

UNDERGRADUATE CURRICULUM CHANGE MEMO

Date: 12/4/2020

From: Dr. Michael McGarry, Department of Electrical and Computer Engineering

Through: Dr. Miguel Velez-Reyes, Chair, Department of Electrical and Computer Engineering

Through: Dr. Patricia Nava, Interim Dean, College of Engineering

To: Dr. Louis Everett, Chair, College of Engineering Curriculum Committee

Proposal Title: Minor in Computer Engineering

The minor in Computer Engineering consists of 16 or more credit hours, representing fundamental areas of knowledge in the field of Computer Engineering. The main objective of the program is to offer interested students with GPAs of 3.00 or above in any field of study other than Computer Engineering, the opportunity to develop their expertise in the high demand areas of digital design, software engineering, and embedded systems.

CURRICULUM CHANGE PROPOSAL

APPROVAL PAGE

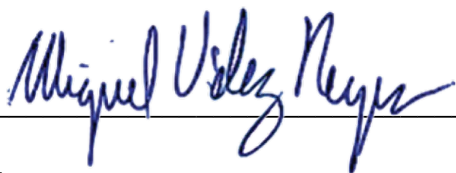
Proposal Title: Minor in Computer Engineering

College: Engineering

Department: Electrical and Computer Engineering

DEPARTMENT CHAIR

I have read the enclosed proposal and approve this proposal on behalf of the department.



December 7, 2020

Signature

Date

COLLEGE CURRICULUM COMMITTEE CHAIR

I have read the enclosed documents and approve the proposal on behalf of the college curriculum committee.

Signature

Date

COLLEGE DEAN

I have read the enclosed documents and approve the proposal on behalf of the college. I certify that the necessary funds will be allocated by the college in support of this proposal.

Signature

Date

From: [Granda, Virginia D](#)
To: [Rivera, Julie A](#)
Cc: [Everett, Louis](#); [Love, Norman D](#)
Subject: FW: UG Proposals Approved by COECC
Date: Monday, January 11, 2021 5:31:27 PM
Attachments: [image027.png](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image028.png](#)
[image029.png](#)
[image030.png](#)
[image031.png](#)
[ECE--Proposal-Minor-Comp-Eng.pdf](#)
[ENGR-Curriculum-Change-Proposal--Fall-2021-Catalog.pdf](#)
[ME--Electro-Mechanical-Concentration-in-MECH.PDF](#)
[MME Senior Project Proposalv3.pdf](#)
[MME--BME 3303 Proposal.pdf](#)
[image009.png](#)

Dear Julie,

Please find the UG Proposals that have been approved by our college.

Let us know when they will be discussed by the UGCC.

FYI, Dr. Love will be presenting the ENGR Proposal (the second one on the list).

Best Regards,

Virginia



Virginia Granda-Becker
Coordinator for Academic Affairs and Undergraduate Studies

College of Engineering
The University of Texas at El Paso
500 W. University Ave
El Paso, TX 79968
Office: (915) 747-8011
www.utep.edu/engineering/eec

From: Nava, Patricia A.
Sent: Monday, January 11, 2021 5:16 PM
To: Love, Norman D <ndlove@utep.edu>
Cc: Granda, Virginia D <granda@utep.edu>
Subject: RE: UG Proposals Approved by COECC

All of these are approved.

PN



Patricia A. Nava, Ph.D.

Interim Dean
Professor of Electrical and Computer Engineering
El Paso Electric Professor in Education
UTEP Distinguished Teaching Professor

College of Engineering
The University of Texas at El Paso
500 West University Avenue
El Paso, TX 79968-0521
Office: 915-747-6917
Fax: 915-747-5437
utep.edu/engineering



From: Love, Norman D
Sent: Monday, January 11, 2021 5:05 PM
To: Nava, Patricia A. <pnav@utep.edu>
Cc: Granda, Virginia D <granda@utep.edu>
Subject: FW: UG Proposals Approved by COECC

Dear Dr. Nava,

I approve of the attached proposals.

I have attached the corrected versions of the proposals to this email for your review.

Norman



Norman Love, Ph.D.

Associate Dean for Academic Affairs and Undergraduate Studies
Professor of Mechanical Engineering
Provost's Faculty Fellow, University Honors Program

College of Engineering
The University of Texas at El Paso
500 W. University Ave.
El Paso, TX 79968-0521
Office: 915-747-8981
Fax: 915-747-5437
utep.edu/engineering/eec/index.html



From: "Granda, Virginia D" <granda@utep.edu>

Date: Monday, January 11, 2021 at 11:14 AM

To: Norman Love <ndlove@utep.edu>

Subject: FW: UG Proposals Approved by COECC

Good morning Dr. Love,

Please find attached the UG proposals that were approved by our COECC and its chair.

Can you please reply letting me know if you approve them?

If you would like, can you please forward them to the Dean for her approval?

