

Hexagon Geospatial U

Geospatial education programs and partnerships

Brochure



At Hexagon, we understand the importance of continually learning, growing and challenging yourself. Our history of innovation proves just that – we've been pioneers and leaders in the geospatial industry for more than four decades. Our innovative software will give you the tools you need to open new doors and invest in the future with confidence.

Hexagon Geospatial U offers more than remote sensing or GIS solutions. Hexagon offers access to Hexagon's entire geospatial portfolio, which brings together all GIS, remote sensing and photogrammetry software. There are several different Hexagon Geospatial U offerings to satisfy the geospatial needs of each university. Depending on your academic focus, you can select programs with desktop, enterprise or cloud platforms, or any combination of the three, to teach the entire geospatial suite.

Get support and tools for research projects and teaching, including rich documentation and deep insights so students understand how to apply these technologies in key industry sectors. We realise the futures of the business and academic communities are inevitably intertwined, and by working together, we can help the world make smarter decisions.

What's in it for you?

Training benefits

- Free e-training modules: Fast, focused on-demand training
- Free webcasts: On-demand, archived <u>webcasts</u> and live webcasts with demonstrations of Hexagon's solutions
- Free step-by-step tutorials and slide presentations: Lecture materials and example data for university educators on the <u>Hexagon Geospatial U Community website</u>



Education programs, grants and partnerships

Hexagon offers the following education programs and grants and is part of the following partnerships:

- Remote Sensing for Education Program
- GIS for Education Program
- Luciad Education Program
- M.App Programs for Education
- Campuswide Grant
- Brilliant Remote Sensing Labs Training Partnership

Programs

Remote Sensing for Education Program

Geographic imaging professionals need to process vast amounts of geospatial data every day. Diverse organisations use ERDAS IMAGINE to leverage their geospatial data investments. Some examples include:

- Land and urban planners monitor and support decision-making for sustainable urban development in dense urban environments with changes
- Data producers use photogrammetric tools to streamline rectification processing workflows, increasing the performance and accuracy of the information generated
- Transportation analysts streamline the construction process and monitor infrastructure
- Defence analysts discover specific activities to support field operations and react to events quickly





With the Spatial Model Editor, available in both ERDAS IMAGINE and GeoMedia, an intuitive graphical tool enables complex geospatial analysis and information extraction tasks to be implemented, shared and executed, without the need to learn programming or scripting languages

In the Remote Sensing for Education Program, students and • instructors will gain hands-on experience in:

- <u>ERDAS IMAGINE Professional</u>: Graphical spatial model editor for building and executing reusable spatial recipes, multispectral image classification, hyperspectral image processing and point cloud tools
- IMAGINE Expansion Pack: Includes automated imageto-image coregistration (AutoSync), 3D visualisation and analysis (VirtualGIS), wizard-based change detection (DeltaCue), orthorectifying radar data (OrthoRadar), NITF support, extracting terrain from SAR images and stereo feature collection
- ERDAS ER Mapper: Advanced image processing and compression capabilities geared toward oil, gas and mineral industries
- <u>IMAGINE Photogrammetry</u>: Analytical triangulation, orthorectify imagery, produce orthomosaics and generate terrain models, including high-resolution point clouds
- <u>IMAGINE DSM Extractor</u>: Generate digital surface models using advanced semi-global matching algorithms
- <u>IMAGINE Terrain Editor</u>: Edit terrain data draped directly over a stereo image pair



Use advanced photogrammetry techniques such as semi-global matching (SGM) to generate dense point clouds from blocks of imagery



Use artificial intelligence to classify the points into landcover types and perform watershed analyses and other surface-model based processes



GIS for Education Program

Making a good map requires powerful analytical tools and clear symbolisation. A wide range of organisations manage their geospatial feature and vector data with GeoMedia, a powerful flexible GIS management platform. Some examples include:

- Map production agencies and local, regional and national governments derive valuable information from multiple operations in conjunction with dynamic info on the fly
- Utility organisations can automate management of their network and infrastructure
- City officials get insight needed to reduce traffic and car accidents as well as improve 911 response time

