<table>
<thead>
<tr>
<th>No.</th>
<th>TOPIC</th>
<th>PROPOSED DATE</th>
<th>COURSE CONTENT</th>
<th>RESOURCE PERSON</th>
<th>COST / PERSON</th>
</tr>
</thead>
</table>
| 1.  | Physical Asset Management                                           | February 24-28 (5 days) | • Reliability Improvement through Preventive Maintenance and Optimal Spares Stocking Policies.  
• Reliability Improvement through Inspection & Predictive Maintenance.  
• Life Cycle Costing (LLC) Management and Effective Use of Maintenance Resources.  
• Role of Emerging Technologies in Physical Asset Management. | University of Toronto Centre and Maintenance Optimization and Reliability Engineering (C-More), Canada | GH¢12,000 |
| 2.  | Discussion on Futuristic Software Technology and Trends for Structural Engineers in Ghana | February 25 Holiday Inn, Accra Airport  
| 3.  | Skills for High Performance Teamwork (Part 1)                       | March 9-11 (3 days) | • Self-Competency Diagnostics & Review and Individual Development, Action Planning (IDAP) - Using My3D online tool to understand your competency strengths and gaps (thinking and reasoning skills, behavioural and attitude and passion and leadership skills).  
• Module 1: Building Effective Personal Relations with Communication for Engineers.  
• Module 2: Giving/Receiving Feedback in Engineering Practice.  
• Module 3: Group Dynamics for Project/Engineering Teams. | TDI Global Group | GH¢1,300 |
<table>
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<tr>
<th>4.</th>
<th><strong>Skills for High Performance Teamwork (Part 2)</strong></th>
<th><strong>March 16-17 (2 days)</strong></th>
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<th>TDI Global Group</th>
<th>GH¢1,200</th>
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</table>
|  |  |  | • Module 4: Engineering Team Decision-Making.  
• Module 5: Engineering Team Problem-Solving.  
• Module 6: Conflict Resolution for Engineering Teams.  
• Module 7: Leveraging Time for Engineering Practice. |  |  |  |  |
| 5. | **Concrete Technology Training** (Highly subsidized) | April 7 – 8 |  |  | Mr. Vincent Oderah | GH¢400 |
|  |  |  | • Overview of the concrete industry in Ghana  
• Interaction of various concrete constituents  
• Cement, typical properties and use in Ghana  
• Effects of water-cement ratio  
• Admixtures: Importance in concrete and how to save concrete  
• Constructional cost whilst ensuring quality  
• Benefits of concrete additives such as pozzolana and fly-ash  
• Concreting case studies around Ghana  
• Concrete descriptive mix design based on BS EN 206-1  
• Hot-weather concreting  
• Water-tight, roller compacted, and marine concrete |  |  |  |  |
| 6. | **Engineering Construction Management** | April 14 - 16 (3 days) |  |  | Ing. Moses Arkoh  
Ing. Joshua Allotey | GH¢1,200 |
|  |  |  | • Basics of Construction Project Management  
• Evaluation of tenders  
• Adherence to planning and failure to plan (including Case studies)  
• Practical site experiences and higher qualifications devoid of site experience (case studies)  
• Causes, curbing and avoidance of cost overrun (case studies) |  |  |  |  |
| 7. | **Metal Structures Fabrication Quality Assurance** | April 20-22 (3 days) |  |  | STARFA | GH¢2,500 |
|  |  |  | Latest professional welding skills and techniques in the manufacturing, oil & gas industries.  
Metal structural assembling for Electric Pylons & Towers |  |  |  |  |
<table>
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<tr>
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<th>Course Title</th>
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</thead>
</table>
| 8 | **Industrial Safety Fire Prevention Management** | April 20-24 (3 days) | - Explain the role of the Fire Warden and understand the principles of combustion and fire spread within a building.  
- Know what actions to undertake in the event of a fire emergency and practice the safe and effective evacuation of their workplace.  
