

IRAO OFFICE USE ONLY	
Received	
In Banner	
MTVCOMP/Codeset	
Master Curriculum	
CIP Code	
Program Code	
Program Description	

University of Hawai'i
Code Request Form for Academic Programs for

[Reset Form](#)

NEW OR MODIFY PROGRAM CODE

New Program Code **Modify Program Code**

Date: 12/1/15

REQUESTOR CONTACT INFORMATION

Name Debie Amby Campus UH Maui College
 Title Banner/Curriculum Specialist Email debie@hawaii.edu
 Office/Dept Academic Affairs Phone 808-984-3378

NEW PROGRAM CODE TO CREATE

Institution MAU - UH Maui College Campus MAU - UH Maui College
 Level UG - Undergraduate Effective Term Fall 2014

	Code (Max. Characters)	Description	Check if requesting new code:
College	(2) <u>IN</u>	<u>Instructional</u>	<input type="checkbox"/> See Banner form STVCOLL
Department	(4) <u>ECET</u>	<u>Electronics&Comp Engineer Tech</u>	<input type="checkbox"/> See Banner form STVDEPT
Degree/Certificate	(6) <u>CO</u>	<u>Certificate of Competence</u>	<input type="checkbox"/> See Banner form STVDEGC
Major	(4) <u>ECET</u>	<u>Electronics&Comp Engineer Tech</u>	<input type="checkbox"/> See Banner form STVMAJR
Concentration	(4) _____	_____	<input type="checkbox"/> See Banner form STVMAJR
Minor	(4) _____	_____	<input type="checkbox"/> See Banner form STVMAJR

If a similar major/concentration code exists in Banner, please list the code: _____

Justification to warrant a new major/concentration code similar to an existing major/concentration code:

Originally it was a Certificate Completion in ECET but it was never created in Banner and therefore was not converted to a Certificate of Competence in ECET in Fall 2014. There are many students waiting to be awarded this certificate.

Is this major/concentration code being used the same way at the other UH campuses? Yes No
 Should this program be available for applicants to select as their planned course of study on the online application? *If yes, student may select the code as their only program of study.* Yes No

RULES PERTAINING TO FINANCIAL AID AND 150% DIRECT SUBSIDIZED LOAN LIMIT LEGISLATION

Is 50% or greater of the classes in this program offered at a location other than the Home Campus? Yes No

Is this program/major/certificate financial aid eligible? Yes No

Does this certificate qualify as a Gainful Employment Program (Title IV-eligible certificate program)? Yes No

See <http://www.ifap.ed.gov/GainfulEmploymentInfo/index.html>

Program Length

In academic years: decimals are acceptable. The length of the program should match what is published by the campus in any online and/or written publication.

0.5

Special Program Designations

See *Special Program Designations Code Definitions on IRAO Program Code Request webpage*

A B N P T U

Required Terms of Enrollment: Fall Spring Summer Extended

ADDITIONAL COMMENTS

ATTACHMENTS

BOR Approved: Associate, Bachelor and Graduate Degrees, and sole credential certificates

- BOR Meeting Minutes & Supporting Documents Curriculum

Chancellor Approved: Certificates related to authorized BOR program & Associate in Technical Studies (ATS) Degree

- Memo from Chancellor to notify VPAA about new program Curriculum

For new certificates approved by the Chancellor, the related BOR authorized academic program is:
Electronics & Computer Engineering Technology (ECET)

VERIFICATIONS

By signing below, I verify that I have reviewed and confirm the above information that is pertinent to my position.

Registrar:

Flora Mora

Print Name



Signature

12/3/15

Date

Financial Aid Officer:

Cathy Bio

Print Name



Signature

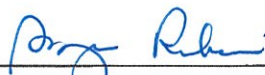
12/3/15

Date

For Community Colleges, verification of consultation with OVPCC Academic Affairs:

Suzette Robinson

Print Name



Signature

12/10/15

Date




UNIVERSITY of HAWAII*
MAUI COLLEGE

December 7, 2015

MEMORANDUM

TO: Dr. Risa Dickson
Executive Vice President for Academic Affairs

FROM: Dr. Lui K. Hokoana 
Chancellor, UH Maui College

SUBJECT: Program Action at UH Maui College

I have approved the following program actions so that the necessary program codes can be established in Banner.

