Computer Graphics Technology

Credentials

Foundation Skills Certificate	16cr.
3D and Video Graphics Certificate	30 cr.
Graphic Arts Certificate	30 cr.
Web and Interactive Media Certificate	30 cr.
3D and Video Graphics AAS Degree	61-62 cr.
Graphic Arts AAS Degree	61-62 cr.
Web and Interactive Media AAS Degree	61-62 cr.
Post-Associate Certificate	16-20 cr.

Major Description

The merger of art and computer technology is the basis of the program options available for students interested in a career in the expanding fields of graphic design and computer graphics.
Students learn how to use professional level software, hardware and peripherals, and to apply the principles of design, typography and color theory to the creation of effective print- and electronic-based visual communication. The computer graphics technology tracks prepare students for a career in the fields of 3D and video graphics, web and interactive media or digital arts, leading to either a certificate or an associate of applied science degree. Instruction in the programs expands on the skills achieved in the foundation skills certificate or equivalent experience. The certificate programs provide students with the opportunity to expand their design and application skills for a specific career within the graphic design and computer graphics industry and learn the principles of design to create professional level visual communications and how to apply software, hardware and peripherals.

In addition to the skills and knowledge students acquire in the certificate programs, the degree programs include coursework that meets the general education requirements for a Schoolcraft associate in applied science (AAS) degree. The degree programs' capstone classes expand the students' creative and practical skills.

It is highly recommended that students meet with faculty for advice in selecting their electives. The foundation skills certificate or equivalent skills must be achieved before starting one of the specialty track certificate or AAS programs.

Computer Graphics Technology: Foundation Skills Certificate

Schoolcraft program code # CRT.000364

The foundation skills certificate provides students with basic design and application skills for a career in the fields of graphic design and computer graphics. These skills are required for entry into any of the computer graphics technology certificate tracks.

Students who satisfactorily complete all college and program requirements qualify for a certificate of completion. Note: Schoolcraft has articulation agreements with some high schools and career/technical centers which allow for credits earned to be applied toward a specific Schoolcraft certificate or associate degree. In addition, students may have some non-instructional life experiences that make them eligible for credit. Students should work with an academic advisor to explore their options for transfer and work life credit.

Not all courses are offered each semester. Students should work with an academic advisor to develop a schedule that will work for them. Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with an academic advisor. Number of credits may vary depending on the course selection.

SAMPLE SCHEDULE OF COURSES

First Year - Fall Semester

Course #	Course Title	Credits
CGT 109	**Design Concepts and Technology**	3
CGT 123	**Illustration - Illustrator**	3
CGT 125	**Digital Imaging 1 - Photoshop**	3
CGT 127	**Publishing - InDesign**	3
HUM 106	**Introduction to Art and Music**	1
Track Option	**Select one:**	3
CGT 247	**3D Animation - Introduction**	
CGT 136	**Web Design and Development 1**	
ART 120	**Drawing: Theory and Elements**	
	Total Credits: 16	

PROGRAM TOTAL 16 CREDITS

Computer Graphics Technology Certificate Specialty Tracks

The computer graphics technology specialty tracks leading to a certificate expand on the skills achieved in the foundation skills certificate or equivalent experience. These certificates give students the opportunity to expand their design and application skills for a specific career within the graphic design and computer graphics industry. The foundation skills certificate or equivalent skills must be achieved before starting one of the specialty track certificate programs. Classes with no prerequisite can be taken before starting the program.

Computer Graphics Technology: 3D and Video Graphics Certificate
Schoolcraft program code # 1YC.00132

This certificate prepares students for a career combining the skills of three-dimensional imaging and video production. With the industry's expansion of computer graphics imaging (CGI), these skills will allow the students to create 3D objects and composite videos with special effects and motion graphics. It creates the opportunity to develop simulations, engineering and architectural visualization for advertising and marketing projects.

Students who satisfactorily complete the program requirements qualify for a certificate of program completion.

