Curriculum Action Request (CAR) Form
COURSE (New Course, Course Modification, Five Year Review)
University of Hawai'i Maui College

Curriculum Proposal # 2015.36
(for CURCOM use only)

1. Curriculum Action

☐ New Course ☑ Course Modification ☐ Five Year Review

2. Proposer

Debasis Bhattacharya

3. Department

☐ Allied Health ☑ Business & Hospitality ☐ Career & Tech Education
☐ English ☐ Humanities ☐ Social Science
☐ Science/Tech/Eng/Math

4. Course Alpha

BUS

5. Course Number

310

6. Course Title

Statistical Analysis for Business Decisions

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
BUS 310 - Statistical Analysis for Business Decisions

1. **Course Alpha.**

   BUS

2. **Course Number.**

   310

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

   Statistical Analysis for Business Decisions

4. **Number of Credits.**

   3

5. **Contact Hours/Type.**

   - Hour lecture (3)

6. **Course Description.**

   Emphasizes problem recognition and formulation; stress on cross-disciplinary complex problem solving and communication; computer intensive. Coverage of descriptive statistics, probability and hypothesis testing with emphasis on quality, productivity, and regression analysis.

7. **Pre-Requisites.**

   MATH 115 with grade C or better, or consent.

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.**

    Update the upper division business statistics course to only focuses on the lower division statistics course (MATH 115) as prerequisite. This simplifies the pathway for students to go from a lower division statistics course to a higher division 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	Recognize and diagnose business problems	Review descriptive statistical analyses	Identify and explain variations in data	Formulate and test hypotheses	Determine reliability and validity of research models	Demonstrate concepts in probability	Identify conditional probability	Explain random variables	Demonstrate association between random variables	Discuss the role of inference in business decisions	Demonstrate techniques in samples and surveys	Explain sampling variation and quality	Analyze confidence intervals and statistical tests	Examine business problems with regression analysis
Apply critical thinking skills to evaluate information, solve problems, and make decisions	☑	☑	☑	☑	☑	☑	☑							
Apply quantitative reasoning to enhance independent or group decision-making skills						☑	☑	☑	☑	☑	☑			
Demonstrate knowledge of statistical business decisions		☑	☑	☑	☑	☑	☑	☑	☑	☑	☑			
Utilize statistical analysis tools to evaluate probability, hypothesis testing, regression analysis									☑	☑	☑	☑	☑	☑

Course SLO/PSLO	Apply knowledge of essential business disciplines including accounting, economics,	Apply critical thinking skills to evaluate information,	Apply quantitative reasoning to enhance	Communicate effectively with other utilizing appropriate forms

	finance, law, management, and marketing, and use business research methods to analyze information in order to develop solid business plans and strategies, and make efficient business decisions.	solve problems, and make decisions.	independent or group decision-making skills.	of oral and written communication methods including multimedia presentations that apply information technologies and serve particular audiences and purposes
Apply critical thinking skills to evaluate information, solve problems, and make decisions	☑	☑	☑	☑
Apply quantitative reasoning to enhance independent or group decision-making skills		☑	☑	
Demonstrate knowledge of statistical business decisions	☑	☑	☑	☑
Utilize statistical analysis tools to evaluate probability, hypothesis testing, regression analysis		☑	☑	☑

16. Course Competencies.

Competency
Recognize and diagnose business problems
Review descriptive statistical analyses
Identify and explain variations in data
Formulate and test hypotheses
Determine reliability and validity of research models
Demonstrate concepts in probability
Identify conditional probability
Explain random variables
Demonstrate association between random variables
Discuss the role of inference in business decisions
Demonstrate techniques in samples and surveys
Explain sampling variation and quality
Analyze confidence intervals and statistical tests
Examine business problems with regression analysis

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.

1. Core concepts in data tables - 3 weeks (SLO IV; Competency a to f)
2. Details of probability and random variables and inference - 10 weeks (SLO I, II and III; Competencies f to j)
3. Samples and surveys, statistical tests and regression analysis - 3 weeks (SLO IV; Competency k to p)

18. Program Learning Outcomes.

Program SLO
Apply knowledge of essential business disciplines including accounting, economics, finance, law, management, and marketing, and use business research methods to analyze information in order to develop solid business plans and strategies, and make efficient business decisions.
Apply critical thinking skills to evaluate information, solve problems, and make decisions.
Apply quantitative reasoning to enhance independent or group decision-making skills.
Communicate effectively with other utilizing appropriate forms of oral and written communication methods including multimedia presentations that apply information technologies and serve particular audiences and purposes