If you have any questions or concerns, please let me know. Thank you for your assistance.

NEW CERTIFICATE OF COMPETENCE
Certificate of Competence- Electronic Computer Engineering Technology

Effective Term: Spring 2014

c: **Pearl Iboshi, Director of IRAO**
Suzette Robinson, UHCC Director of Academic Programs



2002-2003
MetLife Foundation
Best-Practice College
Award Recipient



2008
Bellwether
Award Recipient



2009
President's
Higher
Education
Community
Service
Honor Roll

310 W. Ka'ahumanu Avenue
Kahului, HI 96732-1617
Telephone: 808 984-3655
Fax: 808 984-3546
Website: www.maui.hawaii.edu
An Equal Opportunity/Affirmative
Action Institution



UNIVERSITY of HAWAII
MAUI COLLEGE

November 30, 2015

MEMORANDUM

TO: John Morton
VP for Community Colleges

SUBJECT: Out-of-State Travel

I will be out-of-state from the evening of Monday, November 30, 2015 through Thursday, December 10, 2015. I will be attending the American International Recruitment Council (AIRC) on December 2-5, 2015 in Hollywood, Florida and the ICFE North American Workshop in Miami, Florida on December 7-9, 2015.

During my absence, Vice Chancellor of Information Technology, Robert Mike Albert, will act on my behalf and have full signing authority, including all extramurally-funded programs under my P.I. authority.

A handwritten signature in black ink that reads "Lui K. Hokoana".

Lui K. Hokoana
Chancellor

c: President David Lassner
Council of CC Chancellors
UHMC Administrative Team
UHMC Human Resources Office
UHMC Business Office
UH Foundation Maui Office



2002-2003
MetLife Foundation
Best-Practice College
Award Recipient



2008
Bellwether
Award Recipient



2009
President's
Higher
Education
Community
Service
Honor Roll

310 W. Ka'ahumanu Avenue
Kahului, HI 96732-1817
Telephone: 808 984-3655
Fax: 808 984-3646
Website: www.maui.hawaii.edu

An Equal Opportunity/Affirmative
Action Institution

Curriculum proposal number 2007.21

Curriculum Proposal Cover Sheet – Program/Degree/Certificate
Routing procedure -- official signatures are on the CAR Signature Page

ORIGINAL

Program name: ECET

Proposal type: addition modification

Credential type: Click "choose" for list of credential: AS

Credential name: AS, etc.

Author(s): Mark Hoffman

ext: 321email: markhoff@hawaii.edu

Consulted with: various

Date of Activity

X CAR form, CAR signature page, and program map completed by Author; CAR signature page signed.

X CAR and program map checked by Curriculum Representative; signature page signed.

X CAR and program map discussed by Department; signature page signed by Department Chair.

X Original cover sheet, CAR, signature page, and program map delivered to Curriculum Chair by deadline.

X Electronic copy of the above documents emailed as attachments to Curriculum Chair by deadline.

NOTE: When modifying an existing credential, the program map (i.e., copy of current catalog map with hand-written changes) is not emailed.

X Passed by Curriculum Committee; signature page signed by Curriculum Chair; Senate Chair notified.

X Approved by Academic Senate; signature page signed by Academic Senate Chair.

12/21/07 Forwarded to and received by Chief Academic Officer.

1/30/08 Reviewed by Chief Academic Officer; signature page signed.

3/11/08 Forwarded to and received by Chancellor.

3/16/08 Approved by Chancellor; signature page signed.

UH President/Board, as appropriate, notified/requested approval for program, degree/certificate, program name change, or other curriculum action.

Original signed cover sheet, CAR, signature page, and program map returned to Curriculum Chair.

Distribution, Posting, and Follow-up

Copy of CAR and program map forwarded for Banner input.

Copy of approved proposal sent to Author for files.

CAR and approval date published on Curriculum Committee website.

Notice of final approval emailed to college.

Catalog input completed.

Signed original cover sheet, CAR, signature page, and program map filed in Chief Academic Officer's master curriculum binder.

Copy of the above documents filed in Chief Academic Officer master curriculum cabinet.

