DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

GEOVIA GEMS Course Catalog North America

3DEXPERIENCE®

ABOUT OUR TRAINING COURSES

Dassault Systèmes offers a wide range of GEOVIA training courses designed to suit all levels of mining professionals, from Geologists and Engineers through to Technical and Project Managers. Whether you're an experienced user or just starting out in your career, our training courses will enable you to get the most out of your GEOVIA products.

Please note that training sessions shall be limited to six (6) participants per instructor or two (2) participants per virtually connection to ensure all topics are covered and questions are addressed within the time allotted.

CLASSROOM TRAINING IN NAM

GEOVIA Classroom Training courses are conducted at our Dassault Systèmes offices in Toronto, Vancouver and Montreal subject to instructor availability.

The dates for GEOVIA Classroom training course are flexible and are determined by market demand. For further information on a course or to find out when the course availability, please email us at GEOVIA.NAM.training@3ds.com or call +1 866 560 5846.

ONSITE – CUSTOMISED TRAINING

GEOVIA conducts custom training in which Client's chose their preferred dates, location, topics and/ or data. Groups of users requiring training make this a cost effective training solution. If you would like customized onsite training tailored to your operation's needs, please contact using the information below.

SERVICES

GEOVIA can assist with geology, engineering and operations activities. With over 25 years of expertise working with diverse commodities and mining environments, our typical services assignments span the spectrum of the value mining chain including: modelling, design, scheduling, data management, automated workflows, system configuration, and material movement tracking.

For more information, please click here to visit our Services information page.

CONTACT US

For all **TRAINING & SERVICES ENQUIRIES**
Email: GEOVIA.NAM.Training@3ds.com
Tel: +1 866 560 5846

GEMS Foundation	
Course Code	G_F_3
Available	On-site | NAM: Toronto, Vancouver, Montreal on demand | Virtual*
Duration	3 days
Course Material	English, French (upon request), Spanish (upon request)
Level	Fundamental
Audience	*Designed for New Users*
Description	The course is designed for new users of GEMS and those wishing to refresh their knowledge. It covers concepts and procedures that will allow the user to perform basic functions in the system.
Objectives	Upon completion of this course, you will be able to accomplish the following: • Import data into GEMS • Load and display drillholes into the • graphical work area • Plan drillholes • Filter data from the workspace • Manipulate data in the workspace • Perform basic statistics on drillhole data • Perform basic compositing routines • Create points and polylines • Use PlotMaker to define specific plot styles and batch plots • Use drillhole data to create basic surfaces • Digitize simple interpretation from drillhole data and use to create a solid (using 3D rings and tie lines) • Generate reports
Prerequisites	Before taking this course, you require the following: • Background in mining • Knowledge of file management • Knowledge of ASCII format files and Microsoft® Excel® The GEMS menu structure and graphical user interface (GUI) are similar to most Windows-based packages and therefore a basic knowledge of the Windows operating system and environment is necessary.

* Virtual training requires adequate internet connection

GEMS Geological Modelling	
Course Code	G_GM_2
Available	On-site | NAM: Toronto, Vancouver, Montreal on demand | Virtual*
Duration	2 days
Course Material	English, French (upon request), Spanish (upon request)
Level	Fundamental & Intermediate
Audience	*Designed for New & Existing Users*
Description	It focuses on geological concepts and processes within the software. This course focuses on surface and solid modelling principles and techniques.
Objectives	Upon completion of this course, you will be able to accomplish the following: • Create and manage triangulation surfaces • Create and manage active data/Laplace surfaces • Creating folded surfaces using two sets of lines • Create and manage 3D rings, status & tie lines: explicit modelling • Create and manage dynamic shells: implicit modelling • Creating triangulation solids • Validate and repair solids
Prerequisites	Before taking this course, you require the following: • **Completion of GEMS Foundation course is required** • Knowledge of file management • Knowledge of ASCII format files and Microsoft® Excel® • Knowledge of geological science The GEMS menu structure and graphical user interface (GUI) are similar to most Windows-based packages and therefore a basic knowledge of the Windows operating system and environment is necessary.

