

# REQUEST FOR NEW COURSE

## 1. General Information.

- a. Submitted by the College of: Business and Economics Today's Date: 1/15/2010
- b. Department/Division: MBA
- c. Contact person name: Mary Lee Kerr Email: mkerr2@uky.edu Phone: 7-1924
- d. Requested Effective Date:  Semester following approval OR  Specific Term/Year<sup>1</sup>: Fall 2010

## 2. Designation and Description of Proposed Course.

- a. Prefix and Number: MBA 613
- b. Full Title: Finance in New Product Development
- c. Transcript Title (if full title is more than 40 characters): Finance in New Product Development
- d. To be Cross-Listed<sup>2</sup> with (Prefix and Number): No
- e. Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours<sup>3</sup> for each meeting pattern type.

14 Lecture      \_\_\_\_\_ Laboratory<sup>1</sup>      \_\_\_\_\_ Recitation      \_\_\_\_\_ Discussion      \_\_\_\_\_ Indep. Study

\_\_\_\_\_ Clinical      \_\_\_\_\_ Colloquium      \_\_\_\_\_ Practicum      \_\_\_\_\_ Research      \_\_\_\_\_ Residency

\_\_\_\_\_ Seminar      \_\_\_\_\_ Studio      \_\_\_\_\_ Other – Please explain: \_\_\_\_\_

- f. Identify a grading system:  Letter (A, B, C, etc.)       Pass/Fail
- g. Number of credits: 1
- h. Is this course repeatable for additional credit?      YES       NO
- If YES: Maximum number of credit hours: \_\_\_\_\_
- If YES: Will this course allow multiple registrations during the same semester?      YES       NO

- i. Course Description for Bulletin: This course is designed to provide the concepts and techniques used to evaluate products and services in New Product Development. Open only to One Year MBA students.

<sup>1</sup> Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

<sup>2</sup> The chair of the cross-listing department must sign off on the Signature Routing Log.

<sup>3</sup> In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, represents at least two hours per week for a semester for one credit hour. (from SR 5.2.1)

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1. The purpose of this document is to provide a comprehensive overview of the project's objectives and scope.

2. The project is designed to address the current challenges faced by the organization and to improve operational efficiency.

3. The primary goal is to implement a new system that will streamline the workflow and reduce errors.

4. This system will be developed in phases, starting with the core functionality and then adding advanced features.

5. The project team will consist of a project manager, a system analyst, and a software developer.

6. The project budget is estimated at \$50,000, and the timeline is set for completion within six months.

7. The project will be managed using a structured approach, with regular communication and reporting to stakeholders.

8. The project is subject to change, and the team will be flexible in adjusting the plan as needed.

9. The project will be reviewed and evaluated at the end of the six-month period to assess its impact.

10. The project is a high-priority initiative and will receive the necessary resources and support.

11. The project is expected to result in significant cost savings and improved productivity for the organization.

12. The project is a key component of the organization's strategic plan and will contribute to its long-term success.

13. The project is a complex task that requires careful planning and execution to ensure its success.

14. The project is a critical part of the organization's future and will be closely monitored throughout its lifecycle.

15. The project is a testament to the organization's commitment to innovation and continuous improvement.

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j. Prerequisites, if any: Prereq: MBA 600 through MBA 609

k. Will this course also be offered through Distance Learning? YES<sup>4</sup>  NO

l. Supplementary teaching component, if any:  Community-Based Experience  Service Learning  Both

3. Will this course be taught off campus? YES  NO

4. Frequency of Course Offering.

a. Course will be offered (check all that apply):  Fall  Spring  Summer

b. Will the course be offered every year? YES  NO   
If NO, explain: \_\_\_\_\_

5. Are facilities and personnel necessary for the proposed new course available? YES  NO   
If NO, explain: \_\_\_\_\_

6. What enrollment (per section per semester) may reasonably be expected? 40 per section (total 80)

7. Anticipated Student Demand.

a. Will this course serve students primarily within the degree program? YES  NO

b. Will it be of interest to a significant number of students outside the degree pgm? YES  NO   
If YES, explain: \_\_\_\_\_

8. Check the category most applicable to this course:

Traditional – Offered in Corresponding Departments at Universities Elsewhere

Relatively New – Now Being Widely Established

Not Yet Found in Many (or Any) Other Universities

9. Course Relationship to Program(s).

a. Is this course part of a proposed new program? YES  NO   
If YES, name the proposed new program: \_\_\_\_\_

b. Will this course be a new requirement<sup>5</sup> for ANY program? YES  NO   
If YES<sup>5</sup>, list affected programs: \_\_\_\_\_

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500? YES  NO   
If YES, the *differentiation for undergraduate and graduate students must be included* in the information required in **10.b**. You must include: (i) identification of additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4*.)

b.  The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from **10.a** above) are attached.

<sup>4</sup> You must *also* submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

<sup>5</sup> In order to change a program, a program change form must also be submitted.



