



RECEIVED

NOV 09 2015

ESSAP

RECEIVED

NOV 17 2015

CE GRADUATE STUDIES

November 9, 2015

MEMORANDUM

Approved by G.C. 12-15-15

TO: Dr. Mark Zoran
Chair, Graduate Council

THROUGH: Dr. N.K. Anand
Executive Associate Dean
Dwight Look College of Engineering

N.K. Anand

THROUGH: Dr. Valerie Taylor
Senior Associate Dean for Academic Affairs
Dwight Look College of Engineering

Valerie Taylor

THROUGH: Dr. Prasad Enjeti (GOC dean)
Associate Dean for Academic Affairs
Dwight Look College of Engineering

Prasad Enjeti

FROM: Dr. Miroslav Begovic
Head, Department of Electrical & Computer Engineering

M. Begovic

FROM: Dr. Jose Silva-Martinez
Associate Head for Graduate Affairs, Department of Electrical & Computer Engineering

José Silva-Martínez

SUBJECT: Distance Education Master of Engineering in Electrical Engineering

The Master of Engineering in Electrical Engineering is currently approved for on-campus, face-to-face delivery. We would like to offer the degree via distance education beginning fall 2016. Please see the attached approval and online delivery proposal forms for additional information

Please contact me if you have any questions at jsilva@ece.tamu.edu or 979-845-7477.

Texas Higher Education Coordinating Board

Certification Form for Electronically Delivered and Off-Campus Education Programs April 2014

Directions: For all new programs that are to be delivered electronic-to-individuals (i.e., online), electronic-to-groups, or off-campus face-to-face, a signed pdf of this form must accompany email notification of the new program to Dr. Andrew B. Lofters (andrew.lofters@theccb.state.tx.us). (Institutions offering distance education programs **for the first time** – i.e. have never offered a distance education program, such as newly created institutions -- must complete and submit an *Institutional Plan for Distance Education*).

Please fill out the Administrative Information below and then sign and date on page 4.

Administrative Information

1. Institution: Texas A&M University
2. Program Name – Masters of Engineering in Electrical Engineering
3. Program CIP Code: 14.1001.00
4. Program Delivery – Distance Education/Online
5. Proposed Implementation Date – Fall 2016
6. Contact Person – Provide contact information for the person who can answer specific questions about the program.

Name: Jose Silva-Martinez, IEEE Fellow

Title: Associate Department Head for Graduate Programs

E-mail: jsilva@ece.tamu.edu

Phone: 979.845.7961

CURRICULUM AND INSTRUCTION

- Each program or course results in learning outcomes appropriate to the rigor and breadth of the degree or certificate awarded.
- A degree or certificate program or course offered electronically is coherent and complete.
- The program or course provides for appropriate interaction between faculty and students and among students.
- Qualified faculty provide appropriate oversight of the program or course that is offered electronically.
- Academic standards for all programs or courses offered electronically will be the same as those for programs or courses delivered by other means at the institution where the program or course originates.
- Student learning in programs or courses delivered electronically should be comparable to student learning in programs offered at the campus where the programs or courses originate.

INSTITUTIONAL CONTEXT AND COMMITMENT

Role and Mission

- The program or course is consistent with the institution's role and mission.
- Review and approval processes ensure the appropriateness of the technology being used to meet the objectives of the program or course.

Students and Student Services

- Program or course announcements and electronic catalog entries provide appropriate information.
- Students shall be provided with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technological competence and skills, technical equipment requirements, availability of academic support services and financial aid resources, and costs and payment policies.
- Enrolled students have reasonable and adequate access to the range of student services and student rights appropriate to support their learning.
- The institution has admission/acceptance criteria in place to assess the extent to which a

student has the background, knowledge and technical skills required to undertake the program or course.

- Advertising, recruiting, and admissions materials clearly and accurately represent the program or course and the services available.

Faculty Support

- The program or course provides faculty support services specifically related to teaching via an electronic system.
- The institution assures appropriate training for faculty who teach via the use of technology.
- The institution provides adequate equipment, software, and communications access to faculty to support interaction with students, institutions, and other faculty.

Resources for Learning

- The institution ensures that appropriate learning resources are available to students.
- The institution evaluates the adequacy of, and the cost to students for, access to learning resources and documents the use of electronic resources.

Commitment to Support

- Policies for faculty evaluation include appropriate recognition of teaching and scholarly activities related to programs or courses offered electronically.
- The institution demonstrates a commitment to ongoing support, both financial and technical, and to continuation of the program or course for a period of time reasonable and sufficient for students to complete the course or program.

EVALUATION AND ASSESSMENT

- The institution evaluates the program's or course's educational effectiveness, including assessments of student learning outcomes, student retention, and student and faculty satisfaction.
- At the completion of the program or course, the institution provides for assessment and documentation of student achievement in each course.

On behalf of Texas A&M University (Institution), I assert that the preceding Coordinating Board criteria have been met for all courses associated with this program that will be delivered electronically and off-campus face-to-face.

Chief Academic Officer or President

Date

Name: _____

Title: _____

THECB 4/2014

**DISTANCE EDUCATION
ELECTRONIC TO INDIVIDUALS (ONLINE DELIVERY) APPROVAL FORM**

Submitted by:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Texas A&M University | <input type="checkbox"/> Texas A&M University–Texarkana |
| <input type="checkbox"/> Texas A&M University–Central Texas | <input type="checkbox"/> Texas A&M International University |
| <input type="checkbox"/> Texas A&M University–Commerce | <input type="checkbox"/> Prairie View A&M University |
| <input type="checkbox"/> Texas A&M University–Corpus Christi | <input type="checkbox"/> Tarleton State University |
| <input type="checkbox"/> Texas A&M University–Kingsville | <input type="checkbox"/> West Texas A&M University |
| <input type="checkbox"/> Texas A&M University–San Antonio | <input type="checkbox"/> Texas A&M Health Science Center |

Distance Education: Electronic to Individuals (online Delivery) Authorization Request

Please list the proposed degree and CIP code:

Degree: Master of Engineering in Electrical Engineering

CIP Code: 14.1001.00

When is the effective date of the proposed program?

