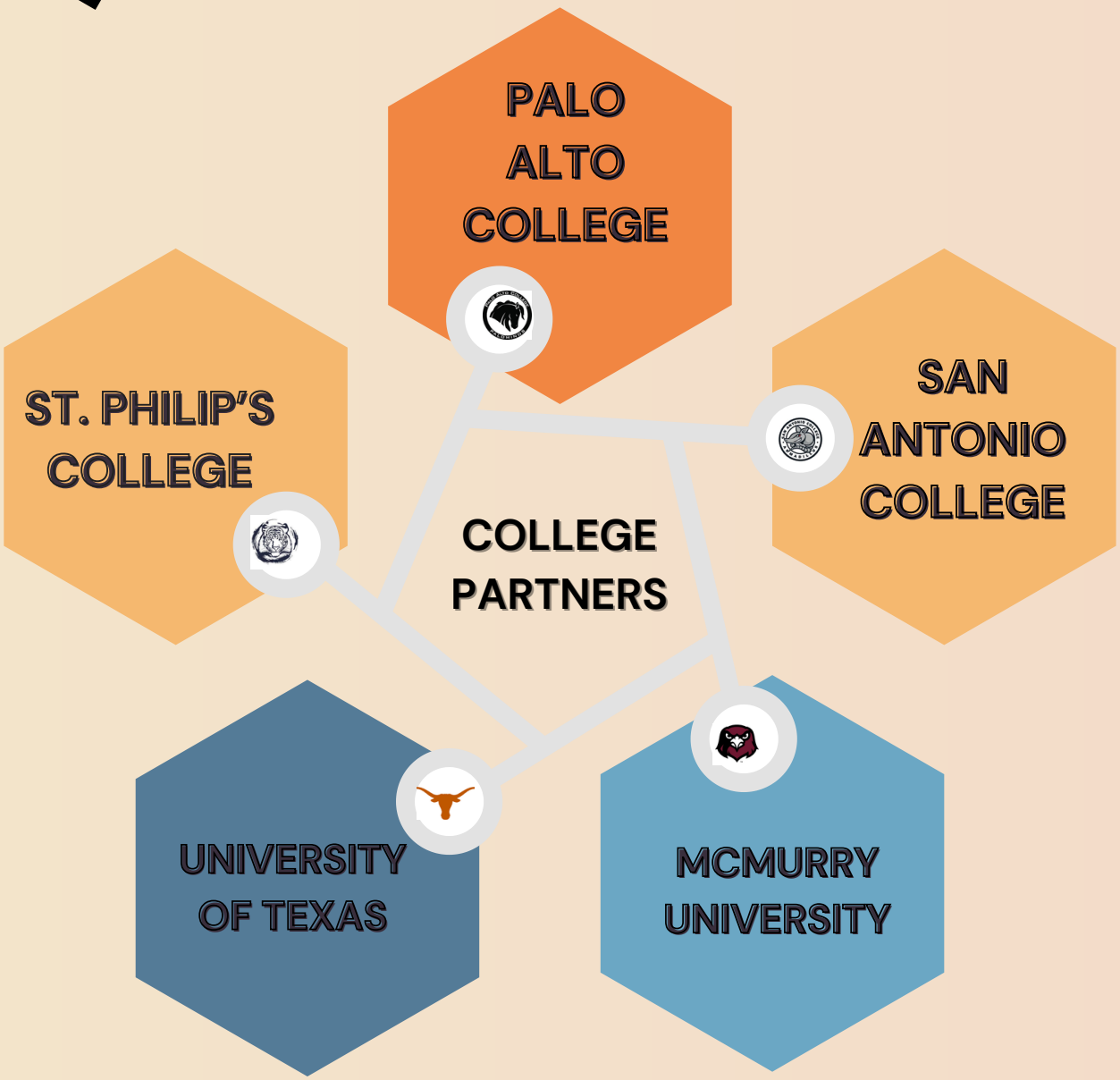
TOM MOORE P-TECH

INGRAM

ITM Course Catalog

2026-2027



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INGRAM TOM MOORE P-TECH

Ingram Tom Moore High School (ITM) is enhancing opportunities for students in the 21st century with a diverse range of programs including accounting & banking financial services, agricultural science, agricultural technology and mechanical systems, architecture & construction technology, business management & operations - entrepreneurship & marketing, cyber security, education & teaching degrees, health science, pre-university associate degrees, associate of arts or science, associate of arts - in business, associate of arts in computer science, associate of arts in engineering, real estate, and transportation, distribution, & logistics. Through partnerships with local businesses, students can engage in work-based learning experiences aligned with high-demand jobs. They can also earn up to 60 college credit hours, covering the core curriculum required for most Associate and Bachelor degrees at Texas public colleges.

THE P-TECH MODEL

The P-TECH model offers students a unique opportunity to earn a high school diploma and an industry-recognized certificate or associate degree. It's a collaborative effort between K-12 education, community colleges, and industry partners, focusing on providing rigorous academic and hands-on workplace experiences. Students begin college coursework in high school and participate in various workplace opportunities like mentoring and internships. The model instills a belief that all students can earn a college degree and prepares them for successful careers in growing fields. Learn more at https://www.ptech.org/.

INDUSTRY-BASED CERTIFICATIONS

Ingram Tom Moore offers multiple certifications in the following pathways: Accounting Technology, Banking & Financial Services, Welding, Construction Technology, Business Management & Operations - Entrepreneurship & Marketing, Information Technology Cybersecurity Specialist, Nurse Aide for Health Care with Phlebotomy, Real Estate, Warehouse Management, Logistics Management, and Supply Chain Management. See details in the pathway sections of the course catalog.

42-HOUR TEXAS CORE CURRICULUM

The 42-semester credit hour (SCH) core curriculum for undergraduate students in Texas public higher education institutions ensures students will develop the essential knowledge and skills they need to be successful in college, in a career, in their communities, and in life. The core curriculum facilitates the transfer of lower-division course credit among public colleges, universities, and health-related institutions throughout the state. Students can pair the 42 SCH with any pathway, including agricultural technology & mechanical systems, architecture & construction technology, and more. For more information on the core curriculum, go to the Texas Higher Education Coordinating Board website.
http://www.thecb.state.tx.us/

HIGH SCHOOL GRADUATION REQUIREMENTS FOUNDATION WITH ENDORSEMENT—26 CREDITS

HIGH SCHOOL GRADUATION REQUIREMENTS FOUNDATION WITH ENDORSEMENT—26 CREDITS			
English - 4 credits English 1, English 2, English 3, and English 4	Science - 4 credits Biology, Chemistry, Physics, and Environmental Science	World Language - 2 credits Spanish 1 Spanish 2	Endorsements: STEM, Public Service
Math - 4 credits	Social Studies -3 credits	Physical Education -1 credit	Business and Industry
Algebra I, Geometry, Algebra II and One Advanced Math	World History, US History, Government and Economics	Fine Arts -1 creditElectives - to equal 26 credits	Arts and Humanities Multidisciplinary
26 Credits Total			

HIGH SCHOOL ENDORSEMENTS

STEM
Requires Algebra 2, Chemistry, and Physics.

BUSINESS AND INDUSTRY
CTE pathways require 3 or more credits of the same cluster with at least one advanced course.

PUBLIC SERVICE
CTE pathways require 3 or more credits of the same cluster with at least one advanced course.

ARTS AND HUMANITIES
4 or more credits in areas of fine art, world languages, or social studies. At least one advanced course.

MULTIDISCIPLINARY
Complete credits in the core: Math, Science, Social Studies, and English

Performance Acknowledgements

Students may earn a performance acknowledgement on their Academic Achievement Record or transcript for the following:
See 19 TAC Chapter 74, Subchapter B for more details:

- Outstanding performance in dual credit coursework
- Outstanding performance in bilingualism and biliteracy.
- Outstanding performance on a College Advanced Placement test or International Baccalaureate examination.
- Outstanding performance on the PSAT/ PREACT, ACT, or SAT.
- Earning a nationally or internationally recognized business industry certification
- Outstanding performance on a College Advanced Placement test or International Baccalaureate examination.

For more information, see the graduation toolkit on the TEA website.

GRADE POINT AVERAGE

Ingram ISD's grade point average system uses a 100-point scale. GPA is calculated by adding all the semester averages for qualifying courses earned by the student and dividing by the number of semesters attempted. To apply the extra points for weighted classes, multiply each semester grade by the weighted points. Weights are applied as follows:

Regular Courses	Honors Courses	Dual & OnRamps
1.00	1.05	1.10

The GPA calculation only includes courses taken in 9th-12th grade. The following courses will be excluded: grades earned in or by summer school, college credit courses not considered dual credit, correspondence courses, credit by examination, courses for which pass/fail is assigned, and local credit courses. Class ranking shall be computed based on courses completed during the normal school year and during regular class hours. If a student repeats a failed course, both grades shall be included in determining class rank.

AWARDING OF CREDIT

A 70 or greater is required to earn credit for a course. For full-year courses, the two-semester grades will be averaged for one final grade. This grade must equal 70 or higher for a student to receive full credit for the course. Students will be given credit proportionally for each semester grade that is 70 or above. Students who do not meet the requirement for full credit will be required to repeat the semester(s) failed.

HIGH SCHOOLCREDIT in MIDDLE SCHOOL

Students who have completed a designated high school-level course at the middle school level may receive credit on their high school transcript. Grades earned in middle school will not count toward a student's GPA. Once credit is awarded, students cannot repeat the course for state credit. Middle school students who take a high school course associated with an EOC must take the associated EOC assessment. A middle school student taking an EOC course cannot be denied promotion based on the EOC performance. Students who do not meet the minimum score on the required EOCs must retake the assessments.

CLASSIFICATION

Student classification is determined by the number of credits accumulated by the end of the preceding year. Changes in grade-level classification shall be made twice a year, at the beginning of each semester.

VALEDICTORIAN AND SALUTATORIAN

The valedictorian and salutatorian shall be the eligible students with the highest and second-highest ranking, respectively. To be eligible for such recognition, a student must:

1. Have attended the District high school for the last 4 semesters and
2. Have successfully completed at least six courses from either state-recognized advanced courses and/or Pre-AP courses, and/or academic college courses.

ALTERNATIVE FORMS OF CREDIT

These forms are not available to all students and require special permission. Students will need to complete the proper request paperwork through the counseling office and receive principal or designee permission. In some situations, a parent conference may be required.

CREDIT BY EXAM

At the high school level, Credit by Exam (CBE) with no prior instruction allows the student to obtain credit for core academic courses. This option is available only one time for each course. Award of credit for courses is given if a student scores 80 or above on the exam, or if administered by semester, the average of two exams to meet or exceed 80. Providers currently approved to supply CBE's are Texas Tech University (TTU) and the University of Texas (UT). Students may use credit by examination to fulfill their course requirements, and the score on the CBE will be entered on the transcript. Course credit earned through credit for the exam will not be recognized by the NCAA. Validation Testing, Credit by Exam with Prior Instruction, allows students who have previous formal instruction and do not have credit in a course to earn credit by taking an approved examination. Students must have made at least a 60 in the course to take a CBE. This option is available only for students with extenuating circumstances such as transferring from non-accredited private schools, homeschooling environments, or out-of-state and district transfers. The grade on the validation test will be recorded on the transcript. Grade points will be awarded as determined by district guidelines. Students who are interested in earning credit by examination should see their counselor for approval and confirmation.

DISTANCE LEARNING ORIGINAL CREDIT

Correspondence Courses—In specific situations that restrict a student from taking a graduation requirement, students may request to take original credit courses through an online provider. Approved online providers in IISD include Texas Tech University (TTU), University of Texas (UT), and the Texas Virtual School Network (TxVSN). These courses are to be completed on a student's own time, and all supplies, materials, textbooks, transportation, and course fees are the responsibility of the student or parent. Courses taken through an external provider are not included in a student's GPA. High school seniors must complete any courses taken through an external online provider and submit the grade report(s) by the end of the fall semester of the year in which graduation is sought. Students will be required to drop a course or complete online/distance learning courses (coursework and final exam) within the deadlines set by the provider. Students will be given credit for courses taken through an online provider after a copy of the official grade report is submitted by the provider to the Counseling and Registrar's office. Final exams for correspondence courses (TTU, TxVSN, and UT courses) are required to be taken on ITM's premises in the presence of an ITM administrator or designee. Courses taken without prior approval will not be accepted for credit.

Distance/Remote Learning on Campus—The District's online provider program is available to students who enroll from out-of-district, homeschooling, or private schools. These courses are only available to complete credits that are not available at ITM and for graduation requirements. ITM's counselor will develop a plan based on a student's available transcript. Students will be scheduled into a class period to work on assigned courses.

CREDIT RECOVERY OPTIONS

The preferred option for credit recovery is for students to re-enroll in the semester(s) of the course failed. If scheduling constraints prevent re-enrollment in a course, students may be enrolled in ITM's online provider. Students may be required to complete these courses on their own time, during the summer, or be scheduled during a class period. The ITM counselor will develop a plan with the student based on the individual student's graduation requirements and the flexibility of their schedule.

ALTERNATIVE FORMS OF CREDIT

ITM recognizes that students have unique circumstances that may warrant a need to accelerate the required coursework for graduation. Students who wish to begin accelerated coursework will need to submit a completed application to the principal or designee. A parent/guardian conference will be required, where an accelerated coursework plan for early graduation will be completed with the school counselor. Students who wish to pursue accelerated coursework need to be diligent and manage their time well. Accelerated coursework will require students to take original credit coursework through an online provider outside of the regular school day and possibly during the summer. In addition to an approved application and a completed accelerated course plan students will be required to meet the following criteria:

- Complete the Foundations with Endorsement Plan of 26 credits
- Receive a satisfactory performance on all 5 EOC's.
- CCMR Indicator has been met.

ADVANCED ACADEMICS

Advanced academic courses provide students with the opportunity to challenge themselves academically and expand on their strengths. Most advanced academic courses are open enrollment. Students are highly encouraged to sign up for advanced courses. If a student meets pre-college readiness criteria, they may automatically be enrolled in these courses

HONORS COURSES

Honors courses are offered in many content areas. These courses offer an enrichment of the regular curriculum taught through a variety of strategies. These strategies foster higher-order thinking, critical thinking, and problem-solving skills. Honors courses are intended to prepare students for dual credit or OnRamps while covering all the required high school Texas Essential Knowledge and Skills (TEKS). These courses received weighted points toward a student's GPA.

DUAL CREDIT COURSES

Dual Credit courses are challenging and rigorous, and allow students to earn college credit while in high school. Students must meet TSI entrance requirements, which vary by course. Dual credit courses are currently available through the Alamo College System and the University of Texas OnRamps program. Courses may be taught online with a college professor or on campus with a qualified Ingram ISD staff member. These courses fulfill high school course requirements, appear on the high school transcript, and receive additional weighting. Students may be limited to dual credit courses based on their individual degree plan requirements, the core 42 SCH, and fields of study.

College Credit is awarded through the associated college. Students must request that a college transcript be sent to the college /university the student will be attending. Acceptance of credit by colleges and universities is up to the receiving institution. It is the student's responsibility to contact the college/university regarding the acceptance of these credits. For details on qualifications and deadlines, see the counselor.

UNIVERSITY OF TEXAS OnRAMPS DUAL ENROLLMENT COURSES

These courses offer distance education through a dual enrollment model for high school students to engage in authentic college experiences. High school staff participate in robust professional development to enhance their expertise and strategic partnerships that yield the greatest impact on postsecondary attainment, persistence, and completion. The OnRamps student is enrolled in both a high school course led by a high school teacher and a distance college course led by a college instructor. Assignments are assigned by the college instructor; high school instructors record grades for the high school side, and college instructors record grades for the college side. Due to the rigorous nature of these courses, students can earn high school credit and not be eligible for college credit. These are open enrollment courses and do NOT require TSIA2. These courses receive weighted GPA points, and students can earn college credit for successful completion of the courses. For more information, go to https://onramps.utexas.edu.

PROCEDURES FOR DROPPING ADVANCED ACADEMICS

Before dropping any advanced course, students must attend tutorials and show a good faith effort to complete and turn in assignments. A parent conference may be required, depending on the course and timing of the requested drop. Teachers will be available for tutoring, and students and parents will be notified in a timely fashion if a student's work and/or assessments are unsatisfactory. Not all schedule change requests may be granted. Completion of a schedule change request form with a signature from the parent, the teacher, and approval from an administrator is required before any schedule change request will be granted.

HONORS

Students are required to stay in these courses for the first six weeks grading period. Students must complete a schedule change form that requires a signature from the parent, the teacher, and approval from an administrator. A parent conference may be required. Any grade earned in the six weeks will transfer to the requested course. Not all schedule change requests will be granted. Available courses: English 1, English 2, Geometry, Algebra 2, Precalculus, Calculus.

DUAL CREDIT

Students are encouraged to stay in a dual course for the first six weeks. Students may not drop these courses after the college withdrawal date has passed. It is the student's responsibility to make themselves aware of the college's withdrawal dates. Students who are in jeopardy of failing the college course may be required to drop the course. Not all courses have an equivalent transfer course. Students will be required to make up coursework in a class that is not transferable. Please see the dual crosswalk for available courses.

ONRAMPS

Students must stay in these courses until the census date. Students may begin a request to drop the course 7 days before the census date. All schedule change requests must be submitted and approved 2 days before the census date. Census dates may vary between courses. These courses cannot be dropped after the census date. Each OnRamps course drop request will be considered on an individual basis due to the length of the course, the curriculum covered, and the availability of an equivalent transfer course. Students will be required to make up coursework in a class that is not transferable. Please see the dual crosswalk for available courses.

COLLEGE AND CAREER TESTING

To support our students in preparing for post-secondary success, ITM provides multiple opportunities for college entrance assessments on campus and during the school day.

TEXAS SUCCESS INITIATIVE ASSESSMENT 2

The TSIA2 is a comprehensive exam that assesses students' readiness for college-level coursework in the areas of reading, writing, and mathematics. Ingram ISD requires that all students participate in the TSIA (Texas Success Initiative Assessment). Students must complete a minimum of 10 hours of tutorials and exam preparation before they will be allowed to sit for the exam. Students will take the exam through Ingram ISD at no cost and will have opportunities to retake the assessment for any area in which they do not meet the college readiness benchmark. Students may be exempt from the TSI by scoring well on the SAT or ACT.

ITM provides this assessment for all students, as needed for dual enrollment, and for Seniors who have not met the college readiness benchmarks on other college entrance exams. For more information, go to https://accuplacer.collegeboard.org/accuplacer/pdf/tsia2-student-informational-brochure.pdf.

PREACT 8/9

The PreACT 8/9 is administered to Ingram ISD 9th-grade students as an early practice of the ACT. The assessment is aligned with the ACT college readiness benchmarks and is used to help students, parents, and the school district identify areas of academic strength, plan for skill building, and college readiness preparation.

PREACT

The PreACT is administered to students in the spring semester of their sophomore year. The assessment is a shorter version of the ACT and is aligned to college readiness benchmarks in the following areas: English, math, reading, and science. Students also complete an interest inventory and can select to receive information about colleges and scholarships. Scoring can be used as an indicator of college and career readiness and for skill building to prepare for the ACT.

ACT

ITM administers the ACT to all juniors in the spring semester and is available to seniors in the fall semester during the school day. The test includes four subject areas: math, reading, English, and science. Test scores reflect what students have learned throughout high school and provide colleges and universities with information for recruiting, advising, placement, and retention. Accommodations are available for those who qualify. For more information on the ACT series of assessments, go to www.act.org.

COLLEGEBOARD PSAT/NMSQT

The PSAT/NMSQT is available to juniors in October of each year. Students may sign up to take the assessment through the school counselor. The PSAT/NMSQT assesses students in the areas of English, reading, and mathematics. Scores are aligned with the SAT's college readiness benchmarks, and students are provided with detailed information on academic strengths and weaknesses. Students may choose to opt into the Student Search Service to receive information on colleges and scholarships. The costs for this exam may or may not be provided for by ITM. Students in their junior year of high school can be eligible for the National Merit Scholarship Program. Students who meet the final eligibility requirements may qualify for special recognition and scholarships. For more information on the PSAT/NMSQT, go to www.collegeboard.com

ASVAB CAREER EXPLORATION PROGRAM

The ASVAB is administered to ITM juniors in the fall semester. The assessment measures a student's developed abilities and helps predict future academic and occupational success. Score reports show a snapshot of their academic and vocational skill levels and are to be used with the Career Exploration Program to align with their interests. The ASVAB CEP offers unique career exploration tools for all levels of education, work, training, and/or certification in addition to military occupations. Students interested in pursuing a military career option will get an opportunity to retake the ASVAB as a senior. For more information, go to www.asvabprogram.com.

COLLEGE BOARD SAT

Students can register for the exam through the College Board website. Ingram Tom Moore is a testing site in the fall and spring for the SAT. The SAT is a college entrance exam that assesses students on what they learn in high school and what they need in college. The test is separated into two sections: ERW and Math. The ERW section includes reading, English, and an essay.

COLLEGE AND CAREER TESTING

COLLEGE VISITS AND CAREER VISITS

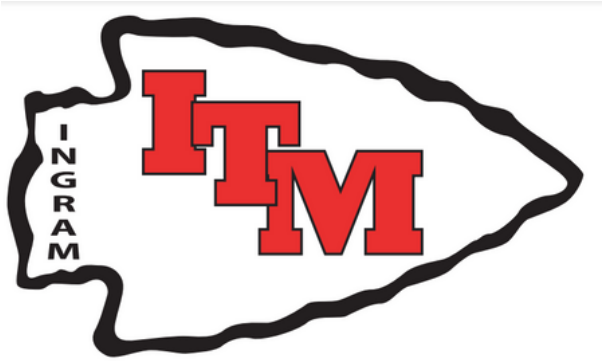
Students are encouraged to visit colleges, universities, and careers they are considering. During a student's Junior and Senior year, students are allowed two college visit days and two career visit days. These days will not count against a student's attendance if they have prior campus approval and provide the appropriate documentation of the visit. Students can pick up a request form in the ITM office. Students are also required to make up any missed work. At least once each year, ITM students will take a class (cohort) field trip to an area college such as UTSA, Texas State, San Antonio -Texas A&M, University of Texas, and more. More information will be sent to parents as each trip is scheduled.