Other:

**Maui Community College
Curriculum Action Request (CAR) Form
Program/Degree/Certificate**

ORIGINAL

For Banner use:

Req:	Rev:
___ Alpha	___
___ Program name	___
___ Program Code	___
___ Concentration	___
___ Minor Code	___

1. Author(s): Mark Hoffman

2. Department: STEM

Program: ECET

3. Date submitted to Curriculum Committee: 12/04/2007

4. Program proposal

New program (attach program proposal and program map) Change of name to existing program

Existing program Title:

Proposed program Title:

5. Credential (degree or certificate) proposal

New credential added to existing program Modification to existing credential

Type of credential

Degree: AA AS AAS

Certificate: CA CC CO ACS

Other, specify:

Existing credential: Title:

Credits:

Proposed credential: Title:

Credits:

If modification, describe change:

Change in credential name

Change in course requirement(s); specify: adds technical electives, deletes required tracks

Change in prerequisite(s) for credential; specify: reveals hidden pre-reqs, lowers math entry requirement

Other; specify: MAP and catalog page change 39&40

Program map must be attached. (For modifications, write changes on copy of current catalog map.)

6. Reason for this curriculum action:

To include newly developed technical electives in program map. To provide a program map that meets local industry requirements. To provide a program map that students may be reasonably expected to complete. To reveal previously hidden prerequisite classes.

7. Proposed term of first offering: fall semester of 2008 year.

8. Special fees required: no yes, explain:

9. Special resources (personnel, supplies, etc.) required: no yes, explain:

10. Special scheduling considerations: no yes, explain:

11. Which program SLOs does this certificate support? (list all that apply and explain, if necessary.)

Program SLO 1: Explain: See additional information section at the end of this document.

Program SLO 2: Explain: meets entry level requirements for Maui high tech industry

Program SLO 3: Explain: operate basic electronic instrumentation

12. Current MCC Catalog needs revision on page(s): 39 and 40

13. Additional Information: ECET students are prepared for roles as engineering technicians for Maui's High Technology Industries. The majority of these industries support telescope operations at the summit of Haleakala. The Electronics PCC has determined that program SLOs need reflect the industries' need for skills in the areas of electronics fundamentals, photonics, fiberoptics, laser safety, and instrumentation. SLOs at the course level have been developed for these skill sets. This CAR proposal is an adjustment to the current ECET program map, but is a only temporary correction. The roles for ECET students, ECET program learner outcomes, ECET course sequence, and course level student learner outcomes sare under revision by a working group comprised of Hawaii Community College and Kauai Community College Electronics Faculty, UH Manoa Institute for Astronomy Education Specialist on Maui, UH Manoa College of Engineering Interim Assoc Dean of Academic Affairs and Director of Academic Affairs, UH Vice President for Research Services, UH Engineering and Astronomy Graduate Students and Education Specialists from the Center for Adpative Optics at UC Santa Cruz. This working group is funded by the NAtional Science Foudation through October 2008. The working group is supported by UH Vice president for Community Colleges and UH Vice president for Academic Affairs. MCC currently has three proposals under consideration at the National Science Foundation that will support the research and compilation of new system-wide Program SLOs based on "The National Photonics Skill Standards for Technicians", regional skills for Maui, Hawaii, and Kauai, and local Maui skill requirements. This CAR is only a small step in the direction of a major program improvement project.

original

The Electronic & Computer Engineering Technology (ECET) program provides students with the skills and knowledge required for entry level employment in high-technology industry as electronic technicians, telecom technicians, network administrators, windows/Unix system administrators, or high performance computer technicians.

The ECET program works closely with the MCC Maui high-technology industry advisory board to insure students gain skills required for employment in local companies. The program provides internship and job placement opportunities in a variety of engineering technology positions.

The ECET program offers a career-ladder with three levels of competency: 1) A Certificate of Completion (C.C.) for course work in Electronics and Computer fundamentals; 2) a Certificate of Achievement (C.A.) with preparation for A+ computer technician and Cisco CCNA network technician industry certifications; and 3) an Associate in Science (A.S.) degree with a choice of ~~three~~ specialties. The specialties provide training in:

- Electronic Engineering Technology, which includes electro-optics instrumentation, adaptive optics for astronomical applications, detectors, amplifiers, power supplies, computer hardware, and robotics.
- Networking Technology, which includes Windows and Unix system administration, routers, hubs, and switches.
- High Performance Computing (HPC) Technology, which focuses on installation, maintenance, and programming of HPC cluster computers.