Effective Date: Fall 2016

****Please note:** This proposed program cannot be advertised as an online delivered degree program until the A&M System Office of Academic Affairs has approved it and the Texas Higher Education Coordinating Board has been notified.

Summary of Proposal (Include Background Information and Rationale for the change.)

Electrical and Computer Engineering (ECEN) has advanced national and global prosperity through research, development and application of electrical and information technologies and sciences for the benefit of humanity, and has helped create the global village. By choosing electrical engineering our graduates embark on an exciting and productive career with endless opportunities and help in shaping a better future for mankind. As a major department with an enrollment of about 750 students pursuing graduate degrees in both electrical and computer engineering, our mission is to create new knowledge and challenge young minds by participation in the process of discovery and invention, to educate electrical and computer engineers with a solid background of fundamentals, to prepare leaders for an exciting future and to serve the society through research, education and outreach activities.

ECEN currently has about 70 tenured/tenure track faculty. Some indicators of our faculty recognition include 22 IEEE Fellows, two members of the National Academy of Engineering, two recipients of the Presidential Early Career Award for Scientists and Engineers (PECASE), 20 recipients of the National Science Foundation (NSF) Career Award, the Office of Naval

(AFOSR) young investigator award and numerous editorships of major journals and national level awards. We also have the unique honor that one of our former faculty members (1978-1984), Jack Kilby, received the 2000 Nobel Prize in Physics. Most of our faculty members work across focus areas and across related disciplines, providing opportunities for students to experience interdisciplinary research and education. The department of ECEN offers unmatched diversity and richness of educational and research experience. Our high quality research program and low tuition rates make graduate studies in our programs among the best values in the world.

ECEN is planning to offer the Masters of Engineering in Electrical Engineering. Through the Distance Learning (DL) program, the students can study anywhere in the world, and earn the same degree as our on-campus student in College Station, Texas. Whether taking classes on campus or through distance education, the standards for admission, course work, graduation and your diploma will all be the same. The currently in place automatic admission program used to engage top TAMU undergraduates in research applies to this program; details can be found in the following link <http://engineering.tamu.edu/electrical/academics/degrees/graduate/automatic-admission-to-the-graduate-program>. Also, up to 6 credits from the fast track program can be used towards this degree; further information can be found at <https://engineering.tamu.edu/electrical/academics/fast-track>.

Electrical engineering is a diverse field that embraces many specialty areas such as Analog and Mixed Signal, Biomedical Imaging, Sensing and Genomic Signal Processing, Device Science and Nanotechnology, Electric Power Systems and Power Electronics, Electromagnetics and Microwaves, and Information Science and Systems.

The Masters of Engineering in Electrical Engineering via distance education is a non-thesis degree requiring at least 30 credit hours. At least 18 credit hours must be ECEN courses. Credits from the existing ECEN fast track program (up to 6) can be validated. Up to 6 credits can be transferred from peer institutions if approved by the graduate studies committee. Seminar (681), Internship (684), Directed Studies (685) and Research (691) hours are not allowed on this program. Final examination may be waived for any student maintaining a GPR of at least 3.0. A petition to waive the final exam must be submitted through the Graduate Office. The Graduate Coordinator will be the chair of all student committees. No other committee members are needed. The students will find help from his/her Advisory Committee of faculty members in formulating an individual plan of study that satisfies the degree requirements and matches his/her own needs, interests, and long-term goals.

Financial Implications:

TAMU has sufficient resources to initiate and maintain quality distance learning programs. Traditional funding sources and student fees ensure the excellence of electronically based courses and programs. Students who are enrolled in online courses within the college of engineering are charged distance education differential tuition of \$540.00 per semester credit hour, which allows for the delivery of the course and ensures the quality of distance and distributed education programs of the University. In addition to the distance education differential tuition, there are traditional services that are a part of the university's operations that contribute to the effective delivery of distance education. A list of all student fee and explanations can be found at <http://sbs.tamu.edu/>.

University: Request for Authorization

I recommend adoption of the following program:

“Having complied with all of the requirements of the Texas Higher Education Coordinating Board, Texas A&M University is hereby authorized to offer the Masters of Engineering in Mechanical Engineering program by distance education, electronic to individuals (online delivery) effective Spring 2015.

The Texas A&M University System Office of Academic Affairs finds that the program offering aforementioned is within the role and scope and capacity of the institution and will benefit students.

Texas A&M University certifies that the proposed distance delivery of the aforementioned program meets the criteria under Texas Administrative Code Chapter 4 Subchapter P regarding quality of the curriculum and courses; delivery of instruction; evaluation, training, supervision, and support of faculty; financial resources; and admission of the support services for students. The program is within the role and mission of the institution and in the Table of Program. The institution will comply with the standards and criteria of the Commission on Colleges of the Southern Association of Colleges and Schools and will adhere to criteria outlined in the *Principles of Good Practice for Degree and Certificate Programs and Courses Offered Through Distance Education.*”

Approval –University:

Karan L. Watson
Provost and Executive Vice President for Academic Affairs

Date

Authorization: System

Approval – Texas A&M University System:

James R. Hallmark, Ph.D.
Vice Chancellor for Academic Affairs

Date