Best Regards,

Virginia



Virginia Granda-Becker

Coordinator for Academic Affairs and Undergraduate Studies

College of Engineering
The University of Texas at El Paso
500 W. University Ave
El Paso, TX 79968
Office: (915) 747-8011
www.utep.edu/engineering/eec

From: Everett, Louis

Sent: Monday, January 11, 2021 10:58 AM

To: Granda, Virginia D <granda@utep.edu>

Subject: FW: UG Proposals Approved by COECC

Yes these are approved by the committee. I also approve them

From: Granda, Virginia D <granda@utep.edu>

Sent: Monday, January 11, 2021 10:04 AM

To: Everett, Louis <leverett@utep.edu>

Subject: UG Proposals Approved by COECC

Good morning Dr. Everett,

Attached are the UG proposals that were approved by our COECC in December.

Please reply if you approve these proposals as the COECC chair.

Best Regards,

Virginia



Virginia Granda-Becker

Coordinator for Academic Affairs and Undergraduate Studies

College of Engineering
The University of Texas at El Paso
500 W. University Ave
El Paso, TX 79968
Office: (915) 747-8011
www.utep.edu/engineering/eec

The University of Texas at El Paso

College of Engineering
Department of Electrical and Computer Engineering
Program

Minor in Computer Engineering

TABLE OF CONTENTS

ADMINISTRATIVE INFORMATION.....	3
MINOR INFORMATION	4
I. NEED	4
A. <i>Job Market Need</i>	4
B. <i>Student Demand</i>	4
C. <i>Enrollment Projections</i>	4
II. QUALITY	4
A. <i>Degree Requirements</i>	4
B. <i>Curriculum</i>	5
C. <i>Faculty</i>	6
D. <i>Students</i>	6
E. <i>Library</i>	7
F. <i>Facilities and Equipment</i>	7
G. <i>Accreditation</i>	7
H. <i>Evaluation</i>	7
III. COSTS AND FUNDING	8

Request Form for a New Minor

Administrative Information

1. Institution: University of Texas at El Paso
2. Program Name – (e.g., *Minor in Women's Studies*): Minor in Computer Engineering
3. Proposed CIP Code: 14.0901.00 06
4. Number of Required Semester Credit Hours (SCHs): 16 or more

5. Brief Program Description – Describe the minor and the educational objectives:

The Minor in Computer Engineering consists of 16 or more credit hours, representing fundamental areas of knowledge in the field of Computer Engineering. Undergraduate students interested in the minor in Computer Engineering must select the coursework with an advisor in order to receive the minor. The main objective of the program is to offer interested students with GPAs of 3.00 or above in any field of study other than Computer Engineering, the opportunity to enhance their capabilities in their own profession by developing expertise in the high demand areas of digital design, software engineering, and embedded systems. These courses generally have prerequisites, and their enrollment will need approval by the Electrical and Computer Engineering Department.

6. Administrative Unit – Identify where the minor would fit within the organizational structure of the university (e.g., *The Department of Electrical Engineering within the College of Engineering*):

The Department of Electrical and Computer Engineering within the College of Engineering

7. Proposed Implementation Date – Report the date that students would enter the minor (MM/DD/YY): 08/01/21

8. Contact Person – Provide contact information for the person who can answer specific questions about the minor:

Name: Miguel Velez-Reyes

Title: Professor

E-mail: mvelezreyes@utep.edu

Phone: 915-747-5470

Minor Information

I. Need

- A. Job Market Need – Provide short- and long-term evidence of the need for graduates in the job market.

No budgetary implications.

- B. Student Demand – Provide short- and long-term evidence of demand for the minor.

No budgetary implications.

- C. Enrollment Projections – Use this table to show the estimated cumulative headcount and full-time student equivalent (FTSE) enrollment for the first five years of the minor.

YEAR	1	2	3	4	5
Headcount	3	6	10	13	16
FTSE					

II. Quality

- A. Degree Requirements – Use this table to show the degree requirements of the minor. *(Modify the table as needed; if necessary, replicate the table for more than one option.)*

Category	Semester Credit Hours	Clock Hours
Required Courses	7	
Prescribed Electives	9 or more	
Free Electives	0	
Other (Specify, e.g., internships, clinical work)	(if not included above)	
TOTAL	16 or more	

Note: A Bachelor degree should not exceed 120 Semester Credit Hours (SCH) per Board rule 5.44 (a) (3). Those that exceed 120 SCH must provide detailed documentation describing the compelling academic reason for the number of required hours, such as programmatic accreditation requirements, statutory requirements, or licensure/certification requirements that cannot be met without exceeding the 120-hour limit.