MILITARY ENLISTMENT

Students who are 17 years of age or older and are pursuing enlistment in a branch of the U.S. Armed Services or Texas National Guard may also request an absence exemption, provided the absence does not exceed four days during the period the student is enrolled in high school and the student provides verification to the district of these activities. Students can pick up a request form in the ITM office. Students are required to make up any missed work.

COLLEGE CREDIT CROSSWALK - CORE 42			
42 CORE CURRICULUM	**COLLEGE COURSE & NUMBER**	**HIGH SCHOOL COURSE**	**CREDIT**
Communication (10) Core - 2 courses (6 credit hrs)	ENGL 1301 - Composition I & ENGL 1302 - Composition II	English 3 dual credit	1.0 credit
Mathematics (20) Core - 1 course (3 credit hrs)	MATH 1314 - College Algebra	Algebra 2 Honors to dual credit	1.5 credits
Life and Physical Sciences (30) Core - 2 courses (6 credit hours)	BIOL 1406 & 1407 - Biology for Science Majors I & II, or	Biology dual credit, or	1.0 credit
	BIOL 2401 & 2402 - Anatomy and Physiology II, or	Anatomy & Physiology dual credit,	1.0 credit
	CHEM 1411 & 1412 - General Chemistry I & II,	Chemistry dual credit	1.0 credit
Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)	HIST 2321 or 2322 - World Civilizations I or II, or	World History dual credit, or	0.5 credit
	PHIL 1301 - Introduction to Philosophy, or	Philosophy: Social Studies Advanced Topics dual credit, or	0.5 credit
	ENGL 2322 - British Literature I	English 4 dual credit	0.5 credit
Creative Arts (50) Core - 1 course (3 credit hours)	ARTS 1301 - Art Appreciation, or	Art Appreciation dual credit, or	1.0 credit
	MUSI 1306 - Music Appreciation	Music Appreciation dual credit	1.0 credit
American History (60) Core - 2 courses (6 credit hours)	HIST 1301& 1302 - United States History I & II	US History dual credit	1.0 credit
Government/Political Science (70) Core - 2 courses (6 hours)	GOVT 2305 - Federal Government,	US Government dual credit	0.5 credit
	GOVT 2306 - Texas Government	Special Topics in Social Studies dual credit	0.5 credit

COLLEGE CREDIT CROSSWALK - CORE 42			
42 CORE CURRICULUM	**COLLEGE COURSE & NUMBER**	**HIGH SCHOOL COURSE**	**CREDIT**
Social and Behavioral Sciences (80) Core - 1 course (3 credit hours)	ECON 2301 - Principles of Macroeconomics, or	Economics dual credit	0.5 credit
	PSYC 2301 - General Psychology, or	General Psychology dual credit	0.5 credit
	SOCI 1301 - Introductory Sociology	Sociology dual credit	0.5 credit
Component Area Option (90) Core - 2 courses (6 credit hours)	SPCH 1321 - Business and Professional Communication, &	Speech dual credit	0.5 credit
	HIST 2321 or 2322 - World Civilizations I or II, if not taken above, or	World History dual credit, or	0.5 credit
	PHIL 2306 - Introduction to Ethics, or	Philosophy: Social Studies Advanced Topics, dual credit, or	0.5 credit
	ENGL 2323 - British Literature II: Romanticism to the Present, or	English 4 dual credit	0.5 credit
For degree completion, a total of 60 hours is required. The Additional (18 credit hours) as approved by the advisor.	Refer to your pathway for degree completion		

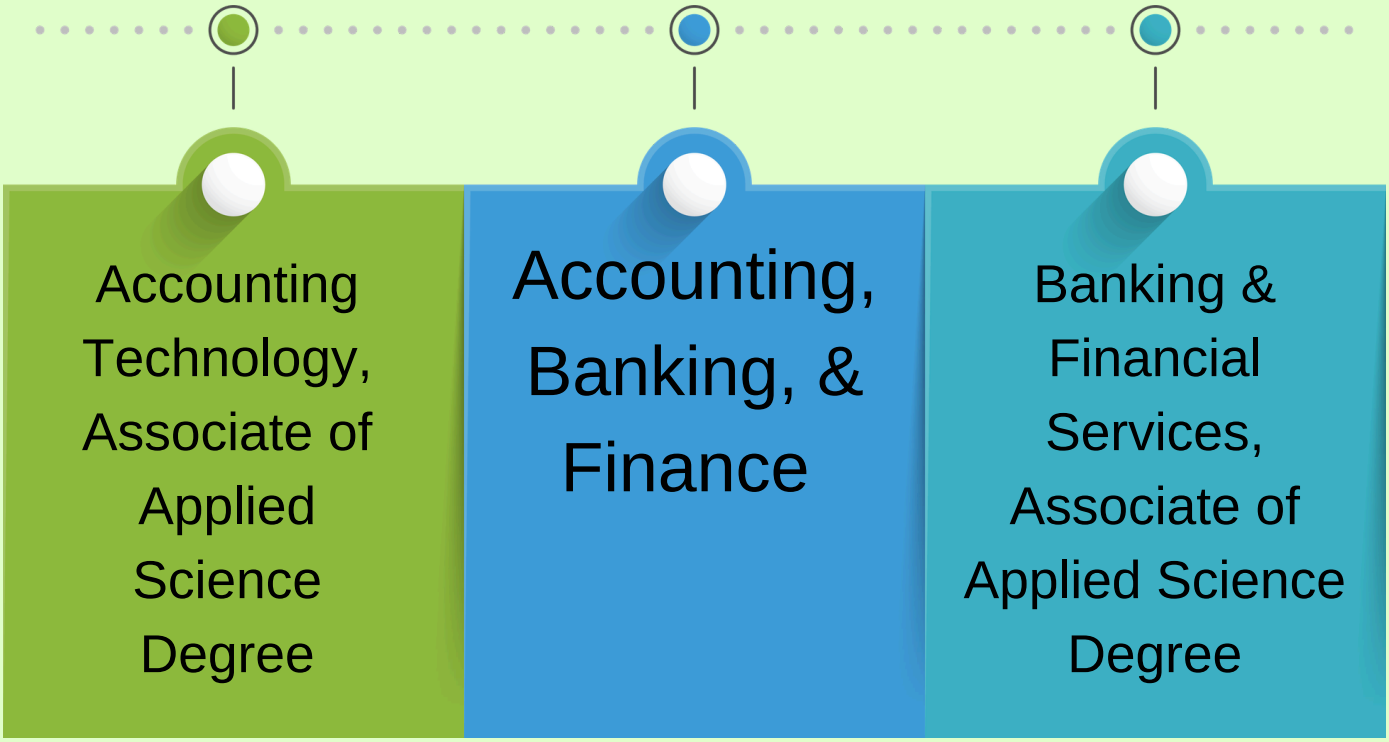


P-TECH
Programs of Choice

Supporting small-town values and providing life-changing opportunities.

ACCOUNTING, BANKING, & FINANCE

The Accounting and Financial Services program of study focuses on occupational and educational opportunities associated with examining, analyzing, and interpreting financial records and managing money in banks, including lending, accepting deposits, and providing financial services. This career cluster includes occupations ranging from financial advisors, financial analysts, loan officers, bank tellers, and credit analysts to accountants & auditors, tax preparers, and personal financial advisors. This pathway can lead to Level 1 Certificates and an Associate of Applied Science Degree from San Antonio College.



Accounting and Financial Services

The Accounting, Banking, and Financial Services focus on occupational and educational opportunities associated with examining, analyzing, and interpreting financial records. It includes exploration of banking and financial services, preparing financial statements, auditing financial statements prepared by others, and interpreting accounting records. This program of study also introduces students to mathematical modeling tools.

WORK-BASED LEARNING OPPORTUNITIES

Intern with a certified public accountant (CPA) at a local business
Intern with a city or county auditor's office
Shadow a financial advisor as an intern at an investment company

Expanded Learning Opportunities

Explore student membership in professional organizations such as AICPA, CIMA, or TXCPA.

Related Award

Accounting Technology, A.A.S
Accounting Technology, Level I Certificate

COURSE SEQUENCE

ACCOUNTING

Principles of Business, Marketing, & Finance
(Grade 9)

Accounting I
(Grade 10)

Financial Math
(Grade 11)

Business English
(Grade 11)

Practicum in Business Management
(Grade 12)

ACCOUNTING TECHNOLOGY, A.A.S. Degree

San Antonio College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 DC ***ENGL 1301** & **1302,** aligns with the degree	English 4
Math	Algebra 1	Algebra 1 or Geometry if Alg 1 was taken in MS	8105	Algebra 2 Honors to DC *Math 1314	**Financial Analysis:** ACCT 2371 Business Tax reporting & ACNT 1331 Federal Income Tax Individual
Science		Biology	Chemistry or Physics *OnRamps option	Physics *OnRamps option	Environmental Systems
Social Studies		W History	Elective	US History *OnRamps option	Federal Government & Economics DC *ECON 2301 aligns with the degree
Physical Activity Elective		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Fine Art & Core DC		Fine Art: *ART 1301 or *MUSI 1306 & Speech *SPCH 1321 aligns with the degree	Spanish 2 if needed	***POFT 1301 Business English**	Elective
Foreign Language	Spanish 1	Spanish 1 or 2	**Business Information Management I DC: *POFT 1171 File/PC Management for Windows and POFT 1231** Numeric Keypad Applications & Spring: ***ITSW 2334** Adv. Spreadsheets	**Accounting II DC,** *ACNT 1304 INTR. To Accounting 2, & *ACNT 1329 Payroll & Business Tax Accounting	**Practicum in Business Management DC** (Fall) *ACNT 2380 - Cooperative Education - Accounting & (Spring) ***POFT 1313 Professional Workforce Preparation**
Pathway		**Prin of Business, Marketing, & Finance DC** (FALL) *ITSW 1301 Intro. to Word Processing & (SPRING) *ITSW 1304 Intro. to Spreadsheets	**Accounting I** (FALL) ***ACNT 1303 Intro. to Accounting, OR ACCT 2301 INTRO TO ACCT** & (SPRING) *ACNT 1311 Introduction to Computerized Accounting	**Financial Math DC**(Fall) ***POFT 1321 Business Math** & (Spring) *ACNT 1313 Computerized Accounting Applications	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

Dual credit course content includes college content standards that extend beyond the scope of the high school course curriculum. College course content cannot be fully controlled by Ingram ISD. College courses often discuss issues using multiple viewpoints represented in our diverse world, some of which may not align with the student's viewpoint. We encourage you to talk to your students about their studies and help them process the multiple views presented. Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Color represents the path for Level 1 Certificate to Degree Completion

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Accounting Technology Level 1 Certificate → **Accounting Technology A.A.S. Degree**

ACCOUNTING TECHNOLOGY COURSE DESCRIPTIONS

These courses are for students pursuing the Accounting Technology Pathway.

PRINCIPLES OF BUSINESS, MARKETING, & FINANCE DC

I**TSW 1301** - Intro to Word Processing
ITSW 1304 - Intro to Spreadsheets
Grade: 9
Credits: 1
Prerequisites: TSIA2, dual credit application complete
College Credit: Yes
The Principles of Business, Marketing, & Finance introduces students to the production of documents, tables, and graphics. Students also gain Instruction in the concepts, procedures, and application of electronic spreadsheets. Students can earn three hours of college credit in the fall for ITSW 1301 - Intro to Word Processing and three hours in the spring for ITSW 1304 - Intro to Spreadsheets. Credits earned go toward the Accounting Technology, Level 1 Certificate from San Antonio College and can be applied towards the Accounting Technology, A.A.S. Degree.

BUSINESS INFORMATION MANAGEMENT 1 DC

POFT 1171- File/PC Management for Windows
POFT 1313 - Professional Workforce Preparation
Grades 10-11,
Credits: 1
Prerequisites: ITSW 1304 or ITSC 1301 or COSC 1301. Grade of "C" or better except COSC 1301 grade of "D" or better.
College Credit: Yes,
POFT 117 is taken in the fall and provides instruction in Windows-based microcomputer operating systems and file management applications for administrative support personnel. Then take POFT 1231, which focuses on skill development in the operation of a numeric keypad, for a total of 3 college credits in the fall. In the spring, students take ITSW 2334. This course teaches advanced techniques for developing and modifying spreadsheets. Includes macros and data analysis functions. Students can earn 3 college credit hours. Courses are offered through San Antonio College, and credits can be applied toward the Accounting Technology, A.A.S. Degree.

ACCOUNTING I DC

ACNT 1303 - Intro to Accounting
ACNT 1311 - Intro. to Computerized Accounting
Grade: 10
Credits: 1
Prerequisites: TSIA2 requirements, Principles of Business, Algebra 1
College Credit: Yes
This course continues the student's study of accounting technology. Students begin a study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliations, and payroll. Students are also given an Introduction to utilizing the computer in maintaining accounting records with primary emphasis on a general ledger package and processing common business applications. QuickBooks accounting software will be used for the completion of projects. Students can earn three hours of college credit in the fall for ACNT 1303 - Intro to Accounting and three hours in the spring for ACNT 1311 - Intro to Computerized Accounting. Credits earned go toward the Accounting Technology, Level I Certificate, from San Antonio College and can be applied towards the Accounting Technology, A.A.S. Degree.
ACNT 1303 is a prerequisite for ACNT 1311.

ACCOUNTING TECHNOLOGY COURSE DESCRIPTIONS

These courses are for students pursuing the Accounting Technology Pathway.

FINANCIAL MATH DC

POFT 1321 - Business Math
ACNT 1313 - Computerized Accounting Applications
Grade: 11
Credits: 1
Prerequisites: TSIA2 requirements
College Credit: Yes
This course builds upon the prior courses. Students learn the fundamentals of business mathematics, including analytical and critical thinking skills. Students also explore the use of computers to develop and maintain accounting records and to process common business applications for managerial decision-making. Accounting software will be used for the completion of projects. Students can earn three hours of college credit in the fall for POFT 1321 - Business Math and three hours in the spring for ACNT 1313 Computerized Accounting Applications. Credits earned go toward the Accounting Technology, Level I Certificate, from San Antonio College and can be applied towards the Accounting Technology, A.A.S. Degree.
ACNT 1303 is a prerequisite for ACNT 1313.

BUSINESS ENGLISH DC

POFT 1301 - Business English
Grade: 11
Credits: .05
Prerequisites: TSIA2 requirements,
College Credit: Yes
In this course, students are given an introduction to a practical application of basic language usage skills with an emphasis on the fundamentals of writing and editing for business. Students can earn three hours of credit for POFT 1301- Business English. Credits earned go toward the Accounting Technology, Level 1 Certificate, from San Antonio College and can be applied towards the Accounting Technology, A.A.S.

PRACTICUM OF BUSINESS IN BUSINESS MANAGEMENT DC

POFT 1171- File/PC Management for Windows
POFT 1313 - Professional Workforce Preparation
Grade: 12
Credits: 1
Prerequisites: TSIA2 requirements
College Credit: Yes
The course completes the program of study in Accounting Technology and builds upon the previous courses. This course provides instruction in Windows-based microcomputer operating systems and file management applications for administrative support personnel. Preparation for the workforce, including ethics, interpersonal relations, professional attire, and career advancement. Practicum in Business Management is also designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences, such as employment, independent study, internships, assistantships, mentorships, or laboratories. Students can earn three hours of college credit in the fall for POFT 1171- File/PC Management for Windows and three hours in the spring for POFT 1313 - Professional Workforce Preparation. Credits earned go toward the Accounting Technology, Level 1 Certificate, from San Antonio College and can be applied towards the Accounting Technology, A.A.S. Degree.

Banking & Financial Services

The Accounting, Banking, and Financial Services focus on occupational and educational opportunities associated with examining, analyzing, and interpreting financial records. It includes exploration of banking & financial services, preparing financial statements, auditing financial statements prepared by others, and interpreting accounting records. This program of study also introduces students to mathematical modeling tools.

WORK-BASED LEARNING OPPORTUNITIES

Intern with a certified public accountant (CPA) at a local business

Intern with a city or county auditor's office

Shadow a financial advisor as an intern at an investment company

Expanded Learning Opportunities

Explore student membership in professional organizations such as AICPA, CIMA, or TXCPA.

Related Awards

Banking & Financial Services, A.A.S.

Banking & Financial Services, Level I Certificate

COURSE SEQUENCE

Banking & Finance

Principles of Business, Marketing, & Finance
(Grade 9)

Business Information Management
(Grade 10)

Entrepreneurship 1
(Grade 11)

Financial Analysis
(Grade 11)

Practicum of Entrepreneurship
(Grade 12)

Banking & Finance, A.A.S. Degree

San Antonio College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 DC *ENGL 1301 & 1302 aligns with the degree	English 4
Math	Algebra 1	Algebra 1 or Geometry if Alg 1 was taken in MS	Geometry and/or Algebra 2 Honors to DC *MATH 1314 aligns with the degree	**Algebra 2 Honors to DC** *MATH-1314 or Accounting DC ACCT 2301 Principles of Financial Accounting & (Spring) ACCT 2302 Principles of Managerial Accounting aligns with the degree	**Ind Std-Accounting DC** ACCT-2301, Principles of Financial Accounting & (Spring) ACCT-2302, Principles of Managerial Accounting aligns with the degree or Precalculus
Science		Biology	Chemistry or Physics *OnRamps option	Physics *OnRamps option	Environmental Systems
Social Studies		World History	Elective	US History *OnRamps option	Federal Government & Economics DC *ECON-2301 aligns with the degree
Fine Art & Core DC		Fine Art DC *ART 1301 or *MUSI 1306 & Speech *SPCH 1321 aligns with the degree	Elective	Elective	Athletics/Elective
Physical Activity Elective		PE/ Athletics	Athletics/Elective	Athletics/Elective	**PRACTICUM of ENTREPRENEURSHIP DC** Securities & Investments FALL *BNKG 1315 - Investments & Securities & SPRING ***BNKG 1340 - Money and Financial Markets** and a FALL *BMGT 1327 - Principles of Management SPRING *BNKG 2389 - Internship Banking & Financial Support Services
Foreign Language	Spanish I	Spanish I or II	Spanish II if needed	**ENTREPRENEURSHIP 1 DC** FALL *BCIS 1305 - Business Comp Apps & SPRING *BNKG 1349 - Commercial Lending	
PATHWAY		**PRINCIPLES of BUSINESS DC** FALL *BNKG 1303 - Principles of Bank Operation & SPRING *BNKG 1343 - Law & Banking	**BUSINESS INFORMATON MANAGEMENT DC** FALL ***BNKG 1351 - Selling Bank and Financial Services** & SPRING *BMGT 2305 - Adv. Communications in Management	**FINANCIAL ANALYSIS DC** FALL *BNKG 1345 - Consumer Lending & SPRING *BNKG 1356 - Analyzing Financial Statements	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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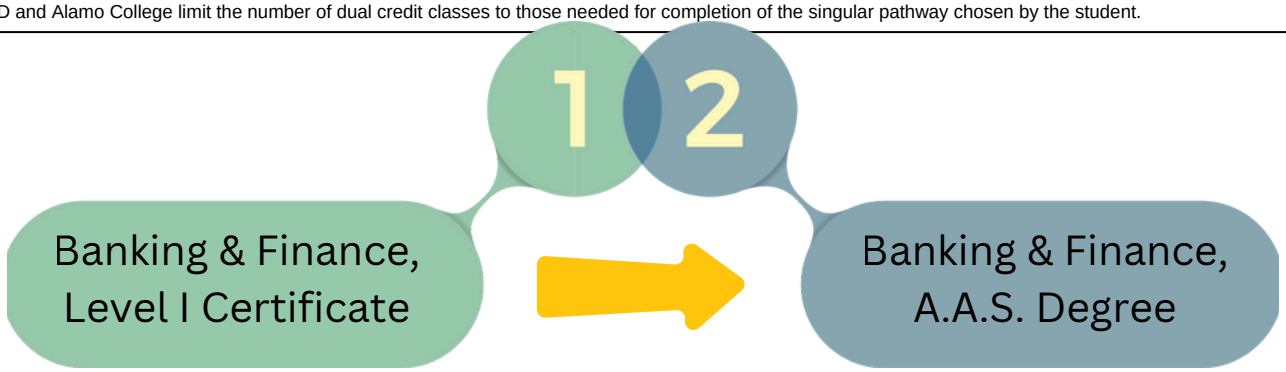
Color represents the path for Level 1 Certificate to Degree Completion

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.



BANKING & FINANCE COURSE DESCRIPTIONS

These courses are for students pursuing the Banking & Financial Services Pathway.

PRINCIPLES OF BUSINESS, MARKETING, & FINANCE DC

BNKG 1303 - Principles of Bank Operation
BNKG 1343 - Law & Banking
Grade: 9
Credits: 1
Prerequisites: TSIA2 requirements
College Credit: Yes

The Principles of Business, Marketing, & Finance introduces students to an overview of the fundamental banking functions and the role of regulation in the banking industry. Explanation of financial products and services to various markets. Students also gain an introduction to the basic sources of law and banking regulation. Emphasis on the laws relating to contracts, negotiable instruments, secured transactions, and consumer credit. Students can earn three hours of college credit for BNKG 1303 and three hours of college credit in the spring for BNKG 1343 from San Antonio College.

BUSINESS INFORMATION MANAGEMENT DC

BNKG 1351 - Selling Bank and Financial Services
BMGT 2305 - Adv. Communications in Management
Grade: 10
Credits: 1
Prerequisites: TSIA2 requirements
College Credit: Yes

In the fall, students will explore BNKG 1351, which examines the characteristics and benefits of bank products and services with an emphasis on the personal selling process and quality customer service. Students will also study the application of personal selling, cross-selling, and related product benefits to individual customer needs. The spring course, BMGT 2305, provides a study of advanced principles of oral and written communications for managers. Students can earn three hours of college credit for BNKG 1351 and three hours of college credit in the spring for BMGT 2305 from San Antonio College.

