Curriculum Action Request (CAR) Form

COURSE (New Course, Course Modification, Five Year Review) Curriculum Proposal # _____

University of Hawai'i Maui College *(for CURCOM use only)*

1. Curriculum Action

☐ New Course ☑ Course Modification ☐ Five Year Review

2. Proposer

Clifford Rutherford

3. Department

☐ Allied Health ☐ Business & Hospitality ☑ Career & Tech Education

☐ English ☐ Humanities ☐ Social Science

☐ Science/Tech/Eng/Math

4. Course Alpha

MAIN

5. Course Number

20

6. Course Title

Introduction to Building Maintenance

7. If this is a course modification or a five year review, please check the curriculum items being modified.

☐ 1. Course Alpha ☐ 2. Course Number ☐ 3. Course Title

☐ 4. Credits ☐ 5. Contact Hours ☐ 6. Course Description

☐ 7. Prerequisites ☐ 8. Corequisites ☐ 9. Rec Prep

☐ 10. Cross-list w other course ☐ 13. Grading Method ☐ 14. Repeatable for credit?

☑ 15. SLOs ☑ 16. Course Competencies ☑ 17. Content & Timeline

☑ 18. PLOs ☑ 19. CASLOs ☑ 21. Method of Delivery

☑ 22. Text and Materials ☐ 23. Maximum Enrollment ☐ 29. Course Designation

☐ 31. Catalog Modification

☐ Other

8. Proposed Semester

Fall 2015

9. Effective Semester (1 Year from Proposed Semester)

Fall 2016

University of Hawaii Maui College
MAIN 20 - Introduction to Building Maintenance

1. **Course Alpha.**

   MAIN

2. **Course Number.**

   20

3. **Course Title/Catalog Title.**

   Introduction to Building Maintenance

4. **Number of Credits.**

   2

5. **Contact Hours/Type.**

   - Hour lecture/lab (3)

6. **Course Description.**

   Explores details of building construction and maintenance. Introduces fundamentals of building systems and operations of the maintenance department.

7. **Pre-Requisites.**

   None

8. **Co-requisites.**

   None

9. **Recommended Preparation.**

   None

10. **Is this a cross-listed course?**

    NO

11. **Reason for Proposal. Why is this course being proposed or modified? This question requires specific information as part of the explanation.**

    Modify Existing Course

12. **Effective Semester and Year.**

    Fall 2016

13. **Grading Method. What grading methods may be used for this course?**

- Standard (Letter,Cr/NCr,Audit) (0)

14. Is this course repeatable for credit? How often can this course be counted toward a degree or certificate?

NO

15. Course Student Learning Outcomes (SLOs).

Course SLO/Competency	Establish priority of work tasks	Carry out and document work order systems	Explain the basic safety guidelines and rules for general workplace safety	Explain the basic safety guidelines for working with and around electrical power tools and circuits	Describe, select, and demonstrate the safe use of hand and power tools used by facilities maintenance technicians	Describe, select and install proper anchors, fasteners and adhesives necessary for a specific maintenance project	Employ systematic diagnostic and troubleshooting practices	Test and analyze GFCI receptacles	Repair and/or replace common electrical devices such as receptacles and switches	Repair and/or replace lighting fixtures, bulbs, and ballasts	Perform general interior and exterior carpentry maintenance	Prepare surfaces and work site for finishing including sanding, caulking, and protective covering of exposed surfaces	Apply surface finishes with a brush and roller according to manufacturer recommendations and job specification	Clean and store painting materials including brushes, rollers, and thinners according to manufacturer's specifications and OSHA regulations	Identify, select, and demonstrate basic plumbing tools for specific applications	Identify and select appropriate materials for residential plumbing repair	Document building maintenance procedures and materials using the work order process
I. Use appropriate materials, tools, equipment, and procedures to carry out tasks performed on basic facility maintenance projects	☑	☑	☑		☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
II. Maintain a safe and healthy worksite and final construction project	☑	☑	☑	☑	☑		☑		☑	☑	☑	☑	☑	☑	☑		
III. Employ measurement and building standards related to common maintenance projects		☑	☑	☑	☑	☑	☑	☑	☑	☑	☑					☑	☑
IV. Demonstrate and develop effective written and oral communication skills	☑	☑	☑														☑
V. Identify and discuss current construction materials and processes	☑	☑	☑	☑	☑	☑	☑		☑	☑	☑			☑	☑	☑	☑

