

Students will be divided into teams/groups where each team is of about 4 students. Each team will work on data collection, presentation, analysis, and use of data either for decisions making, problems solving, or Designing products and processes.

The course project will follow either the engineering methods or statistical methods as being depicted in Fig-1 and Fig-2 respectively.

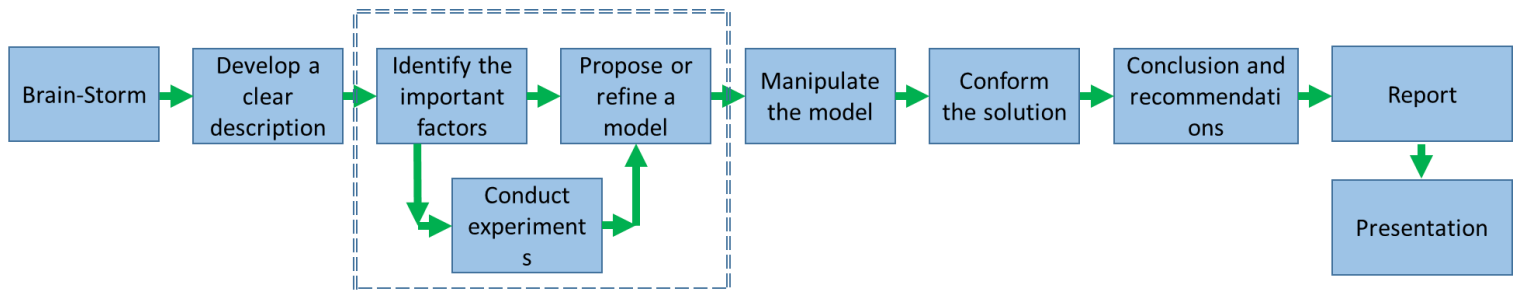


Fig-1: Engineering Method



Fig-1: Statistical Method

Table 1: Timetable / activities

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Engineering Method	Brain-storm	Develop a clear description	Identify../ propose.../ Conduct..	Manipulate the model	Confirm solution	Conclusion and recommendation	Report	Presentation								
Statistical Method	Brain-storm	Define project	Data collection	Data analysis	statistics	Results and conclusions	Report	Presentation								

The overall project evaluation will be as stated as follow:

Overall course project evaluation: weight 40 points	
Progress	20
Report	10
Presentation	10

Progress Evaluation (20 points)

Progress Evaluation	
Level of Students knowledge and scientific skills	10 points
Ability to work within a team	5 points
Punctuality, commitment, and maturity	5 points

Level of Students knowledge and scientific skills	
Problem Recognition	Demonstrates the ability to identify problems.
Understanding of the Topic	Demonstrates an in-depth, high-level understanding of the topic and issues.
Learning Outcome	Demonstrates an understanding of information that is relevant, fosters higher-level thinking, and clearly relates to the skills and content in the curriculum.

Teamwork	
Communication	Everyone is fully engaged with effective exchange of ideas.
Interpersonal Engagement	Members of the group share respect for each other. All members of the group feel free to ask questions and contribute. Conflicts are resolved with open dialogue and compromise.
Group Decision & Planning	A clear procedure for making decisions is formally established by the group.
Roles & Distribution	The group establishes and documents clear and formal roles for each member and distributes the workload equally.
Establish Goals	Achievable goals are established and agreed upon by the group and include clear priorities that are well documented and organized.

Punctuality, commitment, and maturity	
Organization & Structure	All arguments were clearly tied to an idea and organized in a tight, logical fashion.
Argument	All information presented in the argument was clear, accurate and thorough
Counter-Argument	All counterarguments were accurate, relevant and strong.

Presentation Evaluation (10 points)

Presentation Evaluation	
Ability to the present the concept technically and effectively	4 points
Ability to answer technical questions	3 points
Oral presentation including (eye contact, body language time allocation, etc.)	3 points

Report Evaluation (10 points)

Report Evaluation	
Report Structure (Abstract, Introduction, Literature Review, Results...etc.)	2 points
Demonstrating the mechanism of tests or studies and data analysis process	2 points
The written and presented concept expresses clearly the scientific content and its use in other topics.	1 points
The written and presented concept was capable in solving engineering problems.	1 points
Documenting the references and the information sources are addressed	1 points
Addressing project's constraints and engineering standards & codes	1 points
Ability to apply engineering design, analyze, and interpret results and presenting physical models / design plans ,if any, to meet desire needs	1 points
Relevancy of the written / presented material to contemporary issues in the discipline	1 points