Department of Tourism and Hospitality Management

**University of Rajshahi**

**BBA Program**

**1st Year 2nd Semester 2019**

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| **Course Code** | **:** | **THM- 125** |
| **Course Title** | **:** | **Business mathematics** |
| **Course Instructor** | **:** | **Tanjil Bhuiyan** |
| **Address** | **:** | **Lecturer, Department o**f Tourism and Hospitality Management, University of Rajshahi. |
| **Mobile No** | **:** | **+8801688223150** |

**Rationale of the Course**

Business mathematics is designed to introduce the basic mathematical skills needed to understand, analyze, and solve mathematical problems encountered in business and finance, and in investment decision making. There are no prerequisites for however, students are expected to be able to perform the basic arithmetic operations—addition, subtraction, multiplication and division—with ease, and to have some familiarity with fractions, with algebraic operations, and with some basic mathematical principles

**Objective/Learning Outcomes:**

**Upon successful completion of the course, the student will be able to:**

1) Demonstrate knowledge and understand various compound interest formulas.

2) Utilize statistical methods to interpret and predict data.

3) Use matrices and other methods to solve systems of equations.

4) Determine different types of functions and their graphs, including to but not limited to linear, quadratic, exponential and logarithmic.

5) Demonstrate using logarithms to solve problems.

6) Demonstrate using inequalities and systems of inequalities to solve business application problems.

**Course Contents**

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| **Class** | **Topics To Be Discussed** |
|  | Definition-Finite set- Null set- Unit set-Equal set-Equivalent set-Subset-Power set |
|  | union and intersection of sets-Universal set and its operation to business problems |
|  | **Math Practices** |
|  | **Math Practices** |
|  | Idea of Function-implicit and explicit, Functions-linear-quadratic-cubic and bi-quadratic functions |
|  | Solution of linear-quadratic and simultaneous equation-graphics of function |
|  | **Math Practices** |
|  | **Math Practices** |
|  | Rectangular coordinate system-Distance between two points-Grandaunt-Equations of straights lines |
|  | Slope intercepts form-Two points form-parallel and perpendicular lines-Equation and graphical representation of circle-parabola and hyperbola |
|  | **Math Practices** |
|  | **Math Practices** |
|  | **First Tutorial Examination (45 Minutes, Syllabus Classes 01-12)** |
|  | Group/Individual Presentation-01 on Class 01-12 |
|  | Definition of Matrix and Determinants and their properties-addition and multiplication of matrices |
|  | Inverse of matrix-Solution of simultaneous equations. |
|  | **Math Practices** |
|  | **Math Practices** |
|  | Definition-Basic rules-Application to elasticity of demand |
|  | Marginal cost and revenue functions-Conditions for profit maximization and cost minimization. |
|  | **Math Practices** |
|  | **Math Practices** |
|  | **Second Tutorial Examination (45 Minutes, Classes 13-22)** |
|  | **Group/Individual Presentation-02 on Class 13-22** |
|  | Definition-Basic rules-Methods of Substitution and integration by parts-idea of definite integral-Application. |
|  | **Math Practices** |
|  | **Math Practices** |
|  | **Problem Solving Class** |

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| **Text Books** | **:** | Business Mathematics by D.C. Sancheti and V.K.Kapoor |
| **Reference Book** |  | 1.Business Mathematics by Zamiruddin and Khanna  2. Mathematics for Management by M.Raghavacharia |

**Home Assignment (Individual):**

Course Instructor will deliver the home assignment topic/s to the students on or before Class No. 15.

**Home Assignment must be submitted by the students on 25th Class.**

**Communication with Course Instructor**

You should feel free to see me outside of class if you have confusion about any of the material covered in class or if you would like to know more about a particular topic. I will be glad to suggest additional readings or to discuss any other issues with you. You can e-mail me to set up an appointment at **tanjil12097281@gmail.com**

**Course Materials**

The course materials are available in department website.

**Web:** <http://www.ru.ac.bd/thm/> and <http://103.79.117.242/ru_profile/public/teacher/26007261/profile>

**Students Assessment Details:** Your grade will be based on the following weights:

**Marks Distribution**

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| **1** | **Class attendance** | **10%** |
| **2** | **Presentation: Individual/Group,**  **Class test 1 &2, Assignment etc.** | **20%** |
| **5** | **Final Examination** | **70%** |

**Class Participation:** 10% of your grade will come from your class participation. At various times, I will ask you to comment on intercultural issues and challenges. As I expect you to have read the material assigned for the class, a good level of preparedness is essential to obtain a good participation grade.

**Class test (two), Presentation/Assignment/Report etc.:** 20% of your grade will come from the class tests, **Presentation**, Report/Assignment etc. These will be based on class lecture and referred chapters from the book/s. Contemporary issues will be added extra value. The exam will mainly focus on multiple choice/true/false/short questions/Questions from a large number of questions etc.

**Final Exam:** 70% of your grade will come from the final exam and duration is 3 hours.

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