PM World Journal (ISSN: 2330-4480)
Vol. IX, Issue V – May 2020
www.pmworldjournal.com   Series Article

Introduction to Topic and Series
Converting to Online Teaching
by John H. Cable

Converting to Online Teaching[1]
A series of short guidance articles for educators and institutions

Introduction to the Series[2]

By John Cable, Director

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Since erupting in China in December 2019, the Coronavirus (Covid-19) disease has spread worldwide to become the most serious international pandemic since the Spanish Flu in 1918. Following devastating outbreaks in Italy, South Korea and other countries earlier in the year, the disease reached the United States in late January 2020. As infections began to spread rapidly, various city and state leaders took action, issuing stay-at-home orders, shutting down businesses and services, and accelerating various containment strategies. By early March 2020, a nation-wide emergency was in full swing.

Schools were some of the first activities to shut down in order to control the spread of the virus. Some U.S. universities were early to recognize the risks and to react, closing campuses, sending students home and converting courses to online instruction. On March 12, 2020, the University of Maryland (UMD) shut down for three weeks; that closure was extended on March 30th through the end of the current semester, with many courses converted to virtual versions. (There is still some uncertainty as to whether the campus will reopen for the Fall Semester in late August). The UMD's A. James Clark School of Engineering and the Project Management Center for Excellence were no exceptions. We are now conducting all courses online. In addition, our annual Project Management Symposium scheduled for 7-8 May 2020 has also been converted to a virtual event.

Fortunately, we have been developing and conducting virtual courses and training activities since 2006, with full videoconferencing capabilities, and easily made the switch to all online courses in a relatively short amount of time. It occurred to me that it might be useful to share some of the guidelines and processes that we have developed over the last fourteen years for our faculty, guest instructors and staff for converting to teaching online. Since we have partnered with the *PM World Journal* (PMWJ) for many years, it was an obvious vehicle for sharing this information.

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[1] This series of articles by the Director of the University of Maryland's Project Management Center for Excellence provides information and advice for converting from traditional in-person classes to online teaching, based on their experience before and during the Covid-19 pandemic of 2020. See Professor Cable's background at the end of this article.

[2] How to cite this paper: Cable, J. H. (2020). Converting to Online Teaching: A series of short guidance articles for educators and institutions - Introduction, *PM World Journal,* Vol. IX, Issue V, May.

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Over the next several months, a series of short articles in the PMWJ will provide guidance on how to convert to virtual teaching, create and conduct videoconferences, and implement blended learning experiences, based on our experiences at UMD. But first, some additional background.

Project Management Center for Excellence

Summary

The University of Maryland's Project Management Center for Excellence was launched in 2000 in the A. James Clark School of Engineering. The programs we offer were developed under the Department of Civil & Environmental Engineering, however, the program has been designed for engineers, architects and any professional with a technical background. Actually, 80% of our graduate students are from technical backgrounds other than civil engineering, including information technology, mechanical engineering, electrical engineering, and other disciplines.

The academic program is built around our signature program leading to a Masters of Engineering in Project Management (MEng) offered through the Maryland Applied Graduate Engineering office, but we also offer programs leading to:

1. Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Civil Engineering with specialization in Project Management,
2. Graduate Certificate in Engineering Project Management (GECN) also offered thorough the Maryland Applied Graduate Engineering,
3. Minor in Project Management for undergraduates, and a
4. Minor in Construction Project Management for undergraduates offered jointly with the UMD School of Architecture.

This robust academic program includes 11 undergraduate courses and 22 graduate courses. We are the first program in an engineering school to be accredited by the Project Management Institute's (PMI) Global Accreditation Center.

Until March 14, 2020, our courses have been delivered on campus in College Park, Maryland, with the master's program available both online and on campus. The online program, launched in 2006, is unique and has received accolades by peer institutions and by PMI. The course lectures are recorded using Media Site digital technology in the Arnold E. Seigel Learning Center at UMD using state-of-the-art technology enhanced classrooms. Students may watch these classes live, stream them from engineering servers, or download them to watch asynchronously. The online courses are the same as the on-campus courses and taught by the same instructors. The Learning Management System (LMS) used for all classes is *Canvas*™, for all course information, assignments, documents, schedules, and testing. ZoomVideo™ Communications - used for our weekly video-conferences - combines video conferencing, online meetings, and mobile collaboration into one platform. These weekly conferences provide online students with opportunities to ask questions and discuss course materials with other

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students and the instructors. We find many students actually prefer to take online courses because of the weekly video-conferences!