FINANCIAL ANALYSIS

BNKG 1345 - Consumer Lending
BNKG 1356 - Analyzing Financial Statements
Grade: 11
Credits: 1
Prerequisites: TSIA2 requirements
College Credit: Yes

The fall course BNKG 1345 provides a study of the different types of consumer loans. Identify the federal regulations and state laws regarding the collection and servicing of consumer loans and relate consumer credit to the lending process. In the spring, students take BNKG 1356, which provides a study of the process of evaluating financial statements, cash flow, and ratio analysis of individuals and businesses. Emphasis on the relationship between comparative analysis and industry standards. Students can earn three hours of college credit for BNKG 1345 and three hours of college credit in the spring for BNKG 1356 from San Antonio College.

BANKING & FINANCE COURSE DESCRIPTIONS

These courses are for students pursuing the Banking & Financial Services Pathway.

ENTREPRENEURSHIP I DC

BCIS 1305 - Business Comp Apps
BNKG 1349 - Commercial Lending
Grade: 11
Credits: 1
Prerequisites: TSIA2 requirements
College Credit: Yes

The fall course BCIS 1305 is a study of Computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. In the spring course BNKG 1349, students gain an overview of the commercial lending market and process with an emphasis on credit analysis, evaluation, federal regulation, and state laws. Students can earn three hours of college credit for BCIS 1305 and three hours of college credit in the spring for BNKG 1349 from San Antonio College.

ACCOUNTING DC

ACCT 2301 - Principles of Financial Accounting
ACCT 2302 - Principles of Managerial Accounting
Grades: 11-12
Credits: 1
Prerequisites: *TSIA2 requirements, ACCT 2302 requires ACCT 2301 with a grade of "C" or better*
College Credit: Yes

The fall course ACCT 2301 provides an introduction to the fundamental concepts of financial accounting as prescribed by U.S. generally accepted accounting principles (GAAP) as applied to transactions and events that affect business organizations. Students will examine the procedures and systems to accumulate, analyze, measure, and record financial transactions. Students will use recorded financial information to prepare a balance sheet, income statement, statement of cash flows, and statement of shareholders' equity to communicate the business entity's results of operations and financial position to users of financial information who are external to the company. Students will study the nature of assets, liabilities, and owners' equity while learning to use reported financial information for purposes of making decisions about the company. Students will be exposed to International Financial Reporting Standards (IFRS). The spring course ACCT 2302 is an introduction to the fundamental concepts of managerial accounting appropriate for all organizations. Students will study information from the entity's accounting system relevant to decisions made by internal managers, as distinguished from information relevant to users who are external to the company. The emphasis is on the identification and assignment of product costs, operational budgeting and planning, cost control, and management decision-making. Topics include product costing methodologies, cost behavior, operational and capital budgeting, and performance evaluation. Students can earn three hours of college credit for ACCT 2301 and three hours of college credit in the spring for ACCT 2302 from San Antonio College.

BANKING & FINANCE COURSE DESCRIPTIONS

These courses are for students pursuing the Banking & Financial Services Pathway.

PRACTICUM IN BUSINESS MANAGEMENT DC

FALL

BNKG 1315 - Investments & Securities

BMGT 1327 - Principles of Management

SPRING

BNKG 1340 - Money and Financial Markets

BNKG 2389 - Internship Banking & Financial Support Services

Grade: 12

Credits: 2

Prerequisites: TSIA2 requirements

College Credit: Yes

The practicum class completes the program of study in Banking & Financial Services and builds upon the previous courses. The fall courses consist of BNKG 1315, which provides a study of relevant terminology and changes in the stock market as a result of economic and political events and changes in interest rates and taxes, and course BMGT 1327, which examines the concepts, terminology, principles, theories, and issues in the field of management. In the spring course BNKG 1340, students will study monetary policy and its related effects on financial intermediaries. Includes financial markets, regulatory functions, and structures. Addresses investment and funds management. Students will also complete the semester with course BNKG 2389, which is a work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. A learning plan is developed by the college and the employer. Students can earn six hours of college credit for BNKG 1315 & BMGT 1327 and six hours of college credit in the spring for BNKG 1340 & BNKG 2389 from San Antonio College.

AGRICULTURE, FOOD, & NATURAL RESOURCES

The Agriculture, Food, & Natural Resources career cluster focuses on the essentials of life, food, water, land, & air. This program can lead to an Associate of Science-Agriculture Concentration from Palo Alto College. The Associate of Science with a concentration in Agriculture provides a solid academic background coupled with introductory courses in the various areas of the dynamic agricultural and renewable natural resources industry. Jobs are available in several areas of agriculture, including production, supply, processing and marketing, planning and managing renewable natural resources and providing technical assistance to the agricultural industry.

ASSOCIATE OF SCIENCE DEGREE, AGRICULTURE CONCENTRATION

AGRICULTURAL SCIENCE: *Environmental and Natural Resources*

The Environmental and Natural Resources program of study focuses on occupational and educational opportunities associated with the research, design, and engineering of plans for the prevention and control of environmental hazards. This program of study includes conducting research to identify, abate, or eliminate sources of pollutants or hazards that affect either the environment or the health of the population.

WORK-BASED LEARNING OPPORTUNITIES

Clubs, Organizations, Activities:

- Texas FFA—Agriscience Fair,
- Leadership Development Events,
- Career Development Events, Speaker Events

Future Internships

Veterinary Clinics and other local agricultural opportunities

Related Awards/Degrees

Associate of Science - Agriculture Concentration

COURSE SEQUENCE

PRINCIPLES OF AG
(Grades 8-9)

WILDLIFE DC
(Grades 10-12)

AG BUSINESS MANAGEMENT DC
(Grades 10-12)

ADVANCED ANIMAL SCIENCE DC
(Grades 11-12)

ADVANCED PLANT & SOIL SCIENCE DC
(Grades 11-12)

Associate of Science with Concentration in Agriculture

Palo Alto, Alamo College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 DC *ENGL 1301 & 1302	English 4* (DC for Core component 40 & 90 if not taking W. Hist 2321 & 2322)
Math	Algebra 1	Algebra 1 or Geometry if Alg 1 was taken in MS	Geometry and/or Algebra 2 Honors to DC, *MATH 1314	Algebra 2 Honors to DC, *MATH 1314 or Precalculus	Precalculus or Precalculus *OnRamps
Science		Biology	**Biology DC *BIOL 1406 & 1407**	Chemistry, *OnRamps option	**ADVANCE PLANT & SOIL SCIENCE DC,** FALL *AGRI 1307 - Agronomy & SPRING *AGRI 1315 - Principles of Horticulture
Social Studies		**World History Honors to DC *HIST 2321 or 2322**	**Texas Government DC *GOVT 2306 & *HIST 2321 or 2322**	**US History DC *HIST 1301 & 1302 *OnRamps Option**	**Federal Government DC *GOVT 2305 & Economics DC *ECON 2301**
Fine Art		**Fine Art Credit, *ART 1301 or *MUSI 1306 & Speech *SPCH 1321**	Elective	Elective	Elective
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Elective	**Practicum: see Science for pathway completion.**
Pathway	Prin. of Agriculture, Food, and Natural Resources	**PRINCIPLES of AGRICULTURE** if not taken in 8th grade, or **WILDLIFE DC,** Wildlife to Spring dual credit: *AGRI 2330 - Wildlife Conservation and Management	**WILDLIFE to DC,** Wildlife to SPRING dual credit: *AGRI 2330 - Wildlife Conservation and Management, and/or **Livestock Production DC** Fall: *AGRI 1319 & Spring: *AGRI 2321	**ENTREPRENEURSHIP 1 TO DC** *AGRI 2317 - Intro to Agricultural Economics	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Associate of Science with Concentration in Agriculture

Palo Alto, Alamo College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 DC *ENGL 1301 & 1302	English 4* (DC for Core component 40 & 90 if not taking W. Hist 2321 & 2322)
Math	Algebra 1	Algebra 1 or Geometry if Alg 1 was taken in MS	Geometry and/or Algebra 2 Honors to DC, *MATH 1314	Algebra 2 Honors to DC, *MATH 1314 or Precalculus	Precalculus or Precalculus *OnRamps
Science		Biology	**Biology DC *BIOL 1406 & 1407**	Chemistry, *OnRamps option	**ADVANCE PLANT & SOIL SCIENCE DC,** FALL *AGRI 1307 - Agronomy & SPRING *AGRI 1315 - Principles of Horticulture
Social Studies		**World History Honors to DC *HIST 2321 or 2322**	**Texas Government DC *GOVT 2306 & *HIST 2321 or 2322**	**US History DC *HIST 1301 & 1302 *OnRamps Option**	**Federal Government DC *GOVT 2305 & Economics DC *ECON 2301**
Fine Art		**Fine Art Credit, *ART 1301 or *MUSI 1306 & Speech *SPCH 1321**	Elective	Elective	Elective
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Elective	**Practicum: see Science for pathway completion.**
Pathway	Prin. of Agriculture, Food, and Natural Resources	**PRINCIPLES of AGRICULTURE** if not taken in 8th grade, or **WILDLIFE DC,** Wildlife to Spring dual credit: *AGRI 2330 - Wildlife Conservation and Management	**WILDLIFE to DC,** Wildlife to SPRING dual credit: *AGRI 2330 - Wildlife Conservation and Management, and/or **Livestock Production DC** Fall: *AGRI 1319 & Spring: *AGRI 2321	**ENTREPRENEURSHIP 1 TO DC** *AGRI 2317 - Intro to Agricultural Economics	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

AGRICULTURAL SCIENCE COURSE DESCRIPTIONS

These courses are for students pursuing the Agricultural Sciences Pathway.

PRINCIPLES OF AGRICULTURE, FOOD, AND NATURAL RESOURCES

Grades: 8-9
Credit: 1
Prerequisites: None
College Credit: No
Students will gain knowledge of the agriculture, food, and natural resource systems at the local, state, national, and international levels. Plant and animal systems, principles of food products, and food processing systems are evaluated. Students will learn a variety of career and educational opportunities in the agriculture and natural resources systems. Students will also expand on personal development, globalization, industry standards, details, practices, and expectations.

WILDLIFE, FISHERIES, AND ECOLOGY MANAGEMENT DC

AGRI 2330 - Wildlife Conservation and Management
Grades: 9-12
Credit: 1
Prerequisites: Principles of Agriculture, TSIA2 requirements
College Credit: Yes
Principles and practices used in the production and improvement of wildlife resources. Aesthetic, ecological, and recreational uses of public and private lands. In the spring semester, students can earn three hours of college credit for AGRI 2330 - Wildlife Conservation and Management through Palo Alto College. The fall semester is non-dual. Credit earned goes toward an Associate of Science Degree with a concentration in Agricultural Science. This course is taught on campus.

ENTREPRENEURSHIP 1 - PROFESSIONAL STANDARDS IN AGRIBUSINESS DC

AGRI 2317 - Intro to Agricultural Economics
Grades: 11-12
Credit: 1
Prerequisites: Principles of Agriculture, TSIA2 requirements
College Credit: Yes
Students can earn three hours of college credit for AGRI 2317 - Intro to Agricultural Economics in the fall through Palo Alto College. The credit earned goes toward an Associate of Science Degree with a concentration in Agricultural Science. Students will study the fundamental economic principles and their application in the agricultural industry. The spring semester is non-dual. This course is taught on campus.

LIVESTOCK & POULTRY PRODUCTON- ADVANCED ANIMAL SCIENCE DC (SCIENCE CREDIT)

AGRI 1319 - Animal Science
AGRI 2321 - Livestock Evaluation I
Grades: 10-12
Credit: 1 (Science Core Credit)
Prerequisites: Biology, Chemistry, and TSIA2 requirements
College Credit: Yes
This course is for students on the Agricultural Science pathway. Credits go toward an Associate of Science degree with a concentration in Agricultural Science from Palo Alto College. Students can earn three hours of college credit in the fall for AGRI 1319 - Animal Science and three hours in the spring for AGRI 2321 - Livestock Evaluation I. Students will learn the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. To prepare for careers in the field of animal science, students must acquire knowledge and skills related to animal systems and develop knowledge regarding career opportunities, entry requirements, and industry standards. Hands-on labs, such as dissections, will be conducted by the students enrolled in this course. This course can fulfill one of the required four science courses needed for graduation. This course is taught on campus.

AGRICULTURAL SCIENCE COURSE DESCRIPTIONS

These courses are for students pursuing the Agricultural Sciences Pathway.

ADVANCED PLANT AND SOIL SCIENCE DC

AGRI 1307 - Agronomy
AGRI 1315 - Principles of Horticulture
Grades: 11-12
Credit: 1
Prerequisites: Biology, Chemistry, and TSIA2 requirements
College Credit: Yes
This course is for students on the Agricultural Science pathway. Credits go toward an Associate of Science degree with a concentration in Agricultural Science from Palo Alto College. In the fall, students can earn three hours of college credit for AGRI 1307 - Agronomy. Agronomy focuses on the development, production, and management of field crops, including growth and development, climate, plant requirements, pest management, and production methods. In the spring, students can earn three hours of college credit for AGRI 1315 - Principles of Horticulture. Horticulture focuses on the principles and practices in the development, production, and management of field crops, including growth and development, climate, plant requirements, pest management, and production methods. This course is taught on campus.

CAREER & TECHNICAL EDUCATION PROJECT-BASED

Grades: 9-12
Credit: 1
Prerequisites: Approval from the Agricultural Teacher
College Credit: No
Project Required
This course can be paired with any of the above-listed courses in the agricultural science pathway. In this course, students research a real-world problem and develop an original project on a topic related to career interests. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. A student may repeat this course once for credit, provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.

PRACTICUM IN AGRICULTURE, FOOD, AND NATURAL RESOURCES: ANIMAL SCIENCE

Grades: 11-12
Credits: 2 to 3
Recommended Prerequisite: A minimum of one credit from the courses in the Agriculture, Food, and Natural Resources Career Cluster.
College Credit: No
Practicum in Agriculture, Food, and Natural Resources is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences, such as employment, independent study, internships, assistantships, mentorships, or laboratories. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Agriculture, Food, and Natural Resources Career Cluster.

AGRICULTURE TECHNOLOGIES & MECHANICS - WELDING

The Agricultural Technology and Mechanical Systems program The Welding program prepares students to work in an industry that offers opportunities in manufacturing shops, maintenance shops, steel construction sites, ship-building, oil field operations, and ranch-related welding. Students gain extensive skills through shop activities on industrial welding equipment such as SMAW, GMAW, FCAW, GTAW, and Oxy-Fuel. This program leads into the manufacturing field and allows students to pursue a Welding, Level 1 Certificate, from St. Philip's College.

WELDING

LEVEL 1 CERTIFICATE

AGRICULTURAL TECHNOLOGY & MECHANICAL SYSTEMS - WELDING

The Agricultural Technology and Mechanical Systems a program that teaches students about welding and fabrication, as well as other skills related to agriculture and engineering. Students learn how to read metalworking prints, test weld quality, and perform cuts using an oxy/fuel cutting system. The program includes hands-on activities, such as working with metalworking tools and equipment. Students may also work in teams to solve agricultural problems.

WORK-BASED LEARNING OPPORTUNITIES

Clubs, Organizations, Activities
Texas FFA—Agriscience Fair, Leadership Development Events, Career Development Events,
Speaker Events

Future Internships

Local welding and manufacturing opportunities

Related Awards

Welding Level I Certificate

COURSE SEQUENCE

PRINCIPLES OF AG

(Grades 8 or 9)

AG MECHANICS DC

(Grade 10)

AG STRUCTURES DESIGN & FABRICATION DC

(Grades 11 or 12 for school years that begin in even year)

AG EQUIPMENT DESIGN & FABRICATION DC

(Grade 11 or 12 for the school years that begin in odd years)

Agricultural Technology and Mechanical Systems - Welding Entry Level 1 Certificate, St. Philips College with optional Core 42

Required Classes	Possible 8th Grade courses	**9th Grade**	**10th Grade**	**11th Grade**	12th Grade
English		English 1(H)	English 2 (H)	English 3 **Dual Credit Option for Core*	English 4 **Dual Credit Option for Core*
Math	Algebra 1	Algebra 1 or Geometry Honors	Geometry, or Algebra 2 or Algebra 2 *Honors to *DC Option for Core*	Algebra 2 or Algebra 2 or Precalculus *Honors to *DC Option for Core*	PreCalculus
Science		Biology	Chemistry, or Physics **OnRamps option*	Physics **OnRamps option*	Environmental Science or Advanced Science **Dual Credit Option for Core*
Social Studies		World History **Dual Credit Option for Core*	Optional DC Electives for core	US History **Dual Credit Option for Core*	Federal Government & Economics **Dual Credit Option for Core*
Fine Art		Fine Art **Dual Credit Option for Core*	Elective	Elective	Elective
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language or Elective	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Ag. Equipment Design & Fabrication + Agricultural Laboratory and Field Experience, (school year begins in odd years) Fall: dual credit WLDG 1428 - Introduction to Shielded Metal Arc Welding & Spring: dual credit WLDG 1425 - Introduction to Oxy-Fuel Welding and Cutting	Ag. Structures Design & Fabrication + Agricultural Laboratory and Field Experience (school year begins in even year) Fall dual credit *WLDG 1317 Introduction to Layout & Fabrication & Spring: dual credit WLDG 1430 Introduction to Gas Metal Arc Welding
Pathway	Principles of Agriculture, Food, and Natural Resources	Principles of Ag if not taken in 8th grade, or Agri project class.	Ag Mechanics with Spring: dual credit WLDG 1313 - Intro to Blueprint Reading for Welders (Can also be taken at the Junior or Senior year)		

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Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

AGRICULTURAL TECHNOLOGY & MECHANICAL SYSTEMS
WELDING COURSE DESCRIPTIONS

These courses are for students pursuing the Agricultural Technology & Mechanical Systems - Welding Pathway.

PRINCIPLES OF AGRICULTURE, FOOD, AND NATURAL RESOURCES

Grades: 8-9
Credit: 1
Prerequisites: None
College Credit: No
Students will gain knowledge of the agriculture, food, and natural resource systems at the local, state, national, and international levels. Plant and animal systems, principles of food products, and food processing systems are evaluated. Students will learn the variety of career and educational opportunities in the agriculture and natural resources systems. They will also expand on personal development, globalization, industry standards, details, practices, and expectations.

AGRICULTURE MECHANICS & METAL DC

WLDG 1313 - Intro to Blueprinting
Grades: 10-11
Credit: 1
Prerequisites: Principles of Agriculture, TSIA2 requirements
College Credit: Yes
Agricultural Mechanics and Metal Technologies is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metalworking techniques. To prepare for careers in agricultural power, structural, and technical systems. Students can earn three college hours toward a Level One Certificate for WLDG 1313 - Intro to Blueprinting. Students must attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. This course is taught on campus. College credit is awarded through St. Philip's College.

AGRICULTURE STRUCTURES DESIGN AND FABRICATION DC

WLDG 1430 - Introduction to Gas Metal Arc Welding
WLDG 1317 - Introduction to Layout and Fabrication
Grades: 11-12
Prerequisites: Ag Mechanics and Metal, TSIA2 requirements
Credits: 2
College Credit: Yes
AVAILABLE ODD YEARS
Students can earn four hours of college credit in the fall for WLDG 1430 and three credit hours in the spring for WLDG 1317. Credits earned apply toward a Level One Certificate. Students will explore career opportunities, entry requirements, and industry expectations. To prepare for careers in mechanized agriculture and technical systems, students must attain knowledge and skills related to agricultural structures design and fabrication. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations. In Agricultural Structures Design and Fabrication, students will explore career opportunities, entry requirements, and industry expectations. This course is taught on campus. College credit is awarded through St. Philip's College.

AGRICULTURAL TECHNOLOGY & MECHANICAL SYSTEMS
WELDING COURSE DESCRIPTIONS

These courses are for students pursuing the Agricultural Technology & Mechanical Systems - Welding Pathway.

AGRICULTURE EQUIPMENT DESIGN AND FABRICATION DC

WLDG 1425 - Introduction to Oxy-Fuel Welding and Cutting
WLDG 1428 - Introduction to Shielded Metal Arc Welding
Grades: 11-12
Prerequisites: Ag Mechanics and Metal, TSIA2 requirements
Credits: 2
College Credit: Yes
AVAILABLE EVEN YEARS

Students can earn four hours of college credit in the fall for WLDG 1425 and four credit hours in the spring for WLDG 1428. Credits earned apply toward a Level One Certificate. Students will acquire knowledge and skills related to the design and fabrication of agricultural equipment. To prepare for careers in mechanized agriculture and technical systems, students must attain knowledge and skills related to agricultural equipment design and fabrication. This course is taught on campus. College credit is awarded through St. Philip's College.

PRACTICUM IN AGRICULTURE, FOOD, AND NATURAL RESOURCES

Grades: 11-12
Credits: 2 to 3
Prerequisites: Ag Mechanics, Agricultural Pathway, Application
College Credit: No

This course provides a supervised practical application of knowledge and skills in applied agricultural engineering. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences. To prepare for success, students will have opportunities to learn in a variety of settings that may include work-based learning, internships, and participation in Leadership Development Events, Career Development Events, and Speaking Development Events.

ARCHITECTURE & CONSTRUCTION

The Architecture & Construction career cluster focuses on designing, planning, managing, building, & maintaining the built environment. This career cluster includes occupations ranging from architect, carpenter, & construction manager to electrician, plumber, and heating, air conditioning, & refrigeration technician. This program can lead to a Construction Technology Level 1 Certificate from St. Philip's College.

CONSTRUCTION TECHNOLOGY

LEVEL 1 CERTIFICATE

Architecture & Construction Technology

The Construction program explores the occupations and educational opportunities related to constructing, installing, or repairing structures and fixtures made of wood, such as concrete forms including frameworks, partitions, joists, studding, rafters, and stairways. This program of study may also include exploration into installing, dismantling, or moving machinery and heavy equipment according to layout plans, blueprints, or other drawings.