Course SLO/PSLO	Use and maintain appropriate materials, tools, equipment, and procedures to carry out tasks performed on construction projects according to safety and industry standards.	Use math, computer, and oral and written communication skills to solve construction project problems.	Create and maintain accurate documentation of construction and maintenance projects.	Describe industry standard Green Building practices in construction and maintenance projects.	Read and interpret blueprints, and/or schematics, and specifications to plan projects.	Demonstrate the craftsmanship standards of dependability, punctuality, and quality.	Examine and use proper mechanical, electrical, and carpentry codes and standards applicable to construction and repair.
I. Use appropriate materials, tools, equipment, and procedures to carry out tasks performed on basic facility maintenance projects	☑	☑	☑	☑	☑	☑	☑
II. Maintain a safe and healthy worksite and final construction project	☑					☑	☑
III. Employ measurement and building standards related to common maintenance projects		☑	☑	☑	☑	☑	☑
IV. Demonstrate and develop effective written and oral communication skills		☑	☑	☑	☑	☑	
V. Identify and discuss current construction materials and processes	☑	☑		☑	☑	☑	☑

16. Course Competencies.

Competency
Establish priority of work tasks
Carry out and document work order systems
Explain the basic safety guidelines and rules for general workplace safety
Explain the basic safety guidelines for working with and around electrical power tools and circuits
Describe, select, and demonstrate the safe use of hand and power tools used by facilities maintenance technicians
Describe, select and install proper anchors, fasteners and adhesives necessary for a specific maintenance project
Employ systematic diagnostic and troubleshooting practices
Test and analyze GFCI receptacles
Repair and/or replace common electrical devices such as receptacles and switches
Repair and/or replace lighting fixtures, bulbs, and ballasts
Perform general interior and exterior carpentry maintenance
Prepare surfaces and work site for finishing including sanding, caulking, and protective covering of exposed surfaces
Apply surface finishes with a brush and roller according to manufacturer recommendations and job specification
Clean and store painting materials including brushes, rollers, and thinners according to manufacturer's specifications and OSHA regulations
Identify, select, and demonstrate basic plumbing tools for specific applications
Identify and select appropriate materials for residential plumbing repair
Document building maintenance procedures and materials using the work order process

17. Recommended Course Content and Timeline. The course content facilitates the course competencies. Course content may be organized by weeks, units, topics or the like.

Content
1 Week: Introduction and measurement skills 2-3 Weeks: Building systems, structures, and materials 2-4 Weeks: Use of power tools and fasteners 2-3 Weeks: Exterior building systems and repairs 2-3 Weeks: Interior building systems and repairs 1 Week: Plumbing Systems 1 Week: Electrical systems 1 Week: Air conditioning and refrigeration systems 2-3 Weeks: Interior furnishings and materials

18. Program Learning Outcomes.

Program SLO
Use and maintain appropriate materials, tools, equipment, and procedures to carry out tasks performed on construction projects according to safety and industry standards.
Use math, computer, and oral and written communication skills to solve construction project problems.
Create and maintain accurate documentation of construction and maintenance projects.
Describe industry standard Green Building practices in construction and maintenance projects.
Read and interpret blueprints, and/or schematics, and specifications to plan projects.
Demonstrate the craftsmanship standards of dependability, punctuality, and quality.
Examine and use proper mechanical, electrical, and carpentry codes and standards applicable to construction and repair.