Not all courses are offered each semester. Students should work with an academic advisor or Computer Graphics Technology (CGT) faculty to develop a schedule that will work for them. Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with an academic advisor. Number of credits may vary depending on the course selection.

SAMPLE SCHEDULE OF COURSES

First Year - Fall Semester

Course #	Course Title	Credits
CGT 166	**Photography**	3
CGT 168	**Storyboarding**	3
CGT 215	**Motion Graphics 1-After Effects**	3
CGT 226	**Digital Imaging 2 - Photoshop**	3
CGT 254	**3D Animation - Advanced Models and Textures**	3
	Total Credits: 15	

First Year - Winter Semester

Course #	Course Title	Credits
CGT 208	**Digital Video Production**	3
CGT 210	**Visual Effects Production**	3
CGT 246	**Motion Graphics 2 - After Effects**	3
CGT 252	**3D Animation - Animating**	3
CGT 256	**Portfolio 3D - Reel Development**	3
	Total Credits: 15	

PROGRAM TOTAL 30 CREDITS

Computer Graphics Technology: Graphic Arts Certificate
Schoolcraft program code # 1YC.00136

This program teaches students how to blend traditional art techniques with skill using professional graphic design software to create illustrative, fine art and graphic media. By including instruction in color, type, image structure, production planning and marketing, the program prepares students for a wide range of jobs within the design industry.

Students who satisfactorily complete the program requirements qualify for a certificate of program completion.

Not all courses are offered each semester. Students should work with an academic advisor or CGT faculty to develop a schedule that will work for them. Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with an academic advisor. Number of credits may vary depending on the course selection.

SAMPLE SCHEDULE OF COURSES

First Year - Fall Semester

Course #	Course Title	Credits
ART 128	**The Human Figure in Art 1: Theory and Elements**	3
CGT 136	**Web Design and Development 1**	3
CGT 161	**History of Graphic Design**	3
CGT 166	**Photography**	3
CGT 226	**Digital Imaging 2 - Photoshop**	3
	Total Credits: 15	

First Year - Winter Semester

Course #	Course Title	Credits
ART 228	**The Human Figure in Art 2: Theory and Elements**	3
CGT 149	**Typography**	3
CGT 231	**Electronic Publishing**	3
CGT 257	**Portfolio Preparation**	3
Elective	**BUS 103 or CGT or ART**	3
	Total Credits: 15	

PROGRAM TOTAL 30 CREDITS

Computer Graphics Technology: Web and Interactive Media Certificate
Schoolcraft program code # 1YC.00131

This certificate provides students with the web development, technical programming and graphic design skills necessary to build web and multimedia sites. The focus is on developing a skill set that enables students to stay in-step with constantly evolving requirements and standards in the interactive media industry.

Students who satisfactorily complete the program requirements qualify for a certificate of program completion.

Not all courses are offered each semester. Students should work with an academic advisor or Computer Graphic Technology (CGT) faculty to develop a schedule that will work for them. Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with an academic advisor. Number of credits may vary depending on the course selection.

SAMPLE SCHEDULE OF COURSES

First Year - Fall Semester

Course #	Course Title	Credits
CGT 149	**Typography**	3
CGT 161	**History of Graphic Design**	3
CGT 163	**Web Design and Development 2**	3
CGT 168	**Storyboarding**	3
CGT 141	**Introduction to 2D Animation and Interactive Media**	3
	Total Credits: 15	

First Year - Winter Semester

Course #	Course Title	Credits
CGT 212	**Advanced Interactive Media**	3
CGT 213	**Advanced 2D Animation**	3
CGT 226	**Digital Imaging 2 - Photoshop**	3
CGT 234	**Web Development and Design 3**	3
CIS 238	**JavaScript**	3
	Total Credits: 15	

PROGRAM TOTAL 30 CREDITS

Computer Graphics Technology AAS Degree Specialty Tracks

The computer graphics technology programs prepare students for a career in the fields of 3D and video graphics, web and interactive media or digital arts. As in the certificate program, students learn how to use the principles of design, typography, and color theory to create professional level visual communications and how to apply software, hardware and peripherals to meet these goals. In addition to the certificate skills, the associate degree tracks include coursework that meets the general education requirements for a Schoolcraft associate in applied science (AAS) degree. The program's capstone classes expand the students' creative and practical skills. It is highly recommended that students meet with faculty for advice in selecting their electives. The foundation skills certificates or equivalent skills must be achieved before starting one of the specialty track AAS degrees. Classes with no prerequisite can be taken before starting the program.