WORK-BASED LEARNING OPPORTUNITIES

Shadow an industry partner,
Internship,
Conduct an informational interview with an architect to learn about their role and responsibilities,
Participate in SkillsUSA

Industry Certifications

Construction Technology, Level I Certificate

COURSE SEQUENCE

PRINCIPLES OF CONSTRUCTION DC
(Grade 9)

CONSTRUCTION TECHNOLOGY I DC
(Grade 10)

CONSTRUCTION TECHNOLOGY II DC
(Grade 11)

PRACTICUM OF CONSTRUCTION TECHNOLOGY DC
(Grade 12)

Construction Technology, Level 1 Certification

St. Philips College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1(H)	English 2 (H)	English 3 **Dual Credit Option for Core*	English 4 **Dual Credit Option for Core*
Math	Algebra I	Algebra 1 or Geometry Honors	Geometry, or Algebra 2 or Algebra 2 *Honors to *DC Option for Core*	Algebra 2 or Algebra 2 or Precalculus *Honors to *DC Option for Core*	Precalculus
Science		Biology	Chemistry, or Physics **OnRamps option*	Physics **OnRamps option*	Environmental Science or Advanced Science **Dual Credit Option for Core*
Social Studies		World History *Dual Credit Option for Core	Optional DC Electives for core	US History *Dual Credit Option for Core	Federal Government & Economics *Dual Credit Option for Core
Fine Art Elective		Fine Art **Dual Credit Option for Core*	Spanish 2 if needed	Elective	Construction
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Elective	Athletics/Elective
Foreign Language	Spanish 1	Spanish 1 or 2	**CONSTRUCTION TECHNOLOGY I DC**, CNBT 13OO - Resd. & Light CC Drawing , & CNBT 1318	**CONSTRUCTION TECHNOLOGY II DC**, *CNBT 1450 - Construction Tech II & CNBT 1453 - Construction Tech III	**PRACTICUM IN CONSTRUCTION DC**, (3 Class Periods) *CNBT 1346 - Construction Estimating I, & *CNBT 1305 - OSHA Regulations & *CNBT 2342 - Construction Management & CNBT 1342 - Building Codes & 1391 Sp. Topics Practicum
Pathway		**PRINCIPLES OF CONSTRUCTION DC,** *CNBT 1416 - Construction Tech I & *CNBT 1311 - Construction Methods a Materials			

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

Dual credit course content includes college content standards that extend beyond the scope of the high school course curriculum. College course content cannot be fully controlled by Ingram ISD. College courses often discuss issues using multiple viewpoints represented in our diverse world, some of which may not align with the student's viewpoint. We encourage you to talk to your students about their studies and help them process the multiple views presented.

Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

ARCHITECTURE & CONSTRUCTION TECHNOLOGY COURSE DESCRIPTIONS

These courses are for students pursuing the Construction Technology Pathway.

PRINCIPLES OF CONSTRUCTION TECHNOLOGY DC

CNBT 1416 - Construction Tech I
CNBT 1311 - Construction Methods & Materials
Grade: 9
Credit: 1
Prerequisites: TSIA2 requirements
College Credit: Yes
Principles of Construction is intended to provide an introduction and lay a solid foundation for those students entering the construction or craft-skilled areas. This course is for students on the Construction Technology pathway. Credits go toward a Level I Certificate from St. Philip's College. This course is taught on campus. Students can earn four hours of college credit in the fall for CNBT 1416 - Tech I and three hours in the spring for CNBT 1311 - Construction Methods & Materials. All courses are taught on campus, and college credit is earned through St. Philip's College. For safety and liability considerations, the course enrollment is limited to 15 students.

CONSTRUCTION TECHNOLOGY I DC

CNBT 14OO - Residential & Light Commercial Blueprint Reading
CNBT 1450 - Construction Tech II
Grades: 10-11
Credits: 2
Prerequisites: TSIA2 requirements, Principles of Construction Technology
College Credit: Yes
In Construction Technology I, students will gain the knowledge and skills needed to enter the workforce as carpenters or building maintenance supervisors or to prepare for a postsecondary degree in construction management, architecture, or engineering. Students will acquire knowledge and skills in safety, tool usage, building materials, codes, and framing. This course is for students on the Construction Technology pathway. The dual credit goes toward a Level I Certificate. This course is taught on campus. Students can earn four hours of college credit in the fall for CNBT - 14OO Residential & Light Commercial Blueprint Reading. The spring semester consists of four hours of college credit in the spring for CNBT - 1450 Construction Tech II. For safety and liability considerations, the course enrollment is limited to 15 students. College credit is awarded through St. Philip's College.

CONSTRUCTION TECHNOLOGY II DC

CNBT 1342 - Building Codes & Inspection
CNBT 1453 - Construction Tech III
Grades: 10-11
Credits: 2
Prerequisites: TSIA2 requirements, Principles of Construction Technology I
College Credit: Yes
In Construction Technology II, students will gain advanced knowledge and skills needed to enter the workforce as carpenters, building maintenance technicians, or supervisors, or to prepare for a postsecondary degree in construction management, architecture, or engineering. Students will build on the knowledge base from Construction Technology I and will be introduced to building codes and inspections. In the fall, students can receive three hours of college credit for CNBT 1342 - Building Codes & Inspection and three hours of college credit for CNBT 1453 - Construction Tech III in the spring. All credits apply towards the Level I Construction Technology Certificate. All courses are taught on campus, and college credit is earned through St. Philip's College. For safety and liability considerations, course enrollment is limited to 15 students.

ARCHITECTURE & CONSTRUCTION TECHNOLOGY COURSE DESCRIPTIONS

These courses are for students pursuing the Construction Technology Pathway.

PRACTICUM IN CONSTRUCTION TECHNOLOGY DC

FALL

CNBT 1346 - Construction Estimating I

OSHT 1305 - OSHA Regulations

SPRING

CNBT 2342 - Construction Management

PFPB 1413 - Intro to Plumbing

Grade: 12

Credits: 3

Prerequisites: TSIA2 requirements, Principles of Construction Technology 1 & 2

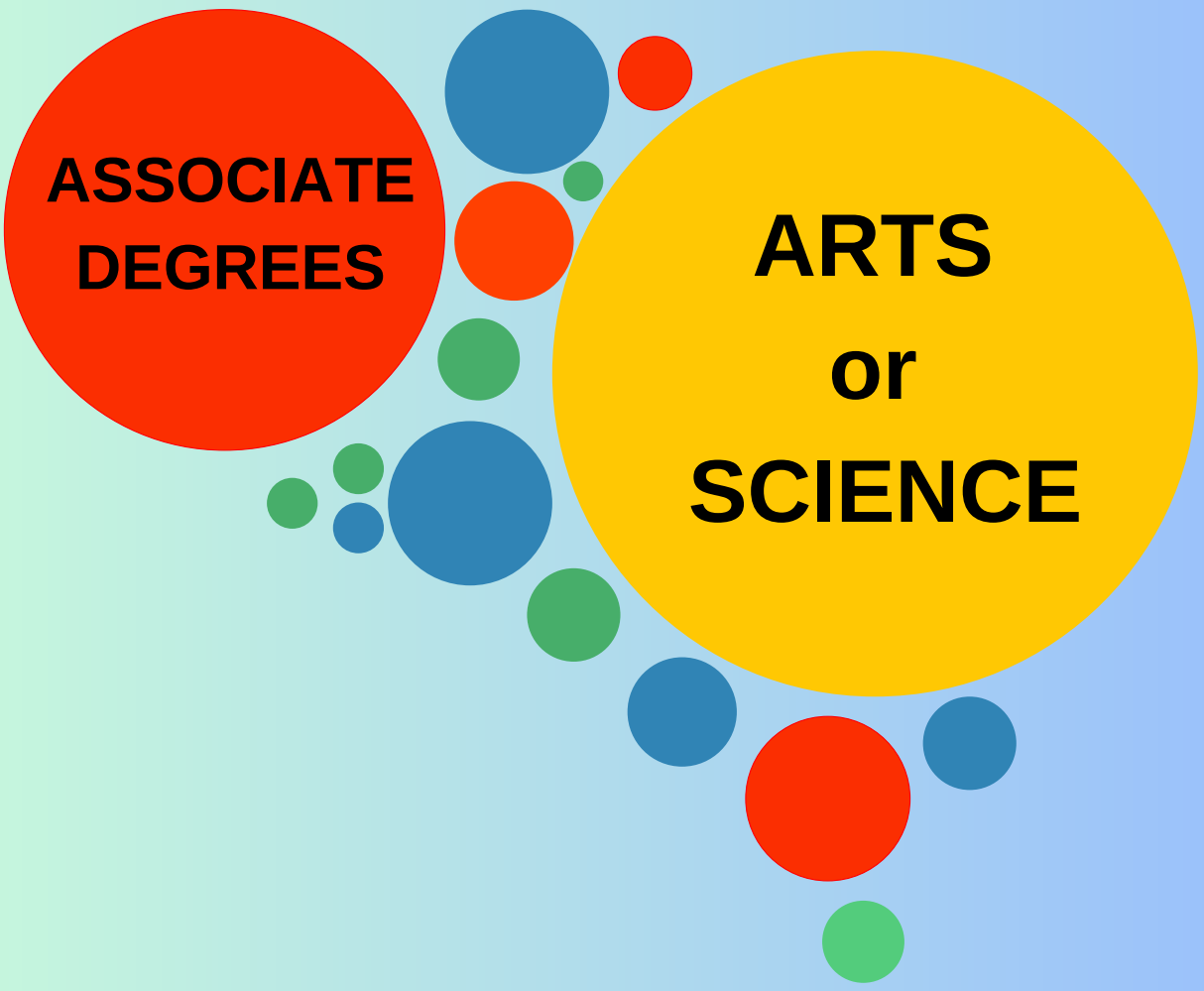
College Credit: Yes

In the Practicum in Construction Technology, students will be challenged with the application of the knowledge and skills from Construction Technology I and II. In many cases, students will be allowed to work at a job (paid or unpaid) outside of school or be involved in local projects that the school has approved for this class. In the fall, students will also have an opportunity to earn six hours of college credit for classes CNBT 1346 - Construction Estimating I and OSHT 1305 - OSHA Regulations. Students can earn seven hours of college credit in the spring for courses CNBT 2342 - Construction Management and PFPB 1413 - Intro to Plumbing and Practicum. All credits apply towards the Level I Construction Technology Certificate. For safety and liability considerations, course enrollment is limited to 15 students. College credit is awarded through St. Philip's College.

ASSOCIATE of ARTS or SCIENCE DEGREE

PRE-UNIVERSITY

The Associate Degree is designed as the equivalent of the first half of a Baccalaureate Degree. This is a general plan and may or may not satisfy the requirements of a specific transfer university. An Associate Degree can create a pathway to careers in business, engineering, computer science, helping professions, and more. Associate Degrees are awarded through Alamo College; see the crosswalk for college details.



Associate Degrees

Students gain a strong educational foundation in a wide range of subjects across many disciplines, including literature, humanities, history, math, science, social sciences, and more. Students also develop skills in communication, critical thinking, problem-solving, and research. Students pursuing this degree will earn 42 core hours and 18 additional hours selected from courses that align with their future four-year university and degree goals.

WORK-BASED LEARNING OPPORTUNITIES

Career Development Events,
Speaker Events
Job-shadowing
Internships

Postsecondary Opportunities

Associate of Art

Associate of Science

COURSE SEQUENCE

Students will complete the Texas Core Curriculum (TCC) which is a 42 semester credit hour (SCH) general education core curriculum for public college students in Texas.
(Grades 9-12)

Students will also complete an 18 hours elective concentration of dual credit courses in the pathway they are pursuing.
(Grades 10-12)

Associate of Arts Degree

St. Philips, Alamo College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	**English 3 DC *ENGL 1301 & 1302**	English 4 *DC Option
Math	Algebra I	Algebra 1or Geometry Honors	**Geometry and/or Algebra 2 Honors to DC, *MATH 1314**	**Algebra 2 Honors to DC, *MATH 1314 or PreCal *OnRamps or DC Option**	PreCalculus *Math DC Options, see advisor
Science		Biology	Chemistry, or Physics *OnRamps option	**Biology DC, *BIOL 1406 & 1407**	Physics or Environmental Science
Social Studies		**World History DC or H to DC, *HIST 2321 or 2322**	**Texas Government *GOVT 2306 & *HIST 2321 or 2322**	**US History DC, *HIST 1301 & 1302, *OnRamps option available**	**Federal Government DC, *GOVT 2305 and Economics DC, *ECON 2301, (can take PSYC 2301, or SOCI 1301 to fulfill core component 80)**
Elective		Elective	Elective	**Additional dual credit hours to finish elective hours, see your advisor**	**Additional dual credit hours to finish elective hours, see your advisor**
Fine Art		**Fine Art/Speech Credit, Art Appreciation, *ART 1301 or Music Appreciation, MUSI 1306 & Speech *SPCH 1321**	Elective	Additional dual credit hours to finish elective hours, see your advisor	Additional dual credit hours to finish elective hours, see your advisor
Physical Activity Elective		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Elective	Elective

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

Dual credit course content includes college content standards that extend beyond the scope of the high school course curriculum. College course content cannot be fully controlled by Ingram ISD. College courses often discuss issues using multiple viewpoints represented in our diverse world, some of which may not align with the student's viewpoint. We encourage you to talk to your students about their studies and help them process the multiple views presented.

Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Associate of Science Degree

St. Philips, Alamo College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	**English 3 DC *ENGL 1301 & 1302**	English 4 *DC Option
Math	Algebra 1	Algebra 1 or Geometry Honors	**Geometry and/or Algebra 2 Honors to DC, *MATH 1314**	**Algebra 2 Honors to DC, *MATH 1314 or PreCal or PreCal DC MTH 2412**	**PreCal DC *Math 2412 or Calculus DC *MATH 2413 or STATS DC *MATH 1342**
Science		Biology	Chemistry, or Physics *OnRamps option	**Biology DC, *BIOL 1406 & 1407**	**Chemistry DC *CHEM 1411 & 1412 or Anatomy & Physiology BIOL 2401 & 2402 A&P**
Social Studies		**World History DC *HIST 2321 & 2322**	**Texas Government *GOVT 2306 & Psychology *PSYC 2301**	**US History DC, *HIST 1301 & 1302, *OnRamps option available**	**Federal Governent DC, *GOVT 2305 & Economics DC, *ECON 2301**
Fine Art		**Fine Art/Speech Credit, Art Appreciation, *ART 1301 or Music Appreciation, MUSI 1306 & Speech *SPCH 1321**	Elective	Elective	Additional dual credit hours to finish elective hours, see your advisor
Physical Activity Elective		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Elective	Elective

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Alamo College Core 42 Courses

Communication (10) Core - 2 courses (6 credit hours)

- English 3 DC, ENGL 1301 & 1302

Mathematics (20) Core - 1 course (3 credit hours)

- Algebra 2 DC, MTH 1314 or 1414, unless degree plan requires alternative math

Life and Physical Sciences (30) Core - 2 courses (6 credit hours)

- Biology for Science Majors DC, BIOL 1406 & 1407

Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History DC, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Creative Arts (50) Core - 1 course (3 credit hours)

- Art Apprecaition DC, ART 1302 or Music Appreciation DC, MUSI 1306

American History (60) Core - 2 courses (6 credit hours)

- US History DC, HIST 1301 & 1302

Government/Political Science (70) Core - 2 courses (6 hours)

- Texas Government DC, GOVT 2306 & Federal Government DC, GOVT 2305

Social and Behavioral Sciences (80) Core - 1 course (3 credit hours)

- Economics DC, ECON 2301, or PSYC 2301, or SOCI 1301

Additional Communication (90) Core - 1 course (3 credit hours)

- SPCH 1321 - Business and Professional Communication

Additional Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History Dc, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

DUAL CREDIT Core 42 COURSE DESCRIPTIONS

These courses are for students pursuing the Core 42/Associate Degree Pathway.

ENGLISH 3 DC A

ENGL 1301 - Composition I
Grades: 11-12
Prerequisite: TSIA2 requirement
Credit: 0.5
College Credit: Yes
English 3 is a high school graduation requirement. The fall semester is an intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus on writing the academic essay as a vehicle for learning, communicating, and critical analysis. The spring semester is an Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions. The course is taught on campus. Students can earn three hours of college credit for ENGL 1301 through St. Philip's College.

ENGLISH 3 DC B

ENGL 1301 - Composition II
Grades: 11-12
Prerequisite: TSIA2 requirement
Credit: 0.5
College Credit: Yes
Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions. The course is taught on campus. Students can earn three hours of college credit for ENGL 1302 through St. Philip's College.

ALGEBRA 2 HONORS to DC

MATH 1314 - College Algebra
Grades: 10-12
Credit: 1
Prerequisite: Algebra 1, TSIA2 Math
College Credit: Yes
This is a full-year high school math credit. This is an advanced, fast-paced Algebra II course that will condense the curriculum in the fall semester to prepare for College Algebra. Students gain an in-depth study and applications of polynomial, rational, radical, exponential, and logarithmic functions and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included. This course fulfills the three hours of mathcore college credit for the Applied Associates degree in Cybersecurity, Associate's of Arts, or Associate's of Science degree plans. The course is taught on campus, and students can earn four hours of college credit for MATH 1413 through St. Philip's College.

DUAL CREDIT Core 42 COURSE DESCRIPTIONS

These courses are for students pursuing the Core 42/Associate Degree Pathway.

BIOLOGY DC A

BIOL 1406 - Biology for Science Majors
Grades: 10 -12
Credit: 0.5
Prerequisites: Biology, TSIA2 Requirements
College Credit: Yes
This course will cover the biology topics of BIOL 1406 - Biology for Science Majors I. The course will focus on the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. You will study the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of physiology, genetics, ecology, and the scientific method are also included. Laboratory activities will reinforce the Lecture topics. This course fulfills the Life and Physical Sciences foundational component area of the core. This course is recommended for students who are pursuing degrees in the area of life science, healthcare, or other STEM-related fields. This course can count towards the four required high school science credits needed for high school graduation. The course is taught on campus. Students can earn four hours of college credit for BIOL 1406 through St. Philip's College.

BIOLOGY DC B

BIOL 1407 - Biology for Science Majors
Grades: 10 -12
Credit: 0.5
Prerequisites: BIOL 1406 with a grade of “C” or better.
College Credit: Yes
This course will cover the biology topics of BIOL 1406 - Biology for Science Majors II. The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. Laboratory activities will reinforce the Lecture topics. This course fulfills the Life and Physical Sciences foundational component area of the core. This course can count towards the four required high school science credits needed for high school graduation. The course is taught on campus. Students can earn four hours of college credit for BIOL 1407 through St. Philip's College.

WORLD HISTORY DC A

HIST 2321 - World Civilizations I
Grades: 10-12
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
This is a one-semester online college course offered through St. Phillip's for students who are fulfilling the Language, Philosophy, and Culture foundational component area of the core. This course is a survey of the social, political, economic, cultural, religious, and intellectual history of the world from the emergence of human cultures through the 15th century. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania, and their global interactions over time. Themes include the emergence of early societies, the rise of civilizations, the development of political and legal systems, religion and philosophy, economic systems, and trans-regional networks of exchange. The course emphasizes the development, interaction, and impact of global exchange. Students can earn three hours of college credit for HIST 2321 through St. Philip's College.

DUAL CREDIT Core 42 COURSE DESCRIPTIONS

These courses are for students pursuing the Core 42/Associate Degree Pathway.

WORLD HISTORY DC B
HIST 2322 - World Civilizations II
Grades: 10-12
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
This is a one-semester, online college course. This course is a survey of the social, political, economic, cultural, religious, and intellectual history of the world from the 15th century to the present. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania, and their global interactions over time. Themes include maritime exploration and transoceanic empires, nation/state formation and industrialization, imperialism, global conflicts and resolutions, and global economic integration. Students can earn three hours of college credit for HIST 2322 through St. Philip's College.

PHILOSOPHY DC,
PHIL 1301 - Introduction to Philosophy
Grades: 10-12
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
This is a one-semester, online college course. This course meets the Language, Philosophy, and Culture component requirements of the core. Students will study the classical and contemporary theories concerning the good life, human conduct in society, and moral and ethical standards. Students will read, analyze, and critique philosophical texts and define and appropriately use important terms such as relativism, virtue, duty, rights, utilitarianism, natural law, egoism, altruism, autonomy, and care ethics. They will apply and demonstrate knowledge of major arguments and problems in ethics and be able to present and discuss well-reasoned ethical positions in writing. Students will apply ethical concepts and principles to address moral concerns in various aspects of life. Students can earn three hours of college credit for PHIL 1301 through St. Philip's College.

ENGLISH 4 DC A
ENGL 2322 - British Literature I: Anglo-Saxon through Neoclassical
Grade: 12
Prerequisite: ENGL 1301 or its equivalent with a “C” or better and ENGL 1302
Credit: 0.5
College Credit: Yes
This course is for students who are interested in British Literature. Students will explore the development of British literature from the Anglo-Saxon period to the Eighteenth Century. Students will study works of prose, poetry, drama, and fiction in historical, linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions. The course is taught on campus, and students can earn three hours of college credit for ENGL 2322 through St. Philip's College.

ENGLISH 4 DC B
ENGL 2323 - British Literature II: Anglo-Saxon through Neoclassical
Grades 12
Prerequisite: ENGL 1301 or its equivalent with a “C” or better and ENGL 1302
Credit: 0.5
College Credit: Yes
This course continues the student’s survey of the development of British literature from the Romantic period to the present. Students will study works of prose, poetry, drama, and fiction with their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Students who already received credit in the Lang/Philosophy core should only take this course if it is part of their field of study or major, or if they plan to use it as elective hours for an Associate of Arts degree. The course is taught on campus, and students can earn three hours of college credit for ENGL 2323 through St. Philip's College.

