



MEGA JATI ACADEMY SDN BHD

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Design and Stability of Structures

TRAINING ID: MJA/CNS/2020/004

By

MEGA JATI ACADEMY SDN BHD

Jalan Marikh U5/174,

CB Seksyen U5,

40150 Shah Alam, Selangor

2020

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1.0 INTRODUCTION

A structure is designed to fulfil two basic criteria i.e. strength and stiffness, by which the stability of the structure can be achieved. The consideration of stiffness requirement is often overlooked by engineers, whether those who are involved in the design or in the construction site. A comprehensive discussion on stability of steel structures is too wide, therefore the two-day short course will highlight briefly only the basic concept of each of the element of stability problem such as bending, axial, shear, lateral torsional and local buckling and stiffness of frame and connection. It applies to common types of structural elements i.e. beam, column and plate system during construction. Relevance clauses in the design code will be used as the reference in the discussion. Besides steel structures as the main scope of discussion, design and failure cases of reinforced concrete structures is also covered. Degradation of structures which is caused by time dependent factors such as fatigue due to repeated loading and due to progressing corrosion will also be discussed.

2.0 COURSE OBJECTIVES

The objectives of the course are:

- 1) To understand the general concept of structural system and design in the construction of building
- 2) To understand the basic formulations used in design, based on design standard references.
- 3) To learn few cases of structural failure and collapse, and to get lesson from the failure cases presented.

3.0 LANGUAGE & LOCATION:

The course material will be in English and Malay. Lectures will be held in the Client's Facilities.

4.0 COURSE FEE:

| NO | METHOD OF PAYMENT | ACCOUNT NAME | BANK | ACCOUNT NUMBER |
|-----------|---------------------------------|---------------------------------|---|-----------------------|
| 1. | Cek / <i>Online Transfer</i> | Mega Jati ACADEMY Sdn Bhd | Bank Islam Malaysia Berhad | 1427-401000-7241 |
| 2. | LO / HRDF | Mega Jati Consult Sdn Bhd | Maybank Banking Berhad | 5142-7132-6182 |
| 3. | e-Perolehan | Mega Jati Consult Sdn Bhd | Nombor e-Perolehan Pembekal eP-140010377 | |

For help and further information please contact

1) Account: Miss Ria : 012 349 8656

2) Training: Miss Zahafarina : 017 419 3031

5.0 COURSE OUTLINE

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|---------------------------|---|----------------------|----------|
| COURSE | DESIGN AND STABILITY OF STRUCTURES | | |
| DURATION REQUIRED | 2 DAYS | LEARNING TIME | 16 HOURS |
| METHOD OF LEARNING | LECTURE, SOFTWARE, DESIGN CALCULATION WORKSHOP, AUDIO VISUAL PRESENTATION | | |
| CPD AWARDED | CIDB 20 CPD FOR EACH PARTICIPANT / HRDF CLAIMABLE | | |

| TIME | 8.30 AM – 10.30 AM | 10.30 AM 11.00 AM | 11.00 AM – 12.30 PM | 12.30 PM 2.30 PM | 2.30 PM 5.30 PM |
|-------------------|--|------------------------------|--|-----------------------------|---|
| DAY | | | | | |
| FIRST DAY | INTRODUCTION TO STRUCTURAL DESIGN AND STABILITY | BREAK | OVERVIEW OF STEEL STRUCTURES DESIGN STABILITY OF STEEL BEAM, COLUMN AND PLATE | BREAK | CASE STUDY – FAILURE OF STEEL STRUCTURES |
| SECOND DAY | OVERVIEW OF CONCRETE STRUCTURES DESIGN | | FATIGUE FAILURE | | CASE STUDY –FAILURE OF CONCRETE STRUCTURES |

**Subject to final changes*

6.0 COURSE SPEAKER

**Subject to final changes.*






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