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Distance Learning for Engineering Students

By

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DISTANCE LEARNING FOR ENGINEERING STUDENTS

- **Introduction**

Pre COVID-19 Higher Education, there was already widespread enthusiasm about online learning since the late 1980 early 1990. Our traditional in-class learning model is now more than ever being challenged. The spring of 2020 is considered as inflection point on the learning curve, it is the inflection point between traditional in-class learning and virtual online delivery model. This model will reflect reduction in tuition and make university education more affordable to more students seeking higher education.

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- **Building Models for Virtual Online Learning**

Even though faculty members, at least many of them, were not trained to deliver online courses, this lead us to universities have to create models to train their faculty to meet such a challenge. Most engineering courses can and should be taught online, those that require laboratory or field work can be conducted in a hybrid method during the COVID-19 Pandemic. In the meantime, faculty has to recognize teaching online courses in seminar format not to exceed 50-90 minutes segment to do away with monolithic (boring) virtual presentations that would include students participation.

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This model which may have been started as a short-term response to a health crisis became a positive transformation to higher education. Engineering and Computer Science Majors It is well known that online courses are offered over the last 2 decades by many universities here in the US and abroad. In California, public and private institutions i.e. [Caltech, Stanford, USC and of course the UC system] have lead the effort in online teaching and their online programs are highly regarded. UCLA was ranked number One three years in a row, USC came second in 2017.

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- **Professional Engineering Certification [Licensing]**

The AAEEA can and should lead the effort in developing online curriculum for EIT and Engineering License review courses so as to help its members getting the certification needed to practice engineering. This effort may require teaming up with local universities to help achieve this task.

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- **Conclusion**

The advancement in Information Technology (IT) and Artificial Intelligence (AI) will drive higher education institutions toward finding options for faculty, students and the community at large which will lead toward digital learning in a more meaningful way with quality standards and regulations to enhance the quality of education and innovation. The year 2020 will go in history as the year of transformation of education on all levels from, elementary schools to higher education. This is the time to seize to advance knowledge.

Stay Safe.