

EDUCATION

# INTERGRAPH® U

Global Education Program







# MOVING THE WORLD FORWARD

At Intergraph®, we understand the importance of continuously learning, growing, and challenging oneself. Our more than 40-year history of innovation proves just that. As the leading global provider of engineering and geospatial software, Intergraph is constantly building on our expertise and experience of the past to positively impact current and future generations.

One way we are achieving this is through our global education program – Intergraph U. Through research initiatives and grant programs, we strive to build a better tomorrow by donating millions of dollars in software and services to universities worldwide.

Colleges and universities across the globe are already benefiting from Intergraph software in a classroom environment. This empowers students to explore the multiple career possibilities available to them, and enter the high-tech workforce with the tools and knowledge they need to be successful. Early access to leading technology ensures students are better educated and more highly qualified to become future industry leaders.

Professors – regardless of what institution or industry you are affiliated with, Intergraph U has an option to fit your exact needs. And students, you can let your voice be heard! If your university isn't yet involved with Intergraph U – contact your professor or staff representative and let them know how they can benefit from this program.

## INTERGRAPH U EDUCATION GRANTS

Intergraph U offers institutions education grants that focus on three distinct industries – geographic information systems, plant engineering, and digital photogrammetry.

To qualify for one of Intergraph's grants, you must complete an Intergraph U – Global Education Program application on behalf of your institution and share your prepared teaching material and course curriculum. Our geographic information systems and plant engineering grant programs offer software, training, maintenance support, and software upgrades free of charge to qualified research institutions, laboratories, and institutions of higher education worldwide. And for a nominal fee, you can take advantage of all Intergraph's digital photogrammetry education grant has to offer. If required, third-party software and hardware are also available at a special education rate.

## GEOGRAPHIC INFORMATION SYSTEMS EDUCATION GRANT

As a forward-thinking organization, Intergraph supports the advancement of innovative technology. Our geospatially based education software offers support and tools for academic research projects and teaching, as well as provides students with insight into how to apply these technologies into key industry sectors around the world, such as defense and intelligence, public safety and security, government, transportation, utilities, and communications. We realize the future of the business and academic communities are inevitably intertwined, and by working together, we can build a more solid foundation for advancing the role of geospatial technology.

## Registered Research Laboratory

Designed to facilitate academic research, our Registered Research Laboratory (RRL) program provides students, educators, and researchers with the leading-edge technology and development support needed for applied research activities. With Intergraph, researchers have the freedom to explore new possibilities and the power to make an impact within their industries.

Benefits include:

- Software licenses\* of:
  - GeoMedia®
  - GeoMedia Grid
  - GeoMedia Image
  - GeoMedia Map Publisher
  - GeoMedia Professional
  - GeoMedia Terrain
  - GeoMedia WebMap Professional
- Tech Net access (a secure section of the Intergraph Web site that hosts technical papers, a developers' forum, and sample commands)
- Complimentary e-mail support (limited) from local Intergraph office
- One free academic place reservation available for each standard course
- Entry into the Online Research Library
- Online tutorials
- Priority notification and consultation (when appropriate) regarding new academic offerings

## Geospatial Production and Exploitation Education RRL Bundle

Defense and intelligence agencies and governments worldwide use Intergraph's geospatially powered solutions to transform vast amounts of complex data into actionable intelligence, enabling quicker and more informed decisions. This bundle includes

\* For descriptions of Intergraph software offered as part of all Intergraph U education grants, refer to the last section of this brochure.

a winning combination of geospatial production and exploitation tools. On the production side, you'll receive tools for the collection, validation, management, and exchange of mapping data. It also supports the production of standard military mapping products, such as hardcopy and digital maps. These tools provide comprehensive capabilities to conduct all aspects of a map production workflow in a robust, efficient manner.

