



# SINGAPORE QUALITY INSTITUTE

66 Tannery Lane #06-07 Sindo Building Singapore 347805  
Tel: 6467 4225 Fax: 6467 4226 Email: [enquiries@sqi.org.sg](mailto:enquiries@sqi.org.sg) Website: [www.sqi.org.sg](http://www.sqi.org.sg)  
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## ADVANCED GD&T BY DR BRYAN NGOI

### COURSE OBJECTIVE

- Learn effective ways to measure and gauge geometric tolerances
- Learn to select the most appropriate measurement techniques
- GDT specifications - prototype or production, batch production or mass production

### COURSE CONTENTS

|   |  |   |  |
|---|--|---|--|
| 1 | Introduction <ul style="list-style-type: none"><li>• What is GD&amp;T</li><li>• Why GD&amp;T and how GD&amp;T benefits you</li></ul>   | 5 | Orientation Control <ul style="list-style-type: none"><li>• Perpendicularity</li><li>• Parallelism &amp; Angularity (application with examples using AME drawings)</li></ul>                 |
| 2 | Basic concepts and Rules <ul style="list-style-type: none"><li>• Features, Features-of-size, Location Dimension</li><li>• MMC, LMC &amp; RFS</li><li>• Rules 1,2&amp;3</li><li>• Bonus tolerance</li><li>• Virtual condition &amp; applications with examples using AME drawings</li></ul> | 6 | Location Control <ul style="list-style-type: none"><li>• Position</li><li>• Symmetry &amp; Concentricity (application with examples using AME drawings)</li></ul>                            |
| 3 | Datums Concepts <ul style="list-style-type: none"><li>• Datum Precedence</li><li>• Datum Plane</li><li>• Datum Target</li><li>• Feature-Of-Size Datum (application with examples using AME drawings)</li></ul>   | 7 | Runout and Concentricity Control <ul style="list-style-type: none"><li>• Circular Runout</li><li>• Total Runout &amp; Concentricity (application with examples using AME drawings)</li></ul> |
| 4 | Form Control <ul style="list-style-type: none"><li>• Flatness</li><li>• Straightness</li><li>• Circularity &amp; Cylindricity (application with examples using AEM drawings)</li></ul>   | 8 | Profile Control <ul style="list-style-type: none"><li>• Line Profile</li><li>• Surface Profile (application with examples using AME drawings)</li></ul>                                      |
|   |  | 9 | Reinforce learning through discussion session using AEM products and drawings  |

### METHODOLOGY

Participants will learn final details in advanced GD&T. Case studies and hands-on exercises using specially selected drawings allow participants to use and apply the information learnt in the course. Participants may also bring company drawings for interpretation during live case studies.

### WHO SHOULD ATTEND

This course is designed for designed for engineers who need to qualify parts with GD&T specifications. You will learn effective ways to measure and gauge geometric tolerances. You will also learn to select the most appropriate measurement techniques for particular GD&T specifications, whether it is prototype or production, batch production or mass production. Enhance understanding by using videos, with step by step explanations, using open setup, gauges or specialized equipment.

### COURSE DATES

08, 09 & 10 Sept 2009 (9:00am – 5:00pm)

### COURSE FEES

S\$ 781.10 (SQI Member) S\$ 888.10 (Non-Member) *Fees inclusive of 7% GST*  
Course fees include training materials, certificate & light refreshments

### TRAINING VENUE

SQI, 66 Tannery Lane #06-07, Sindo Building, Singapore 347805



Certificate No: 6655731205

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