- Explain the reactions of people in a fire emergency and manage an emergency incident until the arrival of the fire and rescue service.  
- Have a good understanding of the first aid fire-fighting equipment in their premises and identify the key requirements of current fire safety legislation.  
- Follow the fire risk assessment process and identify fire safety issues within your workplace.  
- Undertake a practical fire safety audit of simple premises. | STARFA                          | GH¢2,500 |
| 9 | **AutoCAD 2020**                                 | April 27-28 (2 Days) | - Draft and edit geometry and models with solids, surfaces and mesh objects.  
- Annotate drawings with text, dimensions, leaders and tables | Cab Royale Limited              | GH¢300  |
| 10| **Revit MEP 2020**                               | April 29-30 (3 days) | - Develop Mechanical (HVAC, Fire Protection), Electrical lighting, Power, Low Voltage – TV, Communication), Plumbing (Water Supply & Drainage) BIMs  
- Develop coordinated and clash-free BIMs  
- Retrieving drawings and quantities directly from the Models. | Cab Royale Limited              | GH¢1,200 |
| 11| **Speaking for Lasting Impressions**             | May 4-6 (3 days) | - Self-Competency Diagnostics & Review and Individual Development, Action Planning (IDAP)- Using My3D online tool to understand your competency strengths and gaps (thinking and reasoning skills, behavioural and attitude and passion and leadership skills).  
- Module 1: Developing Dynamic Delivery. | TDI Global Group                | GH¢1,500 |
<table>
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<tr>
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<tbody>
<tr>
<td>12. Geotechnical Design Workshop - Reliability Based Design for Shallow Foundation using Eurocode 7</td>
<td>May 19 - 21 (3 days) Overview of EC7 &amp; Sources of uncertainties in soils Statistics and its use in the estimation of soil properties Partial factors discussion &amp; Design Combinations per EC7 The Design Steps and Design Workshop using as many case studies as possible Ing. J.K. Oddei GH¢500</td>
</tr>
<tr>
<td>13. ProtaStructure 2019</td>
<td>May 26- 27 (2 days) Innovative structural BIM solution for quick and accurate modelling, analysis and design of buildings. Advanced integrated features such as group design and 3D Finite Element Analysis. Staged construction, seismic design, foundations and punching shear checks. Quickly produce accurate bending schedules and all drawings for construction. Cab Royale Limited GH¢1,000</td>
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</table>
| 14.  | Advanced Leadership: From Control to Empowerment (Part 1) | June 1-3 (3 days)     | ▶ Self-Competency Diagnostics & Review and Individual Development, Action Planning (IDAP)- Using My3D online tool to understand your competency strengths and gaps (thinking and reasoning skills, behavioural and attitude and passion and leadership skills).  
Module 1: Principles of Leadership.  
Module 2: Practices of empowering Leaders.  
Module 3: The five Leadership Roles.  
Module 4: Leadership Roles: An Assessment. | TDI Global Group                         | GH₵1,500   |
| 15.  | Advanced Leadership: From Control to Empowerment (Part 2) | June 8-9 (2 days)     | ▶ Module 5: Personal Productivity.  
Module 6: Fundamentals of High-Performance Teams.                                                                                   | TDI Global Group                         | GH₵1,200   |
▶ METHODS OF DRIVING – SUMMARY  
▶ THEORETICAL CONSIDERATIONS OF PILING  
  a. Design summary  
  b. Design specifications  
  c. Case Study – sheet piling (Doninga pier 1)  
▶ UNDER SEA PILING  
  a. Summary Method  
  b. Specifications  
  CASE STUDY – TAKORADI  
▶ BORE PILING – o Machinery  
  o Method statement  
  o Case study  
  Doninga: abutment piles  
▶ PILING IN FLOOD WATERS  
  a. Method statement  
  b. Case study - Sissili Pier 4 (reclamation of land through sheet piling + bore piling) | Ing. Joshua Allotey                         | GH₵750     |
### TEMPORARY RIVER CROSSING

