Amrut Mody School of Management

Winter 2025: TOD212_Decision Sciences

Project Guidelines

This project guideline for the TOD212 Decision Sciences course outlines a comprehensive approach to conducting a group-based decision sciences project. Here's a breakdown of what you and your group need to focus on:

The project must reflect real-life case studies relevant to Decision Sciences topics such as Linear Programming (LPP), Spreadsheet Modelling, K-nearest neighbours (KNN), Regression Modelling, Decision Theory, and Time Series Analysis. You must incorporate **at least four** of these topics.

Project Submission:

- **Soft Copy** (PDF of the Word document + Excel file) must be submitted via Google Classroom by **April 13, 2025.**
- **Hard Copy (spiral-bound)** submission is due on **April 14, 2025, at 11 am.**
- A Google Sheet will open on **April 4, 2025,** to select your project presentation slot. This will remain open for 24 hours, after which no changes will be entertained.
- Each group has 30 minutes for the presentation.

Project Requirements

1. **Real-Life Case:**
    - Choose a real-world scenario and collect data from a company, firm, or shop. Reach out to a manager for permission and access to the data.
      Note: Do not use data from online sources. The project should be based on real business operations or situations.
2. **Project Goals:**
    - Formulate the chosen case study into a structured problem.
    - Apply appropriate techniques from Decision Sciences to analyze and solve the problem.
    - Focus on developing meaningful, data-driven insights.
3. **Project Evaluation:**
    - The project accounts for 15% of the total course evaluation.
    - Evaluation will be based on group compatibility, presentation skills, analytical depth, teamwork, and commitment.

Project Structure

Students are required to submit the project report on the given format below. The project will be assessed based on the following structure:

- **Cover Page:**
  It must contain:
  - Topic of your Project
  - Course Name & Section
  - Semester
  - Name and Enrolment Number of all group members.
- **Acknowledgement**
- **Index**
- **Chapter 1: Introduction**

  - Overview: Present the project background, objectives, and scope.
  - Objectives: Clearly outline the research goals.
  - Scope & Background: Describe the context of the project and the real-life case chosen.
  - User Requirements (if applicable): Specify any requirements identified by the company or firm.
  - Unresolved Issues: Highlight any challenges or open problems related to the case study.
  - Company Details: Include the name and contact information of the firm and manager involved in the project.

- **Chapter 2: Analysis and Design**

  - Provide a detailed step-by-step explanation of the project methodology.
  - Highlight the tools and techniques (software, statistical methods) used in the analysis.
  - Include necessary derivations, formulas, codes, flowcharts, and any other technical details.
  - Provide data analysis using:
    - Planning Charts
    - Use Case Diagrams (if relevant)
    - Activity or Sequence Diagrams (if relevant)
    - Data Preparation and Layout (graphs, screenshots, or tables)
    - Statistical Tests/Accuracy Metrics (if applicable)

- **Chapter 3: Learning Experiences**

  - Summarize key learnings from the project.
  - Discuss how theoretical knowledge was applied in practice.
  - Address any challenges encountered during the project and how they were resolved.
  - Focus on how the project bridges the gap between theory and real-world application.

- **Chapter 4: Conclusion**

  - Summarize the key findings from the analysis.

- Provide recommendations based on your findings.
- Highlight contributions made by the project and the scope for future research.

- **Chapter 5: Bibliography/References**

  - Provide a list of all sources, including research papers, websites, and references used for the project.
  - Include details of each team member's contribution to the project.

Technical Specifications:

- **Font:** Times New Roman, 12-point, 1.5 spacing.
- **Alignment:** Justify
- **Margins:** Left 35 mm, Right 20 mm, Top 35 mm, Bottom 20 mm.
- **Presentation:** All figures, tables, and diagrams must be numbered, captioned, and referred to in the body text.
- The project must be well-organized and demonstrate original analysis or suggest innovative solutions to the real-life problem.

Additional Notes:

- Ensure all team members understand the project thoroughly.
- The use of new technologies, methodologies, or practices is encouraged.
- Projects that deviate from the specified guidelines will not be evaluated.

For any questions or assistance, contact the Course Instructor or Teaching Assistant.