In the GIS for Education Program, students and instructors will gain hands-on experience in:

- <u>GeoMedia Professional</u>: Includes grid analysis, data fusion, transaction management, public works management and parcel management
- <u>GeoMedia Transportation Manager</u>: Analyse and maintain linear road networks and infrastructure
- <u>GeoMedia Motion Video Analyst Professional</u>: Analyse motion video taken from UAVs and other moving vehicles
- <u>GeoMedia Advanced Collection</u>: Includes functionality from GeoMedia Feature Topographer



Analyse data and perform complex "what-if" scenario analysis using GeoMedia's query and pipe technology

Classroom licenses

Classroom licenses for Remote Sensing and GIS for Education Programs are concurrent (shared) and designed for use on-site at universities.

The university may purchase annual subscriptions or permanent licenses. For details, contact us.

Student licenses for use off campus

Hexagon offers universities the ability to distribute licenses to its students for use off campus. These student licenses are node locked and for use only on students' personal computers. These licenses can be used at home when working remotely. For details, <u>contact us</u>.

Student licenses can be included with the purchase of 5 or more annual subscriptions or permanent software maintenance package for Remote Sensing for Education, GIS for Education or Campuswide Grant programs.

These student licenses are effective at the university's time of purchase or maintenance renewal, and expire 12 months after activation.

Students can acquire support from the university or from the Hexagon Geospatial Community. They can join the community for free by registering at <u>Hexagon Geospatial Community</u>. Students do not receive support directly from Hexagon.

Single-use licenses

For academics who want to use any of the software packages in the Remote Sensing for Education or GIS for Education programs for research projects, we offer a single-seat annual subscription. Single-seat licenses do not include free licenses for students. Academics can also purchase individual permanent licenses at a discount. <u>Contact us</u> for more information.

Luciad Education Program

Create next-generation geospatial solutions

Are you looking to teach your students leading-edge capabilities at the forefront of technology? It's no longer enough to simply see the data in real time. Predictive analysis is the next step in making smarter and faster decisions.

Luciad Portfolio solutions visualise and analyse objects that move and change on the Earth's surface – planes, trains, ships, people, infrastructure and more. These high-performance visualisation and analysis solutions are interoperable with other systems, technology and data. Taking 2D and 3D information, this technology adds 4D through connections to live sensor feeds as they monitor moving objects, then adds 5D through real-time visualisation and analysis of the sensor data to immediately calculate and deliver information.

Luciad Portfolio tools are especially suitable for projects in graduate-level computer science, computer engineering, civil engineering, mathematics, computational science and research concentrations. Typical research initiatives where Luciad technology can provide rapid application development include big data and visualisation, visual analytics research, unmanned vehicles and systems, operations research, smart cities research and smart farming capabilities.

The Luciad Education Program offers Luciad Portfolio desktop, server or browser solutions. This program consists of your choice from the following products:

- <u>LuciadLightspeed</u> (Advanced tier): Visualise large volumes of tracks of any type of asset – from troops, ships, trucks and planes to individuals or RFID-tagged pallets or goods – instantly
- <u>LuciadFusion</u> (Advanced tier): Store and manage data intelligently, process a multitude of data formats and feed data to numerous applications
- <u>LuciadRIA</u> (Essential tier): Build a standards-based interoperable web-based solution that displays in 2D and 3D



Visualising military symbology, tactical graphics and the result of a line-of sight calculation, in 3D draped on terrain

M.App Programs for Education

Build the M.App of the future

Hexagon invites students, professors and research scientists to build the M.App of the future. Hexagon Smart M.Apps are not your ordinary static maps. These targeted information services combine fresh geospatial content and workflows to deliver an interactive experience that includes a map and a dashboard of insightful analytics. These services simultaneously connect to historical (static) data and dynamic (live) data sources. In the M.App program, academic organisations can select from two options:

- M.App Enterprise for Education Program
- M.App X for Education Program



M.App Enterprise 3D map and charts showing floodwater damage





M.App Enterprise map and charts showing vehicle collision data

M.App Enterprise for Education Program

M.App Enterprise provides a unified geospatial enterprise platform that allows students, professors and researchers to easily create, configure and share applications (including Smart M.Apps) for their courses and projects. M.App Enterprise can be used campuswide.