19. College-wide Academic Student Learning Outcomes (CASLOs).

	Creativity - Able to express originality through a variety of forms.
☑	**Critical Thinking** - Apply critical thinking skills to effectively address the challenges and solve problems. ☑ Preparatory Level
	Information Retrieval and Technology - Access, evaluate, and utilize information effectively, ethically, and responsibly.

	Oral Communication - Practice ethical and responsible oral communications appropriately to a variety of audiences and purposes.
☑	**Quantitative Reasoning** - Synthesize and articulate information using appropriate mathematical methods to solve problems of quantative reasoning accurately and appropriately. ☑ Preparatory Level
	Written Communication - Write effectively to convey ideas that meet the needs of specific audiences and purposes.

20. Linking.

21. Method(s) of delivery appropriate for this course.

- Classroom/Lab (0)

Instructional methods may vary considerably with instructors and specific instructional methods will be at the discretion of the instructor teaching the course.
Suggested techniques might include, but are not limited to:

Lecture, presentation, problem solving, and class exercises or readings
Class discussion or guest lecturers
Audio, visual, or internet presentations
Student class presentations
Group or individual projects
Shop exercises and/or projects (individual or group)
Interactive computer programs or websites
Other contemporary learning techniques e.g., Service Learning, Co-op, self-paced, etc.)

22. Text and Materials, Reference Materials, and Auxiliary Materials.

Appropriate text(s) and materials will be chosen at the time the course is offered from those currently available in the field. Open Source optional.

Example: Residential Construction Academy: Facilities Maintenance, Standiford, 3rd Edition, ISBN: 9781133282433, Publication Date: 2014

Text may be supplemented with but not limited to videos, internet resources, workbooks, demonstration equipment and visual aids at the discretion of the instructor.

23. Maximum enrollment.

20 (Vocational Lab capacity)

24. Particular room type requirement. Is this course restricted to particular room type?

YES
Vocational trades lab

25. Special scheduling considerations. Are there special scheduling considerations for this course?

NO

26. Are special or additional resources needed for this course?

No

27. Does this course require special fees to be paid for by students?

NO

28. Does this course change the number of required credit hours in a degree or certificate?

No

29. Course designation(s) for the Liberal Arts A.A. degree and/or for the college's other associate degrees.

Degree	Program	Category
Associate in Arts:		
AS:		
AAS:	Sustainable Construction Technology	PR - Program Requirement
BAS:		
Developmental/Remedial:		

CO: Maintenance Painting (4 credits), Maintenance Plumbing (4 credits), Small Equipment Repair (6 credits), Sustainable Construction Technology (16 credits)
CA: Sustainable Construction Technology (33 credits)

30. Course designation(s) for other colleges in the UH system.

Similar to FENG 21 Introduction to Building Maintenance, Kauai CC

31. Indicate the year and page # of UHMC catalog referred to. For new or modified courses, please indicate the catalog pages that need to be modified and provide a sheet outlining those changes.

No changes to UHMC 2015-2016: Program Map, page 53; Course Information 129

32. College-wide Academic Student Learner Outcomes (CASLOs).

Standard 1 - Written Communication Write effectively to convey ideas that meet the needs of specific audiences and purposes.	
Outcome 1.1 - Use writing to discover and articulate ideas.	2
Outcome 1.2 - Identify and analyze the audience and purpose for any intended communication.	1
Outcome 1.3 - Choose language, style, and organization appropriate to particular purposes and audiences.	1
Outcome 1.4 - Gather information and document sources appropriately.	0
Outcome 1.5 - Express a main idea as a thesis, hypothesis, or other appropriate statement.	1
Outcome 1.6 - Develop a main idea clearly and concisely with appropriate content.	1
Outcome 1.7 - Demonstrate a mastery of the conventions of writing, including grammar, spelling, and mechanics.	0
Outcome 1.8 - Demonstrate proficiency in revision and editing.	1
Outcome 1.9 - Develop a personal voice in written communication.	1
Standard 2 - Quantitative Reasoning Synthesize and articulate information using appropriate mathematical methods to solve problems of quantative reasoning accurately and appropriately.	
Outcome 2.1 - Apply numeric, graphic, and symbolic skills and other forms of quantitative reasoning accurately and appropriately.	2
Outcome 2.2 - Demonstrate mastery of mathematical concepts, skills, and applications, using technology when appropriate.	2

