

## Strengthening Rudimentary Fundamentals through Audio-visual Offline Tools (AV-doodle Suite) for e-Self Learning and Assessment

Project Number: 6000354

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**Grant Type: TDG** 

Abstract:

This project seeks to enhance the learning experience of freshrnen in the rudimentary fundamentals of technical courses like EE by adding to the e-learning environment offered by the University. A firm grasp of the fundamentals is indispensible for success in the rest of the program. This goes a long way in enhancing graduate employability since analytical and numerical skills are highly sought after by employers in information-driven high value adding industries. We propose to achieve this objective through the introduction of an audio-visual suite (called AV-doodle) to existing fundamental courses. The AV-doodle suite comprises audio-visually illustrated solutions for selected problems that students can access at their own time and pace to complement existing lectures and tutorials. Ability to follow instructions in English is also expected to improve through the use of the AV-doodle suite. These will be accompanied by online self-assessment exercises to provide students an additional domain for evaluation and feedback on the personal level. AV-doodle is introduced to help students grapple with the mechanics of solving problems (the procedural level of learning) in order to free up time to focus on concepts during the tutorials (cognitive level of learning) in line with the University's graduate outcomes.