DUAL CREDIT Core 42 COURSE DESCRIPTIONS

These courses are for students pursuing the Core 42/Associate Degree Pathway.

ART APPRECIATION DC

ART 1301 - Art Appreciation
Grades: 9-12
Credit: 0.5
Prerequisites: TSIA2
College Credit: Yes
This course fulfills the Creative Arts component area of the core. The course is taught on campus, and college credit for ART 1301 can be earned through St. Philip's Alamo College. This course is a general introduction to the visual arts designed to create an appreciation of the vocabulary, media, techniques, and purposes of the creative process. Students will critically interpret and evaluate works of art within formal, cultural, and historical contexts. Students who have already received credit in the Creative Art component can use the course as elective hours for an Associate of Arts or Science degree. Students can earn three hours of college credit for ART 1301 through St. Philip's College.

MUSIC APPRECIATION DC

MUSI 1306 - Music Appreciation
Grades: 9-12
Credit: 0.5
Prerequisites: TSIA2
College Credit: Yes
This course fulfills the Creative Arts component area of the core. The course is taught on campus. Students will recognize musical styles aurally. Students will communicate using basic musical terms when writing or speaking about music. Students will demonstrate an understanding of musical teamwork. Students will demonstrate an understanding of the cultural and societal context for musical styles. Students who have already received credit in the Creative Art component can use the course as elective hours for an Associate of Arts or Science degree. Students can earn three hours of college credit for MUSI 1306 through St. Philip's College.

UNITED STATES HISTORY DC A

HIST 1302 - United States History II
Grade: 11
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
This is an online college course through St. Phillip's for students who are fulfilling the American History foundational component area of the core. Students taking this course will take it in the fall and prepare for the state End-of-Course assessment required for graduation. This course is a survey of the social, political, economic, cultural, and intellectual history of the United States from the Civil War/Reconstruction era to the present. United States History II examines industrialization, immigration, world wars, the Great Depression, the Cold War, and post-Cold War eras. Themes that may be addressed include American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy. Students can earn three hours of college credit for HIST 1302 from St. Philip’s College.

DUAL CREDIT CORE 42 COURSE DESCRIPTIONS

These courses are for students pursuing the Core 42/Associate Degree Pathway.

UNITED STATES HISTORY DC B

HIST 1301 - United States History I
Grade: 11
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
This is an online college course for students who are fulfilling the American History foundational components of the core. The course is a survey of the social, political, economic, cultural, and intellectual history of the United States from the pre-Columbian era to the Civil War/Reconstruction period. United States History 1 includes the study of pre-Columbian, colonial, revolutionary, early national, slavery and sectionalism, and the Civil War/Reconstruction eras. Themes that may be addressed include American settlement and diversity, American culture, religion, civil and human rights, technological change, economic change, immigration and migration, and the creation of the federal government. Students can earn three hours of college credit for HIST 1301 from St. Philip's College.

FEDERAL GOVERNMENT DC

GOVT 2305 - Federal Government
Grade: 12
Credit: 0.5
Prerequisites: TSAI2 Requirements
College Credit: Yes
The US Government course is a high school graduation requirement. This course is a one-semester dual enrollment course taught online. Students who take this course will have a proctored class period on campus. This course explores the origin and development of the U.S. Constitution, the structure and powers of the national government, including the legislative, executive, and judicial branches, federalism, political participation, the national election process, public policy, civil liberties, and civil rights. This course fulfills the Government/Political Science foundational component area of the core. Students can earn three hours of college credit for GOVT 2305 from St. Philip's College.

TEXAS GOVERNMENT DC

GOVT 2306 - Texas Government
Grades: 10-12
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
Texas government is a one-semester dual enrollment course taught online. This course fulfills three of the six hours required in the Government/Political Science component of the core for any Associate's degree. In this advanced-level course, students will study the origin and development of the Texas constitution, the structure and powers of state and local government, federalism and intergovernmental relations, political participation, the election process, public policy, and the political culture of Texas. Students can earn three hours of college credit for GOVT 2306 from St. Philip's College.

ECONOMICS DC

ECON 2301 - Principles of Macroeconomics
Grade: 12
Credit: 0.5
Prerequisites: TSIA2
College Credit: Yes
Economics is a high school graduation requirement. This is a one-semester dual enrollment course taught online. This course consists of an analysis of the economy, including the measurement and determination of Aggregate Demand and Aggregate Supply, national income, inflation, and unemployment. Other topics include international trade, economic growth, business cycles, fiscal policy, and monetary policy. This course fulfills the Social and Behavioral Sciences foundational component area of the core. It may also be an elective for an Associate of Arts degree. Students can earn three hours of college credit for ECON 2301 from St. Philip's College.

DUAL CREDIT Core 42 COURSE DESCRIPTIONS

These courses are for students pursuing the Core 42/Associate Degree Pathway.

PSYCHOLOGY DC

PSYC 2301 - General Psychology
Grades: 10-12
Credit: 0.5
Prerequisites: TSIA2
College Credit: Yes
The course is taught on campus and is a survey of major topics in psychology. Introduces the study of behavior and the factors that determine and affect behavior and mental processes. This course fulfills the Social and Behavioral Sciences foundational component area of the core. Students can earn three hours of college credit for PSYC 2301 from St. Philip's College.

SOCIOLOGY DC

SOCI 1301 - Introductory Sociology
Grades: 10-12
Credit: 0.5
Prerequisites: TSIA2
College Credit: Yes
This is a one-semester online college course. This course meets the Social and Behavioral Science component requirements of the core. Students who have already received credit in the Social and Behavioral Science component should only take this course if it is part of their field of study or major, or if they plan to use it as an elective hour for an Associate of Arts or Science degree. Students who take this course will have a proctored class period on campus. This is an introductory study of social behavior and the organization of human society. Students will learn the concepts and principles used in the study of group life, social institutions, and social processes. This course will describe the development of the field as a social science by identifying methods and strategies of research leading to an understanding of how the individual relates to society and the ever-changing world. Students will also learn the importance and role of culture, social structure, socialization, and social change in today's society. This course is taught on campus by our instructor. Students can earn three hours of college credit for SOCO 1301 from St. Philip's College.

SPEECH DC

SPCH 1321 - Business and Professional Communication
Grades: 9-12
Credit: 0.5
Prerequisites: TSIA2
College Credit: Yes
This course focuses on the application of theories and practices of speech communication as applied to business and professional situations. Students learn the fundamental techniques of business and professional presentations, including organizational and other types of communication used in business settings. Emphasis is on critical thinking, nonverbal communication, listening skills, interviewing, group processes, and formal presentations in an organizational environment. This course fulfills the additional Communication component area option of the core. This course is taught on campus by our instructor. Students can earn three hours of college credit for SPCH 2321 from St. Philip's College.

DUAL CREDIT COURSES FOR DEGREE COMPLETION

Grades: 9-12
Prerequisites: TSIA2 requirements
College Credit: Yes
Students will choose dual-credit courses to complete their pathway, see the crosswalk. College credit hours earned through Alamo College

BUSINESS ADMINISTRATION,

Pre-University,
Associate of Arts Degree,
Concentration in Business Administration

The Associate Degree is designed as the equivalent of the first half of a Baccalaureate Degree. This is a general plan and may or may not satisfy the requirements of a specific transfer university. An Associate Degree can create a pathway to careers in business, engineering, computer science, helping professions, and more. The Associate of Arts concentration in Business Administration offers instruction in general business and practices. This program offers a complete set of freshman and sophomore courses that students need to transfer to Texas public four-year colleges and universities. It contains a Business Field of Study Curriculum for students who are seeking a Bachelor of Business Administration (BBA), a Bachelor of Arts (BA), or a Bachelor of Science (BS) degree with a major in business, including all business specializations.

Associate Degrees

Students gain a strong educational foundation in a wide range of subjects across many disciplines, including literature, humanities, history, math, science, social sciences, and more. Students also develop skills in communication, critical thinking, problem-solving, and research. Students pursuing this degree will earn 42 core hours and 18 additional hours selected from courses that align with their future four-year university and degree goals.

WORK-BASED LEARNING OPPORTUNITIES

Career Development Events,
Speaker Events
Job-shadowing
Internships

Postsecondary Opportunities

Associate of Arts - Business Concentration

COURSE SEQUENCE

Students will complete the Texas Core Curriculum (TCC) which is a 42 semester credit hour (SCH) general education core curriculum for public college students in Texas.
(Grades 9-12)

Students will also complete an 18 hours elective concentration of dual credit courses in the pathway they are pursuing.
(Grades 10-12)

Alamo College Core 42 Courses

Communication (10) Core - 2 courses (6 credit hours)

- English 3 DC, ENGL 1301 & 1302

Mathematics (20) Core - 1 course (3 credit hours)

- Algebra 2 DC, MTH 1314 or 1414, unless degree plan requires alternative math

Life and Physical Sciences (30) Core - 2 courses (6 credit hours)

- Biology for Science Majors DC, BIOL 1406 & 1407

Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History DC, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Creative Arts (50) Core - 1 course (3 credit hours)

- Art Apprecaition DC, ART 1302 or Music Appreciation DC, MUSI 1306

American History (60) Core - 2 courses (6 credit hours)

- US History DC, HIST 1301 & 1302

Government/Political Science (70) Core - 2 courses (6 hours)

- Texas Government DC, GOVT 2306 & Federal Government DC, GOVT 2305

Social and Behavioral Sciences (80) Core - 1 course (3 credit hours)

- Economics DC, ECON 2301, or PSYC 2301, or SOCI 1301t

Additional Communication (90) Core - 1 course (3 credit hours)

- SPCH 1321 - Business and Professional Communication

Additional Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History Dc, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Associate of Arts Degree

Business Administration Concentration

St. Philip's College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 DC *ENGL 1301 & 1302	English 4 *DC Option for core
Math	Algebra I	Algebra 1or Geometry Honors	Geometry and/or Algebra 2 Honors to DC, *MATH 1314	Algebra 2 Honors to DC, *MATH 1314 or Precal, if Algebra 2 has been taken	IND STY: Business Math DC *MATH 1324 & Statistics and Business Decision Making DC *BUSI 2305
Science		Biology	Chemistry, or Physics *OnRamps option	Physics or Physics OnRamps	Biology DC, *BIOL 1406 & 1407
Social Studies		World History DC or H to DC, *HIST 2321 or 2322	Texas Government *GOVT 2306 & *HIST 2321 or 2322	US History DC, *HIST 1301 & 1302, *OnRamps option available	Federal Governent DC, *GOVT 2305 & Economics DC, *ECON 2301
Fine Art Elective		Fine Art/Speech Credit, Art Appreciation, *ART 1301 or Music Appreciation, MUSI 1306 & Speech *SPCH 1321	Elective	Elective	Elective
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Electives	Electives
Pathway		Electives	**PRINCIPLES of BUSINESS DC**, (FALL) *BUSI 1301 & (Spring) Business Computer Applications *BCIS 1305	**ACCOUNTING I DC**, (Fall) Prin of Financial Accounting *ACCT 2301 & (Spring) Prin of Managerial Accounting DC *ACCT 2302	**PRACTICUM of BUSINESS OR ACCOUNTING I DC, (Fall) Prin of Financial Accounting *ACCT 2301 & (Spring) Prin of Managerial Accounting DC *ACCT 2302**

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

Dual credit course content includes college content standards that extend beyond the scope of the high school course curriculum. College course content cannot be fully controlled by Ingram ISD. College courses often discuss issues using multiple viewpoints represented in our diverse world, some of which may not align with the student's viewpoint. We encourage you to talk to your students about their studies and help them process the multiple views presented.

Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

BUSINESS ADMINISTRATION ELECTIVE COURSE DESCRIPTIONS

In addition to the Core 42 classes for an Associate Degree, students will take an additional 18 hours in the elective field of study for their pathway.

BUSINESS PRINCIPLES DC

Grade: 10
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
Students are introduced to the role of business in modern society. Includes an overview of business operations, analysis of the specialized fields within the business organization, and development of a business vocabulary. Students can earn three hours of college credit for BUSI 1301.

BUSINESS COMPUTER APPLICATIONS DC

BCIS 1305 - Business Computer Applications
Grade: 10
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
Computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. Students can earn three hours of college credit for BCIS 1305.

PRINCIPLES OF FINANCIAL ACCOUNTING DC

ACCT 2301 - Principles of Financial Accounting
Grade: 11
Credit: 0.5
Prerequisites: Meet the TSIA2 college-readiness standard for Mathematics
College Credit: Yes
This course is an introduction to the fundamental concepts of financial accounting as prescribed by U.S. generally accepted accounting principles (GAAP) as applied to transactions and events that affect business organizations. Students will examine the procedures and systems to accumulate, analyze, measure, and record financial transactions. Students will use recorded financial information to prepare a balance sheet, income statement, statement of cash flows, and statement of shareholders' equity to communicate the business entity's results of operations and financial position to users of financial information who are external to the company. Students will study the nature of assets, liabilities, and owners' equity while learning to use reported financial information for purposes of making decisions about the company. Students will be exposed to International Financial Reporting Standards (IFRS). Students can earn three hours of college credit for ACCT 2301.

PRINCIPLES OF MANAGERIAL ACCOUNTING DC

ACCT 2302 - Principles of Managerial Accounting
Grade: 11
Credit: 0.5
Prerequisites: ACCT 2301 with a grade of "C" or better
College Credit: Yes
This course is an introduction to the fundamental concepts of managerial accounting appropriate for all organizations. Students will study information from the entity's accounting system relevant to decisions made by internal managers, as distinguished from information relevant to users who are external to the company. The emphasis is on the identification and assignment of product costs, operational budgeting and planning, cost control, and management decision-making. Topics include product costing methodologies, cost behavior, operational and capital budgeting, and performance evaluation. Students can earn three hours of college credit for ACCT 2302.

BUSINESS ADMINISTRATION ELECTIVE COURSE DESCRIPTIONS

In addition to the Core 42 classes for an Associate Degree, students will take an additional 18 hours in the elective field of study for their pathway.

MATHEMATICS FOR BUSINESS & SOCIAL SCIENCES DC

MATH 1325 - Mathematics for Business and Social Sciences
Grade: 12
Credit: 0.5
Prerequisites: Meet the TSIA2 college-readiness standard for Mathematics
College Credit: Yes
This course delves into the application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. (The content level of this course is expected to be at or above the level of college algebra.) Students can earn three hours of college credit for MATH 1324.

BUSINESS STATISTICS DC

Grade: 12
Credit: 0.5
Prerequisites: MATH 1324 Mathematics for Business & Social Sciences
College Credit: Yes
This course explores the descriptive and inferential statistical techniques for business and economic decision-making. Topics include the collection, description, analysis, and summarization of data; probability; discrete and continuous random variables; the binomial and normal distributions; sampling distributions; tests of hypotheses; estimation and confidence intervals; linear regression; and correlation analysis. Statistical software is used to analyze data throughout the course. Students can earn three hours of college credit for BUSI 2305.

PRACTICUM of BUSINESS,

Grade: 12
Credits: 2
College Credit: No
This course is recommended for students in Grades12. Recommended prerequisites: Pathway completion in Business Administration. This course provides a supervised practical application of knowledge and skills in applied agricultural engineering. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences. To prepare for success, students will have opportunities to learn in a variety of settings that may include work-based learning, internships, and participation in Leadership Development Events, Career Development Events, and Speaking Development Events.

Computer Science,

Pre-University,

Associate of Science Degree,

Concentration in Computer Science

The Associate Degree is designed as the equivalent of the first half of a Baccalaureate Degree. This is a general plan and may or may not satisfy the requirements of a specific transfer university. An Associate Degree can create a pathway to careers in business, engineering, computer science, helping professions, and more. This Associate of Science degree prepares students for entry-level positions as software developers. The program instills students with fundamental concepts and provides them with hands-on experience developing software applications. Students will be able to obtain the knowledge and skills necessary for success in the computer industry.

Associate Degrees

Students gain a strong educational foundation in a wide range of subjects across many disciplines, including literature, humanities, history, math, science, social sciences, and more. Students also develop skills in communication, critical thinking, problem-solving, and research. Students pursuing this degree will earn 42 core hours and 18 additional hours selected from courses that align with their future four-year university and degree goals.

WORK-BASED LEARNING OPPORTUNITIES

Career Development Events,
Speaker Events
Job-shadowing
Internships

Postsecondary Opportunities

Associate of Science - Computer Science Concentration

COURSE SEQUENCE

Students will complete the Texas Core Curriculum (TCC) which is a 42 semester credit hour (SCH) general education core curriculum for public college students in Texas.
(Grades 9-12)

Students will also complete an 18 hours elective concentration of dual credit courses in the pathway they are pursuing.
(Grades 10-12)

Alamo College Core 42 Courses

Communication (10) Core - 2 courses (6 credit hours)

- English 3 DC, ENGL 1301 & 1302

Mathematics (20) Core - 1 course (3 credit hours)

- Algebra 2 DC, MTH 1314 or 1414, unless degree plan requires alternative math

Life and Physical Sciences (30) Core - 2 courses (6 credit hours)

- Biology for Science Majors DC, BIOL 1406 & 1407

Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History DC, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Creative Arts (50) Core - 1 course (3 credit hours)

- Art Apprecaition DC, ART 1302 or Music Appreciation DC, MUSI 1306

American History (60) Core - 2 courses (6 credit hours)

- US History DC, HIST 1301 & 1302

Government/Political Science (70) Core - 2 courses (6 hours)

- Texas Government DC, GOVT 2306 & Federal Government DC, GOVT 2305

Social and Behavioral Sciences (80) Core - 1 course (3 credit hours)

- Economics DC, ECON 2301, or PSYC 2301, or SOCI 1301t

Additional Communication (90) Core - 1 course (3 credit hours)

- SPCH 1321 - Business and Professional Communication

Additional Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History Dc, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Associate of Science Degree
Computer Science Concentration
Palo Alto College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1(H)	English 2 (H)	English 3 DC *ENGL 1301 & 1302	English 4 *DC option for core
Math	Algebra I	Geometry H	Algebra 2 Honors to DC *MATH 1314	Precalculus DC *MATH 2412	Calculus DC 1 *MATH 2413
Science		Biology	Chemistry, or Physics *OnRamps option	Physics *OnRamps option	Biology DC *BIOL 1406-1407
Social Studies		World History H- DC *HIST 2321 or 2322	Texas Government DC *GOVT 2306 & *HIST 2321 or 2322	US History DC * HIST 1301-1302, *OnRamps Option	Federal Government *GOVT 2305 & Economics *ECON 2301
Fine Art		Fine Art Credit: *ART 1301 or *MUSI 1306 & Speech *SPCH 1321	Elective	Elective	Elective
Physical Activity Elective		PE/ Athletics	Athletics/Elective	Athletics/Elective	Athletics/Elective
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Elective	Elective
Pathway		Elective	Elective	**PROGRAMMING FUNDAMENTALS I DC,** FALL *COSC 1436 & **PROGRAMMING FUNDAMENTALS II DC** SPRING *COSC 1437	**PROGRAMMING FUNDAMENTALS III DC** *COSC 2436

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

COMPUTER SCIENCE ELECTIVE COURSE DESCRIPTIONS

In addition to the Core 42 classes for an Associate Degree, students will take an additional 18 hours in the elective field of study for their pathway.

PROGRAMMING FUNDAMENTALS I DC A

COSC 1436 - Programming Fundamentals I
Grade: 11
Credit: 0.5
Prerequisites: Meet the TSIA2 college-readiness standard for Mathematics
College Credit: Yes
This course introduces the fundamental concepts of structured programming and provides a comprehensive introduction to programming for computer science and technology majors. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy. (This course is included in the Field of Study Curriculum for Computer Science.) Students can earn four hours of college credit for COSC 1336.

PROGRAMMING FUNDAMENTALS I DC B

COSC 1437 - Programming Fundamentals II
Grade: 11
Credit: 0.5
Prerequisites: COSC 1336 or COSC 1436
College Credit: Yes
This course focuses on the object-oriented programming paradigm, emphasizing the definition and use of classes along with the fundamentals of object-oriented design. The course includes a basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software. Students can earn three hours of college credit for COSC 1437.

PROGRAMMING FUNDAMENTALS II DC

COSC 2436 - Programming Fundamentals III
Credit: 0.5
Prerequisites: COSC 1337 / COSC 1437 or ITSE 2457 / ITSE 2457
College Credit: Yes
This course dives further into the applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis. Students can earn four hours of college credit for COSC 2436.

PRECALCULUS DC

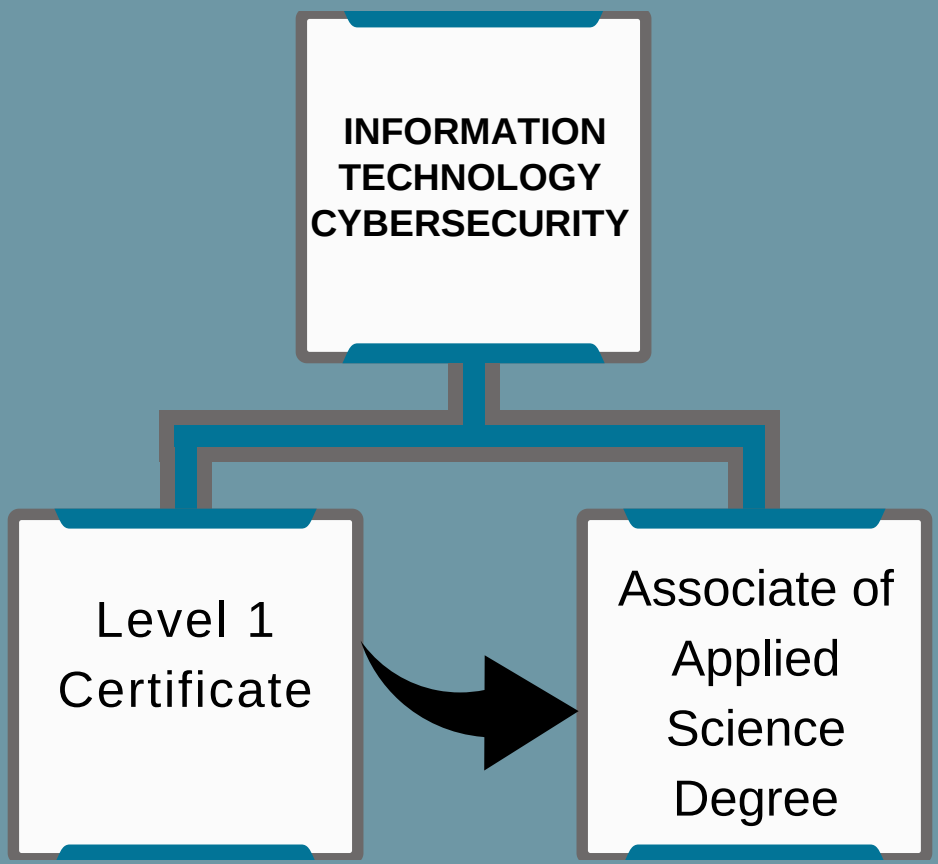
MATH 2412 - Precalculus
Grade: 11
Credit: 0.5
Prerequisites: MATH 1314 or MATH 1414 (MATH 1414 is highly recommended) with a grade of “C” or better
College Credit: Yes
This course is an in-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Students can earn four hours of college credit for MATH 2412.