The included exploitation software provides a comprehensive environment for organizing, pre-processing, managing, integrating, analyzing, and disseminating geospatial intelligence. It allows operators and analysts to work with large amounts of satellite imagery, aerial photos, and other forms of geospatial intelligence in a powerful, yet intuitive, environment.

### **Security, Government & Infrastructure (SG&I) Education Grant**

Recognizing innovative teaching practices, the Security, Government & Infrastructure (SG&I) Education Grant is designed to advance geographic information systems (GIS) in the classroom through the use of innovative geospatial technology. A goal of Intergraph U is to achieve closer collaboration between the academic and commercial communities to further develop and implement the role of spatial technology in today's society. As spatial technology impacts almost every aspect of our lives, this growing sector continues to need qualified individuals to solve challenges and dive into the world of opportunities awaiting exploration. Offering courses that use geospatial software tools will help students be better prepared for their future careers in an array of diverse industries that would benefit from this skill set.

Image courtesy of Kokusai Kogyo Company Ltd.,  
Tokyo, Japan. Kokusai Kogyo Company Ltd.

Image taken using DMC® (Z/I Imaging® large-format digital camera).





Benefits include:

- GeoMedia Professional
- GeoMedia WebMap Professional
- Other Intergraph industry-specific software offered to qualified universities
- Maintenance for initial grant (renewals are for universities meeting program requirements)

### SG&I Student License Grant

The SG&I Student License Grant program lets students obtain free software licenses for use at home. A teacher or professor associated with an education institution must agree to manage the distribution of these licenses.

Benefits include:

- 52-week student licenses of GeoMedia Professional, free of charge
- Online tutorials

This is also available as a part of the RRL and the SG&I Education Grant.

## PLANT ENGINEERING EDUCATION GRANT

The Plant Engineering Education Grant is designed to introduce and stimulate the use of Intergraph's life-cycle engineering software at education institutions with strong plant-oriented engineering programs. This grant helps build student qualifications using real-world tools, preparing them for future careers in the chemical, consumer goods, nuclear and power generation, oil and gas, and pharmaceutical plant engineering industries. It also enhances institutions' technical programs.

Benefits include:

- Intergraph's engineering software – SmartPlant® Instrumentation, SmartPlant P&ID, SmartPlant Electrical, SmartSketch®, and SmartPlant 3D

- Other industry-specific software offered to qualified universities
- Maintenance for the life of the grant (renewable if grant requirements are met)
- Training for instructors\*
- Technical assistance in on-site product installation

## DIGITAL PHOTOGRAMMETRY EDUCATION GRANT

The Digital Photogrammetry Education Grant provides everything a researcher or student needs to become proficient in digital photogrammetry, at a fraction of the standard cost. Intergraph's photogrammetric solutions support all earth imaging requirements, from data acquisition to exploitation and data distribution.

Benefits include:

- Intergraph's geospatial data collection and production ImageStation® software suite – a complete data workflow for capturing and exploiting geospatial data for maps, terrain models, and orthophotos
- Intergraph's complete 3D Stereo Hardware Kit for ImageStation software products – including a workstation, widescreen LCD display, four pairs of polarizing glasses, and more

- Intergraph's enterprise infrastructure software solution – TerraShare® – which combines geospatial data storage with desktop and Web tools to effectively address your geospatial content needs

## INTERGRAPH U EDUCATION GRANT SOFTWARE DESCRIPTIONS

Listed below are just some of the Intergraph software included in our Intergraph U – Global Education Program. This is not an exhaustive list.

- **GeoMedia** – GeoMedia enables you to bring data from disparate databases into a single GIS database environment for viewing, analysis, and presentation. It is uniquely suited to perform “what-if” analysis because it enables you to string together multiple operations in an analysis pipeline. Changing any of the data along the pipeline automatically updates the results.
- **GeoMedia Grid** – GeoMedia Grid provides seamless integration of vector and grid data formats for viewing and analysis. It carries out complex

\*Certain plant and marine engineering training is complimentary with this grant. Intergraph also provides virtual-based SmartPlant 3D training for education institutions at a discounted rate.