Outcome 2.3 - Communicate clearly and concisely the methods and results of quantitative problem solving.	2
Outcome 2.4 - Formulate and test hypotheses using numerical experimentation.	2
Outcome 2.5 - Define quantitative issues and problems, gather relevant information, analyze that information, and present results.	2
Outcome 2.6 - Assess the validity of statistical conclusions.	1
Standard 3 - Information Retrieval and Technology. Access, evaluate, and utilize information effectively, ethically, and responsibly.	
Outcome 3.1 - Use print and electronic information technology ethically and responsibly.	0
Outcome 3.2 - Demonstrate knowledge of basic vocabulary, concepts, and operations of information retrieval and technology.	1
Outcome 3.3 - Recognize, identify, and define an information need.	1
Outcome 3.4 - Access and retrieve information through print and electronic media, evaluating the accuracy and authenticity of that information.	1
Outcome 3.5 - Create, manage, organize, and communicate information through electronic media.	1
Outcome 3.6 - Recognize changing technologies and make informed choices about their appropriateness and use.	2
Standard 4 - Oral Communication Practice ethical and responsible oral communications appropriately to a variety of audiences and purposes.	
Outcome 4.1 - Identify and analyze the audience and purpose of any intended communication.	1
Outcome 4.2 - Gather, evaluate, select, and organize information for the communication.	1
Outcome 4.3 - Use language, techniques, and strategies appropriate to the audience and occasion.	0
Outcome 4.4 - Speak clearly and confidently, using the voice, volume, tone, and articulation appropriate to the audience and occasion.	0
Outcome 4.5 - Summarize, analyze, and evaluate oral communications and ask coherent questions as needed.	2
Outcome 4.6 - Use competent oral expression to initiate and sustain discussions.	1
Standard 5 - Critical Thinking Apply critical thinking skills to effectively address the challenges and solve problems.	
Outcome 5.1 - Identify and state problems, issues, arguments, and questions contained in a body of information.	1
Outcome 5.2 - Identify and analyze assumptions and underlying points of view relating to an issue or problem.	2
Outcome 5.3 - Formulate research questions that require descriptive and explanatory analyses.	2
Outcome 5.4 - Recognize and understand multiple modes of inquiry, including investigative methods based on observation and analysis.	0
Outcome 5.5 - Evaluate a problem, distinguishing between relevant and irrelevant facts, opinions, assumptions, issues, values, and biases through the use of appropriate evidence.	1
Outcome 5.6 - Apply problem-solving techniques and skills, including the rules of logic and logical sequence.	2
Outcome 5.7 - Synthesize information from various sources, drawing appropriate conclusions.	1
Outcome 5.8 - Communicate clearly and concisely the methods and results of logical reasoning.	1
Outcome 5.9 - Reflect upon and evaluate their thought processes, value system, and world views in comparison to those of others.	0
Standard 6 - Creativity Able to express originality through a variety of forms.	
Outcome 6.1: Generate responses to problems and challenges through intuition and non-linear thinking.	0
Outcome 6.2: Explore diverse approaches to solving a problem or addressing a challenge.	1
Outcome 6.3: Sustain engagement in activities without a preconceived purpose.	0
Outcome 6.4: Apply creative principles to discover and express new ideas.	0
Outcome 6.5: Demonstrate the ability to trust and follow one's instincts in the absence of external direction	2
Outcome 6.6: Build upon or adapt the ideas of others to create novel expressions or new solutions.	1

33. Additional Information