| a. Design considerations |
| b. Construction |
| c. Function during flood |
| d. Advantages/disadvantages |

### DISCUSSIONS / COURSE WORK

| 17. Advanced Concrete Technology Training (Highly subsidized) | June 23 – 24 | Concrete repair solutions |
| | | Logical structure to the steps in the repair process of developing repair solutions |
| | | Effective waterproofing systems as outlined in BS EN8102:2009 Joint sealants |
| | | 1K and 2K waterproofing systems |
| | | Epoxy flooring solutions |
| | | Mr. Vincent Oderah |
| | | GH¢400 |

| 18. Occupational Health and Safety Management System Awareness Course (ISO 45001:2018) | June 31 – July 1 | Ing. Ben Richard Aniagyei, Past President of GhIE Degree in Mechanical Engineering KNUST. He has over 30 years working experience in the field. |
| | | GH¢850 |

<p>| 19. Energy Management System Awareness Course (ISO 50001) | July 8 – 9 | Ing. Ben Richard Aniagyei, Past President of GhIE Degree in Mechanical Engineering KNUST. He has over 30 years working experience |
| | | |</p>
<table>
<thead>
<tr>
<th>Course</th>
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<th>Modules</th>
<th>Instructors</th>
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</tr>
</thead>
</table>
| Geotechnical Design Workshop – Serviceability Limit State (SLS) Design using EC7-1 for shallow foundation. | July 14 – 16 (3 days) | • Overview of Ultimate Limit State (ULS) design Principles  
• Design Examples for the ULS  
• SLS design steps and Design Workshop | Ing. J.K. Oddei | GH¢500 |
| Urban Flood Modelling with HECHMS           | July 28 - 29 (2 days) | • HEC HMS User Interface  
• HEC HMS Basin Models  
• HEC HMS Meteorological Models  
• Calibrating HEC HMS Models & Modelling Future Scenarios | Ing. Kojo Keelson | GH¢850 |
| Health Safety & Environment (HSE)- Internal Audit Training | Aug 4 - 6 (3 days) | Overview of OHSAS 18001:2007 Management System Standards requirements  
Internal Audit Process:  
• Internal Audit Objectives and targets  
• Audit Definitions  
• Audit Principles and Audit Types of Audit  
planning/program of  
• How to Conduct the Audit  
• Audit Review/Reports  
• Benefits of Internal Audits  
Audit case study and role-play | Ing. Ben Richard Aniagyei, Past President of GhIE  
Degree in Mechanical Engineering KNUST.  
He has over 30 years working experience in the field. | GH¢1,000 |
Degree in Mechanical Engineering KNUST.  
He has over 30 years working experience in the field. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Program Title</th>
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<th>Trainers</th>
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</tr>
</thead>
</table>
- Contract Formulation & Preparation  
- Tender Pricing & Procedures  
- Tender Evaluation & Negotiation  
- Contract Administration  
- Variation Orders, Claims & Settlements of Disputes | Hon. David Opon-Kusi. FGhIS  
Surv. James Klu. FGhIS  
Ing. Kwesi Abbey Sam. FGhIE  
Lawyer Effiba Amihere | Gh¢850 |
- Writing Style and Language  
- Presentation of Information  
- Textual (Descriptive)-Graphical, Numerical and Types of Summary | Dr. Kobby Mensah, PhD from the University of Sheffield, UK.  
He is a leading expert in Communication, | Gh¢850 |
| 25.  | Fire Safety Design – Principles and Practice 3    | September 2 - 3 (2 days) | - Design Principles for fire prevention:  
- Architectural Design  
- Electrical Design  
- Structural Design  
- Fire Fighting Techniques | Architect Harold Evans  
Ing. Joshua Allotey  
Mr. D.S. Afful | GH¢850 |
| 26.  | Concrete Technology Training (Highly subsidized)  | September 8 – 9 | - Overview of the concrete industry in Ghana  
- Interaction of various concrete constituents  
- Cement, typical properties and use in Ghana  
- Effects of water-cement ratio  
- Admixtures: Importance in concrete and how to save concrete constructional cost whilst ensuring quality. | Mr. Vincent Oderah | GH¢400 |
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</tr>
</thead>
</table>
| Analysis & Design of Stormwater Conveyance System | September 15 - 16 (2 days) | • Overview of Stormwater System  
• Relationship between Rainfall and Runoff  
• Estimation of Peak Flows for Design using Rational Method | Ing. Obeng Atuah                                  | GH¢850 |
| Rainfall Runoff Modelling with EPA SWMM     | October 13 - 14 (2 days) | • Rainfall Data Types  
• Overland Flow Routing  
• Infiltration Methods  
• Sensitivity Analysis and Calibration  
• Continuous Simulation | Ing. Kojo Keelson                                  | Gh¢1,200 |
| Electrical Safety                          | November 4 - 5 (2 days) | • General Electrical Safety  
• Electrical Safety (cont.)  
• Exercise / Discussions  
• Safe Excavations / Works Permit System  
• Work Permit System  
• Work on High / Low Voltage Systems  
• Control of Hazardous Energies  
• Safe Installation of Gensets  
• Video on Safe Electrical Work Practices | Ing. Ben Richard Aniagyei, Past President of GhIE Degree in Mechanical Engineering KNUST. He has over 30 years working experience in the field. | GH¢850 |
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<tr>
<th>No.</th>
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<th>Details</th>
<th>Instructor</th>
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| 30. | Advanced Concrete Technology Training (Highly subsidized)                     | November 10 - 11      | • Concrete repair solutions  
• Logical structure to the steps in the repair process of developing repair solutions  
• Effective waterproofing systems as outlined in BS EN8102:2009  
• Joint sealants  
• 1K and 2K waterproofing systems  
• Epoxy flooring solutions | Mr. Vincent Oderah     | GH¢400 |
| 31. | Designing with Auto CAD Civil 3D 2011                                        | November 16 - 20      | • Working with Points  
• Surfaces  
• Alignment  
• Profiles  
• Corridor | Ing. Bernard Owusu       | BSc. Civil Engineering, MSc. Road and Transportation Engineering, GH¢1,500 |
| 32. | HSE Awareness course for Oil Marketing Companies (OMCs)                       | November 24 – 25      |                                                                 | Ing. Ben Richard Aniagyei, Past President of GhIE  
Degree in Mechanical Engineering KNUST. He has over 30 years working experience in the field. |     |

Reservations may be made by: Tel: 0540502347 or 0302 -760867/8, or Email: jacbeecham@ghie.org.qh and copy ghiecentre@yahooo.com.