**“This generous software grant from Intergraph enables George Mason University to provide our students with the education and experience of using GIS prior to entering the workforce versus learning on the job, which is a tremendous advantage in today’s market. This interdisciplinary approach to introducing and teaching GIS results in a distinct community of students who are well-suited for the technological challenges they will face upon graduation.”**

Dr. David Wong  
Chairman, Earth Systems and GeoInformation Sciences  
George Mason University

spatial analysis, such as site location (locating the best site), corridor planning (finding best path between multiple locations), and hot-spot detection (spatial clustering of sparse points).

- **GeoMedia Image** – GeoMedia Image provides a full set of image display, enhancement, and manipulation tools entirely integrated with other GeoMedia products. You can interact with vector and image data in a single, seamless, geo-fused environment. A specialized image enhancement toolbar supports simple and intuitive workflows, and advanced image registration tools provide you with a detailed level of registration algorithms for improved registration accuracy.
- **GeoMedia Map Publisher** – GeoMedia Map Publisher is used by national, regional, and military mapping agencies whenever they require enhanced cartographic capabilities and high levels of GIS mapping automation to produce their map series products.
- **GeoMedia Professional** – GeoMedia Professional has all the functionality of GeoMedia and adds smart tools to capture and edit spatial data. It builds on GeoMedia's flexibility, scalability, and open standards, and delivers productivity gains for collecting and modifying data and speeding implementation of GIS databases.

- **GeoMedia Terrain** – GeoMedia Terrain adds terrain analysis and visualization to the GeoMedia environment. Capitalizing on GeoMedia's ability to display multiple geographic data types simultaneously without translation, GeoMedia Terrain delivers the ability to ingest terrain, feature, and image data to support a variety of terrain analysis applications. GeoMedia Terrain also includes components to generate three-dimensional terrain models and dynamically fly through those models.
- **GeoMedia WebMap Professional** – GeoMedia WebMap and GeoMedia WebMap Professional provide Intergraph's GeoMedia geospatial technology in a fully scalable server solution. This solution may be deployed as Web services or interactive Web sites (thin-client solutions), including enterprise data access, sophisticated geospatial analysis, and map generation.
- **ImageStation** – The ImageStation digital photogrammetric software suite enables you to process digital photogrammetry workflows. This includes project creation to orientation and triangulation, 3D feature collection and editing, digital terrain model collection and editing, and orthophoto production using aerial and satellite sensors.
- **ImageStation 3D Stereo Kit** – This 3D Stereo Kit supports Intergraph's ImageStation digital

“Since 2004, Intergraph's Education Grant Program has enabled Auburn University at Montgomery to provide its students with learning opportunities that enhance their ability to fill a variety of positions in today's highly technical job market. We are extremely grateful for the generous contributions Intergraph has made in support of our GIS programs in both education and research.”

Dr. Terance L. Winemiller  
Associate Professor of Anthropology and Geography  
Auburn University at Montgomery, Alabama  
Department of Sociology

photogrammetric software suite and is optimized for productivity. It includes the latest generation of workstations, a widescreen LCD display, four polarizing glasses, a Z/I Mouse, and more.

- **SmartPlant 3D** – The most advanced plant design software offered in two decades, SmartPlant 3D is a next-generation, data-centric, rule-driven solution for streamlining engineering design processes while preserving existing data and making it more usable/re-usable. SmartPlant 3D is a full-suite solution that provides all the capabilities needed to design a plant, and then keep it as-built throughout its life cycle.
- **SmartPlant Electrical** – SmartPlant Electrical automatically inherits a familiar user interface and a common project administrator tool, SmartPlant Engineering Manager. Common tools and components ensure a lower cost of ownership, eliminating the need for multiple administrators and reducing the need for product-specific training.
- **SmartPlant Instrumentation** – This industry-leading instrumentation solution helps you prevent equipment failure by better managing and storing your instrumentation and control data. An integrated plant control system can prevent unscheduled shutdowns by using the most up-to-date information for better planning and maintenance. SmartPlant Instrumentation brings all instrumentation information together into a single plant control system, which you can easily access and update to ensure consistency across the different instrument tasks and deliverables.

