

COURSE OVERVIEW GE0251

Empowering Decisions with Spatial Data: Capture, Analysis and Visualization

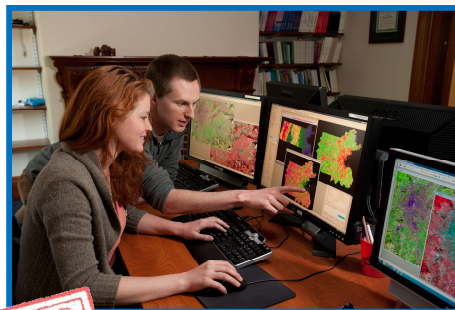
Course Title

Empowering Decisions with Spatial Data: Capture, Analysis and Visualization

Course Date/Venue

Session 1: April 07-11, 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

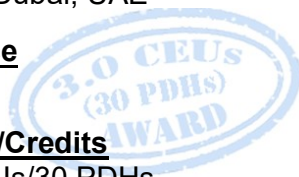


Course Reference

GE0251

Course Duration/Credits

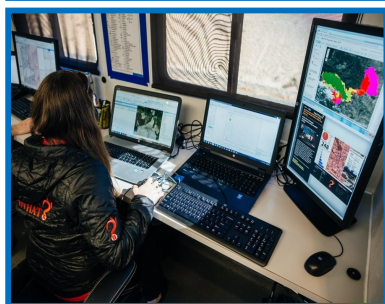
Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.



This course is designed to provide participants with a detailed and up-to-date overview of GIS, spatial analysis and modeling. It covers the spatial analysis including the basic techniques and toolsets; the spatial interpolation, kriging, IDW, theissen polygons, inverse-distance weighting and creating a buffer; the basic elements of spatial information required to undertake spatial analysis; the spatial statistics toolbox as well as the conversion tool and map overlay operations; and the calculation of effective distance, point pattern analysis and kernel density estimation.



During this interactive course, participants will learn the geo referencing, projection and transformation; editing attributes and records; the symbology, classification and spatial autocorrelation tool; the raster and image analysis, map algebra, raster conversion, raster calculation and reclassification; the basic spatial modelling approaches; the role of GIS in spatial modelling; and the model builder and spatial modelling example.

Course Objectives

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

- Apply and gain an in-depth knowledge on GIS, spatial analysis and modeling
- Discuss spatial analysis including the basic techniques and toolsets
- Recognize spatial interpolation, kriging, IDW, theissen polygons, inverse-distance weighting and creating a buffer
- Identify the basic elements of spatial information required to undertake spatial analysis
- Discuss spatial statistics toolbox and illustrate conversion tool, map overlay operations, calculating effective distance, point pattern analysis and kernel density estimation
- Interpret geo referencing, projection and transformation as well as edit attributes and records
- Explain the symbology, classification and spatial autocorrelation tool
- Carryout raster and image analysis, map algebra, raster conversion, raster calculation and reclassification
- Employ basic spatial modelling approaches and identify the role of GIS in spatial modelling
- Recognize model builder and spatial modelling

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Howard 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 an overview of all significant aspects and considerations of GIS, spatial analysis and modeling for those that are new to the technology, need an updated understanding of the industry, or those that will be managing GIS professionals. Further, the course also beneficial to GIS support – junior staff from electricity planning department.

Course Fee

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

Accommodation


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

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.

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. Amer AlKhatib, MSc, BSc, is a **Senior Engineer** with over **25 years** of integrated industrial experience and academic experience as a **University Professor**. His wide expertise lies extensively in the areas of **ArcGIS Data Management, Spatial Analysis, Spatial Data Management, Collecting & Evaluating Data, Data Integration & Quality Control, Alignment Techniques, Cartographic Planning Process & Design Principles, Editing Workflows & Geometry, Geographic Coordinate Systems, Advanced Symbology Techniques, Comparing Projections, Map Projections, Geographic Information System (GIS) & Remote Sensing, Advanced Operating Systems, Graphic Drawing, Advanced Digital Mapping, Digital Cartography, PC ARC/INFO System, Advanced Remote Sensing, Advanced Operating System, Graphic Drawing, Global Signing System, Global Positioning System (GPS), Web Mapping, Geodatabase Management, Engineering Survey, Building Geodatabase** and various softwares such as ArcGIS, Global Mapping, Google Earth Pro, Envi 4.2 and Terra Incognita.

