offered.

A MOOC that is being offered through a Rutgers academic unit and that has gone through approved Rutgers curricular review should be treated as a legitimate Rutgers course regardless of format. It should be available to all qualified (i.e., those meeting any prerequisites) Rutgers students.

Credit for Rutgers Students Enrolled in non-Rutgers MOOCs

Decisions on accepting transfer credits for non-Rutgers MOOCs being offered for credit will probably have to be made on a case by case basis, following the already established procedures that each school has for evaluating outside courses for transfer credit. Accepted credits should count toward the maximum number of credits that a student can transfer in.

Recommendations

What MOOCs are, how they work, who participates, what they're used for and how they fit into institutional structures—these are all things that seem to be changing on almost a daily basis. The Committee is very much aware that any recommendations we offer today are likely to seem passé in six months and positively quaint a year from now. So this is our best advice based on the situation in January 2013.

1. There should be significant academic representation—faculty and students—on any group, including the COHLIT Advisory Council, making recommendations on the Rutgers approach to MOOCs.
2. Once the Advisory Council, or other duly constituted group, has developed MOOC guidelines and strategies, there should be an opportunity for review by appropriate university bodies, including the Senate Instruction, Curricula, and Advising Committee.
3. Guidelines should reflect strong support for training (both technical and pedagogical) for faculty interested in developing MOOCs.
4. Any Rutgers MOOC being offered for credit should go through the regular approval process of the academic unit and school through which it is being offered.
5. Any Rutgers MOOC being offered for credit would require separate approval as a MOOC-based course even if that course was previously approved as a face-to-face, hybrid, or online course.
6. Course proposals should include an assessment of how learning goals are to be met, and how the instructor is to evaluate student learning.
7. If there is a desire to change a non-credit Rutgers MOOC to a credit-bearing course, that course will need to go through the normal approval process.
8. A MOOC that is being offered through a Rutgers academic unit and that has gone through approved Rutgers curricular review should be treated as a legitimate Rutgers course regardless of format. It should be available to all qualified Rutgers students.

9. Decisions on accepting transfer credits for credit-bearing non-Rutgers MOOCs should be made following the already established procedures that each school has for evaluating outside courses for transfer credit.
10. While lectures or other materials from a non-Rutgers MOOC may—copyright permitting—be used just like any other resource (textbook, podcast, supplementary reading or lecture, etc.) within a Rutgers course, any Rutgers course using lecture or other materials from a non-Rutgers MOOC must also include significant additional material.

Instruction, Curricula, and Advising Committee:

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Burrell, Sherry, At-Large C (F)
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Deenamsetty, Srividya, GS-NB (S)
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Oboh, Ofure, CCAS (S)
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Spasojevic, Predrag, Engineering (F)
Spellmeyer, Kurt, SAS-NB (F)
Stauffer, George, MGSA Dean (A)

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