CALCULUS DC

MATH 2413 - Calculus I
Grade: 12
Credit: 0.5
Prerequisites: MATH 2412 with a grade of “C” or better,
College Credit: Yes
This course covers the limits and continuity; the Fundamental Theorem of Calculus, the definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas. Students can earn four hours of college credit for MATH 2413.

CYBERSECURITY INFORMATION TECHNOLOGY SPECIALIST

The Information Technology (IT) career cluster focuses on the design, development, support, and management of hardware, software, multimedia, and systems integration services. The specialist prepares students to design, implement, and secure computer networks. This pathway can lead to an Associate of Applied Science Degree or a Level 1 Certificate in Information Technology Cybersecurity.



Cybersecurity

The Cybersecurity program of study includes the occupations and educational opportunities related to planning, implementing, upgrading, or monitoring security measures for the protection of computer networks and information. This program of study may also include exploration into responding to computer security breaches, and viruses, and administering network security measures.

WORK-BASED LEARNING OPPORTUNITIES

CyberPatriot Club
Shadow an industry partners
Internships

Industry Certifications & Awards

CompTIA Security
CompTIA Networking
CISCO CCNA

Information Technology Cybersecurity Specialist, A.A.S. Degree

Information Technology Cybersecurity Specialist, Level 1 Certificate

COURSE SEQUENCE

PRINCIPLES OF INFORMATON TECHNOLOGY DC
(Grade 9)

INTERNETWORKING TECHNOLOGIES I DC
(Grades 10-12)

NETWORKING DC
(Grade 10-12)

INTERNETWORKING TECHNOLOGIES II DC
(Grades 10-12)

COMPUTER SCIENCE DC
(Grades 10-12)

DIGITAL FORENSICS DC
(Grade 12)

PRACTICUM OF INFORMATION TECHNOLOGY DC
(Grade 12)

PROJECT-BASED RESEARCH DC
(Grades 11-12)

Information Technology Cybersecurity Specialist, A.A.S.

St. Philip's College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 with DC *ENGL 1301 aligns with the degree	English 4
Math	Algebra 1	Algebra 1 or Geometry Honors	Geometry Honors or Algebra 2 Honors to DC *MATH 1314 aligns with the degree	Algebra 2 Honors to DC *MATH 1314 or Precalculus	Precalculus
Science		Biology	Chemistry, or Physics *OnRamps option	Physics *OnRamps option	Environmental Systems
Social Studies		W History	World History or Elective	US History *OnRamps option	Federal Government and Economics *ECON 2301, or *PSYC 2301, or *SOCI 1301 aligns with the degree
Fine Art - Elective		Fine Art: *ART 1301 or Music Appreciation *MUSI 1306 & Speech *SPCH 1321 aligns with the degree	Spanish 2 if needed	Elective	Elective
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language & Pathway	Spanish 1	Spanish 1 or 2	**NETWORKING DC** **FALL *ITNW 1425 – Fundamentals of Networking** Technologies & SPRING *ITNW 2405 – Network Administration	**INTERNETWORKING TECHNOLOGIES II DC** **FALL *ITNW 2412 – Routers** & SPRING *ITSY 2301 -Firewalls and Network Security, (prerequisite must pass *ITSY 1342 with a C or better)	**DIGITAL FORENSICS DC** FALL*ITSY 2442 -Incident Response and Handling & SPRING *ITSY 2443 - Computer System Forensics
Pathway		**PRINCIPLES OF INFORMATION TECHNOLOGY DC** Fall Principles class & SPRING DC *ITNW 1308 – Implementing and Supporting Client Operating Systems	**INTERNETWORKING TECHNOLOGIES I DC** FALL *ITSC 1316 – Linux Installation and Configuration & SPRING *ITSY 1342 – Information Technology Security, (This class is a prerequisite for *ITSY 2301)	**COMPUTER SCIENCE DC** FALL *ITNW 1413 - Computer Virtualization & SPRING *COSC 1336 – Programming Fundamentals I (the student must meet college readiness for this course)	**PRACTICUM OF INFORMATION TECHNOLOGY DC** FALL *ITSY 2430 -Intrusion Detection & SPRING *ITSY 2286 Internship - Computer and Information Systems Security

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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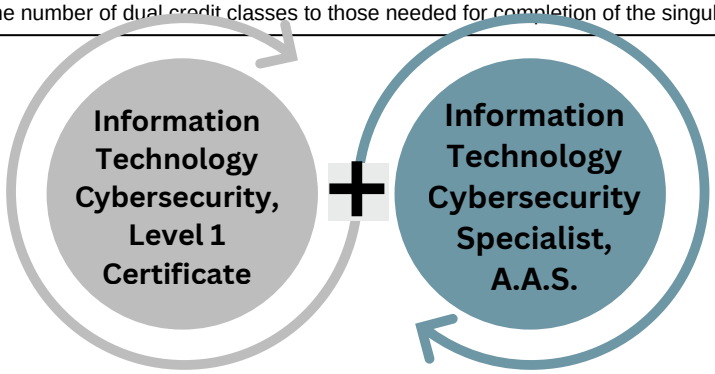
Color represents the path for Level 1 Certificate

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.



INFORMATION TECHNOLOGY CYBERSECURITY SPECIALIST COURSE DESCRIPTIONS

These courses are for students pursuing the Cybersecurity Pathway.

PRINCIPLES OF INFORMATION TECHNOLOGY DC

ITNW 1308 - Implementing & Supporting Client Operating Systems
Grade: 9
Credit: 1
Prerequisites: TSIA2
College Credit: Yes
This course develops the knowledge and skills needed to master fundamental concepts of cybersecurity. Students in the course will develop a basic foundation for continuing their cybersecurity education and choosing a career in the cybersecurity field. Students will explore the challenges facing information security professionals related to ethics, system security, network security, and application security. In the Spring semester, students can earn hours of college credit for ITNW 1308 - Implementing and Supporting Client Operating Systems, through St. Philip's, Alamo College. Students will conduct risk assessments and develop and implement security policies to mitigate those risks. This class is taught on campus.

NETWORKING DC

ITNW 1425 - The Fundamentals in Networking Technologies
ITNW 2405 - Network Administration
Grades: 10-12
Credit: 1
Prerequisites: Principles of Information Technology, TSIA2 requirements
College Credit: Yes
This course is for students pursuing the Applied Associate Degree in Information Technology Cybersecurity Specialist and is taken concurrently with ITCS Internetworking Technologies I. During the fall semester, you will earn four hours of college credit in ITNW 1425- The Fundamentals in Networking Technologies. In the spring semester, you will earn four hours of college credit for ITNW 2405 Network Administration. Certification exams for CompTIA Network + will be available. College credit is awarded through St. Philip's College.

INTERNETWORKING TECHNOLOGIES I DC

ITSC 1316 - Linux Installation & Configuration
ITSY 1342 - Information Technology Security
Grades: 10-12
Credit: 1
Prerequisites: Networking, TSIA2 requirements
College Credit: Yes
This course is for students pursuing theApplied Associate Degree in Information Technology Cybersecurity Specialist and is takenconcurrently with ITCS Networking. During the fall semester, you will earn three hours of college credit in ITSC 1316 - Linux Installation and Configuration. In the spring semester, you will earn four hours of college credit for ITSY 1342 - Information Technology Security. Certification exams for CompTIA Linux+ and CompTIA Security + will be available. College credit is awarded through St. Philip's College.

INTERNETWORKING TECHNOLOGIES II DC

ITNW 2412 - Routers
ITSY 2301 - Firewalls & Network Security
Grades: 11-12
Credit: 1
Prerequisites: Networking, TSIA2 requirements
College Credit: Yes
This course is for students pursuing the Applied Associate Degree in Information Technology Cybersecurity Specialist and is taken concurrently with ITCS Computer Science. During the fall semester, you will earn four hours of college credit in ITNW 2412 - Routers. In the spring semester, you will earn four hours of college credit for ITSY 2301 - Firewalls and Network Security. Certification exams for Cisco CCN will be available. Students who have completed 28 ITCS college credit hours, with a C or better, may be eligible for a Level 1 Certificate from St. Philip's College. College credit is awarded through St. Philip's College.

INFORMATION TECHNOLOGY CYBERSECURITY SPECIALIST COURSE DESCRIPTIONS

These courses are for students pursuing the Cybersecurity Pathway.

COMPUTER SCIENCE DC

COSC 1336 - Programming Fundamentals
Grades: 11-12
Credit: 1
Prerequisites: Networking, TSIA2 requirements
College Credit: Yes
This course is for students pursuing the Applied Associate Degree in Information Technology Cybersecurity Specialist and is taken
concurrently with ITCS Internetworking Technologies II. During the fall semester, you will earn four hours of college credit in 1413 - Computer Virtualization. In the spring semester, you will earn three hours of college credit for COSC 1336 - Programming Fundamentals 1. Students who have completed 28 ITCS college credit hours, with a C or better, may be eligible for a Level 1 Certificate from St. Philip's College. Students will apply computer programming concepts to new problems or situations. College credit is awarded through St. Philip's College.

DIGITAL FORENSICS DC

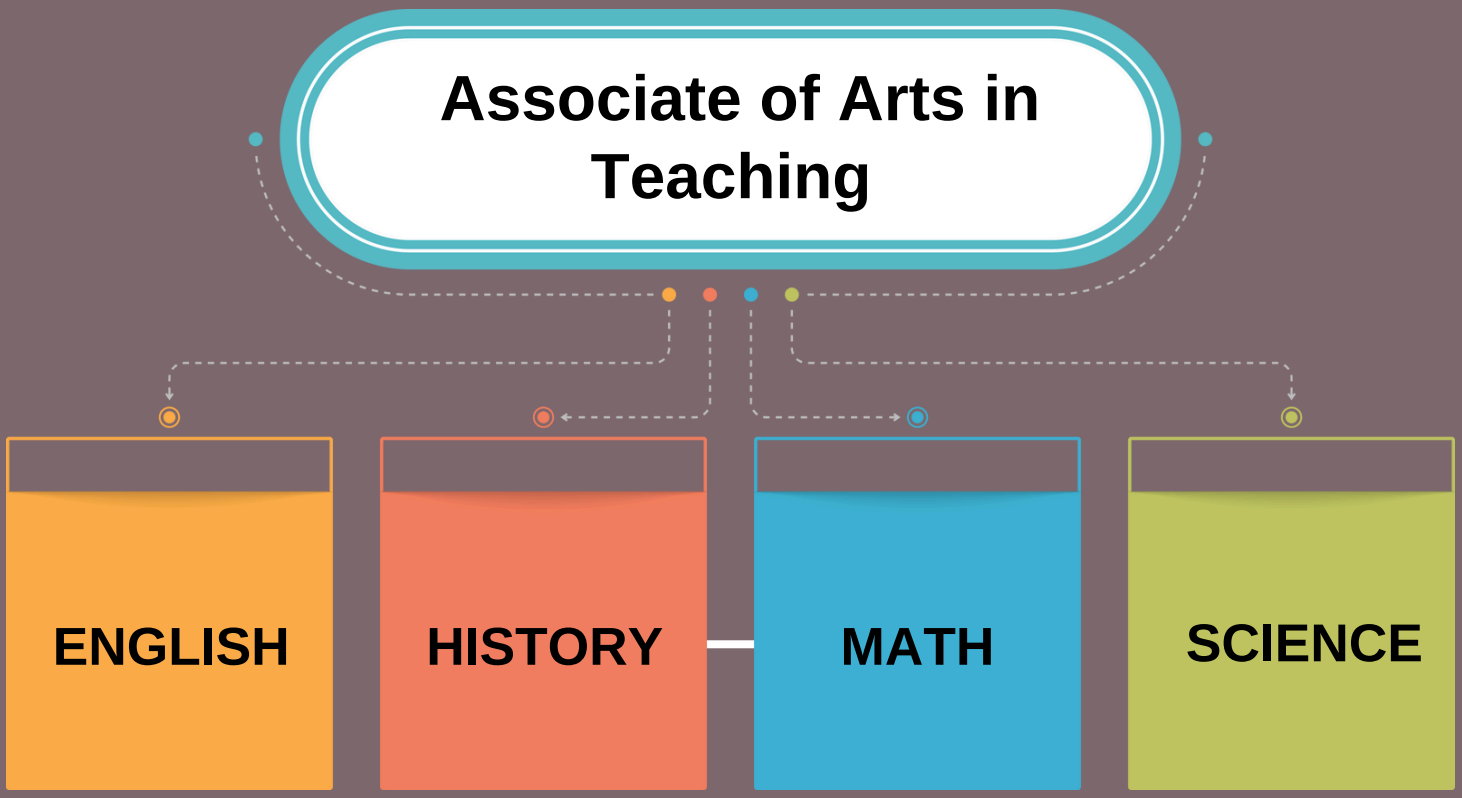
ITSY 2442 - Incident Response
ITSY 2443 - Computer Systems Forensics
Grades: 11-12
Credit: 1
Prerequisites: Internetworking Technologies I or II, TSIA2 requirements
College Credit: Yes
This course is for students pursuing the Associate of Applied Science degree in Information Technology Cybersecurity Specialist. During the fall semester, students can earn four hours of college credit for ITSY 2442 - Incident Response & Handling. In the spring semester, students can earn four hours of college credit for ITSY 2443 - Computer System Forensics. Students will pair this course with their final spring semester Practicum and Internship to complete the degree plan. College credit is awarded through St. Philip's College.

PRACTICUM IN INFORMATION TECHNOLOGY

ITSY 2430 - Intrusion Detection
ITSY 2286 - Internship Computer & Information Systems
Grades: 11-12
Credits: 2 to 3
Prerequisites: Successful completion of Cybersecurity Pathway, TSIA2 requirements
College Credit: Yes
Internship and Project Required
This course is the capstone course for students pursuing the Associate of Applied Science degree in Information Technology Cybersecurity Specialist. Students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. This course will provide an internship with a local IT/ Telecom company in the Ingram/Kerrville area or with the Ingram ISD Technology Department. Students will develop and gain the experience and expertise needed to expand their knowledge through real-world work-related problems and tasks. During the fall semester, students can earn four hours of college credit for ITSY 2430 - Intrusion Detection & in the spring, earn two college credit hours for ITSY 2286 Internship - Computer and Information Systems Security through St. Philip's College.

EDUCATION - TEACHING

The Education and Training career cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster. This career cluster includes a diverse spectrum of occupations, ranging from teaching assistant, classroom teacher, to school administrator.



EDUCATION & TEACHING

The Associate of Arts in Teaching pathway is fully transferable into a Texas public 4-year institution, placing students on track to complete their Bachelor's degree to launch their teaching careers within two years after graduating. Students will complete internship and observation hours at local daycare centers and schools. Dual courses in an area of concentration that focuses on a specific program of study such as English or Social Studies will be required.

WORK-BASED LEARNING OPPORTUNITIES

AVID Tutors—Tutoring students in the middle school Avid program

Potential Certification

Educational Aide 1

COURSE SEQUENCE

PRINCIPLES OF EDUCATION

(Grade 9)

DUAL CREDIT CORE CONCENTRATION

Students will choose dual credit courses in a subject area for concentration: Science, Math, English, History

(Grades 10-12)

PRACTICUM IN EDUCATION & TRAINING DC

(Grade 12)

Alamo College Core 42 Courses

Communication (10) Core - 2 courses (6 credit hours)

- English 3 DC, ENGL 1301 & 1302

Mathematics (20) Core - 1 course (3 credit hours)

- Algebra 2 DC, MTH 1314 or 1414, unless degree plan requires alternative math

Life and Physical Sciences (30) Core - 2 courses (6 credit hours)

- Biology for Science Majors DC, BIOL 1406 & 1407

Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History DC, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Creative Arts (50) Core - 1 course (3 credit hours)

- Art Apprecaition DC, ART 1302 or Music Appreciation DC, MUSI 1306

American History (60) Core - 2 courses (6 credit hours)

- US History DC, HIST 1301 & 1302

Government/Political Science (70) Core - 2 courses (6 hours)

- Texas Government DC, GOVT 2306 & Federal Government DC, GOVT 2305

Social and Behavioral Sciences (80) Core - 1 course (3 credit hours)

- Economics DC, ECON 2301, or PSYC 2301, or SOCI 1301t

Additional Communication (90) Core - 1 course (3 credit hours)

- SPCH 1321 - Business and Professional Communication

Additional Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History Dc, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Associate of Arts in Teaching, Concentration English

St. Philip's College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English Required 12 additional hours in Math for St. Philip's Assocaite of Arts Degree		English 1 (Honors)	English 2 (Honors)	English 3 DC *ENGL 1301 & 1302	English 4 DC, British Literature 1 & 2, *ENGL 2322 & 2323
Math	Algebra 1	Algebra 1 or Geometry Honors	Geometry and/or Algebra 2 Honors to DC, *MATH 1314	Algebra 2 Honors to DC, *MATH 1314 or PreCal *OnRamps Option	PreCalculus
Science		Biology	Chemistry, or Physics *OnRamps option	Biology DC, *BIOL 1406 & 1407	Physics or Environmental Science
Social Studies		World History DC or H to DC, *HIST 2321 or 2322	Texas Government *GOVT 2306 & *HIST 2321 or 2322	US History DC, *HIST 1301 & 1302, *OnRamps option available	Federal Government DC, *GOVT 2305 and Economics DC, *ECON 2301, (can take PSYC 2301, or SOCI 1301 to fulfill core component 80)
Fine Art Elective		Fine Art/Speech Credit, Art Appreciation, *ART 1301 or Music Appreciation, MUSI 1306 & Speech *SPCH 1321	Elective	Elective	English DC, American Literature 1 & 2, *ENGL 2327 - 2328
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Elective	**INSTRUCTIONAL PRACTICES DC** FALL Intro to Teaching *EDUC 1301 & SPRING *EDUC 2301 Special Populations
Pathway		Principles of Education	DC Electives	DC Electives	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

Dual credit course content includes college content standards that extend beyond the scope of the high school course curriculum. College course content cannot be fully controlled by Ingram ISD. College courses often discuss issues using multiple viewpoints represented in our diverse world, some of which may not align with the student's viewpoint. We encourage you to talk to your students about their studies and help them process the multiple views presented.

Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Associate of Arts in Teaching, Concentration History

St. Philip's College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 DC *ENGL 1301 & 1302	English 4 *DC ENGL 2322 & 2323 for Core 42
Math	Algebra I	Algebra I or Geometry Honors	Geometry and/or Algebra 2 Honors to DC, *MATH 1314	Algebra 2 Honors to DC, *MATH 1314 or PreCal *OnRamps Option	PreCalculus
Science		Biology	Chemistry, or Physics *OnRamps option	Biology DC, *BIOL 1406 & 1407	Physics or Environmental Science
Social Studies		World History DC or H to DC, *HIST 2321 or 2322	Texas Government *GOVT 2306 & *HIST 2321 or 2322	US History DC, *HIST 1301 & 1302, *OnRamps option available	Federal Government DC, *GOVT 2305 and Economics DC, *ECON 2301, (can take PSYC 2301, or SOCI 1301 to fulfill core component 80)
Fine Art		Fine Art/Speech Credit, Art Appreciation, *ART 1301 or Music Appreciation, *MUSI 1306 & Speech *SPCH 1321	Elective	Elective	Elective
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Electives	Electives
Pathway		Principles of Education	12 HOURS OF APPROVED DC HISTORY FOR ELECTIVE CONTENT	Electives	**INSTRUCTIONAL PRACTICES DC** FALL Intro to Teaching *EDUC 1301 & SPRING *EDUC 2301 Special Populations

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Associate of Arts in Teaching, Concentration Math

St. Philip's College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 DC *ENGL 1301 & 1302	English 4 *DC Option for Core 42 if not taking W. Hist 2321 & 2322
Math Required 12 additional hours in Math for St. Philip's Assocaite of Arts Degree	Algebra I	Algebra 1 or Geometry if Alg 1 was taken in MS	Geometry and/or Algebra 2 Honors to DC, *MTH 1414	Algebra 2 H TO DC, *MTH 1414, or Precalculus DC DC *MTH 2412	Precalculus DC *MTH 2412 and/or STATS DC *MTH 1342 or Calculus, *MTH 2413, if PreCal has been taken
Science		Biology	Chemistry, or Physics *OnRamps option	Biology DC, *BIOL 1406 & 1407	Physics or Environmental Science
Social Studies		World History DC or H to DC, *HIST 2321 or 2322	Texas Government *GOVT 2306 & *HIST 2321 or 2322	US History DC, *HIST 1301 & 1302, *OnRamps option available	Fed Government DC, *GOVT 2305 & Economics DC, *ECON 2301
Fine Art Electives		Fine Art/Speech Credit, Art Appreciation, *ART 1301 or Music Appreciation, *MUSI 1306 & Speech *SPCH 1321	Elective	Elective	If Alg 2 DC MTH 1314 was taken as a junior, studen*t wil take *MTH-1350, Math for Teachers 1 & *MTH-1351, Math for Teachers 2 or see counselor for math options
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Electives	**INSTRUCTIONAL PRACTICES DC** FALL Intro to Teaching *EDUC 1301 & SPRING *EDUC 2301 Special Populations
Pathway		Principles of Education	Elective	If Alg 2 DC MTH 1314 is taken student can take *MTH 1350, Math for Teachers 1 & *MTH 1351 Math for Teachers 2	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Associate of Arts in Teaching, Concentration Science

St. Philip's College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 DC *ENGL 1301 & 1302	English 4 *DC Option for Core 42 if not taking W.Hist 2321 & 2322
Math	Algebra I	Algebra 1 or Geometry Honors	Geometry and/or Algebra 2 Honors to DC, *MTH 1314	Algebra 2 Honors to DC, *MATH 1314 or PreCal *OnRamps Option	PreCalculus
Science: Required 12 additional hours in Science for St. Philip's Assocaite of Arts Degree		Biology	Chemistry, or Physics *OnRamps option	Biology DC for Science Majors *BIOL 1406 & 1407	Chemistry DC, *CHEM 1411 & 1412 or Physics OnRamps
Social Studies		World History DC or H to DC, *HIST 2321 or 2322	Texas Government *GOVT 2306 & *HIST 2321 or 2322	US History DC, *HIST 1301 & 1302, *OnRamps option available	Federal Government DC, *GOVT 2305 and Economics DC, *ECON 2301, (can take *PSYC 2301, or *SOCI 1301 to fulfill core component 80)
Fine Art		Fine Art/Speech Credit, Art Appreciation, *ART 1301 or Music Appreciation, *MUSI 1306 & Speech *SPCH 1321	Elective	Elective	Elective
Physical Activity Elective		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Elective	**INSTRUCTIONAL PRACTICES DC** FALL Intro to Teaching *EDUC 1301 & SPRING *EDUC 2301 Special Populations
Pathway		Principles of Education	Elective	**ANATAMY & PHYSIOLOGY DC**, *BIOL 2401 & 2402	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

EDUCATION-TEACHING COURSE DESCRIPTIONS

These courses are for students pursuing the Education-Teaching Pathway.