# REQUEST FOR NEW COURSE

## Signature Routing Log

**General Information:**

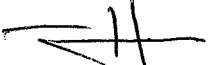
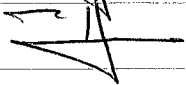
Course Prefix and Number:   MBA 613

Proposal Contact Person Name:   Mary Lee Kerr           Phone: 7-1924           Email: mkerr2@uky.edu


**INSTRUCTIONS:**

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

**Internal College Approvals and Course Cross-listing Approvals:**

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
MBA Policy Committee (Gatton College)	11/24/2009	Merl Hackbart / 7-1627 / mhackbart@uky.edu	
Gatton College Faculty	2/5/2010	Merl Hackbart / 7-1627 / mhackbart@uky.edu	
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**External-to-College Approvals:**

Council	Date Approved	Signature	Approval of Revision <sup>6</sup>
Undergraduate Council			
Graduate Council		 2010.04.19 16:19:16 -04'00'	
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

**Comments:**

<sup>6</sup> Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 439: QUANTUM MECHANICS

PROBLEM SET 1

Due: Monday, September 10, 2012

1. (10 points) A particle of mass  $m$  is confined to a one-dimensional infinite potential well of width  $a$ .

(a) Write down the wave function  $\psi(x)$  for the ground state.

(b) Calculate the probability of finding the particle in the region  $0 < x < a/2$ .

(c) Calculate the expectation value of the momentum  $\langle p \rangle$  for the ground state.

(d) Calculate the expectation value of the energy  $\langle E \rangle$  for the ground state.

2. (10 points) A particle of mass  $m$  is confined to a one-dimensional infinite potential well of width  $a$ .

(a) Write down the wave function  $\psi(x)$  for the first excited state.

(b) Calculate the probability of finding the particle in the region  $a/4 < x < 3a/4$ .

(c) Calculate the expectation value of the momentum  $\langle p \rangle$  for the first excited state.

(d) Calculate the expectation value of the energy  $\langle E \rangle$  for the first excited state.

3. (10 points) A particle of mass  $m$  is confined to a one-dimensional infinite potential well of width  $a$ .

(a) Write down the wave function  $\psi(x)$  for the second excited state.

(b) Calculate the probability of finding the particle in the region  $a/3 < x < 2a/3$ .

(c) Calculate the expectation value of the momentum  $\langle p \rangle$  for the second excited state.

(d) Calculate the expectation value of the energy  $\langle E \rangle$  for the second excited state.

4. (10 points) A particle of mass  $m$  is confined to a one-dimensional infinite potential well of width  $a$ .

(a) Write down the wave function  $\psi(x)$  for the third excited state.

(b) Calculate the probability of finding the particle in the region  $a/2 < x < 3a/4$ .

(c) Calculate the expectation value of the momentum  $\langle p \rangle$  for the third excited state.

(d) Calculate the expectation value of the energy  $\langle E \rangle$  for the third excited state.

**University of Kentucky**  
**Gatton College of Business and Economics**  
**MBA 613 - Finance**

Professor: Jason Smith  
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Phone: (859) 257-2774  
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E-mail: [jason.smith@uky.edu](mailto:jason.smith@uky.edu)  
Office Hours: By Appointment

### **Course Description and Objective**

This finance course continues the study of corporate finance. This course outlines the concepts and techniques used to evaluate products and services in New Product Development. The topics include risk management, options, executive stock options and hedging. Students will understand why corporate risk management is important, the risks being taken and if those risks can or cannot be hedged. Included will be an introduction to the tools used to quantify and minimize risks as well as the relevant and timely concept of real options.

### **Course Materials**

The recommended text, which can be used in preparation for lecture as well as used as a supplemental reference is:

- (i) Corporate Finance: *Core Principles and Applications*, by Stephen A. Ross, Randolph W. Westerfield, Jeffrey F. Jaffe, and Bradford D. Jordan, 1<sup>st</sup> edition, McGraw Hill. Henceforth, this book will be referred to as RWJJ.

### **Course Requirements and Grading**

The material in this course will be presented predominately in lecture format, supplemented with cases. To get the most out of the course and to promote the sharing of ideas, participation on the part of all students is expected. I expect you to attend each class and to be well-prepared.

Your grade for the course will be determined by homework assignments, cases, and a final exam. The homework assignments and cases are group assignments. Since a group approach to assignments is subject to the free-rider problem, I reserve the right to assign one third of the grade for the homework assignments and cases to peer review.