Contact the program coordinator, Mark Hoffman, at 984-3321 or by email at markhoff@hawaii.edu

→ Requirements for Certificate of Completion (C.C.) - Electronic & Computer Engineering Technology: ~~22-23~~ credits

Required preparation: Placement at least MATH 27 or 107, placement at least ENG 22, and ICS 101, or consent.

Electronics 101(3), ~~105(4), 201(4)~~

~~Physics 105(4)~~

Information & Computer Science 111(4)

Mathematics 107 or 135 or higher (3-4)

Electives must number 100 or above.

Requirements for Certificate of Completion (C.C.) - High Performance Computing (HPC): 19 credits

~~Information & Computer Science 251(4), 252(4), 258(3), 275(4), 298(4)~~

→ Requirements for Certificate of Achievement (C.A.) - Electronic & Computer Engineering Technology: ~~37-38~~ credits

All C.C. courses (22-23) plus:

Electronics 130(4), 140(4), 240(4)

English 100(3)

add ICS 110 Phys 105
MATH 107

Requirements for Associate of Science (A.S.) Degree - Electronic & Computer Engineering Technology: ~~67-68~~ credits

All C.A. courses (37-38) plus:

Electronics 193v(1), 293v(1)

Social Science elective(3) (Electives must number 100 or above.)

Humanities elective(3) (Electives must number 100 or above.)

SP 151, BUS/COM 130, or COM 145(3) -- Communication elective

Plus one of the following specialties (19):

Electronics Specialty: 19 credits

Electronics 110(4), 112(4), 205(4), 298(4)

Information & Computer Science 211(3)

Networking Specialty: 19 credits

Electronics 285(3), 298(4)

Information & Computer Science 251(4), 252(4), 275(4)

High Performance Computing Specialty: 19 credits

Information & Computer Science 251(4), 252(4), 258(3), 275(4), 298(4)

(continued on the next page)

Full-time students would take courses in one of the following sequences:

Electronics Specialty

First Semester (Fall)	Credits	Second Semester (Spring)	Credits
* ETRO 101 Introduction to Electronics Technology	3	* ETRO 105 Electronic Circuit Analysis I	4
* ICS 111 Introduction to Computer Science	4	* ETRO 201 Digital Computer Technology I	4
* PHYS 105 Principles of Technology	4	** ETRO 130 Computer Hardware & Operating Systems	4
** ENG 100 Composition I	3	ICS 211 Introduction to Computer Science II	3
* MATH 107 Math for Electronics & Computers	4	Communication elective (<i>SP 151, BUS/COM 130, or COM 145</i>)	3
	18		18
Third Semester (Fall)	Credits	Fourth Semester (Spring)	Credits
ETRO 110 Electronics Technology I	4	ETRO 112 Electronics Technology II	4
** ETRO 140 Computer Networking I	4	** ETRO 240 Computer Networking II	4
ETRO 205 Digital Computer Technology II	4	ETRO 298 Topics Project in Electronic Tech	4
ETRO 193v Internship I	1	ETRO 293v Internship II	1
Humanities elective (<i>must number 100 or above</i>)	3	Social Science elective (<i>must number 100 or above</i>)	3
	16		16

Networking Specialty

First Semester (Fall)	Credits	Second Semester (Spring)	Credits
* ETRO 101 Introduction to Electronics Technology	3	* ETRO 105 Electronic Circuit Analysis I	4
* MATH 107 Math for Electronics & Computers	4	* ETRO 201 Digital Computer Technology I	4
* PHYS 105 Principles of Technology	4	** ETRO 130 Computer Hardware & Operating Systems	4
** ENG 100 Composition I	3	ICS 251 Introduction to Unix/Linux	4
* ICS 111 Introduction to Computer Science	4		16
	18		
Third Semester (Fall)	Credits	Fourth Semester (Spring)	Credits
** ETRO 140 Computer Networking I	4	** ETRO 240 Computer Networking II	4
ICS 275 Introduction to HPC Clusters	4	ETRO 285 Windows System Admin & Security	3
ICS 252 Unix/Linux System Administration	4	ETRO 298 Topics Project in Electronic Tech	4
ETRO 193v Internship I	1	ETRO 293v Internship II	1
Humanities elective (<i>must number 100 or above</i>)	3	Social Science elective (<i>must number 100 or above</i>)	3
	16	Communication elective (<i>SP 151, BUS/COM 130, or COM 145</i>)	3
			18

