



DEGREE

## Associate of Science in Surveying Technology

**Total Credit Hours:** 62-64**About** Associate of Science in Surveying Technology

The Surveying Technology program prepares the student for immediate employment as a surveying or Geographic Information Systems (GIS) technician and teaches the student knowledge and skills that will enable one to adapt to ever evolving technical and technological changes in geospatial field and office applications. The graduate will be prepared to face the challenge of modern Surveying and GIS practice. The program emphasizes applications-based approaches and provides an overview of the geospatial fields of surveying, mapping, and GIS and prepares the student for further study and for the Level 3 Certified Survey Technician examination prepared by the American Congress of Surveying and Mapping-National Society of Professional Surveyors (ACSM/NSPS).

### [REQUIREMENTS FOR DEGREE](#)

**General Education Requirements**

Course	Course Name	Credits
<b>English (Choose 1)</b>		
EN110A	Freshman Composition with Instructional Lab	4
EN110	Freshman Composition	3
<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
MA161A	College Algebra & Trigonometry I	3
CS151	Windows Applications	3
	Humanities & Fine Arts	3-4
SI110/110L	Environmental Biology & Environmental Biology Laboratory	4

	Social & Behavioral Sciences	3
<b>Major Requirements</b>		
<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
AE103	Basic Blueprint Reading	3
AE121	Technical Engineering Drawing I	3
AE150	Computer Aided Drafting I (CAD I)	3
CE211	Plane Surveying I	3
CE222	Plane Surveying II	3
MA161B	College Algebra & Trigonometry II	3
SU100 <b>OR</b>	Surveying Drafting <b>OR</b>	<b>3 OR</b>
CT100	Introduction to Construction Trades	3
SU101	Surveying Problems I	3
SU230	Advanced Surveying	3
SU240	Boundary Law I	3
SU241	Boundary law II	3
SU250	Introduction to Geographic Information Systems	3
SU251	Advanced Geographic Information Systems	3
SU280	Special Topics in Geographic Information Systems	3
SU292	Surveying Practicum	1
<b>Program Total</b>		<b>62-64</b>

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### [GENERAL REQUIREMENTS FOR ASSOCIATE DEGREE](#)

Recognizing the necessity for students to succeed in the complex and rapidly changing workplace, Guam Community College offers a general education curriculum that introduces students to major areas of knowledge and methods of inquiry. All degree programs require an interdisciplinary general education component that promotes the development of intellectual skills that enable students to become effective learners and informed citizens. Critical thinking, the use of language and computation, appropriate social skills, global awareness and respect for diverse opinions are among the learning outcomes provided in the general education requirements of each program.

Guam Community College believes that general education provides the academic foundation necessary for students to achieve their life goals. General education is intended to offer students a breadth of quality student learning experiences, encourage their respect for cultural heritage, promote their ethical and responsible social behavior and facilitate their life-long learning.

The General Education program strives to foster student learning and skill development in civic engagement, critical thinking, understanding of the relationship between the individual and society, information literacy, oral communication, quantitative reasoning, and written communication.

Guam Community College believes that high quality general education opportunities for all citizens are necessary for democratic principles and practices to exist and for a sound economy to flourish. The College continually scrutinizes the general education curriculum in order to assure that all degrees and certificates granted by the College support this vision of general education and that it serves as a means to inspire hope, opportunity and responsibility in all its constituencies.

Requirements for General Education follow the options described below. Students declared prior to fall 2010 will follow the requirements indicated in the applicable catalog in which they first declared their major program at the College.

### **Notes on General Education requirements**

Students are advised to check the requirements for their specific programs before taking General Education courses.

Courses chosen to meet the general education requirements may not be used to meet the Major Requirements of a student's specific degree program.

The list contains courses with pre-requisites, so students should make their choices carefully and thoughtfully. Students may consult a counselor or an academic advisor for guidance in choosing any of the course options listed.

**IMPORTANT NOTE:** Some programs require different levels of coursework to meet General Education requirements, please review the individual programs for more information.

