



## Learning in Accelerated Times-Are you ready?

by Linda Thomas,  
Director,  
Construction Management

Thomas L. Friedman, the famous author and columnist, has declared that we are living in “exponential times.” Apparently, civilization is advancing at a faster rate than it ever has in the past. He reports that our growth is in three distinct domains. The first is accelerations in technology (think Moore’s law, where the power of microchips doubles every two years). Secondly, globalization, which he defines as the capability of any individual to compete or collaborate globally; and finally, climate change, remarking how our planet is in a state the human species has never been before. Friedman also declares that these three areas overlap, resulting in a whole new reality that makes one feel as though everything is moving too fast. I know my mom feels this way; at 85 she has seen a drastic change in society over her life but never at this speed. What about you?

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## Student Feature

### Taking care of business (and unfinished business) online

by Robert Zotti, Assistant Dean, WebCampus



When Jerome Butler, a 13-year veteran in the telecommunications industry with stints at Alcatel-Lucent, Goodman Networks, and Verizon Wireless, embarked on his quest for a master’s degree to advance his career, he was not anticipating that the journey would take him from his native

home in Maryland to Texas and back again. *“When I left for Houston, I had to drop out of the program I was in. At that point I made a decision that the next time I would try to complete my master’s, I would have to go back with an online program.”* While working in Houston as a network engineer for Verizon in 2012, he received an email from Stevens describing the network and communication management and services program. *“I looked and saw that it was something that could help with my career goals. I went to get approval to sign up,”* Jerome said. *“The timing was right.”*

Now in his fifth class, Jerome reflected on how his time at Stevens has already had a significant effect on his career. *“I feel like it helped me with my understanding of RF (radio frequency) fundamentals and how the related systems actually work,”* he said. *“Having this knowledge has helped me to explain things to others and make them understand the big picture.”* This was particularly useful as Jerome routinely deals with a wide variety of stakeholders. Learning more about telecommunications theory, project management, technology,

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## Accelerated times

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A degree from Stevens in construction management is now available fully online. I've found planning and delivering online learning about this ancient human activity gives me first-hand insight into what Friedman reports. Software for including media-rich resources, streaming classes in real time and other aids-for-learning change every semester. This opportunity for continuous improvement, however, is a good thing because students can view the drastic changes to the architecture, construction and engineering as it is happening. Also, online learning allows students to stand back and see the past juxtaposed against the present while hypothesizing about the impact of technology, globalization and climate change in an objective light.

The construction management program's goal is to use the online learning tools we have at our fingertips to explain the built environment, find the gaps in knowledge and investigate promising trends so that practitioners can learn better ways to make the process of construction more efficient. The fundamental theorem of construction management informs us that construction engineering and management exists to enable the implementation process to be carried out efficiently. Thus, learning how to become more efficient is our chief objective.

At Stevens, built environment classes are mainly taught via the case study method. Being able to share lessons learned, debate theory and ask questions in the online community expands the

knowledge base from the single viewpoint of the instructor to the combined "hive" knowledge of the collective — students and the instructor interacting to represent infinite experiences. Additionally, the use of technology allows us not only to time-shift learning to a time that is best for the individual student but also captures the information in a retrievable classroom database. It is like having an instructor available when the student is available, knowledge dissemination at the rate, pace and frequency that makes sense for each student. Most importantly, this knowledge resource is an intelligent assistant and available in modules that make sense, packaged according to the information, and not a fixed time-period that is more advantageous to the scheduling of classrooms.

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This convenience comes with responsibility, however. When a student engages with online material, she should be focused, almost hyper-focused. The student should also take the initiative to use other sources of information available to fill in gaps in knowledge so that personal understanding can be more robust.

This type of learning also requires more initiative on your part. Twenty-first-century students cannot afford to be passive learners simply soaking up the information presented to them; today students must be an active contributor in the process of their learning. Not being an engaged learner may cause a student to end up more confused than sitting in a traditional classroom. Online learning is a skill to be developed over time, but once mastered one can theoretically pursue any available knowledge.

My goal as a curriculum designer is not to use online offerings as merely a repository of current knowledge — as a digital professor per se. But an intelligent assistant ready to help students make relevant the solutions to the problems of our world.