PRINCIPLES OF EDUCATION

Grade: 9
Credit: 1
Prerequisites: None
College Credit: No
Principles of Education and Training is designed to introduce learners to the various careers available within the Education and Training Career Cluster. Students use self-knowledge as well as educational and career information to analyze various careers within the Education and Training Career Cluster. Students will develop a graduation plan that leads to a specific career choice in their area of interest.

INTRODUCTION TO TEACHING DC

EDUC 1301 - INSTRUCTIONAL PRACTICES
Grade: 12
Credit: 1
Prerequisites: TSIA2 requirements
College Credit: Yes
An enriched, integrated pre-service course and content experience that: 1) provides active recruitment and institutional support of students interested in a teaching career, especially in high-need fields; 2) provides students with opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse student populations; 3) provides students with support from college and school faculty, preferably in small cohort groups, for introduction to and analysis of the culture of schooling and classrooms; 4) course content should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; and 5) the course must include a minimum of 16 contact hours of field experience in P-12 classrooms. Students can earn three hours of college credit for EDUC 1301 through St. Philip's College.

SPECIAL POPULATIONS IN TEACHING DC

EDUC 2301 - SPECIAL POPULATIONS
Credit: 1
Prerequisites: EDUC 1301 with a grade of C or better
College Credit: Yes
An enriched, integrated pre-service course and content experience that: 1) provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, ethnic and academic diversity, and equity with an emphasis on factors that facilitate learning; 2) provides students with opportunities to participate in early field observations of P-12 special populations; 3) course content should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; 4) the course must include a minimum of 16 contact hours of field experience in P-12 classrooms with special populations. Students can earn three hours of college credit for EDUC 2301 through St. Philip's College.

ELECTIVE CONCENTRATION DC

Grades: 10-12
Prerequisites: TSIA2 requirements
College Credit: Yes
Students will choose dual credit courses beyond Core 42 in their subject area for a concentration in Science, Math, English, or History. Refer to the pathway in the course catalog or see your advisor. College credit hours earned through St. Philip’s College apply toward the Associate of Arts Degree - Teaching Concentration.

Engineering,

Pre-University,

Associate of Science Degree,

Concentration in Engineering

The Associate Degree is designed as the equivalent of the first half of a Baccalaureate Degree. This is a general plan and may or may not satisfy the requirements of a specific transfer university. An Associate Degree can create a pathway to careers in business, engineering, computer science, helping professions, and more. The engineering program is an Associate of Science (AS) degree with a concentration in Engineering.
After earning an AS degree, students can transfer to a 4-year college to get a BS in a specific engineering specialization.

Associate Degrees

Students gain a strong educational foundation in a wide range of subjects across many disciplines, including literature, humanities, history, math, science, social sciences, and more. Students also develop skills in communication, critical thinking, problem-solving, and research. Students pursuing this degree will earn 42 core hours and 18 additional hours selected from courses that align with their future four-year university and degree goals.

WORK-BASED LEARNING OPPORTUNITIES

Career Development Events,
Speaker Events
Job-shadowing
Internships

Postsecondary Opportunities

Associate of Science - Engineering Concentration

COURSE SEQUENCE

Students will complete the Texas Core Curriculum (TCC) which is a 42 semester credit hour (SCH) general education core curriculum for public college students in Texas.
(Grades 9-12)

Students will also complete an 18 hours elective concentration of dual credit courses in the pathway they are pursuing.
(Grades 10-12)

Alamo College Core 42 Courses

Communication (10) Core - 2 courses (6 credit hours)

- English 3 DC, ENGL 1301 & 1302

Mathematics (20) Core - 1 course (3 credit hours)

- Algebra 2 DC, MTH 1314 or 1414, unless degree plan requires alternative math

Life and Physical Sciences (30) Core - 2 courses (6 credit hours)

- Biology for Science Majors DC, BIOL 1406 & 1407

Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History DC, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Creative Arts (50) Core - 1 course (3 credit hours)

- Art Apprecaition DC, ART 1302 or Music Appreciation DC, MUSI 1306

American History (60) Core - 2 courses (6 credit hours)

- US History DC, HIST 1301 & 1302

Government/Political Science (70) Core - 2 courses (6 hours)

- Texas Government DC, GOVT 2306 & Federal Government DC, GOVT 2305

Social and Behavioral Sciences (80) Core - 1 course (3 credit hours)

- Economics DC, ECON 2301, or PSYC 2301, or SOCI 1301t

Additional Communication (90) Core - 1 course (3 credit hours)

- SPCH 1321 - Business and Professional Communication

Additional Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History Dc, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Associate of Science Degree
Engineering Concentration
Palo Alto College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (H)	English 2 (H)	English 3 DC *ENGL 1301 & 1302	English 4 *DC option for core
Math	Algebra I	Geometry H	Algebra 2 Honor to DC *MATH 1314	Precalculus DC *MATH 2412	**Engineering Mathematics DC** Calculus I DC, MATH 2413 & University Physics I DC, PHYS 2425
Science		Biology	Chemistry, or Physics *OnRamps option	Physics *OnRamps Option	Chemistry DC, CHEM 1411 & 1413
Social Studies		World History H to DC *HIST 2321 or 2322	Texas Government DC, *GOVT 2306 & *Hist, 2321 or 2322	US History DC, *HIST 1301 & 1302 *OnRamps Option	Federal Government DC, *GOVT 2305 & Economics DC, *ECON 2301
Fine Art		Fine Art DC Elective: ART 1301or MUSI 1306 & Speech DC, *SPCH 1321	Elective	Elective	Elective
Physical Activity Elective		PE/ Athletics	Athletics/Elective	Athletics/Elective	Athletics/Elective
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Elective	**PRACTICUM IN ENGINEERING DC** w/ Computer Programming DC, *ENGR 2304
PATHWAY		Elective	Elective	**INTRODUCTION TO ENGINEERING DC**, *ENGR 1201 & Engineering Graphics *ENGR 1304	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

Dual credit course content includes college content standards that extend beyond the scope of the high school course curriculum. College course content cannot be fully controlled by Ingram ISD. College courses often discuss issues using multiple viewpoints represented in our diverse world, some of which may not align with the student's viewpoint. We encourage you to talk to your students about their studies and help them process the multiple views presented.

Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

ENGINEERING ELECTIVE COURSE DESCRIPTIONS

In addition to the Core 42 classes for an Associate Degree, students will take an additional 18 hours in the elective field of study for their pathway.

INTRODUCTION TO ENGINEERING DC

ENGR 1201 - Introduction to Engineering
ENGR 1304 - Engineering Graphics
Grade: 11
Credit: 1
Prerequisites: MATH 1314 or MATH 1414 with a grade of “C” or better.
College Credit: Yes
The fall course, ENGR 1201, is designed to enhance the academic success of students majoring in Engineering or the sciences and is open to all students. It provides an introduction to contemporary issues and applications relevant to the various engineering fields and professional careers, as well as to the engineering problem-solving approach. Topics of emphasis include technical communication, team-based engineering design, licensure, ethics, and computer applications. In the spring, students take ENGR 1304, which introduces students to the use of computer-aided drafting and design software and sketching for graphical communication of technical information in the context of the engineering design process. Topics include fundamentals of technical communication, conventions of engineering graphics, graphical presentation of data, spatial relationships, multi-view projection, dimensioning, sectioning, and assemblies. Computer-aided design, in two and three dimensions, is emphasized, and a final design project is required. Students can earn two hours of college credit in the fall for ENGR 1201 and three college credit hours for ENGR 1304 in the spring.

PRECALCULUS DC

MATH 2412 - Precalculus
Grade: 11
Credit: 0.5
Prerequisites: MATH 1314 or MATH 1414 (MATH 1414 is highly recommended) with a grade of “C” or better
College Credit: Yes
This course is an in-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Students can earn four hours of college credit for MATH 2412.

ENGINEERING MATH DC

MATH 2413 - Calculus I
PHYS 2425 - University Physics *Prerequisites: MATH 2413 or equivalent with a C or better*
Grade: 12
Credit: 1
Prerequisites: MATH 2412 with a grade of “C” or better, or equivalent, or permission by the department
College Credit: Yes
This fall course delves into the limits and continuity, the Fundamental Theorem of Calculus, the definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to the calculation of areas. In the spring, students investigate the fundamental principles of physics, using calculus, for science, computer science, and engineering majors; the principles and applications of classical mechanics, including harmonic motion, physical systems, and thermodynamics; and emphasis on problem-solving; basic laboratory experiments supporting the theoretical principles presented as well as experimental design, data collection and analysis, and preparation of laboratory reports. Students can earn four hours of college credit in the fall for MATH 2413 and four hours of college credit in the spring for PHYS 2425.

ENGINEERING ELECTIVE COURSE DESCRIPTIONS

In addition to the Core 42 classes for an Associate Degree, students will take an additional 18 hours in the elective field of study for their pathway.

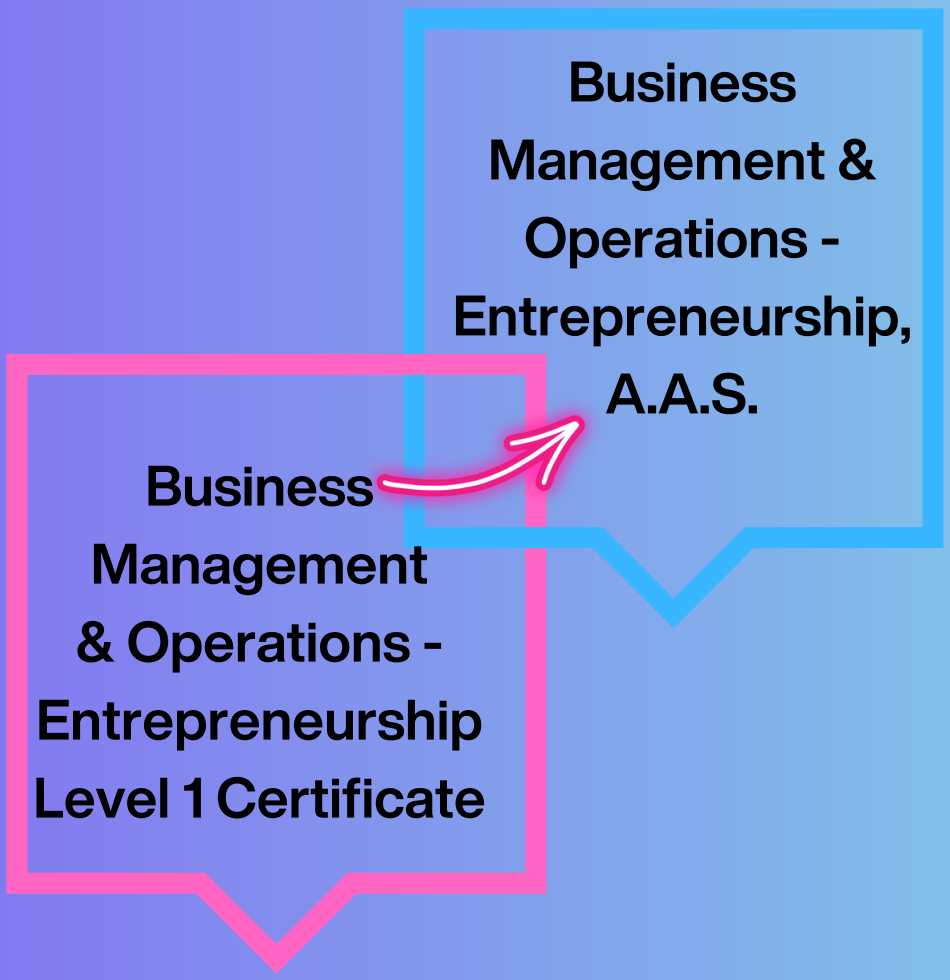
PRACTICUM OF ENGINEERING DC

ENGR 2304 - Computer Programming for Engineering Applications
Grade: 12
Credit: 2
Prerequisites: MATH 2413 with a grade of “C” or better or department approval.
College Credit: Yes
The Practicum in Engineering is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Students will also take ENGR 2304, where they examine programming methods used to obtain solutions to basic engineering problems that are presented in a contemporary computer language such as C++. Algorithms, data presentation, and program structures are developed and practiced. Students can earn three college credit hours for ENGR 2304.

ENTREPRENEURSHIP & MARKETING

BUSINESS MANAGEMENT & OPERATIONS

Business Management students learn to devise solutions to complex problems, lead organizations, exceed customer expectations, collaborate in teams, manage projects, and communicate effectively orally and in writing. The Entrepreneurship specialization focuses on occupational and educational opportunities associated with planning, directing, and coordinating the administrative services and operations of an organization. It includes formulating policies, managing daily operations, and allocating the use of materials and human resources.



ENTREPRENEURSHIP & MARKETING
BUSINESS MANAGEMENT & OPERATIONS

Business, Marketing, and Finance focus on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations. This career cluster includes occupations ranging from business owner and entrepreneur to accountant, retail manager, and market analyst. Entrepreneurship focuses on occupational and educational opportunities associated with planning, launching, directing, and coordinating public or private sector ventures.

WORK-BASED LEARNING OPPORTUNITIES

Intern at a local start-up or business
Participate in the development and launch of a school-based enterprise
Job shadow an entrepreneur
Participate in UIL-related events

Aligned Industry-Based Certifications

Business Management & Operations - Entrepreneurship A.A.S.

Business Management & Operations - Entrepreneurship Level 1 Certificate

COURSE SEQUENCE

PRINCIPLES OF BUSINESS, MARKETING & FINANCE DC
(Grade 9)

BUSINESS INFORMATION MANAGEMENT I DC
(Grade 10)

ENTREPRENEURSHIP 1 DC
(Grade 11)

BUSINESS MANAGEMENT DC
(Grade 11)

INDEPENDENT STUDY MATH DC
(Grade 11)

ACCOUNTING
(Grade 12)

PRACTICUM OF BUSINESS, MARKETING & FINANCE DC
(Grade 12)

Business Management & Operations Entrepreneurship A.A.S.

Palo Alto College

Required Classes	9th Grade	10th Grade	11th Grade	12th Grade
English	**English 1 (Honors)**	**English 2 (Honors)**	English 3 DC, *ENGL 1301, aligns with the degree	**English 4**
Math	**Algebra 1 or Geometry**	**Geometry and/or Algebra 2,** *Honors to Dual Credit Option*	**Algebra 2 H to DC** or **Independent Study Math** PAC Offering Fall: 16 weeks *MATH 1324 - Math for Business & Spring: 16 weeks *Accounting ***ACCT 2301** Principles of Financial Accounting	If College Algebra has not been taken: I**ndependent Study Math** Fall: 16 weeks *MATH 1324 - Math for Business & Spring: 16 weeks *Accounting *ACCT 2301 Principles of Financial Accounting or If College Algebra 2 Math 1314 is taken, students would take Accounting, Accounting 1 **ACCT 2301** & Spring, Accounting 2, **ACCT 2302**
Science	Biology	Chemistry, or Physics *OnRamps option	**Physics *OnRamps options**	**Environmental Science**
Social Studies	**World History**	**Elective**	**US History *OnRamps Option**	Federal Government & Economics DC *ECON 2301
Fine Art	**Creative Art Core Credit DC:** Art Appreciation, *ART 1301 or Music Appreciation,*MUSI 1306 **& Speech DC,** *SPCH 1321, aligns with the degree	**Elective**	**Elective**	**Athletics/Electives**
Physical Activity Elective	**PE/ Athletics**	**Athletics/Electives**	**Athletics/Electives**	**PRACTICUM OF BUSINESS MANAGEMENT DC**
Foreign Language	**Spanish 1 or 2**	**Spanish 2, if needed**	**ENTREPRENEURSHIP**	**PRACTICUM OF BUSINESS MANAGEMENT DC, PAC offering 16 weeks Fall: Math** Accounting 2, ACCT 2302 **Spring** Practicum & *BMGT 2382 Cooperative Education - Business Administration & Management
Pathway	**PRINCIPLES OF BUSINESS, MARKETING, & FINANCE DC,** *BUSI 1301 Business Principles & *MRKG 1311 - Principles of Marketing	**BUSINESS MANAGEMENT DC, DC, PAC offering 16 weeks** Fall: BUSG 2309 - Small Business Management, & Spring: *BUSI 2301 Business Law	**ENTREPRENEURSHIP I DC SAC offering** Fall: Flex 1: MRKG 1301 - Customer Relations, & Flex 2: MRKG - 1371 New Media Marketing Spring: Flex 1: BUSG 1315 Small Business Operations & Flex 2, BUSG 1341 - Small Business Financing	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

Dual credit course content includes college content standards that extend beyond the scope of the high school course curriculum. College course content cannot be fully controlled by Ingram ISD. College courses often discuss issues using multiple viewpoints represented in our diverse world, some of which may not align with the student's viewpoint. We encourage you to talk to your students about their studies and help them process the multiple views presented. Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Entrepreneurship Level 1 Certificate

Business Management & Operations Entrepreneurship A.A.S.

BUSINESS MANAGEMENT & OPERATIONS - ENTREPRENEURSHIP - MARKETING COURSE DESCRIPTIONS

These courses are for students pursuing the Business Management - Entrepreneurship/Marketing pathway; core classes required for the degree are listed under the Core 42 course description.

PRINCIPLES OF BUSINESS, MARKETING & FINANCE DC

BUSI 1301 - Business Principles
MRKG 1311 - Principles of Marketing
Grade: 9
Credit: 1
Prerequisites: TSIA2
College Credit: Yes

Students are introduced to Business Principles and Principles of Marketing. In the fall, students take BUSI 1301, an introduction to the role of business in modern society. Includes an overview of business operations, analysis of the specialized fields within the business organization, and development of a business vocabulary. In the spring, students will take MRKG 1311, which gives students an introduction to marketing functions, identification of consumer and organizational needs, an explanation of economic, psychological, sociological, and global issues, and a description and analysis of the importance of marketing research. Students can earn three hours of credit for BUSI 1301 in the fall and three hours of credit for MRKG 1311 through Palo Alto College. These courses typically cover foundational topics in business and marketing, providing students with a strong understanding of business principles and strategies.

BUSINESS INFORMATION MANAGEMENT 1 DC

MRKG 1371 - New Media Marketing I
BUSG 1302 - E-BUSINESS MANAGEMENT
Grade: 10
Credit: 1
Prerequisites: TSIA2
College Credit: Yes

In the fall, students will enroll in MRKG 1371, which introduces digital and social media marketing concepts and how they can be integrated into marketing plans. Students explore social media and website principles, create a social media marketing plan, and demonstrate website design techniques. In the spring semester, students will take BUSG 1302, which provides an introduction to business. Includes the internet, infrastructure for electronic commerce, markup languages, web-based tools and software, security issues, and electronic payment systems. The course covers strategies for marketing, sales, and purchasing; legal, ethical, and tax issues; and management functions. Students can earn three hours of college credit for MRKG 1371 and three hours of college credit in the spring for BUSG 1302 from Palo Alto College.

BUSINESS MANAGEMENT DC

BUSG 2309 - Small Business Management
MRKG 1301 - Customer Relations
Grade: 11
Credit: 1
Prerequisites: TSIA2
College Credit: Yes

Students continue the business pathway through the Business Information Management course. In the fall, students take BUSG 2309, which delves into the start-up and operation of a small business. Includes facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues. In the spring, students take MRKG 1301, where students learn the general principles of customer relationship management, including skills, knowledge, attitudes, and behaviors. Students can earn three hours of college credit for BUSG 2309 and three hours of college credit for MRKG 1301 from Palo Alto College.

BUSINESS MANAGEMENT & OPERATIONS - ENTREPRENEURSHIP - MARKETING COURSE DESCRIPTIONS

These courses are for students pursuing the Business Management - Entrepreneurship/Marketing pathway; core classes required for the degree are listed under the Core 42 course description.

