COURSE OVERVIEW GE0520
Geographic Information Systems Applications in Oil and Gas Upstream

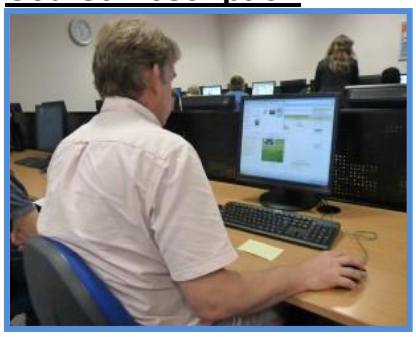
Course Title
Geographic Information Systems Applications in Oil and Gas Upstream

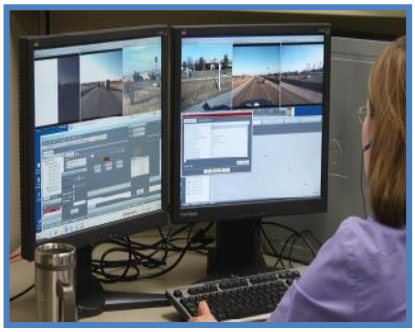
Course Date/Venue
Session 1: January 06-10, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
Session 2: July 27-31, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference
GE0520

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description





This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using the geographical information system software.

The course provides a broad introduction to GIS including the fundamentals of the science, key supporting technologies, and prominent organizations in the field. Participants are introduced to the components of GIS, different data types and their sources, and the concept of spatial analysis. A series of case studies provide examples of how GIS can be applied in different disciplines. Some hands-on software exercises provide an exposure to basic tools and GIS principles. The role that GIS plays in integration with other information technologies, such as enterprise databases and Internet applications, is also investigated.

Further, the course will also cover the principle GIS functions and components and how they interact to aid in decision making processes; the principle data models used to represent data spatially; the diverse ways GIS may be applied to solve problems and inform business processes; the major geospatial initiatives and organizations that are shaping the role of GIS in society; the use of spatial data for visualization, query, and analysis; and the web-based tools and internet sites pertinent to the technology.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on Geographical Information System (GIS) and related technologies
- Discuss the principle GIS functions and components and how they interact to aid in decision making processes
- Explore the principle data models used to represent data spatially
- Identify the diverse ways GIS may be applied to solve problems and inform business processes
- Discuss the major geospatial initiatives and organizations that are shaping the role of GIS in society
- Use spatial data for visualization, query, and analysis
- Explore web-based tools and Internet sites pertinent to the technology

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides a broad overview of GIS, the geospatial industry, and related technologies. It is ideally suited for those that are new to the technology, need an updated understanding of the industry, or those that will be managing GIS professionals.

Course Fee

US$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours: -

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Mostafa Essam, MSc (on-going), PgDip, Pre-Master, BSc, PMI-PMP, is a **Senior GIS Consultant** with extensive years of hands-on practical experience in the areas of **ArcGIS Pro**, **ArcGIS Online**, **ArcGIS Enterprise**, **GIS Technology**, **GIS & Remote Sensing Solution** & Technology, **GIS** Desktop, **GIS** Data & Tools, **GIS Database Systems & Platforms**, **GIS Strategy Plan** & Building Capacity, **POSTGIS** Library, **GIS & IoT Integrations**, **GIS Design Solutions**, **Remote Sensing Models** & Application, **Database Servers**, **Enterprise Database Development**, **Geospatial Solutions**, **Data Analysis Processes**, Computer-Aided Design (**CAD**), Global Positioning Systems (**GPS**), **Geospatial Database Mapping**, **Spatial Analysis**, **Statistical Analysis** using **Python Libraries**, **Data Conversions & Reformatting** using **ESRI Software** (**ArcGIS 10.6**), **Geo Database** using **ArcGIS 10.2** with **Raster-Vector Data**, **Imagery Catalogue, Machine Learning** in **Image Processing**, **Satellite Imagery** Classification, **Maps Production** (Contour Maps, Spatial Maps, Thematic & Zonal Maps, Landscape Maps & Environmental Maps for Mining), **Forest Burn Mapping**, **Exploration Maps** and **Well Logging & Mapping**. He is also well-versed in various **Software** such as ArcMap, ArcPro, ArcGIS Online, ArcGIS Enterprise, ArcGIS Server, ArcGIS Image Server, GEOMEDIA, ERDAS IMAGINE, M.App Enterprise, ERDAS APOLLO, LUCIAD Fusion, AutoCAD, AutoCAD Map 3D, QGIS, Global Mapper, SuperMap, MSSQL, ORACLE, POSTGRES, Mi. Project, Visio, Diagram.io, HTML, CSS, c#, Python, OGC Service Protocols, INSPIRE DB Schemes, Machine Learning, Deep learning, Photoshop, Video Editing, Figma, Advanced Excel, DAX Functions, Power Query, PowerBI and SPSS. He is currently the **Geospatial Solutions Expert & Database Analyst** wherein he is handling a comprehensive project for enhancing the road safety and traffic management though the use of advanced technologies, real-time data processing and GIS analytics.