Computer Graphics Technology: 3D and Video Graphics AAS Degree
Schoolcraft program code # AAS.00032

Similar to the 3D and video graphics certificate, this degree prepares students for a career combining the skills of three-dimensional imaging and video production. In addition, it includes capstone courses that develop creative and practical skills beyond what is taught in the certificate program, as well as coursework that meets the general education requirements for a Schoolcraft associate in applied science (AAS) degree. The degree strengthens the student's position in the profession and gives the student an academic credential with a higher standing.

Students who satisfactorily complete all college and program requirements qualify for an associate in applied science degree. Students wishing to pursue a post-associate certificate must have a computer graphics technology associate degree or equivalent professional experience.

Not all courses are offered each semester. Students should work with an academic advisor or CGT faculty to develop a schedule that will work for them. Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with an academic advisor. Number of credits may vary depending on the course selection.

SAMPLE SCHEDULE OF COURSES

First Year - Fall Semester

Course #	Course Title	Credits
Mathematics	**Select one:**	3-4
MATH 101	**Business Mathematics**	
MATH 102	**Technical Mathematics**	
MATH 113	**Intermediate Algebra for College Students**	
CGT 166	**Photography**	3
CGT 168	**Storyboarding**	3
CGT 215	**Motion Graphics 1-After Effects**	3
CGT 254	**3D Animation - Advanced Models and Textures**	3
	Total Credits: 15-16	

Computer Graphics Technology: 3D and Video Graphics AAS Degree (continued)

First Year - Winter Semester

Course #	Course Title	Credits
ENG 101	**English Composition 1**	3
COMA 103	**Fundamentals of Speech**	3
CGT 208	**Digital Video Production**	3
CGT 246	**Motion Graphics 2 - After Effects**	3
CGT 252	**3D Animation - Animating**	3
	Total Credits: 15	

Second Year - Fall Semester

Course #	Course Title	Credits
ENG 102	**English Composition 2**	3
Science	**Select one:**	4
BIOL 101	**General Biology**	
CHEM 111	**General Chemistry 1**	
PHYS 104	**Introduction to Astronomy**	
CGT 158	**Sound Design**	3
CGT 226	**Digital Imaging 2 - Photoshop**	3
CGT 244	**History of Animation**	3
	Total Credits: 16	

Second Year - Winter Semester

Course #	Course Title	Credits
Social Science	**Select one:**	3
POLS 105	**Survey of American Government**	
PSYCH 153	**Human Relations**	
CGT 210	**Visual Effects Production**	3
BUS 103	**Organizing a Small Business**	3
Capstone	**Select one:**	3
CGT 250	**Practical Application**	
CGT 271*	**Internship**	
CGT 298*	**Honors Studies**	
CGT 256	**Portfolio 3D - Reel Development**	3
	Total Credits: 15	

PROGRAM TOTAL 61-62 CREDITS
*These classes are offered as independent learning. Contact CGT faculty.

Computer Graphics Technology: Graphic Arts AAS Degree
Schoolcraft program code # AAS.00028

Similar to the graphic arts certificate, this program teaches students how to blend traditional art techniques with skill using professional graphic design software to create illustrative, fine art and graphic media, preparing students for a wide range of jobs within the design industry. In addition, it includes capstone courses that develop creative and practical skills beyond what is taught in the certificate program, as well as coursework that meets the general education requirements for a Schoolcraft associate in applied science (AAS) degree. The degree strengthens the student's position in the profession and gives the student an academic credential with a higher standing.