High Performance Computing Specialty

First Semester (Fall)	Credits	Second Semester (Spring)	Credits
* ETRO 101 Introduction to Electronics Technology	3	* ETRO 105 Electronic Circuit Analysis I	4
* ICS 111 Introduction to Computer Science	4	* ETRO 201 Digital Computer Technology I	4
* PHYS 105 Principles of Technology	4	** ETRO 130 Computer Hardware & Operating Systems	4
** ENG 100 Composition I	3	ICS 251 Introduction to Unix/Linux	4
* MATH 107 Math for Electronics and Computers	4		16
	18		
Third Semester (Fall)	Credits	Fourth Semester (Spring)	Credits
** ETRO 140 Computer Networking I	4	** ETRO 240 Computer Networking II	4
ETRO 193v Internship I	1	ETRO 293v Internship II	1
ICS 252 Unix/Linux System Administration	4	ICS 258 Programming for HP Clusters	3
ICS 275 Introduction to HPC Clusters	4	ICS 298 Special Topics Project in CS	4
Humanities elective (<i>must number 100 or above</i>)	3	Social Science elective (<i>must number 100 or above</i>)	3
	16	Communication elective (<i>SP 151, BUS/COM 130, or COM 145</i>)	3
			18

* Note: Courses required for Certificate of Completion.
 ** Note: Courses required for Certificate of Achievement.

proposed temp

The Electronic & Computer Engineering Technology (ECET) program provides students with the skills and knowledge required for entry level employment in high-technology industry as electronic technicians, telecom technicians, network administrators, Windows/Unix system administrators, or high performance computer technicians.

The ECET program works closely with the MCC Maui high-technology industry advisory board to insure students gain skills required for employment in local companies. The program provides internship and job placement opportunities in a variety of engineering technology positions.

The ECET program offers a career-ladder with three levels of competency: 1) A Certificate of Completion (C.C.) for course work in Electronics and Computer fundamentals; 2) a Certificate of Achievement (C.A.) with math, physics, and computer science basics; and 3) an Associate in Science (A.S.) degree that provides training in:

- Electronic Engineering Technology, which includes electro-optics instrumentation, adaptive optics for astronomical applications, detectors, amplifiers, power supplies, computer hardware, and robotics.

and

- Computer Engineering Technology, which includes Windows and Unix system administration, routers, hubs, switches, and High Performance Computing (HPC) Technology, which focuses on installation, maintenance, and programming of HPC cluster computers.

Contact the program coordinator, Mark Hoffman, at 984-3321 or by email at markhoff@hawaii.edu

Requirements for Certificate of Completion (C.C.) - Electronic & Computer Engineering Technology: 10 credits
Electronics 101(3), 102(4) Information & Computer Science 101(3)

Requirements for Certificate of Completion (C.A.) - Electronic & Computer Engineering Technology: 24 credits

All C.C. courses(10) plus:

English 100(3)

Physics 105(4)

Information & Computer Science 110(3)

Mathematics 107 (4)

Requirements for Associate of Science (A.S.) Degree - Electronic & Computer Engineering Technology: minimum 75 credits

English 100(3)

Physics 105(4)

Mathematics 107 (4)

Humanities elective(3) (*Electives must number 100 or above.*) ²⁰

Social Science elective(3) (*Electives must number 100 or above.*)

SP 151, BUS/COM 130, or COM 145(3) -- *Communication elective*

Electronics 193v(1), 293v(1)

Electronics 101(3), 102(4), 105(4), 140(4), 201(4), 205(4), 298(4) ²⁹

Information & Computer Science 110(3), 111(4) ⁷

Technical Electives: 19 credits

Electronics 106(4), 110(4), 112(4), 130(4), 160(1), 161(3), 166(3), 240(4), 285(3)

Information & Computer Science 151C(3), 211(3), 251(4), 252(4), 258(3), 275(4), 298(4)