During his career life, Mr. Amer has gained his practical and field experience through his various significant positions and dedication as the **University Professor** for various institutes and research centers like the Mutah University, Karak Governorate, Jordanian Computer Corner, Royal Jordanian Geographical Center, Information Advisory Association, Automatic Drawing Company and Graphic Information Systems Company.

Mr. Amer has a **Master** degree in **Information Systems** and a **Bachelor** degree in **Geography**. Further, he is a **Certified Instructor/Trainer** and has delivered numerous trainings, seminars, courses, workshops and conferences globally.

Course Program

The following program is planned for this course. However, the course instructor(s) 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	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0930	Introduction: What is Spatial Analysis?
0930 – 0945	<i>Break</i>
0945 – 1030	Basic Techniques in Spatial Analysis & Spatial Analyst Toolsets
1030 – 1230	Spatial Interpolation, Kriging, IDW, Thiessen Polygons, Inverse-Distance Weighting & Creating Buffer

1230 -1245	Break
1245 – 1420	Basic Elements of Spatial Information Required to Undertake Spatial Analysis
1420 – 1430	Recap
1430	Lunch & End of Day One

Day 2

0730 – 0930	Overview of the Spatial Statistics Toolbox
0930 – 0945	Break
0945 – 1100	Conversion Tool & Map Overlay Operations
1100 – 1230	Calculating Effective Distance
1230 – 1245	Break
1245 – 1420	Point Pattern Analysis & Kernel Density Estimation
1420 – 1430	Recap
1430	Lunch & End of Day Two

Day 3

0730 – 0930	Geo Referencing, Projection & Transformation
0930 – 0945	Break
0945 – 1100	Editing Attributes & Records
1100 – 1230	Symbology & Classification
1230 – 1245	Break
1245 – 1420	Spatial Autocorrelation Tool
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4

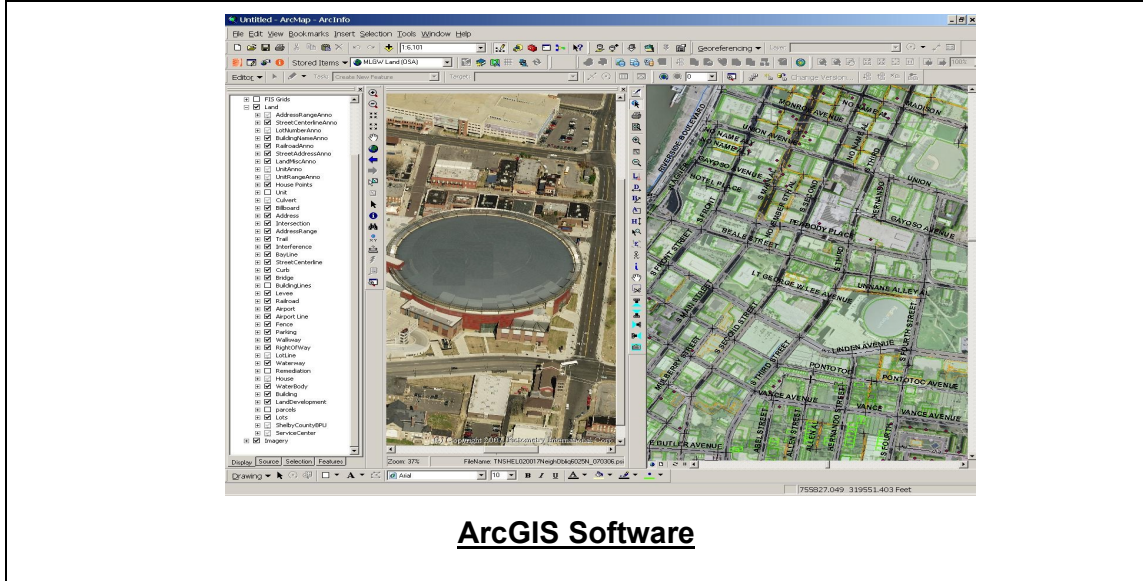
0730 – 0930	Raster & Image Analysis
0930 – 0945	Break
0945 – 1100	Map Algebra
1100 – 1230	Raster Conversion & Raster Calculation
1230 – 1245	Break
1245 – 1420	Reclassification
1420 – 1430	Recap
1430	Lunch & End of Day Four

Day 5

0730 – 0830	Basic Spatial Modelling Approaches
0830 – 0930	The Role of GIS In Spatial Modelling
0930 – 0945	Break
0945 – 1230	An Overview of Model Builder
1230 – 1245	Break
1245 – 1345	Spatial Modelling Example
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 Software”.



ArcGIS Software

Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org