During his career life, Mr. Mostafa has gained his practical and field experience through his various significant positions and dedication as the **GIS Project Manager**, **GIS Business Analyst/GIS Analyst**, **Geospatial Solution Architect**, **Remote Sensing Expert**, **Development Team Leader**, **Database Administrator**, **GIS & Remote Sensing Senior Analyst**, **GIS Analyst**, **GIS Specialist**, **Technical Training Department Manager** and **GIS Draftsman** from various multi-national companies within the Middle East.

Mr. Mostafa has a **Pre-Master** in **Applied GIS/RS**, a **Bachelor** of **Arts** degree in **Geography**, a **Postgraduate Diploma** in **GIS**, a **Diploma** in **.Net Back-End Development** and currently enrolled in a **Master's** degree in **Geography**. Further, he is a Certified Project Management Professional (**PMI-PMP**) by the Project Management Institute and has various certificates in Data Analysis Using Microsoft Power BI, Canadian SAR Application, Advanced UX Design, Front-End Web Development and Data Analysis. He is also an **active member** of NASA Space App Competition, Information Technology institute (ITI) and Oasis Academy and has delivered numerous trainings, courses, workshops, seminars and conferences globally.

Course Program

The following program is planned for this course. However, the course instructor may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0915	***Introduction to GIS***
0915 – 0930	*Break*
0930 – 1115	***Brief History***
1115 – 1230	***Definition*** *Maps • Images Assessment*
1230 – 1245	*Break*
1245 – 1420	***Cartographic Issues***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Spatial Reference***
0930 – 0945	*Break*
0945 – 1115	***Spatial Reference (cont'd)***
1115 – 1215	***Spatial Representation***
1215 – 1230	*Break*
1230 – 1420	***Spatial Representation (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Fundamentals of GIS & Geotechnologies*** *Remote Sensing*
0930 – 0945	*Break*
0945 – 1115	***Fundamentals of GIS & Geotechnologies (cont'd)*** *Map Projection*
1115 – 1215	***GIS Process***
1215 – 1230	*Break*
1230 – 1420	***GIS Process (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

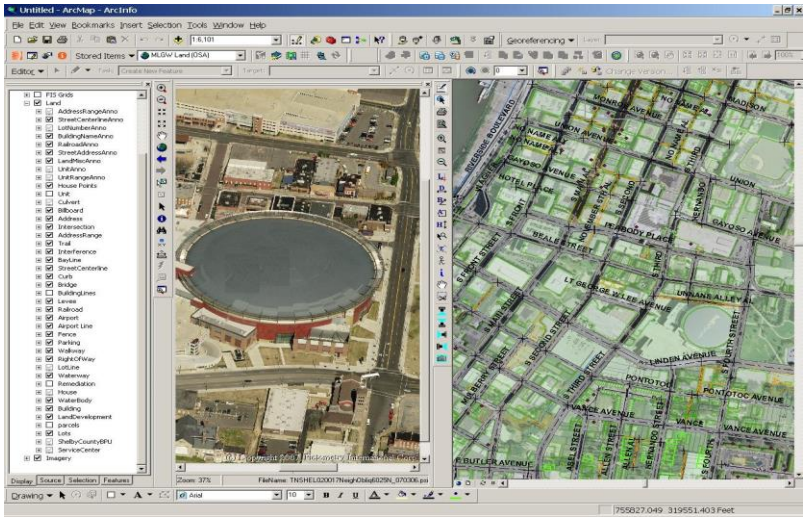
0730 – 0930	***Spatial Data***
0930 – 0945	*Break*
0945 – 1115	***Spatial Data (cont'd)***
1115 – 1215	***GIS in Enterprise***
1215 – 1230	*Break*
1230 – 1420	***GIS in Enterprise (cont'd)***
1420 - 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Applications of GIS***
0930 – 0945	*Break*
0945 – 1100	***Applications of GIS (cont'd)***
1100 – 1215	***GIS Organizations & Standards***
1215 – 1230	*Break*
1230 – 1315	***GIS Organizations & Standards (cont'd)***
1315 – 1345	*Summary*
1345 - 1400	***Course Conclusion***
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the "ArcGIS 10.1 Software".



ArcGIS 10.1 Software

Course Coordinator

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