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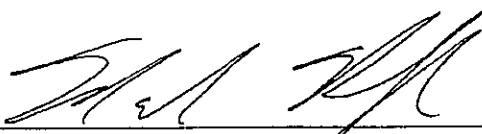
Full-time students would take courses in one of the following sequences:

First Semester (Fall)	Credits	Second Semester (Spring)	Credits
* ETRO 101 Introduction to Electronics Technology	3	ETRO 105 Electronic Circuit Analysis I	4
* ETRO 102 Instrumentation for Engineering Technicians	4	** ENG 100 Composition I	3
* ICS 101 Digital Tools for the Information World	<u>3</u>	** MATH 107 Math for Electronics & Computers	4
	10	Technical elective (<i>must be from ECET list</i>)	<u>3-4</u>
			14-15
Third Semester (Fall)	Credits	Fourth Semester (Spring)	Credits
ETRO 201 Digital Computer Technology	4	ETRO 205 Digital Computer Technology I	4
ETRO 140 Computer Networking I	4	ICS 111 Introduction to Computer Science I	4
** ICS 110 Introduction to Computer Programming	3	General Education elective (<i>must number 100 or above</i>)	3
** PHYS 105 Principles of Technology	<u>4</u>	Technical elective (<i>must be from ECET list</i>)	<u>3-4</u>
	15		14-15
Fifth Semester (Fall)	Credits	Sixth Semester (Spring)	Credits
General Education Elective (<i>must number 100 or above</i>)	3	ETRO 298 Special Project In Electronics Technology	4
Technical elective (<i>must be from ECET list</i>)	3-4	General Education elective (<i>must number 100 or above</i>)	3
Technical elective (<i>must be from ECET list</i>)	3-4	Technical elective (<i>must be from ECET list</i>)	3-4
ETRO 193v Internship I	<u>1-3</u>	ETRO 293v Internship II	<u>1-3</u>
	10-14		11-14

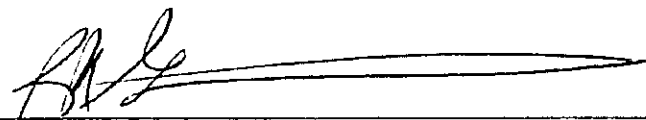
* Note: Courses required for Certificate of Completion.
 ** Note: Courses required for Certificate of Achievement

Maui Community College
Curriculum Action Request (CAR) Signature Page

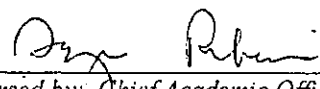

Proposed by: Author or Program Coordinator 12/15/07
Date


Checked by: Academic Subject Area Representative to Curriculum Committee 12/15/07
Date


Requested by Department: Department Chair 12/14/07
Date


Recommended by: Curriculum Chair 12/18/07
Date


Approved by Academic Senate: Academic Senate Chair 12/20/07
Date


Endorsed by: Chief Academic Officer 1/23/08
Date


Approved by: Chancellor 2/10/08
Date

Curriculum Proposal Number 2014.50

Curriculum Proposal Cover Sheet – Program/Degree/Certificate
Routing procedure – Official Signatures on Signature Page

Program Name: ECET AS
or
Course Alpha & Number: _____
Author: Mark Hoffman

Proposal Type:	
<input type="checkbox"/>	Addition
<input checked="" type="checkbox"/>	Modification
<input type="checkbox"/>	Deletion

Date of Activity:

9/26/14 Author Signature

9/26/14 Curriculum Representative Signature

9/26/14 Department Chair Signature

11-19-14 Curriculum Chair Signature

Proposals Posted in Website for General Review

12/19/14 Academic Senate Chair Signature

_____ Chief Academic Officer Signature

_____ Chancellor Signature

_____ NEW DEGREES ONLY! Chief Academic Officers Approval

_____ NEW DEGREES ONLY! Board of Regents Approval

_____ Signature Sheet Returned to Curriculum Chair

Distribution, Posting and Follow-Up:

_____ Notify Proposers of Approval

_____ Banner & IRO Input

_____ Catalog Input Complete

_____ Articulation Forms Forwarded to Articulation Coordinator

_____ Five-Year Review Database Updated

_____ Originals Filed in Chief Academic Officer's Office

_____ Registrar & Counseling Notified

**University of Hawaii Maui College
Curriculum Action Request (CAR) Form
Program/Degree/Certificate**

For Banner use	
Req	Rcv
___ Alpha	___
___ Program name	___
___ Program Code	___
___ Concentration	___
___ Major Code	___