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

☑	**Creativity** - Able to express originality through a variety of forms. ☑ Level 2
☑	**Critical Thinking** - Apply critical thinking skills to effectively address the challenges and solve problems. ☑ Level 2
☑	**Information Retrieval and Technology** - Access, evaluate, and utilize information effectively, ethically, and responsibly. ☑ Level 2
☑	**Oral Communication** - Practice ethical and responsible oral communications appropriately to a variety of audiences and purposes. ☑ Level 2
☑	**Quantitative Reasoning** - Synthesize and articulate information using appropriate mathematical methods to solve problems of quantative reasoning accurately and appropriately. ☑ Level 2
☑	**Written Communication** - Write effectively to convey ideas that meet the needs of specific audiences and purposes. ☑ Level 2

20. Linking.

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

- Cable TV (0)
- Classroom/Lab (0)
- HITS/Interactive TV (0)
- Hybrid (0)
- Online (0)

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

Statistics for Business: Decision Making and Analysis, Stine & Foster, or latest edition

23. Maximum enrollment.

35

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

NO

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:	Liberal Arts	LE - Elective
AS:		
AAS:		
BAS:	ABIT	CR - Core Course/Requirement - BAS
Developmental/Remedial:		

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

Course is a requirement for the ABIT BAS degree.

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.

Update needed in catalog 2015-2016 on page 12-13 ABIT requirements and page 101 course descriptions.

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.	3
Outcome 1.2 - Identify and analyze the audience and purpose for any intended communication.	3
Outcome 1.3 - Choose language, style, and organization appropriate to particular purposes and audiences.	3
Outcome 1.4 - Gather information and document sources appropriately.	3
Outcome 1.5 - Express a main idea as a thesis, hypothesis, or other appropriate statement.	3
Outcome 1.6 - Develop a main idea clearly and concisely with appropriate content.	3
Outcome 1.7 - Demonstrate a mastery of the conventions of writing, including grammar, spelling, and mechanics.	2
Outcome 1.8 - Demonstrate proficiency in revision and editing.	2
Outcome 1.9 - Develop a personal voice in written communication.	2
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.	3
Outcome 2.2 - Demonstrate mastery of mathematical concepts, skills, and applications, using technology when appropriate.	3
Outcome 2.3 - Communicate clearly and concisely the methods and results of quantitative problem solving.	3
Outcome 2.4 - Formulate and test hypotheses using numerical experimentation.	3
Outcome 2.5 - Define quantitative issues and problems, gather relevant information, analyze that information, and present results.	3
Outcome 2.6 - Assess the validity of statistical conclusions.	3
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.	3
Outcome 3.2 - Demonstrate knowledge of basic vocabulary, concepts, and operations of information retrieval and technology.	3
Outcome 3.3 - Recognize, identify, and define an information need.	3
Outcome 3.4 - Access and retrieve information through print and electronic media, evaluating the accuracy and authenticity of that information.	3
Outcome 3.5 - Create, manage, organize, and communicate information through electronic media.	2

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.	3
Outcome 4.2 - Gather, evaluate, select, and organize information for the communication.	3
Outcome 4.3 - Use language, techniques, and strategies appropriate to the audience and occasion.	2
Outcome 4.4 - Speak clearly and confidently, using the voice, volume, tone, and articulation appropriate to the audience and occasion.	2
Outcome 4.5 - Summarize, analyze, and evaluate oral communications and ask coherent questions as needed.	3
Outcome 4.6 - Use competent oral expression to initiate and sustain discussions.	3
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.	3
Outcome 5.2 - Identify and analyze assumptions and underlying points of view relating to an issue or problem.	3
Outcome 5.3 - Formulate research questions that require descriptive and explanatory analyses.	3
Outcome 5.4 - Recognize and understand multiple modes of inquiry, including investigative methods based on observation and analysis.	3
Outcome 5.5 - Evaluate a problem, distinguishing between relevant and irrelevant facts, opinions, assumptions, issues, values, and biases through the use of appropriate evidence.	3
Outcome 5.6 - Apply problem-solving techniques and skills, including the rules of logic and logical sequence.	3
Outcome 5.7 - Synthesize information from various sources, drawing appropriate conclusions.	3
Outcome 5.8 - Communicate clearly and concisely the methods and results of logical reasoning.	3
Outcome 5.9 - Reflect upon and evaluate their thought processes, value system, and world views in comparison to those of others.	3
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.	2
Outcome 6.2: Explore diverse approaches to solving a problem or addressing a challenge.	2
Outcome 6.3: Sustain engagement in activities without a preconceived purpose.	2
Outcome 6.4: Apply creative principles to discover and express new ideas.	2
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.	2

33. Additional Information