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GEMS Polygon Modelling	
Course Code	G_pM_2
Available	On-site | NAM: Toronto, Vancouver, Montreal on demand | Virtual*
Duration	2 days
Course Material	English, French (upon request), Spanish (upon request)
Level	Intermediate
Audience	*Designed for Existing Users*
Description	The course is designed for users who are responsible for activities that require them to design and manage polygon workspaces used in various tools such as 2D polygonal reserve estimations, geological mapping, ore control operations and cut evaluations for short and long term planning.
Objectives	Upon completion of this course, you will be able to accomplish the following: • Create and manage polygon workspaces • Define layers • Define layer groups and a clear understanding of how layers interact with each other • Obtain volumes, tonnages and grades reported by bench, rock type and grade range from the polygon workspace • Import and export polygon data
Prerequisites	Before taking this course, you require the following: • **Completion of GEMS Foundation course is required** • Knowledge of file management • Knowledge of ASCII format files and Microsoft® Excel® • Knowledge of geological science The GEMS menu structure and graphical user interface (GUI) are similar to most Windows-based packages and therefore a basic knowledge of the Windows operating system and environment is necessary.

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GEMS Block Modelling	
Course Code	G_BM_2
Available	On-site | NAM: Toronto, Vancouver, Montreal on demand | Virtual*
Duration	2 days
Course Material	English, French (upon request), Spanish (upon request)
Level	Intermediate
Audience	*Designed for Existing Users*
Description	The course covers users who want to become familiar with the block estimation and classification techniques. This course will also explore different methods of categorizing and reporting volumes and tonnage for resources.
Objectives	Upon completion of this course, you will be able to accomplish the following: • Run compositing routines to calculate weighted averages for grades • Perform basic statistics and variography • Create and display a block model • Update block attributes for rock type and density • Use inverse distance and ordinary kriging algorithms to update grade attributes • Report volumes and tonnages using the block model with solids and /or surfaces • Import and export block model
Prerequisites	Before taking this course, you require the following: • **Completion of GEMS Foundation course is required** • **Experience/competency in the use of GEMS is required** • **Completion of GEMS Geological Modelling course is recommended** • **General Knowledge of geostatistical principles including variography and interpolation** • Knowledge of ASCII format files and Microsoft® Excel® • Knowledge of geological science • Basic Microsoft Access skills The GEMS menu structure and graphical user interface (GUI) are similar to most Windows-based packages and therefore a basic knowledge of the Windows operating system and environment is necessary.

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GEMS Mine Cut Evaluation	
Course Code	G_CE_2
Available	On-site | NAM: Toronto, Vancouver, Montreal on demand | Virtual*
Duration	2 days
Course Material	English, French (upon request), Spanish (upon request)
Level	Intermediate
Audience	*Designed for Existing Users*
Description	The course is designed for GEMS users who are responsible for activities that require them to perform short-term planning on a mine. This course focuses on understanding and accessing the underlying geological data, and designing mine planning cuts (represented as polygons on one or more benches). Users will be taken through the creation and sequencing of the cuts and the subsequent reporting of the grade, tonnage and product for these.
Objectives	Upon completion of this course, you will be able to accomplish the following: • Create and manage cut evaluation workspaces • Design cut polygons on specific layers and be able to apply geometry rules to create new polygons • Attach attributes to the mine cut polygons • Sequence the mine polygons in the order that they will be mined out • Develop multiple scenarios for different target tonnages or grade • Report interactively using the information window or use Excel for the final report of the volumes, tonnages, and grades • Develop the framework to report out volumes and tonnages based on various rock groups or grade groups
Prerequisites	Before taking this course, you require the following: • **Completion of GEMS Foundation course is required** • **Knowledge of polygon and polyline tools** • **Knowledge of block modelling and volumetrics concepts** • Knowledge of CAD tools • Knowledge of file management • Knowledge of ASCII format files and Microsoft® Excel® • Knowledge of geological science • Basic Microsoft Access skills The GEMS menu structure and graphical user interface (GUI) are