1. Author(s): Mark Hoffman
2. Department: STEM Program: ECET
3. Date submitted to Curriculum Committee: October 3, 2014

4. Program proposal
 New program (attach program proposal and program map) Change of name to existing program

Existing program Title:
 Proposed program Title:

5. Credential (degree or certificate) proposal
 New credential added to existing program Modification to existing credential

Type of credential

Degree: AA AS AAS
 Other, specify:

Certificate: CA CC CO ASC

Existing credential: Title: AS ECET
 Proposed credential: Title:

Credits: 61
 Credits:

If modification, describe change:

- Change in credential name
 Change in course requirement(s); specify: MATH 119 replaces MATH 107
 Change in prerequisite(s) for credential; specify: MATH 103
 Other; specify: Scheduling changes (see program map) and choice of general education electives (Social science, communication, and humanities)

Program map must be attached. (For modifications, write changes on copy of current catalog map.)

6. Reason for this curriculum action:
 Math 103 is now a program and course pre-requisite to ensure that ECET students are better prepared to succeed in the ECET AS degree program. Math 107 is changed to Math 119 to better prepare students for Math in the BAS ENGT degree program. Math 119 is in the first semester of the ECET program map. General Education course scheduling is changed due to the Math scheduling change. Gen ed course recommendations are changed to meet BAS gen ed pre-req requirements.

7. Proposed term of first offering: fall semester of 2015 year.

8. Special fees required: no yes, explain:

9. Special resources (personnel, supplies, etc.) required: no yes, explain:

10. Special scheduling considerations: no yes, explain: Courses must fit the AS ECET degree course scheduling.

11. Which program SLOs does this certificate support? (list all that apply and explain, if necessary.)

Program SLO 1: Apply project management techniques to electrical/electronic(s) and computer systems
 Explain:

Program SLO 2: Utilize appropriate mathematics at the level of algebra and trigonometry to solve technical problems Explain:

Program SLO 3: Utilize appropriate mathematics at the level of algebra and trigonometry to solve technical problems Explain:

SLO 4: Demonstrate critical engineering technology skills and experiences such as: making existing technology operate, creating/selecting new technology, troubleshooting, calibrating, characterizing, and optimizing

SLO 5: Demonstrate engineer's way of thinking, analyzing technology as systems

SLO 6: Demonstrate engineer professional skills such as communication and managing projects

SLO 7: Demonstrate proficiency in the general education college core requirements: creativity, critical thinking, oral and written communication, information retrieval, and quantitative reasoning

SLO 8: Demonstrate a respect for diversity and a knowledge of contemporary professional, societal and global issues

SLO 9: Commit to quality, timeliness, and continuous improvement

12. Current UHMC Catalog needs revision on page(s): 45, 112, 113, 131, and 138.

13. Additional Information:

The Electronic & Computer Engineering Technology (ECET) program leading to an Associate in Science degree provides students with the skills and knowledge required for entry level employment within the high-technology industry as electronic/electro-optic technicians, renewable energy technicians, telecom technicians, and network system administrators. Students learn fundamental engineering concepts, computer programming, mathematics, and physics relevant to a wide variety of industries on Maui. Training, equipment, and supplies are provided for 3-D printing and circuit board fabrication. Software applications for circuit simulation, CAD, finite element analysis, and microprocessor control are utilized. The program requires written and verbal proficiencies and emphasizes laboratory competencies. Internship and job placement opportunities in a variety of engineering technology positions are provided.

The ECET program offers different levels of educational opportunity:

- Certificate of Completion for coursework in electronics and computer fundamentals
- Certificate of Achievement with electronics, math, physics, and computer basics
- Associate in Science degree in Electronic and Computer Engineering Technology, including electro-optics instrumentation, adaptive optics for astronomical applications, detectors, robotics, and computer hardware. The scheduling is designed for a cohort of students to complete the AS degree program in four semesters.
- Lower division pathway to the Bachelor of Applied Science (BAS) in Engineering Technology (ENGT). Courses that are prerequisites to the BAS require a grade C or better.

Admission process

For admission to the UH Maui College ECET program, complete all required steps outlined below. Applications will be reviewed on a first come - first served basis.