Your university may have several different departments that could create and configure their own apps. The geology or geomorphology department may want to create apps that use radar displacement to study land movement using the

M.App X for Education Program

Suitable for military academies and universities that are training students for a career in the GEOINT community, M.App X is a browser-based geospatial platform for users who want to process and analyse imagery in real time using GIS and remote sensing capabilities and without the heavy cost of high-end hardware and software. M.App X fosters geospatial tradecraft creation, common usage and secure sharing of the latest intel, making up-to-date information accessible and reusable. ERDAS IMAGINE Spatial Modeler or radar tools. The health department may want to create dashboards to study and track the COVID-19 pandemic. The forestry department may want to use machine learning to count oil palms.

The agriculture department may be interested in vegetation indices for best practices for precision farming. Civil engineering and urban planning departments may want to use geoprocessing in ERDAS IMAGINE for change detection.

Centralised storage and computation eliminate the cost of maintaining multiple workstations. This enterprise solution requires only one installation. Students can use ERDAS IMAGINE via browser on any operating system, meaning individual licenses need not be purchased.

Built on decades of experience in providing image analysis capabilities, M.App X contains industry-specific tools and workflows for the GEOINT community and security organisations.

Partnerships

Brilliant Remote Sensing Labs Training Partnership

To boost knowledge of remote sensing and satellite image processing topics, our partnership with Brilliant Remote Sensing Labs enables its Remote Sensing Portal to offer free, up-to-date ERDAS IMAGINE software education licenses to students, professors and all professionals around the world during their online training period in the Remote Sensing Portal. This online learning portal offers courses and a flexible certificate program. To enroll, visit the <u>Remote Sensing Portal</u> and click Enroll Now to purchase courses.



Grants

Campuswide Grant

Hexagon Geospatial U offers universities an education campuswide grant of up to 500 licenses of ERDAS IMAGINE Essentials. With numerous licenses, we provide universities with a complimentary, unique and robust package that other geospatial software companies cannot match.

Free student licenses with grant program

The geospatial education Campuswide Grant program allows students to obtain free software licenses for use in the comfort of their own homes. Student licenses must be administered by the university. <u>Contact us</u> for details.



Licensing options

Hexagon offers flexible subscription and licensing options for a variety of programs. Contact us for details.

Subscription support

Support is available for annual subscriptions and permanent licenses. Support is included with annual subscriptions. Customers who choose permanent licenses must purchase a software maintenance contract annually to receive support portal access and other benefits. Annual student licenses for use off campus are only available with the purchase of annual software maintenance contract for permanent license holders. For more information, <u>contact us</u>.

Documentation is also available for the products in many of the programs. Visit the Hexagon geospatial <u>documentation portal</u> to browse, read, search, comment and save product information.

Hexagon Geospatial Community

Students, instructors and researchers may also register and use the Hexagon Geospatial Community which includes a knowledge base, discussion boards and e-training modules, to have their questions answered through product-specific information, self-guided training, community feedback and more.

Access the Hexagon Geospatial Community.

Hexagon Geospatial U Community

Designed for university educators, the Hexagon Geospatial U Community contains thousands of pages of curriculum including presentations, tutorials and example data for various products in our education portfolios. Students can follow the step-by-step tutorials for lab exercises.

Become a part of the <u>Hexagon Geospatial U Community</u>.

Contact us

Join the technology revolution!

For more information on our Education Programs, contact your local sales representative, local Hexagon Geospatial partner/reseller or the <u>Global Education Manager</u>.



Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications. Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Safety, Infrastructure & Geospatial division improves the resilience and sustainability of the world's critical services and infrastructure. Our solutions turn complex data about people, places and assets into meaningful information and capabilities for better, faster decision-making in public safety, utilities, defense, transportation and government. Learn more at <u>hexagon.com</u> and follow us <u>@HexagonAB</u>.

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