Students who satisfactorily complete all college and program requirements qualify for an associate in applied science degree. Students wishing to pursue a post-associate certificate must have a computer graphics technology associate degree or equivalent professional experience.

Not all courses are offered each semester. Students should work with an academic advisor or Computer Graphics Technology (CGT) faculty to develop a schedule that will work for them. Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with an academic advisor. Number of credits may vary depending on the course selection.

SAMPLE SCHEDULE OF COURSES

First Year - Fall Semester

Course #	Course Title	Credits
ENG 101	**English Composition 1**	3
Mathematics	**Select one:**	3-4
MATH 101	**Business Mathematics**	
MATH 102	**Technical Mathematics**	
MATH 113	**Intermediate Algebra for College Students**	
ART 128	**The Human Figure in Art 1: Theory and Elements**	3
CGT 136	**Web Design and Development 1**	3
CGT 161	**History of Graphic Design**	3
	Total Credits: 15-16	

First Year - Winter Semester

Course #	Course Title	Credits
ENG 102	**English Composition 2**	3
BUS 122	**Advertising**	3
ART 228	**The Human Figure in Art 2: Theory and Elements**	3
CGT 166	**Photography**	3
CGT 226	**Digital Imaging 2 - Photoshop**	3
	Total Credits: 15	

Computer Graphics Technology: Graphic Arts AAS Degree (continued)

Second Year - Fall Semester

Course #	Course Title	Credits
Science	**Select one:**	4
BIOL 101	**General Biology**	
CHEM 111	**General Chemistry 1**	
PHYS 104	**Introduction to Astronomy**	
COMA 103	**Fundamentals of Speech**	3
Elective	**Select one:**	3
ART 246	**Sculpture 1: Theory and Elements**	
WELD 112	**Contemporary Metal Sculpture 1**	
Elective	**Select one:**	3
	Any ART or CGT course	
CGT 149	**Typography**	3
	Total Credits: 16	

Second Year - Winter Semester

Course #	Course Title	Credits
Social Science	**Select one:**	3
POLS 105	**Survey of American Government**	
PSYCH 153	**Human Relations**	
CGT 231	**Electronic Publishing**	3
BUS 103	**Organizing a Small Business**	3
Capstone	**Select one:**	3
CGT 250	**Practical Application**	
CGT 271*	**Internship**	
CGT 298*	**Honors Studies**	
CGT 257	**Portfolio Preparation**	3
	Total Credits: 15	

PROGRAM TOTAL 61-62 CREDITS

*These classes are offered as independent learning. Contact CGT faculty.

Computer Graphics Technology: Web and Interactive Media AAS Degree
Schoolcraft program code # AAS.00031

Similar to the web and interactive media certificate, this degree provides students with the web development, technical programming and graphic design skills necessary to build web and multimedia sites. In addition, it includes capstone courses that develop creative and practical skills beyond what is taught in the certificate program, as well as coursework that meets the general education requirements for a Schoolcraft associate in applied science (AAS) degree. The degree strengthens the student's position in the profession and gives the student an academic credential with a higher standing.

Students who satisfactorily complete all college and program requirements qualify for an associate in applied science degree. Students wishing to pursue a post-associate certificate must have a computer graphics technology associate degree or equivalent professional experience.

Not all courses are offered each semester. Students should work with an academic advisor or Computer Graphics Technology (CGT) faculty to develop a schedule that will work for them. Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with an academic advisor. Number of credits may vary depending on the course selection.