Online Agile Project Management Certificate Program

As a result of a market analysis we conducted in June 2016, we ran a series of workshops in 2017 on Mastering Agile Project Management. The workshops were well received and in October 2018 we launched a five-course Professional Certificate Program on edX on Agile Project Management. This program provides participants with the understanding, principles, and skills to confidently deliver faster, innovative solutions for their stakeholders. The Professional Certificate program consists of five courses designed to teach the mechanics of how to design and facilitate projects using "pure" Agile Scrum and Lean Continuous Delivery techniques. Through the series, participants also explore other frameworks in order to understand differences in scale, structure, and empowerment. The courses are self-paced so learners can speed through them in a day (each is about 10 hours long) or complete the lessons based on a rhythm that suits their schedule. The success of the certificate exceeded our expectations and, as of this writing, we have over 100,000 students enrolled from 177 countries and have made the Class Central list of Top 100 MOOC's of all time.

MOOC Virtual Courses

EdX is a nonprofit, open-source learning destination that offers online educational programs and courses in alliance with more than 130 member institutions, comprised of both leading global universities and colleges, and a diverse group of prominent organizations from around the world. Founded by Harvard University and Massachusetts Institute of Technology (MIT) and based in Cambridge, MA, edX is focused on transforming online and classroom learning through groundbreaking methodologies, game-like educational experiences and cutting-edge research on an open-source platform. The University of Maryland System is a partner with edX and we have a program plan to launch approximately 50 new courses on edX over the next 24 months. The demand for just-in-time education is accelerating rapidly. These courses are for professional development and participants can earn PDU's. At this time, we do not offer academic credit for any of our MOOC courses.

Conversion of 2020 PM Symposium to a Virtual Conference

Because of the world-wide Pandemic, the University of Maryland closed their campus' indefinitely. We were faced with cancelling our annual two-day Project Management Symposium we hold every spring, rescheduling it, or going virtual. We jumped at the chance to offer a *VIRTUAL* event at a lower cost and potentially to a wider audience. After receiving approval from our speakers and sponsors that they would be happy to support a virtual platform, we planned a new agenda with a refined schedule to allow for breaks between each session. We verified that our video conferencing platform could handle the schedule and then announced it to the public. People that had already registered were offered either a full or partial refund based on whether they elected to participate in the virtual event or cancel their registration. So far, the response has been

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very promising. The *VIRTUAL* event features four (4) keynotes and fifty-five (55) individual sessions in five (5) concurrent tracks, all for only $125 per person. One huge benefit to this *VIRTUAL* format is that attendees can earn up to 44.25 PDU's. Over the two days, participants can attend fifteen (15) live sessions at 45 minutes each to earn 11.25 PDUs. Then, since all the live sessions will be recorded, participants will then be able to view the other forty-four (44) sessions, which would earn them another thirty-three (33) PDUs.

Experience the 2020 Virtual UMD Project Management Symposium and register at
https://pmsymposium.umd.edu/pm2020/

The New Reality – Virtual and Blended Learning

The future is uncertain. But we are redesigning all of our courses in a blended format so that classes can seamlessly shift from on campus to online platforms. Designed carefully, with the focus on the adult learner, we have learned working through edX how to design blended courses that work in either paradigm with enhanced learning outcomes.

Future Articles in this Series

Some of the topics that will be addressed in future articles in this series include the following:

- Converting to Teaching Online
- Video Production Guidance
- Video Conference Etiquette
- Facilitating Video Conferences
- Blended Learning Classroom Guidance

Conclusion

Virtual learning and teaching have been successfully embraced in our program at the University of Maryland. I hope our experience and the guidance provided in this series of articles can be useful to others who are or will soon be making this transition.

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John Cable is Director of the Project Management Center for Excellence in the A.James Clark School of Engineering at the University of Maryland, where he is also a professor and teacher of several graduate courses in project management. His program at the University of Maryland offers masters and PhD level programs focused on project management. With more than 1,300 seats filled annually with students from many countries, including more than 40 PhD students, the program is the largest graduate program in project management at a major university in the United States.

John Cable served in the newly formed U.S. Department of Energy in 1980, where he was involved with developing energy standards for buildings, methods for measuring energy consumption, and managing primary research in energy conservation. As an architect and builder, Mr. Cable founded and led John Cable Associates in 1984, a design build firm. In 1999 he was recruited by the University of Maryland's Department of Civil & Environmental Engineering to create and manage a graduate program in project management. In his role as founder and director of the Project Management Center for Excellence at Maryland, the program has grown to offer an undergraduate minor, master's degrees, and a doctoral program. Information about the Project Management Center for Project Management at the University of Maryland can be found at www.pm.umd.edu.

In 2002, PMI formed the Global Accreditation Center for Project Management Educational Programs (GAC). Mr. Cable was appointed to that inaugural board where he served as vice chair. In 2006, he was elected as chairman, a role he held through 2012. As Chair of the PMI GAC, John led the accreditation of 86 project management educational programs at 40 institutions in 15 countries in North America, Europe, the Middle East, Latin America and the Asia Pacific Region. John was awarded PMI's 2012 Distinguished Contribution Award for his leadership at the GAC. He can be contacted at jcable@umd.edu.