This IKONOS image of Chichen Itza, Yucatan, Mexico, is displayed via Intergraph's GeoMedia Professional software. Explorers and archaeologists have studied the ancient city for more than a century. With the help of specialists from Intergraph, Dr. Terance Winemiller of Auburn University Montgomery is developing a 3D model of the site core in GeoMedia Grid based upon a 1932 map published by the Carnegie Institution of Washington, D.C. Satellite image courtesy of GeoEye.



- **SmartPlant P&ID** – The piping and instrumentation diagram (P&ID) – the “roadmap” of the plant – is developed, accessed, shared, and modified throughout the plant life cycle. Therefore, it is critical that the P&ID be kept up to date, accurately reflecting the as-built plant. SmartPlant P&ID helps you develop and manage your P&IDs with a focus on the plant asset rather than the document representation.
- **SmartSketch** – This innovative product for the technical office combines world-class business diagramming with award-winning drawing technology. It is a versatile, cost-effective precision engineering and drafting product that gives engineering, procurement, and construction (EPC) firms and owner/operators a competitive edge throughout the plant life cycle by speeding productivity, cutting costs, and offering a sophisticated degree of automation for detail work.
- **TerraShare** – The TerraShare family of products is a client/server, enterprise geospatial content access solution, enabling the management and structure of data files within an enterprise. It consists of several server- and client-side modules to integrate a storage infrastructure with end-user production and exploitation tools.

Image courtesy of Florida Department of Transportation Surveying and Mapping Office, Tallahassee, Florida, USA.

Image taken using DMC® (Z/I Imaging large-format digital camera).





**“ Using Intergraph tools provides our students with an excellent opportunity to use the market’s leading software for process design, preparing them for careers in plant design engineering. Our students gain valuable experience through hands-on training using process graphics and design software – beginning with their first design course. Students are learning sophisticated techniques using the same software as industry professionals.”**

**Professor Markku Hurme**  
Helsinki University of Technology

# JOIN THE TECHNOLOGY REVOLUTION!

## UNIVERSITIES AND COLLEGES WORLDWIDE CAN HELP PREPARE THEIR STUDENTS WITH INDUSTRY-SPECIFIC KNOWLEDGE AND SKILLS THROUGH INTERGRAPH U.

With the right tools, you have the power to explore, discover, learn, and thrive. Educators, invest in the future while enriching your coursework with the latest Intergraph technology, used in more than 60 countries around the world. Intergraph continues to focus on the future by investing heavily in R&D and innovation. We believe there are no limits to what we can achieve. When we work together, the impossible becomes possible.

For more information on any of our Intergraph U – Global Education Program offerings, please contact us at [education@intergraph.com](mailto:education@intergraph.com). To apply for one of Intergraph's plant engineering grants, complete an application at [www.intergraph.com/ppm/education.aspx](http://www.intergraph.com/ppm/education.aspx). To apply for one of Intergraph's geographic information systems or digital photogrammetry grants, complete an application at [www.intergraph.com/sgi/education.aspx](http://www.intergraph.com/sgi/education.aspx).









# ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph's industry-specific software to organize vast amounts of data into understandable visual representations and actionable intelligence. Intergraph's software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph PP&M provides enterprise engineering software for the design, construction, and operation of plants, ships, and offshore facilities. Intergraph SG&I provides geospatially powered solutions to the defense and intelligence, public safety and security, government, transportation, photogrammetry, utilities, and communications industries.

For more information, visit [www.intergraph.com](http://www.intergraph.com).



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