<i>Assignments</i>	<i>Percentage of Final Grade</i>
Homework Assignments	25%
Case Assignments	15%
Final Exam	60%

## **Grading Scale for Graduate Students**

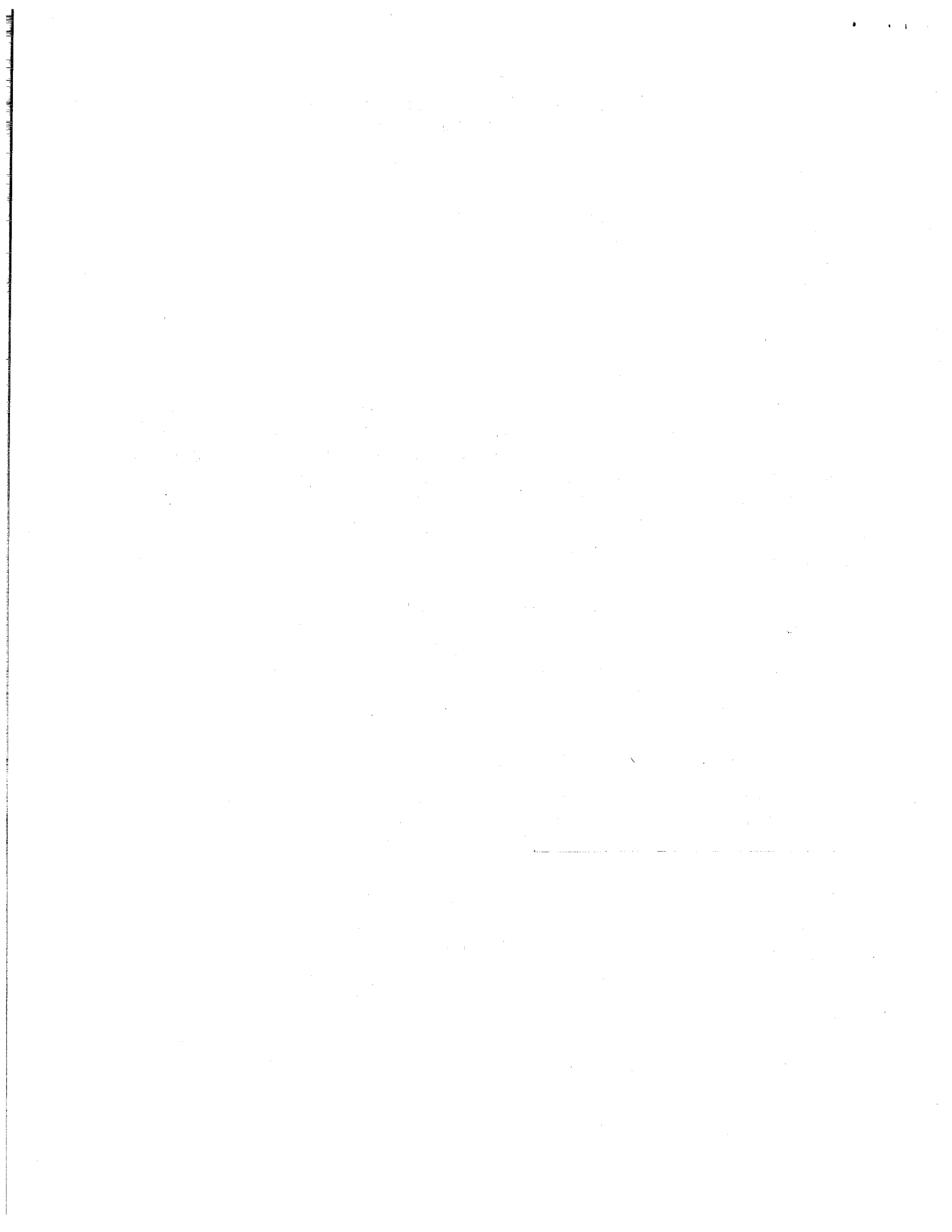
100-90% = A

89.9-80% =B

79.9-70% = C

< 69.9% = E





## **Suggestions for the Preparation of Case Reports and Case Classes**

Case memos are due at the beginning of the class that we discuss the case. For each of the cases that will be discussed in this course, an instructive list of questions will be provided to help guide and focus your analysis. Your case report should include (but is not limited to) and analysis of these questions.

In the case reports, you should point out the major issues in the case and suggest alternative solutions. Clearly state and explain any assumptions you make in your analysis. State your specific recommendation and fully develop the logic supporting it. Do not attempt to hedge your bets or be wishy-washy. In general, the reports should not be more than 3 type-written, double spaced pages (excluding exhibits, if any). Brevity is a virtue. Do not repeat the facts of the case - I have read it. The case reports should be written in essay form, not in the form of individually answering the questions that accompany the case. It should be written with an employer of client in mind as your intended audience. Keep a copy of your answers as you will be expected to contribute to the class discussion based on your written answers. The overall purpose of the case reports and the case discussions is to apply the concepts you have learned thus far to messy, real-world situations.

Understanding the ideas is not sufficient. You also must be able to communicate the ideas and how they impact your analysis. Therefore, the grade will be assigned based on both your answers as well as how well you defend your proposed solution.

### **Honor Code**

The Honor Code is in effect. You are expected to be familiar with the School's Honor Code. All discussions about the homework assignments are to be limited to your group. Materials like assignments from other groups or those from previous years are not to be consulted. If there is any question whether particular conduct is consistent with my expectations regarding the Honor Code, you are expected to ask me.

### **Review Sessions**

I will hold a review session each week. The time and date will be announced the first day of class. In addition, if possible, the TA will hold an additional help session each week.

### **Assistance**

If you have any questions or need individual assistance, you can call or email me to make an appointment to see me at a mutually convenient time.