I encourage you to practice using online learning to your benefit but know that regardless of the size, speed or computing capacity, the technology is limited to being a record of what we already know. Some solutions to the problems require retrieval of this knowledge, but all of the problems we will face have not been solved and recorded somewhere retrievable with Google. The big, important problems we will face still need to be answered by humans who know how to take available knowledge and extend our collective understanding.



# One Way to Use the Academic Studio

by Allison Ruppino,  
Manager and Senior Instructional Technologist



Professor Papa Ndiaye started at Stevens Institute of Technology in 2016 as an associate professor

in the financial engineering department for the School of Systems and Enterprises.

Prior to joining Stevens, he was a research fellow at Inria in France from 1991 to 1998. Professor Ndiaye has 20 years of experience with quantitative research and consulting in the financial industry, focusing on robust optimization and risk modeling for portfolio construction and management.

When he was active as an executive for building systems, research teams or working for hedge funds, he always kept a close connection with the academic world as an adjunct professor in France (Grenoble Polytechnic School - Ensimag) and at NYU Tandon School of Engineering.

Professor Ndiaye was exposed to distance education at a young age. His first contact with distant education occurred when he was just 14 years old (in the late '70s) as a student in Dakar, Senegal. "Our school was connected to a college that trained future high school teachers. We used to have

*supervised, mock classes where we role-played being a teacher in what was called 'micro-teaching',*" professor Ndiaye explained. "The sessions were video recorded and then replayed in a closed circuit. And now the closed circuit is the web."

Fast forward to today, he became interested in the idea of adding videos to his own courses to enhance the distance learning experience for the students.

Initially, professor Ndiaye used Blackboard Collaborate to run live, virtual classes to take advantage of the interactive features that web-conferencing offered. He liked the idea of capturing himself on screen to recreate an authentic teaching experience. "I felt the need to have the students see me in a 'real classroom mode' where I often juggle from my slides to the white board, and where I can easily add examples on the fly and visually communicate with graphs and diagrams," he said. "So in a sense, the studio provides that extra degree of freedom."

Professor Ndiaye has been using the academic studio for the past two semesters to create content. He continues to discover topics that he wants to highlight and he adds them to his Canvas course shells through videos.

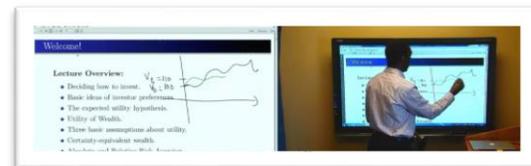
"Moreover, it gave me the option to record some review/extra lectures that I could distribute to all students especially when I am teaching several sections of a course."

What has the feedback from the students been on these videos? Overwhelmingly positive! They not only find his videos helpful in clarifying difficult concepts, but students have actually requested he add more videos. "Students, especially web students, like to see how I look into examples step-by-step," he said.

"They find the narrative useful on how to move from theory to applications and connect different graphical ways of understanding concepts. Students from the on-campus classes asked me if I can record some videos to help them review the material presented in class."

Overall, professor Ndiaye has valued the flexibility and reusability of the recorded material that he has produced. He likes that students can study at their own pace and that he can focus the videos on what the students need. "It feels like a real classroom where I can depart from my scripted canvas and adjust the content to make it more vivid," he added.

WebCampus continues to support Professor Ndiaye and other professors that utilize the academic studios!



## Unfinished business

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and regulations has helped him in his day-to-day activities and gave Jerome a new appreciation of the business side of the industry. Jerome's "a-ha moment" came as he delved through subject matter related to assets, liability, stockholder equity and high-level accounting. *"It really showed me a whole financial world that I just haven't had to deal with,"* he said. *"Prior to this class, everything has been along the lines of telecom or RF or engineering technology."*

The FIN615 course was developed as a combination of two other classes (Finance and Accounting). This allowed a wider range of topics in the curriculum without increasing its length. However, the content itself is no less demanding, noted Professor Juan Cabrera, who is now teaching the course online for the eighth time. *"The subject matter is a significant departure from the experience of many students,"* Cabrera said. *"People who attend the course are usually non-finance majors looking to advance into management or break into the finance industry."* Because the class can be very different from what students are used to, Professor Cabrera has created many short video lectures (using Camtasia Relay) to go over the lessons in detail. In addition, an application designed around the course textbook called WileyPLUS is used to supplement the activities and materials in the Canvas system. *"WileyPLUS complements Canvas very well,"* noted Cabrera. WileyPLUS has an extensive database of assignments that can

be customized to each module in the course.