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GEMS Mine Survey	
Course Code	S_S_2
Available	On-site | NAM: Toronto, Vancouver, Montreal on demand | Virtual*
Duration	2 days
Course Material	English, French (upon request), Spanish (upon request)
Level	Fundamental & Intermediate
Audience	*Designed for New & Existing Users*
Description	The course designed for users who are responsible for activities required to operate and manage a mine such as an open pit or underground operation. Such activities include daily determination of the location of worked faces, dig limits, blastholes, etc., as well as periodic production of maps and calculation of moved volumes. Users will be taken through the creation and sequencing of the cuts and the subsequent reporting of the grade, tonnage and product for these.
Objectives	Upon completion of this course, you will be able to accomplish the following: • Create and manage cut evaluation workspaces • Design cut polygons on specific layers and be able to apply geometry rules to create new polygons • Attach attributes to the mine cut polygons • Sequence the mine polygons in the order that they will be mined out • Develop multiple scenarios for different target tonnages or grade • Report interactively using the information window or use Excel for the final report of the volumes, tonnages, and grades • Develop the framework to report out volumes and tonnages based on various rock groups or grade groups
Prerequisites	Before taking this course, you require the following:

- **Completion of GEMS Foundation course is required**
- **Basic experience/competency in the use of GEMS is required**
- **Knowledge of CAD tools**
- Knowledge of file management
- Knowledge of ASCII format files and Microsoft® Excel®
- Knowledge of geological science
- Basic Microsoft Access skills

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GEMS Open Pit Design	
Course Code	G_OP_2
Available	On-site | NAM: Toronto, Vancouver, Montreal on demand | Virtual*
Duration	2 days
Course Material	English, French (upon request), Spanish (upon request)
Level	Fundamental & Intermediate
Audience	*Designed for New & Existing Users*
Description	The course is designed for users who are responsible for activities that require them to design and manage pit designs. Such activities include designing pits, ramps, pit pushbacks and dumps. In addition to these activities, other mine engineering tasks such as volumetrics of ore and concentrate stockpiles within the pit design will be investigated.
Objectives	Upon completion of this course, you will be able to accomplish the following: • Create a new project in GEMS • Create workspaces for pit design • Assign parameters to design that define berm width, pit slope angle and batter angle • Create final pit designs complete with toes, crests, ramps, switchbacks and slots • Create a valid surface triangulation from the pit design • Obtain volumes, tonnages and grades reported by bench, rock type and grade range from the pit design.
Prerequisites	Before taking this course, you require the following: • **Completion of GEMS Foundation course is required** • **Basic experience/competency in the use of GEMS is required** • **Knowledge of polyline tools** • **Knowledge of CAD tools** • Knowledge of file management • Knowledge of ASCII format files and Microsoft® Excel® The GEMS menu structure and graphical user interface (GUI) are similar to most Windows-based packages and therefore a basic knowledge of the Windows operating system and environment is necessary.

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GEMS Plotting	
Course Code	G_P_1
Available	On-site | NAM: Toronto, Vancouver, Montreal on demand | Virtual*
Duration	1 day
Course Material	English, French (upon request), Spanish (upon request)
Level	Intermediate
Audience	*Designed for Existing Users*
Description	The course is a comprehensive one-day course designed for all levels of GEMS users. It covers the use of the GEMS PlotMaker software, the creation of templates, the creation of raster or vector images from GEMS, the creation of plots from GEMS using PlotMaker and the creation of batch plotting procedures for periodic use in GEMS and PlotMaker.
Objectives	Upon completion of this course, you will be able to accomplish the following: • Create a new project in GEMS • Create and modify a series of PlotMaker templates to use onsite • Create Ad Hoc and specialized plots from GEMS data • Set up and modify a batch plotting routine that can be implemented on site • Troubleshoot plotting errors • Streamline plotting process flows
Prerequisites	Before taking this course, you require the following: • **Completion of GEMS Foundation course is required** • Knowledge of GEMS data object types The GEMS menu structure and graphical user interface (GUI) are similar to most Windows-based packages and therefore a basic knowledge of the Windows operating system and environment is necessary.

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