

**MARA UNIVERSITY OF TECHNOLOGY  
SHAH ALAM**



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**EDUCATIONAL TORSION TESTER**

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In the name of ALLAH  
The Compassionate, the Merciful,  
Praise be to Allah, Lord of the Universe,  
And Peace and Prayers be upon  
His Final Prophet and Messenger

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# CHAPTER 1

## INTRODUCTION

### 1.1 An Overview

Engineering training which involves lectures, lab works, and industrial training, is the essential element of preparation for engineer graduates when entering into the professional areas. In lectures viewpoint, the most important contribution that an engineering educator makes comes in the one-to-one interaction between students and lecturers.

Through their explanation of problem solutions, the lecturers may definitely encourage student to develop their problem solving abilities and their understanding of the engineering design process. In addition, this interaction between lecturer and student gives many students their first exposure to the professional aspects that underlie engineering decisions.

Most of the time, the subject is taught with greater emphasis on the practical viewpoint rather than descriptive aspect. Then, students are exposed into experiences of doing experimental works that related to their studies. Practically, their studies become more effective as much as experiments they have tested instead of easily to get a job in this related field. As a result, a fresh engineering graduate, on entering to a manufacturing unit specifically, would gained the means of correlating what he learned and what is required in engineering training.

With this in mind, an attempt has been made to bring as much of practice as possible into this task to make it useful for engineering students.