Another practice that Cabrera instituted was weekly online office hour sessions for students to review the subject matter in real-time. These sessions are conducted every Thursday at lunchtime. Despite having a class with students spread across three time zones and seven states (CO, GA, MD, OK, NC, NY and NJ), communication with course participants has not been a problem. *"We also have people who travel a lot. Because of the format of the course, it really makes it easier for them to keep up with the assignments,"* noted Cabrera. The mix of interaction has worked very well for Jerome. *"I think just having the scheduled office hours, or just sending an email and setting up a time has been good enough for me,"* he said.

In terms of balancing school work with his career and family life, Jerome noted one crucial factor: *"Time is one thing that I don't have a lot of. I am married and I have a son who is now 18 months old."* Taking advantage of whatever spare time he could find — which was often in small increments — Jerome routinely reads through lecture material via the Canvas mobile application. His most memorable "mobile moment" was reading through half of a slide presentation while waiting at the barber shop. *"I'm always on the go, so being able to fit that in wherever you can is awesome,"* he says. *"I like the flexibility that Stevens online program has, because it allows me to still have the life that I have, and it allows me to be able to fit in getting a master's at the same time."*

## At Work and Online: The Team Factor

Jerome described the group work in his online courses as a unique growing experience that takes a little getting used to. *"When your team is physically at a location, you learn their habits, you learn about them. When you start out online, the only thing you know you all have in common is that you all signed up for the same class."* Still, the task of getting used to working in virtual teams pales in comparison to the group work that Jerome deals with on the job. A recent example was the work he did in preparation for the presidential inauguration and parade. *"Whenever we have a big event like that, we make sure that we put systems in place to handle the spike in phone traffic,"* he said. Such projects involve determining where and when the heaviest cell traffic will be, and deploying various temporary systems to support the load. *"Just having that additional knowledge from the classes I have taken has helped in situations where I had to make decisions and explain things to different people. It has been perfect."*

## Epilog

Once he finishes his master's degree, Jerome hopes to advance to a management position. *"I've been an engineer for almost 13 years and I love it. But I aspire to get into management because I love working in teams and I would like to work in an environment where I have more control to make decisions and lead teams."*

## Instructor Tip of the Month

### Wrapping up course activities

As the spring semester comes to a close, you, as the instructor, begin the closing activities of the course. Final projects and final exams are scheduled and students begin to complete their final preparations for their presentations and are zealously studying for final exams.

#### This is a great time to:

1. Review the syllabus course/learning objectives with your students to confirm their knowledge.
2. Let students know what would be the next course to complete a certificate or master's degree.
3. Remind students to complete the end-of-course survey especially if your survey dates are different from the standard dates.

Look for the steps on how to back up your Canvas course and submit student grades in the May 2017 issue!

## Student Tip of the Month

### Don't forget to complete the end-of -course survey

Stevens offers an end-of-course survey for all students. These surveys are anonymous and we encourage all students to complete one survey for each online course taken. The surveys contain multiple-choice questions and text comment areas. The survey will take no more than 5 minutes to complete.

Your instructor does not have access to the survey results until **AFTER** all grades for the course have been posted to the student information system. Survey results are consolidated and are not listed as individual students results.

There should be a link within your course for you to access the survey. If you can't locate the link, you can take the survey at <https://web.stevens.edu/assess/>

**April 28–May 19, 2017** — Surveys open!

## Important Dates

Last day to withdraw w/o signatures	April 10
End-of-course survey	April 28-May 19
Last day of WebCampus classes	May 5
Final exams	May 8–May 15
Start of summer courses	May 15

## Tell us what you think

What stories would you like us to publish?

Would you like to write a story?

Let us know!

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