SAMPLE SCHEDULE OF COURSES

First Year - Fall Semester

Course #	Course Title	Credits
ENG 101	**English Composition 1**	3
Mathematics	**Select one:**	3-4
MATH 101	**Business Mathematics**	
MATH 102	**Technical Mathematics**	
MATH 113	**Intermediate Algebra for College Students**	
CGT 163	**Web Design and Development 2**	3
CGT 149	**Typography**	3
CGT 141	**Introduction to 2D Animation and Interactive Media**	3
	Total Credits: 15-16	

First Year - Winter Semester

Course #	Course Title	Credits
ENG 102	**English Composition 2**	3
CGT 213	**Advanced 2D Animation**	3
CGT 161	**History of Graphic Design**	3
CGT 168	**Storyboarding**	3
CGT 212	**Advanced Interactive Media**	3
	Total Credits: 15	

Computer Graphics Technology: Web and Interactive Media AAS Degree (continued)

Second Year - Fall Semester

Course #	Course Title	Credits
Science	**Select one:**	4
BIOL 101	**General Biology**	
CHEM 111	**General Chemistry 1**	
PHYS 104	**Introduction to Astronomy**	
COMA 103	**Fundamentals of Speech**	3
CGT 234	**Web Development and Design 3**	3
CGT 226	**Digital Imaging 2 - Photoshop**	3
BUS 122	**Advertising**	3
	Total Credits: 16	

Second Year - Winter Semester

Course #	Course Title	Credits
Social Science	**Select one:**	3
POLS 105	**Survey of American Government**	
PSYCH 153	**Human Relations**	
CIS 238	**JavaScript**	3
BUS 103	**Organizing a Small Business**	3
Capstone	**Select one:**	3
CGT 250	**Practical Application**	
CGT 271*	**Internship**	
CGT 298*	**Honors Studies**	
CGT 257	**Portfolio Preparation**	3
	Total Credits: 15	

PROGRAM TOTAL 61-62 CREDITS

*These classes are offered as independent learning. Contact CGT faculty.

Computer Graphics Technology: Post-Associate Certificate

Schoolcraft program code #PAC.00181

The post-associate certificate is for those students who have a degree in computer graphics and/or are working in the profession and wish to add an additional area of specialty to their portfolio. Students should take a combination of six courses based on the specific area of study. It is highly recommended that Computer Graphics Technology (CGT) faculty be consulted when selecting courses. Students can assemble courses to develop expertise in 3D animation, video graphics, web design, interactive media, publishing or graphic design. Prerequisite and co-requisite requirements must be honored.

The post-associate certificate is awarded upon successful completion of 16 credits (exact number may vary slightly due to credit value of course.)

Not all courses are offered each semester. Students should work with an academic advisor to develop a schedule that will work for them. Number of credits may vary depending on the course selection.

Computer Graphics Technology: Post-Associate Certificate

Course #	Course Title	Credits
ART 115	**Art History 1**	4
ART 116	**Art History 2**	4
ART 120	**Drawing: Theory and Elements**	3
ART 128	**The Human Figure in Art 1: Theory and Elements**	3
ART 246	**Sculpture 1: Theory and Elements**	3
CGT 136	**Web Design and Development 1**	3
CGT 141	**Introduction to 2D Animation and Interactive Media**	3
CGT 149	**Typography**	3
CGT 158	**Sound Design**	3
CGT 163	**Web Design and Development 2**	3
CGT 166	**Photography**	3
CGT 168	**Storyboarding**	3
CGT 208	**Digital Video Production**	3
CGT 210	**Visual Effects Production**	3
CGT 212	**Advanced Interactive Media**	3
CGT 213	**Advanced 2D Animation**	3
CGT 215	**Motion Graphics 1-After Effects**	3
CGT 226	**Digital Imaging 2 - Photoshop**	3
CGT 231	**Electronic Publishing**	3
CGT 234	**Web Development and Design 3**	3

Computer Graphics Technology: Post-Associate Certificate (continued)

CGT 244	**History of Animation**	3
CGT 246	**Motion Graphics 2 - After Effects**	3
CGT 247	**3D Animation - Introduction**	3
CGT 252	**3D Animation - Animating**	3
CGT 254	**3D Animation - Advanced Models and Textures**	3
WELD 112	**Contemporary Metal Sculpture 1**	3

PROGRAM TOTAL 16-20 CREDITS