### **GENERAL EDUCATION**

#### ***Scope 1: Skills for and Application of Lifelong Learning***

##### **Freshman Composition (Choose one course from the following to meet the required 3-4 credits)**

<b>Course #</b>	<b>Course Name</b>	<b>Credits</b>
EN 110	Freshman Composition	3
EN110A	Freshman Composition with Instructional Lab	4
EN 111	Writing for Research	3

##### **Mathematics (Choose one course from the following to meet the required 3-4 credits)\***

<b>Course #</b>	<b>Course Name</b>	<b>Credits</b>
MA 110A	Finite Mathematics	3
MA 115	Fundamentals of College Algebra	3
MA 161A	College Algebra & Trigonometry I	3

\*Any college level math will be considered for the completion of this category

##### **Literacy for Life Skills (Choose one course from the following to meet the required 3 credits)**

<b>Course #</b>	<b>Course Name</b>	<b>Credits</b>
CO 110	Critical Thinking for Civic Engagement	3
CS 151	Windows Applications	
CS 152	Macintosh Applications	

#### ***Scope 2: Broad Comprehension of the Development of Knowledge, Practice and Interpretation***

##### **Humanities & Fine Arts (Choose one course from the following to meet the required 3-4 credits)\***

<b>Course #</b>	<b>Course Name</b>	<b>Credits</b>
ASL 100	American Sign Language I	4
CH 110	Chamorro I	4
ED 265	Culture & Education in Guam	3
CO 125	Introduction to Human Communication and Speech	3
EN 210	Introduction to Literature	3
HI 121	World Civilization (Pre-historic Time to 1500)	3
HI 122	World Civilization (1500 to Present Time)	3
HI 176	Guam History	3
HM 110	Introduction to Community Services	3
HM 201	Social Welfare & Development	3
HU 120	Pacific Cultures	3
HU 220	Guam Cultures & Legends	3
JA 110	Japanese I	4
KE 110	Korean I	4
PI 101	Introduction to Philosophy	3
TH 101	Introduction to the Theater	3
VC 101	Introduction to Visual Communications	3

\*Any foreign language, humanities, or fine arts course will be considered for the completion of this category

##### **Natural & Physical Sciences (Choose one course and the corresponding lab from the following to meet**

**the required 4 credits)\*\***

<b>Course #</b>	<b>Course Name</b>	<b>Credits</b>
SI 101/101L	Introduction to Chemistry (3) & Introduction to Chemistry Laboratory (1)	4
SI 103/103L	Introduction to Marine Biology (3) & Introduction to Marine Biology Laboratory (1)	
SI 105/105L	Introduction to Physical Geology (3) & Introduction to Physical Geology Laboratory (1)	
SI 110/110L	Environmental Biology (3) & Environmental Biology Laboratory (1)	
SI 141	Applied Physics I	
SI 150/150L	Introduction to Microbiology (3) & Introduction to Microbiology Laboratory (1)	
SI131/131L	Human Anatomy & Physiology I (3) & Human Anatomy & Physiology I Laboratory (1)	
SI132/132L	Human Anatomy & Physiology II (3) & Human Anatomy & Physiology II Laboratory (1)	

\*\*The exception to this would be SI141 which does not include a laboratory requirement

**Scope 3: Preparation for and Acceptance of Responsible Participation in Civil Society**
**Social & Behavioral Sciences (Choose one course from the following to meet the required 3 credits)**

<b>Course #</b>	<b>Course Name</b>	<b>Credits</b>
EC 110	Principles of Economics	3
PS140	American Government	3
PY 100	Personal Adjustment	3
PY 120	General Psychology	3
PY 125	Interpersonal Relations	3
SO 130	Introduction to Sociology	3
CJ 100	Introduction to Criminal Justice	3
WG 101	Introduction to Women and Gender Studies	3

\*Any social and behavioral science course will be considered for the completion of this category

**Minimum General Education Requirements 19**

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[\*\*SUGGESTED SEQUENCE OF COURSES\*\*](#)

This suggested sequence of courses is based on the 2023-2024 College Catalog.

