



CPD AWARDED BY
BEM APPROVED CPD HOURS: 7 HOURS
REF NO: ACEM/191225/038

COURSE ON FUNDAMENTALS OF BRIDGE DESIGN

The objective of this course is to present a global view of bridge design and avoiding some pitfalls that can blight the careers of graduate engineers. Some design methods are shown where spreadsheets can be used to arrive at suitable preliminary choices before proceeding to detailed analysis thus saving time in the design process.

Speaker's Biodata



Ir. PATRICK CYRIL AUGUSTIN					
NATIONALITY	Malaysian DATE OF BIRTH 16 th May 1954				
PRIMARY and SECONDARY	La Salle Petaling Jaya 1961-1971				
FORM 6	Further Education Class 1972-1973, Bukit Bintang Boys School, Petaling Jaya				
TERTIARY	1	B.Sc. (Upper 2 nd Class Honours Engineering Lancaster University		1977	
	2	DIC, M.Sc. (Concrete Structures) Imperial College London University		1981	
PROFESSIONAL QUALIFICATIONS	1	Member of the Institution of Engineer, Malaysia (MIEM) Fellow of the Institution of Engineer, Malaysia (FIEM)	25 17	April January	1983 2000
	2	Registered Professional Engineer (P. Eng.)	19	March	1984
	3	Member of the Institution of Civil Engineers (MICE) Fellow of the Institution of Civil Engineers (FICE)	2 17	December December	1984 2003
	4	Chartered Engineer, U.K. (C.Eng.)	17	December	2003
	5	Member of Institution of Structural Engineers (MIStructE) Fellow of Institution of Structural Engineers (FIStructE) Chartered Structural Engineer	23 23 23	November January January	1989 2003 2003
	6	Member Association of Consulting Engineers Malaysia (MACEM)			1994
	7	Council Member, ACEM 2002-2003, 2003-2004, 2004-2005			
	8	Council Member, IEM 2005-2006, 2006-2007, 2007-2008, 2009-2010			
	9	BEM Accredited Checker A10023S	9	May	2020

Ir. Patrick Augustin graduated with a B.Sc.(Upper 2nd Class Honours Engineering) from Lancaster University and a DIC, M.Sc.(Concrete Structures) from Imperial College London University. He is a registered Professional Engineer, a Chartered Engineer, a Fellow of IEM, ICE & IStructE and a member of ACEM. He has also served as a Council Member for both ACEM and IEM. Ir. Patrick is also a BEM Accredited Checker and a HRD Accredited Trainer.

Ir. Patrick Augustin has written and published several articles related to the design and construction of bridges. He also conduct courses and presents paper at seminars and conferences on the subject.

Target Audience

- This course is intended for Graduate Engineers who have started a career in bridge design, with 1 to 3 years of exposure.
- Target Group → CIVIL AND STRUCTURAL ENGINEERS
- Methology → IN PERSON : FACE TO FACE
- Target Industry → CONSULTING ENGINEERS AND BRIDGE CONTRACTORS
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Course Outline and Subject Matter

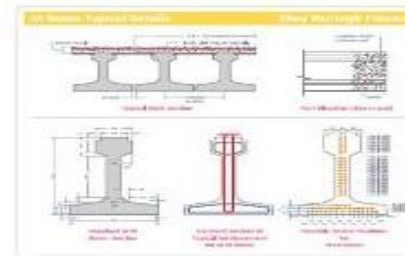
- Introduction to Reinforced and Prestressed Concrete Bridge Design in accordance with BS 5400 Rev. 3.
- Abutments and Failure Investigation of Piled Reinforcement Soil Wall and Excessive Movements of Piled
- Embankment at Soft Ground.
- Beam on Elastic Foundations
- Bridge Joints
- Laminated Elastomeric Rubber Bearings for Bridges
- Ciria C543 CH8 Integral River Bridge
- HA Loading
- Bridge Beam Preliminary Design
- Magnel Diagrams Revisited
- Crack Width BS5400
- Calculation of Ultimate Moment of Resistance of a Section
- 45m Bulb Tee Bridge Beam Preliminary Design

Training Programme

- Training Programme No : 10001565778
- Course Title : COURSE ON FUNDAMENTALS OF BRIDGE DESIGN
- Submission Date : 22/06/2025
- Expiry Date : 21/06/2026
- Total Training Hours : 7.0
- Trainer : PATRICK CYRIL AUGUSTIN

Contact Person: Puan Rozi Abd Samad

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Beam with fixed support: $D_{max} = 3.603m$ @ $0.02m$

Section	1	2	3	4	5	6	7	8	9	10
Length	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weight	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Center of Gravity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area Moment of Inertia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Section Modulus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radius of Gyration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Section Properties	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weight	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Center of Gravity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area Moment of Inertia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Section Modulus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radius of Gyration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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