**Course Specifications**

**(CS)**

**Mathematics of Finance and Investments (QUAN 127)**

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| **Course Instructor:** Dr. Md. Izhar Alam  **E- mail:** [mialam@ksu.edu.sa](mailto:mialam@ksu.edu.sa)  **Contact No.:** 0536108067  **Tel No.:** 1195  **Office:** F091, CBA | **C:\Users\KSU-AlMuzahimiyia\Dropbox\My Documents\new photo.jpg** |

**Objectives:**

The aim of this course is to understand the basic concepts and principles in the calculation of simple and compound interest for the identification of investment alternatives and the selection of the best to streamline investment decisions.

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| **Topics** | **No of**  **Weeks** | **Contact hours** |
| 1. Introduction and definitions | 2 | 6 |
| 1. The general law of simple interest | 1 | 3 |
| 1. True and commercial interest | 1 | 3 |
| 1. Present value and discount-the sum of annuities certain using fixed and variable simple interest rates | 3 | 9 |
| 1. Some practical applications on simple interest including methods of redemption of short term loans, modification of loans and saving accounts | 3 | 9 |
| 1. The general law of compound interest: the sum, present values and discount –the nominal rate of compound interest | 1 | 3 |
| 1. The calculation of the sum and present value of annuities –certain with fixed and variable compound rates of interest | 2 | 6 |
| 1. The nominal Interest Rate (I*nom*), The Periodic Rate (I*per*) and the Effective Annual Rate (EAR) | 1 | 3 |

**Recommended Study Materials:**

1. An Undergraduate Introduction to Financial Mathematics *by* [**J. Robert Buchanan**](http://search.barnesandnoble.com/booksearch/results.asp?ATH=J%2E+Robert+Buchanan), Barnes & Noble, New York, 2008.
2. Mathematics for Management and Finance (8th ed.) *by* **Shao & Shao**, South- Western College Publishing, Cincinnati, Ohio. ISBN- 0-538-87099-0
3. Reading and Practice Material prepared *by* the Instructor- **Dr. Md. Izhar Alam**

**Exams:**

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| **Assessment task (e.g. essay, test, group project, examination etc.)** | Proportion of Final Assessment |
| **Midterm 1** (Multiple Choice Questions, Written type and Calculation based questions) | 20% |
| **Midterm 2** (Multiple Choice Questions, Written type and Calculation based questions) | 20% |
| **Quizzes** (Two quizzes- 5 marks each; 10 multiple choice questions will be there) | 10% |
| **Final Exam** (Multiple Choice Questions, Written type and Calculation based questions) | 40% |
| **Attendance, Participation and Homework** (5 marks for attendance and 5 marks for participation and homework) | 10% |

**GRADES**: (The instructor abides by the following grading scale strictly and DOES NOT curve at all.)

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| **Description** | **Percentage** | **Scale** | **Grade** |
| Quizzes, In-Class Assignments | 5 | 95 - 100 | A+ |
| Lab | 15 | 90-94 | A |
| Two Tests (20% each) | 40 | 85-89 | B+ |
| Final (Comprehensive) Exam | 40 | 80-84 | B |
| Total | 100% | 75-79 | C+ |
|  |  | 70-74 | C |
|  |  | 65-69 | D+ |
|  |  | 60-64 | D |
|  |  | < 59 | F |

1. **QUIZZES AND IN-CLASS ASSIGNMENTS**:  There will be quizzes and in-class assignments administered throughout the semester.  Students who are absent on the day that we have an in-class assignment would have to take a zero for that in-class assignment grade.
2. **TESTS**:  Two tests, which focus primarily on materials covered in class and from the textbook, will be administered during the semester.  Students are strongly encouraged to visit the Companion Website for additional coverage of the materials presented in the textbook.  In order to perform well on the tests, students must be familiar with the definitions listed in the *Key Terms* section, and do all the questions listed in the *Review Questions* section.  Students who cannot take the scheduled tests must discuss with the instructor in advance.  Makeup tests and exam will not be given except with prior notification and under extenuating and unavoidable circumstances.  The burden of proof of said circumstances is on the student.  Makeup examinations will usually differ from the original exam, and may be essay or oral.
3. **FINAL EXAM**:  A comprehensive exam will be given during the KSU University exam schedule.  The format of the final exam is relatively similar to the format for the tests.
4. **ATTENDANCE**:  The attendance policy follows the guidelines stated in the KSU Catalog ([http://www.KSU.edu.sa/](http://www.ksu.edu.sa/)).  Students must assume full responsibility for any loss incurred because of absence, whether excused or unexcused.  All work missed because of absences will receive a grade of zero.  Excused absences are those resulting from the student’s participation in a University-sponsored activity, from recognizable emergencies, or from serious illness.  Students are encouraged to participate actively in class discussion and presentation.
5. **KSU HONOR CODE**:  All students must obey the KSU Honor Code diligently.  The Honor Code is based on the need for trust in an academic community.  KSU’s Honor Code is a system developed by and maintained for the welfare of its students, and all students should make sure that they read and understand the provisions outlined in the Student Handbook (read [http://www.ksu.edu.sa](http://www.ksu.edu.sa/)).  All work completed for this course will be considered pledged.  **CHEATING IS ABSOLUTELY NOT TOLERATED AT KSU UNIVERSITY**.  Plagiarism is a violation of the Honor code.  All papers submitted in this course are subject to evaluation using plagiarism detection software.
6. **ACADEMIC DISHONESTY POLICY:**  Cheating in any form will not be tolerated in the College of Business.  If the instructor determines that a student has cheated on an assignment, the grade of “F” may be assigned for the entire course.  “Cheating” is the use of unauthorized resources and/or work of another including but not limited to homework, tests, papers, presentations and exams.  Unless specifically instructed otherwise, students are to assume that all coursework is to be the work of the individual student alone.  If a student is unsure as to whether collaboration is permitted, the professor should be contacted in advance of performing the work.  If a faculty member penalizes a student in a course for an Honour Code violation, they should also bring formal charges against the student with the University Honour Board.
7. **LEARNING DISABILITIES**:  Any student who feels that he may need accommodations based on the impact of a physical, psychological, medical, or learning disability should contact Students' Affair Office.
8. **Inclement Weather Policy**:  In cases of inclement weather, commuter and campus based disabled students will be permitted to make decisions about whether or not to attend classes without penalty.  If the University is open, it is expected that residence students will attend all classes being held that day.  Cancelled classes will not be rescheduled since students should utilize the cancelled class period as computer lab time.

**COMMENTS**:

* The instructor reserves the right to make any appropriate and necessary changes to the Course Syllabus and Class Schedule.
* Students are responsible for all materials covered in class as well as materials in the textbook.  If you must be absent, the instructor assumes that you have obtained notes from a classmate.  Any student having difficulty with the materials should make an appointment to see the instructor.
* Private conversations between students are disruptive and annoying to both the instructor and other students. Therefore, students with disruptive and annoying behaviours are dismissed from class until the behaviour is under control.

**Note:** *Those students who will show improvements will get some bonus marks.*

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**(Course- Instructor)**