# TAYLOR'S UNIVERSITY

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## SCHOOL OF ARCHITECTURE, BUILDING & DESIGN
Foundation in Natural and Built Environments

**MATHEMATICS [MTH10304]**

**Project – Statistics - (30%) –1st June 2015**

### INTRODUCTION



Statistics is a mathematical science which involves the collection, analysis and interpretation of data. Statistical analysis helps to understand some process and possibly to make some predictions based on the understanding.

This assignment is designed to provide students with a hands-on experience on how to conduct a survey, to organize and present the data.

### OBJECTIVES OF THE PROJECT

1. To allow students to collect and organize statistical data.
2. To enable the students to apply the knowledge gained to analyse statistical data and draw conclusion from the data.

### LEARNING OUTCOMES OF THE PROJECT

1. To analyse and solve problems that involves various mathematical principles.
2. To collect, organize, present and draw conclusion for simple statistical data.
3. To understand and apply fundamental mathematical principles; statistics.

### TASKS - METHODOLOGY

In a group of **four (4) to five (5)** members, you are required to complete the following tasks.

1. Assuming Kementerian Kesihatan Malaysia (Malaysian Health Ministry) engage you to conduct a survey. They would like to study **the understanding level of female and male students in Taylor's University on one of the common chronic diseases in Malaysia.** This survey focuses *to compare how much male and female students understand about the diseases*.
2. You are required to research the fact of one of the common chronic diseases in Malaysia, i.e. stroke, high blood pressure, diabetics or etc. **Compare the facts with understanding of each category of students** to conclude which group understands better on that disease.

3. Each questionnaire must consists of **minimum 15 questions (exclude the demographical questions, i.e. age, sex and etc…).** It is advisable to avoid open ended question and provide options for every questions. Decide the answer to be numerical rating, numerical ranking, yes-no or etc. (Keep in mind what you want to learn)
4. Print the interviewers' question and answer list. Proceed to interview your targets. Each group must survey/interview **min 200 targets or 50 targets per member, whichever higher.**
5. Administer the survey.
6. Tabulate and analyze the data.

## SUBMISSION REQUIREMENT

1. One **A2 sized printed infographic poster** which summarises the findings of your survey
2. Survey report
3. Suggested format for survey report
   a. **Cover page**
   b. **Table of Content**
   c. **Introduction and objective** of your survey (what you want to learn/compare in your survey)
   d. **Methodology** – Briefly explain the surveying process and record of the survey process (images of interviewing process and venues where the interview takes place)
   e. **An empty survey form and all responded survey forms**
   f. **Analysis** – Statistical analysis of each question, include all necessary calculation, diagrams and etc. (Important: Not all measure is applicable to each question. **Use of inappropriate measures will result reduction in marks / grades**)
   g. **Conclusion**

## ASSESSMENT CRITERIA

The assessment for this assignment will be based on

Understanding of Comparative survey

Knowledge and Understanding of statistical Analysis

Communication Skills

Individual contribution

## MARKING CRITERIA

Refer to Assessment Rubric for Mathematics Project - Statistics

## Assessment Rubric for Mathematics Project – Statistics

| TGC | Criteria | Excellent | Good | Satisfactory | Poor | Unsatisfactory |
|---|---|---|---|---|---|---|
| | **Understanding of Comparative survey (5%)**<br><br>Introduction and objectives of the survey clearly defined and explained | Demonstrate excellent understanding of comparison survey | Demonstrate considerate understanding of comparison survey | Demonstrate some understanding of comparison survey | Demonstrate limited understanding of comparison survey | Fail to demonstrate understanding of comparison survey |
| | | 5 | 4 | 3 | 2 | 1 - 0 |
| | **Knowledge and Understanding of statistical Analysis (15%)**<br><br>Demonstrate ability to perform statistical calculations and make conclusion | Shows excellent ability to perform statistical calculations | Shows considerable ability to perform statistical calculations | Shows some ability to perform statistical calculations | Shows limited ability to perform statistical calculations | Shows unsatisfactory ability to perform statistical calculations |
| | | 15 - 13 | 12 - 10 | 9 - 7 | 6 - 4 | 3 - 0 |
| | **Communication Skills (10%)**<br><br>Ability to organize and convey the information clearly, accurately, creatively and easy to understand | Assignment organization or presentation is clear, creative, and precisely focused | Assignment organization or presentation shows considerable clarity, creativity and focus | Assignment organization or presentation shows some clarity, creativity, or focus | Assignment organization or presentation shows limited clarity, creativity, or focus | Assignment organization or presentation shows little clarity, creativity or focus |
| | | 10 - 9 | 8 - 7 | 6 - 5 | 4 - 3 | 2 - 0 |
| | **\*\* Individual contribution (multiplier)**<br><br>Demonstrate ability to contribute to the team, to lead or work with others team members | Significant participation and contribution to the team.<br><br>Demonstrate excellent leadership. | Considerate participation and contribution to the team.<br><br>Demonstrate considerate leadership. | Average participation and contribution to the team.<br><br>Demonstrate some leadership. | Limited participation and contribution to the team.<br><br>Demonstrate limited leadership. | Fail to participate and contribute to the team.<br><br>Demonstrate poor leadership. |
| | | Max 1 | Max 0.8 | Max 0.6 | Max 0.4 | Max 0.2 |

