

# Graphic Communications (GC)

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## **GC 120 Foundations of Graphics** (3 credit hours)

Introductory course providing orientation to language of graphics for students majoring in any field. Designed to help develop the ability to use CAD within the context of a concurrent design process to understand how everyday objects are designed, analyzed and created. Emphasis placed on decision-making processes involved with creating geometry and development of modeling strategies that incorporate the intentions of the designer.

*GEP Visual and Performing Arts*

*Typically offered in Fall, Spring, and Summer*

## **GC 250 Architectural Graphic Communications** (3 credit hours)

Architectural Graphic Communications is an advanced graphic course designed to expand on the concepts covered in the introductory courses (GC 120, GC 210, GC 211). The emphasis is on strengthening architectural sketching and CAD drawing skills and showing how specific construction processes and materials selected for an architectural design affect commercial and residential production architectural drawings. Topics include perspective drawing, shadow projection, texturization, rendered plans, elevations and other related topics.

Prerequisite: GC 120 or TDE 220

*Typically offered in Fall and Spring*

## **GC 320 3D Spatial Relations** (3 credit hours)

Analysis and solution of three-dimensional space problems utilizing graphic principles of orthogonal projection techniques. Application of studies of lines; surfaces; solids; surface intersections; surface development; vectors; and civil, mechanical, and geographical structures.

Prerequisite: GC 120

*GEP Mathematical Sciences*

*Typically offered in Fall and Spring*

## **GC 330 Basic Technical Animation** (3 credit hours)

Create technical animations to communicate scientific and technical information to a variety of audiences and environments. Includes performing basic skills in image processing including cropping, transformations, color manipulation and color enhancement. Students will apply basic concepts of constructing 3-D objects, spaces, and environments. Create technical animations which apply environmental attributes including surface study, texture, color, lighting models, photo-realism, and raytracing.

Prerequisite: GC 120 or TDE 220

*Typically offered in Fall only*

## **GC 340 Concepts of Website Development** (3 credit hours)

An introduction to the essential elements of web site development for students in Technology Education and Graphic Communications. Content focuses on planning and executing web site for educational effectiveness, user interfaces, site testing, and maintenance. Course provides instruction in software appropriate for creating a website.

*Typically offered in Summer only*

## **GC 350 Applied CAD/D and Geometric Controls** (3 credit hours)

Techniques for producing mid-level computer models of individual parts and assemblies of parts. Application of conventional tolerancing and geometric tolerancing and dimensioning. Investigation of design for manufacture and CAD/CAM (Computer-Aided Design/Computer-Aided Manufacture) processes. Conventions and standards for technical drawing documentation.

Prerequisite: GC 120

*Typically offered in Fall and Spring*

## **GC 420 Visual Thinking** (3 credit hours)

Develop visual thinking skills through a series of exercises using various visual media. Integrates and stresses drawing and construction activities essential to visual thinking. Emphasis on direct observation (seeing), mental imagery and sketching that is based upon three-dimensional space. Develops students' visual and drawing skills and provides for their application toward solving open-ended spatial problems. Intended for the scientific and technically oriented student.

*Typically offered in Fall and Spring*

## **GC 450 Advanced Graphics Usage with CAD** (3 credit hours)

Advanced applications of 3-dimensional solid modeling tools in technical and engineering environments. Theory and application of manufacturing databases developed with 3-D modeling tools. Development and management of 3-D geometry using modeling software. Emphasis on application of 3-D modeling technology.

Prerequisite: GC 350 -- Applied CAD/D and Geometric Controls

*Typically offered in Fall and Spring*

## **GC 496 Special Topics in Graphic Communications** (1-4 credit hours)

Topical study in areas of current interest and need to students and/or needs of curricula served by Graphic Communications.

*Typically offered in Fall, Spring, and Summer*

## **GC 498 Independent Study in Graphic Communications** (1-4 credit hours)

Independent study in areas of current interests and needs of students in the field of Graphic Communications and the visual sciences. Individualized/Independent Study and Research courses require a "Course Agreement for Students Enrolled in Non-Standard Courses" be completed by the student and faculty member prior to registration by the department.

Prerequisite: GC 120 or TDE 220

*Typically offered in Fall, Spring, and Summer*