- B. Curriculum – Use these tables to identify the required courses and prescribed electives of the minor. Note with an asterisk (*) courses that would be added if the minor is approved. *(Add and delete rows as needed. If applicable, replicate the tables for different tracks/options.)*

Required Courses

Prefix and Number	Course Title	SCH
EE 2372	Software Design I	3
EE 2369/2169	Digital Systems Design I and Lab	4

Prescribed Elective Courses

Prefix and Number	Course Title (Select three of the following)	SCH
EE 3372	Software Design II	3
EE 3376/3176	Microprocessor Systems I and Lab	4
EE 4342/4142	Digital Systems Design II and Lab	4
EE 4374	Operating Systems	3
EE 4379	Computer Architecture	3
EE 4395	Special Topics	3
EE 33xx/ EE 43xx	EE elective course (optional by Department approval)	3/4

Free Elective Course Menu

Prefix and Number	Course Title	SCH

Other

Prefix and Number	Course Title	SCH

- C. Faculty – Use these tables to provide information about Core and Support faculty. Add an asterisk (*) before the name of the individual who will have direct administrative responsibilities for the program. (*Add and delete rows as needed.*)

Name of <u>Core</u> Faculty and Faculty Rank	Highest Degree and Awarding Institution	Courses Assigned in Program	% Time Assigned To Program
Sai Mounika Errapotu, Assistant Professor	PhD in Electrical and Computer Engineering University of Houston	EE 4379	100%
Michael McGarry, Associate Professor	PhD in Electrical Engineering Arizona State University	EE 2372, EE 3372, EE 4374, EE 4379	100%
Patricia Nava, Professor	PhD in Electrical Engineering New Mexico State University	EE 2169, EE 2369, EE 4142, EE 4342	100%
Rodrigo Romero, Associate Professor of Practice	PhD in Electrical and Computer Engineering University of Texas at El Paso	EE 3176, EE 3376	100%
New Faculty in Year ____			
New Faculty in Year ____			

Name of <u>Support</u> Faculty and Faculty Rank	Highest Degree and Awarding Institution	Courses Assigned in Program	% Time Assigned To Program

- D. Students – Describe general recruitment efforts and admission requirements. In accordance with the institution’s Uniform Recruitment and Retention Strategy, describe plans to recruit, retain, and graduate students from underrepresented groups for the minor.

We will utilize our existing strategies for recruitment and retention.

- E. Library – Provide the library director's assessment of library resources necessary for the minor. Describe plans to build the library holdings to support the minor.

All the resources for Computer Engineering, Electrical Engineering and other engineering disciplines are in good standing to support any / all majors and minors in Computer Engineering and other engineering degree programs.

- F. Facilities and Equipment – Describe the availability and adequacy of facilities and equipment to support the minor. Describe plans for facility and equipment improvements/additions.

We already have the facilities and equipment to support this minor. Our existing Computer Engineering BS concentration area, and MS in Computer Engineering have required us to already have the necessary facilities and equipment.

- G. Accreditation – If the discipline has a national accrediting body, describe plans to obtain accreditation or provide a rationale for not pursuing accreditation.

No accreditation required.

- H. Evaluation – Describe the evaluation process that will be used to assess the quality and effectiveness of the new minor.

The program will be evaluated by the metrics of success regarding the numbers of students enrolled and graduating with the minor.

III. Costs and Funding¹

Five-Year Costs and Funding Sources - Use this table to show five-year costs and sources of funding for the program.

No budgetary implications.

Five-Year Costs		Five-Year Funding	
Personnel ¹	\$0	Reallocated Funds	\$0
Facilities and Equipment	\$0	Anticipated New Formula Funding ³	\$0
Library, Supplies, and Materials	\$0	Special Item Funding	\$0
Other ²	\$0	Other ⁴	\$0
Total Costs	\$0	Total Funding	\$0

1. Report costs for new faculty hires, graduate assistants, and technical support personnel. For new faculty, prorate individual salaries as a percentage of the time assigned to the program. If existing faculty will contribute to program, include costs necessary to maintain existing programs (e.g., cost of adjunct to cover courses previously taught by faculty who would teach in new program).
2. Specify other costs here (e.g., administrative costs, travel).
3. Indicate formula funding for students new to the institution because of the program; formula funding should be included only for years three through five of the program and should reflect enrollment projections for years three through five.
4. Report other sources of funding here. In-hand grants, "likely" future grants, and designated tuition and fees can be included.

¹ Please use the "Program Funding Estimation Tool" found on the CB website to correctly estimate state funding.

Catalog Copy for Minors

Program Name- Minor in Computer Engineering

Program Description- The Minor in Computer Engineering consists of 16 or more credit hours, representing fundamental areas of knowledge in the field of Computer Engineering. Undergraduate students interested in the minor in Computer Engineering must select the coursework with an advisor in order to receive the minor. The main objective of the program is to offer interested students with GPAs of 3.00 or above in any field of study other than Computer Engineering, the opportunity to enhance their capabilities in their own profession by developing expertise in the high demand areas of digital design, software engineering, and embedded systems. These courses generally have prerequisites, and their enrollment will need approval by the Electrical and Computer Engineering Department.

Degree Requirements- Enrolled students must complete between 16 or more credit hours in consultation with an advisor and maintain a GPA of 3.00 or above.