- 1) Complete the Math and English COMPASS tests. (ECET courses require specific placement scores: CMPW 74 and CMPA 75.)
- 2) Contact the program coordinator, Mark Hoffman (by email at markhoff@hawaii.edu or at 984-3321), or the program counselor, Kulamani Ishihara (by email at vorlues@hawaii.edu or at 984-3272), to schedule an application review counseling session and create an academic plan of study. Math and English COMPASS scores (shown above) are required for counseling.

Requirements for Certificate of Completion (CC) in Electronic & Computer Engineering Technology: 10 credits
Electronics 101(3), 102(4)
Information & Computer Science 101(3)

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Requirements for Certificate of Achievement (CA) in Electronic & Computer Engineering Technology: 26 credits
Electronics 105(4), 106(4)
English 100(3)
Information & Computer Science 110(3) - 111(4)
Physics 105(4) - *Natural Science elective*
Mathematics 119(4)

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Requirements for Associate in Science (AS) degree in Electronic & Computer Engineering Technology: 61 credits
All CA courses (C- plus)
Electronics 140(4), 161(3), 201(4), 205(4), 210(3), 212(3), 296(3)
Electronics ICS 193v(1), 293v(1)
Communication elective(3) - 100 or above

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ENG 210 (3)- Humanities elective,
Social Science elective(3) - 100 or above

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Cohort takes courses in this sequence:

Electronic and Computer Engineering Technology (ECET) Associate in Science (AS) Degree

Program Map

First semester (Fall)		credits	Second semester (Spring)		credits
*ETRO 105	Electronic Circuit Analysis I	4	*ETRO 106	Electronic Circuit Analysis II	4
*ENG 100	Composition I	3	*ICS 111	Introduction to Computer Science I	4
*ICS 110	Introduction to Computer Programming***	3	*PIIYS 105	Principles of Technology	4
*MATH 119	Engineering Pre-Calculus****	4	Communication elective	100 or above	3
Social Science elective	100 or above	3			15
		17			
Third semester (Fall)		credits	Fourth semester (Spring)		credits
ETRO 140	Computer Networking I	4	ETRO 161	Introduction to Optics & Photonics	3
ETRO 193v	Internship I	1	ETRO 205	Digital Computer Technology II	4
ETRO 201	Digital Computer Technology I	4	ETRO 212	Electronic Technology II	3
ETRO 210	Electronic Technology I	3	ETRO 293v	Engineering Technology Internship II	1
ENG 210	Research Writing**	3	ETRO 296	Special Projects in Electronic Technology	3
		15			14

*Note: Courses required for the Certificate of Achievement

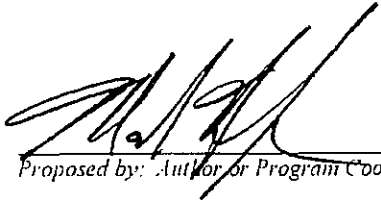
**Note: Course is prerequisite to the BAS in Engineering Technology. Students not planning to pursue the BAS should see program

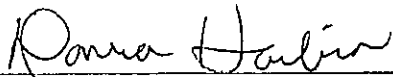
for about substituting another course from the corresponding elective list.


***Note: ICS 101 with grade C or better, or consent is a prerequisite for ICS 110

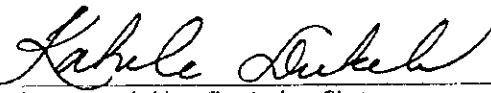
****Note: or MATH 135 and MATH 140

University of Hawaii Maui College
Curriculum Action Request (CAR) Signature Page

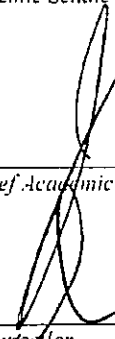

Proposed by: Author or Program Coordinator
Date: 11-19-14


Checked by: Academic Subject Area Representative to Curriculum Committee
Date:


Requested by Department: Department Chair
Date: 12/12/14


Recommended by: Curriculum Chair
Date: 11-19-14


Approved by Academic Senate: Academic Senate Chair
Date: 12/19/14


Endorsed by: Chief Academic Officer
Date: 1-6-15


Approved by: Chancellor
Date: 1-22-15