

Midland Counties Regional Group

Two-day preparation course for the IStructE Chartered Membership examination

Saturday 8 June 2024 – 08:30 – 17:30 BST
 Sunday 9 June 2024 – 09:00 – 17:30 BST
 Hybrid event

TENTATIVE PROGRAMME

DAY 1 – SATURDAY 8 JUNE 2024	
08:30 – 09:00	REGISTRATION OF PARTICIPANTS
09:00 – 09:05	Welcome address and tutor(s) introduction
09:05 – 10:00	<p>An examiner’s perspective of chartered membership examination of IStructE and their expectations on</p> <ul style="list-style-type: none"> • Functional framing, load transfer, serviceability, stability and sustainability aspects of two schemes that are distinct, viable and sustainable • Review and critical appraisal of schemes using sustainability as a key criterion • Client communication (in an email format) • Design of principal structural elements (including foundations) and their embodied carbon calculations (A1 to A3) • Drawings for estimation • Method statement
10:00 – 11:00	<p>Section 1a: Scheme design</p> <ul style="list-style-type: none"> • Aim of structural design/sustainability/embodied carbon • Understanding & appreciation of conceptual design • Thumb rules for sizing elements (for buildings and bridges)
11:00 – 11:15	MORNING TEA/COFFEE BREAK
11:15 – 12:30	<p>Section 1a: Scheme design (Contd..) Structural systems for concrete and steel buildings and bridge structures</p> <p><u>Buildings</u></p> <ul style="list-style-type: none"> • Floor systems • Shear wall and bracing arrangements <p><u>Bridges</u></p> <ul style="list-style-type: none"> • Deck systems • Piers and abutments
12:30 – 13:15	<p>Section 1a: Scheme design (Contd..) Foundations & retaining wall systems</p> <ul style="list-style-type: none"> • Shallow foundations • Ground improvement techniques • Deep foundations • Earth retaining and stabilising structures (ERSS)

13:15 – 13:45	LUNCH BREAK
13:45 – 14:15	Section 1b: Client communication <ul style="list-style-type: none"> • Communication format – general requirements • Reduce material use and cost reduction through viable changes to the brief without impinging the functional requirements of the structure
14:15 – 15:45	Section 2c: Calculations - Analytical and design tools <ul style="list-style-type: none"> • General requirements • Approximate analysis methods for building structures • Approximate analysis methods for bridge structures • Embodied carbon calculations (A1-A3)
15:45 – 16:00	AFTERNOON TEA/COFFEE BREAK
16:00 – 16:30	Section 2d: Drawings and detailing (for building and bridge structures) <ul style="list-style-type: none"> • General requirements • General arrangement plans, including foundations • Sections and elevations • Critical details (a minimum of three details)
16:30 – 17.30	Section 2e: Method Statement <ul style="list-style-type: none"> • General requirements • Safe construction methodology • Site set up • Site investigations • Foundations, substructure and superstructure (for buildings structures) • Foundations, substructure and superstructure (for bridge structures)
DAY 2 – SUNDAY 9 JUNE 2024	
09:00 – 09:30	Water retaining / basement / underground structures <ul style="list-style-type: none"> • Watertight design – Crack width (As per EC2: Part 3) • Basement grades • Waterproofing protection
09:30 – 10:00	Guide to Robustness and Disproportionate Collapse <ul style="list-style-type: none"> • Class 1 Buildings • Class 2A & 2B Buildings (Approach to Class 3 Buildings will be highlighted)
10:00 – 11:15 Parallel session*	Session 1 - Possible solutions to past CME questions <ul style="list-style-type: none"> • Access bridge* - Q3 of CME February 2023 (Sections 1a and 1b) • Office building* – Q2 of CME February 2023 (Sections 1a and 1b)
11:15 – 11:30	MORNING TEA/COFFEE BREAK
11:30 – 12:30 Parallel session*	Workshop 1 – Hands-on session by candidates Candidates are expected to work on possible solutions** focussing on sections 1a and 1b <ul style="list-style-type: none"> • New Railway Bridge* - Q3 of CME January 2024 • Defence facility* – Q2 of CME January 2024 ** Due to time constraints, it is a prerequisite that candidates review the question in advance and be prepared to work on the solutions on the day
12:30 – 13:15 Parallel session*	Workshop 1a* – Group discussion Candidates shall discuss their solutions with the tutor.

13:15 – 13:45	LUNCH BREAK
13:45 – 15:15 Parallel session*	Session 1 (Cont'd...) Possible solutions to past CME questions <ul style="list-style-type: none"> • Access Bridge* - Q3 of CME February 2023 (Sections 2c, 2d and 2e) • Office Building* – Q2 of CME February 2023 (Sections 2c, 2d and 2e)
15:15 – 15:30	AFTERNOON TEA/COFFEE BREAK
15:30 – 16:30 Parallel session*	Workshop 1* (Cont'd..) - Hands-on session by candidates Candidates are expected to work on sections 2c, 2d & 2e to <ul style="list-style-type: none"> ➤ identify principal structural elements and briefly discuss calculation procedures ➤ discuss drawing details (not expected to draw details) ➤ discuss the method statement <ul style="list-style-type: none"> • New Railway Bridge* - Q3 of CME January 2024 • Defence facility* – Q2 of CME January 2024
16:30 – 17:15 Parallel session*	Workshop 1a* (Cont'd..) – Group discussion Candidates shall discuss their solutions with the tutor.
17:15 – 17:30	<ul style="list-style-type: none"> • General tips • Concluding remarks