<b>Year 1</b>					
<b>Semester 1</b>			<b>Semester 2</b>		
<b>Course</b>	<b>Course Name</b>	<b>Credits</b>	<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
AE103	Basic Blueprint Reading	3	AE121	Technical Engineering Drawing I	3
CS151	Windows Application	3	AE150	Comp Aided Design & Draft I	3
MA161A	College Algebra & Trigonometry I	3	EN_____	English Requirement	3-4
CT100 OR SU100	Introduction to Construction	3 OR 3	MA161B	College Algebra & Trigonometry II	3

SU101	Trades OR Surveying Drafting Surveying Problems I	3	SI110/SI110L	Environmental Biology AND Environmental Biology Laboratory	4
<b>Total</b>		<b>15</b>		<b>Total</b>	<b>16-17</b>
<b>Year 2</b>					
<b>Semester 3</b>			<b>Semester 4</b>		
<b>Course</b>	<b>Course Name</b>	<b>Credits</b>	<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
CE211	Plane Surveying I	3	SU230	Advanced Surveying	3
SU240	Boundary Law I	3	SU251	Advanced Geographic Information Systems	3
SU250	Introduction to Geographic Information Systems	3	CE222	Plane Surveying II	3
	Humanities & Fine Arts	3-4	SU241	Boundary Law II	3
	Social and Behavioral Sciences	3	SU280	Special Topics in Geographic Information Systems	3
			SU292	Surveying Practicum	1
	<b>Total</b>	<b>15-16</b>	<b>Total</b>	<b>Total</b>	<b>16</b>
<b>Program Total</b>			<b>62-64</b>		

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### Student Learning Outcomes

Upon successful completion of the AS in Surveying Technology program, students will be able to:

1. Prepare to enter a productive technical position in the geospatial fields of surveying, mapping, and Geographic Information Systems.
2. Successfully pass the American Congress of Surveying and Mapping-National Society of Professional Surveyors (ACSM/NSPS) Level 3 Certified Survey Technician examination.
3. Emulate a professional work ethic needed in the surveying industry.
4. Utilize modern measurement technologies to acquire spatial data and employ industry-standard software to solve technical problems.

**Check out some of these amazing Associate of Science in Surveying Technology courses...**

**SU280 Special Topics in Geographic Information Systems**

This course will introduce students to the applications of Geographic Information Systems (GIS) in cadastral and land information systems and in land use planning. Geographic data is increasingly important in understanding society and the environment. Using advanced tools and software, students will have an opportunity to focus on local and global planning problems.

[+ More Info](#) [1]

**SU251 Advanced Geographic Information Systems**

This course is a more advanced study of Geographic Information Systems (GIS) with particular emphasis on manipulation and analysis of raster data. This course will also provide introduction to ArcGIS Spatial Analyst and 3D Analyst.

[+ More Info](#) [2]

**SU240 Boundary Law I**

This course introduces the concepts of boundary control and legal principles. Topics covered include proportionate measurement, rights in land, junior/senior title rights, retracement of original surveys, deed first/survey first, common and case law, ranking/prioritizing evidence, controlling monuments and corners, error in legal descriptions, and plats and case studies.

[+ More Info](#) [3]

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**You may also be interested in these related Programs...**



[4]



[Certificate in Computer Aided Design & Drafting \(CADD\)](#) [4]

Computer Aided Design and Drafting (CADD) systems are used by drafters to prepare electronic drawings that can be viewed, printed, or programmed directly into automated manufacturing systems.

[+ More Info](#) [4]



[5]

[Associate of Science in Pre-Architectural Drafting](#) [5]

The A.S. in Pre-Architectural Drafting covers pre-architecture, building materials and properties, technical drafting, basic computer aided design and drafting (CADD), architectural computer modeling, and an introductory engineering course.

[+ More Info](#) [5]



[6]

### [Associate of Science in Civil Engineering Technology](#) [6]

The Associate of Science in Civil Engineering Technology is a course of study that prepares students to analyze construction sites, use and maintain equipment, draft plans, and write reports. Technical requirement classes are designed to provide students with fundamentals in surveying, analyzing material strength, and structural drafting and design. This course of study will provide students with an overview of technical drawing, construction management and procedures, planning, and estimating. The student learning outcomes meet the professional standards of technicians in this field.

[+ More Info](#) [6]