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Modern Architecture Studies in Southeast Asia (MASSA) Research Unit
Foundation in Natural and Built Environment (FNBE)

**PEER ASSESSMENT FORM** *(PRIVATE & CONFIDENTIAL) MATH0103 (Mathematics)*

*Write the proficiency level from the rubric that fits each group members' participation in the box under the collaboration skill. Include your own name in the list. For ranking, use "1" for the group member that you feel contributed the most to the work, followed by other group members in order of contributions.* **The ranking should reflect the participant level of each member.**

| Name of Group Member | Participation | Leadership | Communication | Cooperation | Time Management | TOTAL (Out of 25) | RANK |
|---|---|---|---|---|---|---|---|
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| 6. | | | | | | | |

| | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
| **Participation** | Group member participated fully and was always on task in class. | Group member often participated, was usually on time and did their task well, and immediately, if prompted. | Group member sometimes participated, occasionally wasted time or sometimes worked on unrelated material. | Group member was often missing, contributed minimally or often worked on unrelated material. | Group member did not participate, wasted time, or worked on unrelated material. |
| **Leadership** | Group member assumed leadership in an appropriate way when necessary by helping the group stay on track, encouraging group participation, posing solutions to problems, and having a positive attitude. | Group member occasionally assumed leadership in an appropriate way, inconsistently, and generally helped to maintain good group participation, and having a positive attitude. | Group member usually allowed others to assume leadership or often dominated the group. | Group member seldom assumed leadership and occasionally undermined the leadership of others. | Group member did not assume leadership or assumed it in a nonproductive manner and generally behaved in a manner detrimental to the overall attitude of the group. |
| **Communication** | Group member listened carefully to others' ideas. Group member offered detailed, constructive feedback when appropriate. | Group member often listened to others' ideas and offered feedback that was usually relevant and appropriate. | Group member sometimes listened to others and interrupted them. Group member occasionally offered constructive feedback, but sometimes the comments were inappropriate or not useful. | Group member often did not listen to others. Feedback was seldom given and usually inappropriate o unhelpful. | Group member did not listen to others and often interrupted them. Group member did not offer constructive or useful feedback. |
| **Cooperation** | Group member treated others respectfully and shared the workload fairly. | Group member usually treated others respectfully and often tried to share workload fairly. | Group member sometimes treated others disrespectfully or did not share the workload fairly. | Group member often treated others disrespectfully and often tried to distribute workload unfairly. | Group member treated others disrespectfully or did not share the workload fairly. |
| **Time Management** | Group member completed assigned tasks on time. | Group member completed most of the task assigned on time. | Group member sometimes did not complete the assigned tasks on time and occasionally forced the group to make last-minute adjustments and changes to accommodate missing work. | Group member did not complete most of the tasks assigned on time. | Group member did not complete most of the assigned tasks on time and often forced the group to make last-minute adjustments and changes to accommodate missing work. |

*List down some of the main tasks that had been assigned to you for this assignment and briefly describe your performance:*

1. _____
   _____
   _____
   _____

2. _____
   _____
   _____
   _____

3. _____
   _____
   _____
   _____

*You may also list any other contributions that you feel you have made for your team:*

_____
_____
_____

*Briefly comment on the contributions of other group member, particularly those you feel contributed more or less than expected:*

_____
_____
_____

Student's Signature: _____   Date: _____

Student's Name: _____   Student ID: _____

*This section for comments by Lecturers / Tutors:*