ENTREPRENEURSHIP 1 DC

BCIS (TBA) - Information Technology for Business Professionals
BUSG 1315 - Small Business Operations
Grade: 11
Credit: 1
Prerequisites: TSIA2
College Credit: Yes
Entrepreneurship 1 is a continuation of the Business pathway. In the fall, students are enrolled in a BCIS Information Technology for Business Professionals course; students learn computer terminology, hardware, software, operating systems, and information systems relating to the business environment. In the spring, students are enrolled in BUSG 1315 and explore operating a small business. Emphasizes management functions, including planning, leading, organizing, staffing, and controlling operations. Students can earn three hours of college credit for BCIS and three hours of college credit for BUSG 1315 from Palo Alto College.

INDEPENDENT STUDY MATH DC

MATH 1324 - Mathematics for Business & Social Sciences
BUSG 1341 - Small Business Financing
Grade: 11-12
Credit: 1
Prerequisites: TSIA2
College Credit: Yes
In the fall, independent math consists of MATH 1324, which is the application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. In the spring, students enroll in BUSG 1341, which provides information on the financial structure of a small business. Includes business financing, budgeting, record keeping, taxation, insurance, and banking. Students can earn three hours of college credit for MATH 1324 and three hours of college credit for BUSG 1341 from Palo Alto College.

BUSINESS MANAGEMENT & OPERATIONS - ENTREPRENEURSHIP - MARKETING COURSE DESCRIPTIONS

These courses are for students pursuing the Business Management - Entrepreneurship/Marketing pathway; core classes required for the degree are listed under the Core 42 course description.

ACCOUNTING DC

ACCT 2301 - Principles of Financial Accounting

ACCT 2302 - Principles of Managerial Accounting (*Prerequisites: ACCT 2301 with a grade of "C" or better)*

Grade: 12

Credit: 1

Prerequisites: Meet the TSIA2 college-readiness

College Credit: Yes

In the fall, students are enrolled in ACCT 2301. This course is an introduction to the fundamental concepts of financial accounting as prescribed by U.S. generally accepted accounting principles as applied to transactions and events that affect business organizations. Students will examine the procedures and systems to accumulate, analyze, measure, and record financial transactions. Students will use recorded financial information to prepare a balance sheet, income statement, statement of cash flows, and statement of shareholders' equity to communicate the business entity's results of operations and financial position to users of financial information who are external to the company. Students will study the nature of assets, liabilities, and owners' equity while learning to use reported financial information for purposes of making decisions about the company. Students will be exposed to International Financial Reporting Standards. Students continue deeper into accounting in the spring with the course ACCT 2302. This course provides an introduction to the fundamental concepts of managerial accounting appropriate for all organizations. Students will study information from the entity's accounting system relevant to decisions made by internal managers, as distinguished from information relevant to users who are external to the company. The emphasis is on the identification and assignment of product costs, operational budgeting and planning, cost control, and management decision-making. Topics include product costing methodologies, cost behavior, operational and capital budgeting, and performance evaluation. Students can earn three hours of college credit for ACCT 2301 and three hours of college credit for ACCT 2302 from Palo Alto College.

PRACTICUM OF BUSINESS, MARKETING & FINANCE DC

Fall

BUSG (TBA) - Financial Management of Smaller Firms

BUSI 2301 - Business Law I

Spring

BMGT 1309 - Information and Project Management

MGT 2382 - Cooperative Education - Business Administration and Management

Grade: 12

Credit: 2

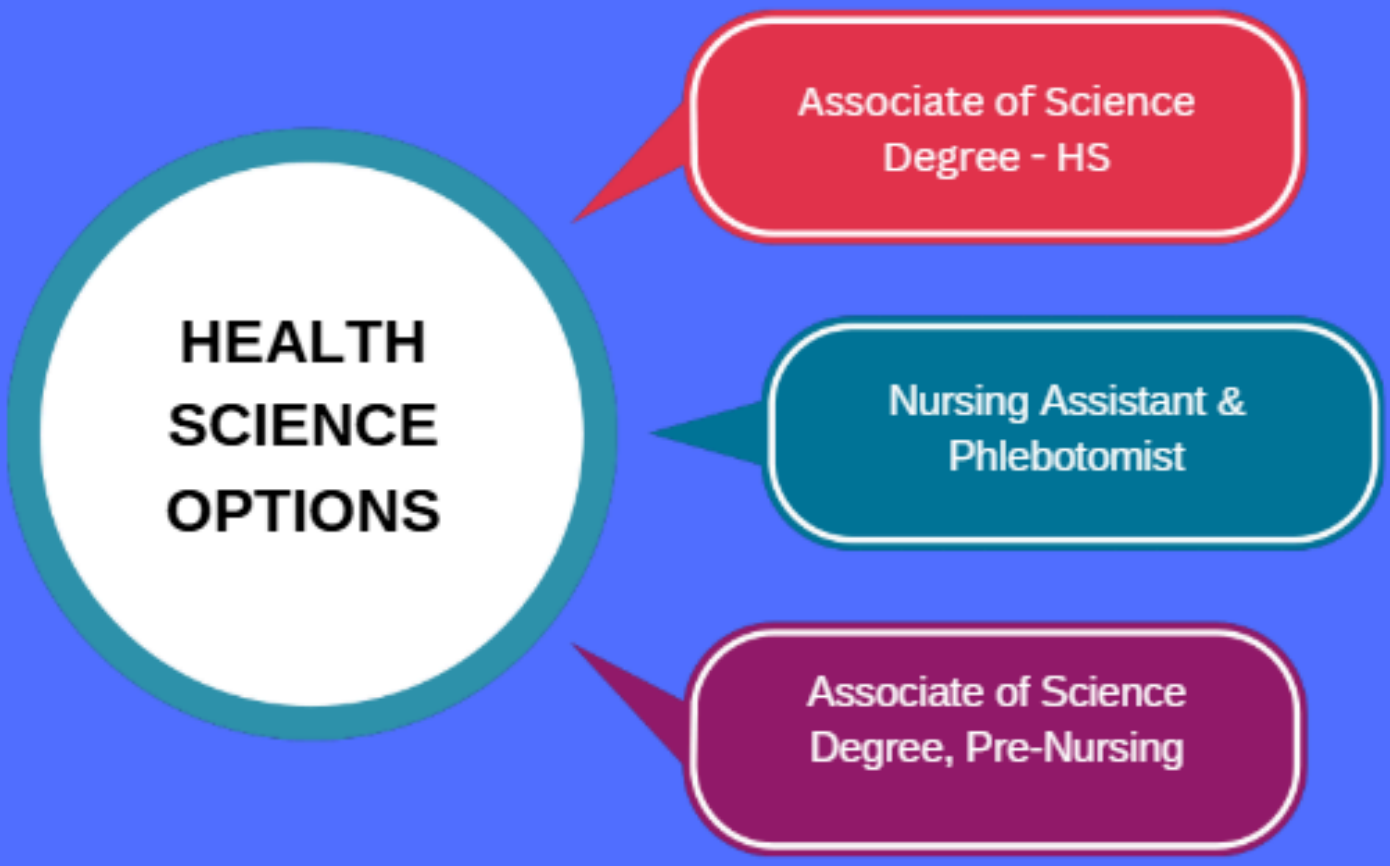
Prerequisites: TSIA2

College Credit: Yes

In the fall, students complete their degree plan with two courses, BUSG (TBA) - Financial Management of Smaller Firms, which provides an introduction to the financial management of smaller firms. Students also take BUSI 2301, where students learn the principles of law, which form the legal framework for business activity. In the spring, students conclude the pathway with BMGT 1309 and investigate the critical path methods for planning and controlling projects. Includes time/cost tradeoffs, resource utilization, stochastic considerations, task determination, time management, scheduling management, status reports, budget management, customer service, professional attitude, and project supervision. Students will also conclude with BMGT 2382, which provides the student with career-related activities encountered in the student's area of specialization, offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Students can earn six hours of college credit for BUSG 1302 & BUSI 2301 and six hours of college credit for BMGT 1309 & MGT 2382 from Palo Alto College.

HEALTH SCIENCE

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.



Health Science

The Healthcare program of study introduces students to occupations and educational opportunities related to diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study also includes an introduction to the opportunities associated with providing treatment and counseling to patients, as well as rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

WORK-BASED LEARNING OPPORTUNITIES

Clubs, Organizations & Activities

Health Occupation Students of America (HOSA)
Job-Shadowing
Internships
Volunteer at a community wellness center, hospital, assisted living, or nursing home

Related Awards/Certifications

Associate of Science Degree
Associate of Science - Pre-Nursing
Nurse Aide for Health Care, Level I Certificate
Phlebotomy Certificate

COURSE SEQUENCE

PRINCIPLES OF HEALTH SCIENCE
(Grade 8- 9)

MEDICAL TERMINOLOGY
(Grade 9-12)

HEALTH SCIENCE THEORY
(Grades 10-12)

ANATOMY & PHYSIOLOGY DC
(Grades 10-12)

NURSE AIDE FOR HEALTH CARE DC
(Career pathway only)
(Grade 11)

CLINICAL - NURSING ASSISTANT DC
(Career pathway only)
(Grade 11)

SPECIAL TOPICS IN NURSING ASSISTANT DC
(Career pathway only)
(Grade 11)

HEALTH SCIENCE THEORIES WITH PHLEBOTOMY
(Grade 12)

CHEMISTRY DC 1405 (NURSING)
(GRADE 10-12)

MICROBIOLOGY DC(NURSING)
(GRADE 10-12)

PRACTICUM OF HEALTH SCIENCE DC
(Grades 11-12)

Alamo College Core 42 Courses

Communication (10) Core - 2 courses (6 credit hours)

- English 3 DC, ENGL 1301 & 1302

Mathematics (20) Core - 1 course (3 credit hours)

- Algebra 2 DC, MTH 1314 or 1414, unless degree plan requires alternative math

Life and Physical Sciences (30) Core - 2 courses (6 credit hours)

- Biology for Science Majors DC, BIOL 1406 & 1407

Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History DC, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Creative Arts (50) Core - 1 course (3 credit hours)

- Art Apprecaition DC, ART 1302 or Music Appreciation DC, MUSI 1306

American History (60) Core - 2 courses (6 credit hours)

- US History DC, HIST 1301 & 1302

Government/Political Science (70) Core - 2 courses (6 hours)

- Texas Government DC, GOVT 2306 & Federal Government DC, GOVT 2305

Social and Behavioral Sciences (80) Core - 1 course (3 credit hours)

- Economics DC, ECON 2301, or PSYC 2301, or SOCI 1301t

Additional Communication (90) Core - 1 course (3 credit hours)

- SPCH 1321 - Business and Professional Communication

Additional Language, Philosophy & Culture (40) Core - 1 course (3 credit hours)

- W. History Dc, HIST 2321 or 2322 or English 4 DC, British Literature 2322 & 2323 or Phil 1301

Health Science
Associate of Science Degree
St. Philip's College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	**English 3 DC *ENGL 1301 & 1302**	**English 4 *DC Option for Core 42 if not taking W.*Hist 2321 & 2322**
Math	Algebra I	Alg 1 or Geometry Honors	Geometry Honors, or Algebra 2 or Algebra 2 Honors to DC *MATH 1314	**Algebra 2 Honor to DC *MATH 1314 or Precalculus**	**Precalculus DC *MATH 2412 or Stats *MATH 1342**
Science		Biology	Chemistry, or Physics *OnRamps option	**Anatomy Physiology DC *BIOL 2401 & 2402**	**Chemistry DC *CHEM 1411 & 1412 or Anatomy & Physiology BIOL 2401 & 2402 A&P**
Social Studies		**World History Honors to DC *HIST 2321 or 2322**	**Texas Government DC *GOVT 2306 & *HIST 2321 or 2322**	**US History DC *HIST 1301 & 1302 *OnRamps Option**	**Federal Government DC *GOVT 2305 & Economics DC ECON 2301**
Fine Art		**Fine Art/Speech Credit, Art Appreciation, *ART 1301 or Music Appreciation, *MUSI 1306 & Speech *SPCH 1321**	Elective	Elective	Elective
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Additional Requirements to complete the 18 credit hours needed for the degree see your Alamo ACES G.P.S. & advisor	**PRACTICUM OF HEALTH SCIENCE PHLEBOTOMY CERTIFICATION**
Pathway	Prin of Health Science	**PRINCIPLES OF HEALTH SCIENCE OR MEDICAL TERMINOLOGY**	**MEDICAL TERMINOLOGY or HEALTH SCIENCE THEORY**	**HEALTH SCIENCE THEORY**	

Opportunity to join the TMHS Health Occupation Students of America (HOSA)

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Nurse Aide for Health Care Level I Certificate, with Phlebotomy

St. Philip's College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (H)	English 2 (H)	English 3 **Dual Credit Option for Core*	English 4 **Dual Credit Option for Core*
Math	Algebra 1	Algebra 1 or Geometry Honors	Geometry, or Algebra 2 or Algebra 2 *Honors to *DC Option for Core*	Algebra 2 or Algebra 2 or Precalculus *Honors to *DC Option for Core*	PreCalculus
Science		Biology	Chemistry, or Physics *OnRamps option	**Anatomy & Physiology DC *BIOL 2401-2401**	Physics *OnRamps option
Social Studies		World History *Dual Credit Option for Core	Optional DC Electives for core	US History *Dual Credit Option for Core	Federal Government & Economics *Dual Credit Option for Core
Fine Art Elective		Fine Art **Dual Credit Option for Core*	Elective	Elective	Athletics/Electives
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	**PRACTICUM OF HEALTH SCIENCE PHLEBOTOMY CERTIFICATION**
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	**NURSE AIDE FOR HEALTH CARE DC, FALL *NURA 1401 & A & P DC, *BIOL 2401 & 2403 or *NURA 1407 - Body Systems, SPRING: Clinical - Nursing Assistant/Aide and Patient Care Assistant/Aide *NURA 1460 & Special Topics In Nursing Assistant/Aide *NURA 1491**	
Pathway	Prins of Health Science	**PRINCIPLES OF HEALTH SCIENCE or MEDICAL TERMINOLOGY**	**MEDICAL TERMINOLOGY or HEALTH SCIENCE THEORY**		

Opportunity to join the TMHS Health Occupation Students of America (HOSA) Students will have the opportunity to challenge certifications exams pursuant to performance on qualifying coursework

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Color represents the path for Level 1 Certificate

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

Associate of Science

Pre-Nursing: Generic - Concentration

includes academic prerequisites towards the A.A.S. and B.S.N. degrees
St. Philip's College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	**English 3 DC *ENGL 1301 & 1302**	English 4 *DC option
Math	Algebra 1	Alg 1 or Geometry Honors	Geometry Honors, or Algebra 2 or Algebra 2 Honors to DC *MATH 1314	**Algebra 2 Honor to DC *MATH 1314 or Precalculus**	**Statistics DC *Math 1342**
Science		Biology	Chemistry, or Physics *OnRamps option	**Anatomy & Physiology DC *BIOL 2401-2401**	**Chemistry DC *CHEM 1411 & Microbiology *BIOL 2420 - Microbiology for Nursing & Allied Health**
Social Studies		**World History Honors to DC *HIST 2321 or 2322**	**Texas Government DC *GOVT 2306 & *HIST 2321 or 2322**	**US History DC *HIST 1301 & 1302 *OnRamps Option**	**Government *GOVT 2305 & Economics**
Fine Art		**Fine Art DC *ART 1301 or *MUSI 1306 & Speech *SPCH 1321 aligns with the degree**	Elective	**General Psychology DC *PSYC 2301 - & Lifespan Growth and Development DC *PSYC 2314**	**PHIL 2306: INTRO TO ETHICS**
Physical Activity		PE/ Athletics	Athletics/Electives	Athletics/Electives	Athletics/Electives
Foreign Language	Spanish 1	Spanish 1 or 2	Spanish 2 if needed	Elective	**PRACTICUM OF HEALTH SCIENCE PHLEBOTOMY CERTIFICATION**
Pathway	Prin of Health Science	**PRINCIPLES OF HEALTH SCIENCE or MEDICAL TERMINOLOGY**	**MEDICAL TERMINOLOGY or HEALTH SCIENCE THEORY**	**HEALTH SCIENCE THEORY**	

Opportunity to join the TMHS Health Occupation Students of America (HOSA)

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

HEALTH SCIENCE COURSE DESCRIPTIONS

These courses are for students pursuing the Health Science Pathway

PRINCIPLES OF HEALTH SCIENCE

Grades: 8-9
Credits: 1
Prerequisites: none
College Credit: No
This hands-on lab course is designed to provide an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the healthcare industry. Students will learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others. The student identifies the academic preparation, and skills necessary for employment as defined by the health science industry. Students will research a variety of professions in the healthcare industry and be able to identify academic requirements for professional advancement such as certification, licensure, registration, continuing education, and advanced degrees.

MEDICAL TERMINOLOGY

Grades: 9 -11
Credit: 1
Prerequisites: Principles of Health Science
College Credit: No
This course is designed to introduce students to the structure
of medical terms, including prefixes, suffixes, word roots,
combining singular and plural forms, medical abbreviations, and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology. This is a milestone course, critical to the success of other health science-related courses.

HEALTH SCIENCE THEORY

Grades: 10-12
Prerequisites: Biology, Principles of Health Science, Medical Terminology, Health Science Pathway
Credit: 1
College Credit: No
The course is designed to provide for the development of advanced knowledge and skills related to a health career. Students will employ hands-on experiences for continued knowledge and skill development. Professional integrity in the health science industry is dependent on the acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.

PHLEBOTOMY

Grade: 12
Credit: 1
Prerequisites: Biology, Principles of Health Science, Medical Terminology, Health Science Pathway
Phlebotomy (PLAB) courses prepare Health Science professionals to perform a variety of blood collection methods using proper techniques and universal precautions. The courses cover vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood cultures, and specimen collection on adults, children, and infants. An emphasis is placed on infection prevention, proper patient identification, labeling of specimens and quality assurance, specimen handling, processing, and accessioning. Additional topics include professionalism, ethics, technical calculations, and medical terminology. This course leads to certification as a Phlebotomy Technician.

HEALTH SCIENCE COURSE DESCRIPTIONS

These courses are for students pursuing the Health Science Pathway.

ANATOMY & PHYSIOLOGY DC A

BIOL 2401 *- Anatomy and Physiology I*
Grades: *10-12*
Credit*: 0.5*
Prerequisites: *Biology and one Chemistry science credit, TSIA2 requirements*
College Credit: *Yes*
This course can count towards the four required high school science credits needed for high school graduation. Anatomy and Physiology I is the first part of a two-course sequence. It is a study of the structure and function of the human body including cells, tissues, and organs of the following systems: integumentary, skeletal, muscular, nervous, and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides a hands-on learning experience for the exploration of human system components and basic physiology. This course fulfills the Life and Physical Sciences foundational component area of the core The course is taught on campus, and is a lab-oriented class that teaches proper dissection techniques as well as various physiological phenomena, and is recommended for students interested in medically related careers. Students can earn four hours of college credit for BIOL 2401 through St. Philip's College.

ANATOMY & PHYSIOLOGY DC B

BIOL 2402 - Anatomy and Physiology II
Grades: 11-12
Credit: 0.5
Prerequisites: BIOL 2401 with a grade of “C” or better.
College Credit: Yes
This course can count towards the four required high school science credits needed for high school graduation. Anatomy and Physiology II is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides a hands-on learning experience for the exploration of human system components and basic physiology. This course fulfills the Life and Physical Sciences foundational component area of the core. The course is taught on campus, and is a lab-oriented class that teaches proper dissection techniques as well as various physiological phenomena, and is recommended for students interested in medically related careers. Students can earn four hours of college credit for BIOL 2402 through St. Philip's College.

DUAL CREDIT COURSES FOR A.S. DEGREE COMPLETION

Grades: 9-12
Prerequisites: TSIA2 requirements
College Credit: Yes
Students will choose dual-credit courses to complete their pathway. See the crosswalk. College credit hours earned through Alamo Colleges.

CHEMISTRY DC A

CHEM 1411 - General Chemistry I
Grades: 11-12
Credits: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
This course covers the fundamental principles of inorganic chemistry: general chemical principles, fundamental laws and theories, including but not limited to modern atomic theory, chemical bonding, states of matter, solutions, stoichiometry, thermochemistry, and gas laws. The course content provides a foundation for work in advanced chemistry and related sciences, and as such is aimed at science majors. This course is math-intensive (MI). The prospective student needs to have a good working knowledge of the use of scientific notation, including the use of a calculator, exponential and logarithmic functions, significant figures, dimensional analysis, and solving simple linear equations. Students can earn four college credits for CHEM 1411 through St. Philip's College.

HEALTH SCIENCE COURSE DESCRIPTIONS

These courses are for students pursuing the Health Science Pathway.

CHEMISTRY DC B

CHEM 1412 *- General Chemistry II*
Grades*: 11-12*
Credits: *0.5*
Prerequisites*: Credit for CHEM 1411 or (CHEM 1311 and CHEM 1111) with a grade of "C" or better.*
College Credit*: Yes*
This course is a continuation of CHEM 1411, including kinetics, molecular and ionic equilibria, elementary thermodynamics, electrochemistry, nuclear chemistry, and other topics. CHEM 1412 is equivalent to a combination of CHEM 1112 and CHEM 1312. This course fulfills the Life and Physical Sciences foundational component area of the core. Students can earn four hours of college credit for CHEM 1412 through St. Philip's College.

MICROBIOLOGY DC

BIOL 2420 *- Microbiology for Nursing and Allied Health Dual Credit*
Grades*: 11-12*
Credit*: 0.5*
Prerequisites*: CHEM 1405 or higher with a grade of C or better*
College Credit*: Yes*
This course covers basic microbiology and immunology and is primarily directed at students who are pre-nursing majors. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health. Students can earn four hours of college credit for BIOL 2420 through St. Philip's College.

DUAL CREDIT COURSES FOR A.S. DEGREE COMPLETION

Grades: 9-12
Prerequisites: TSIA2 requirements
College Credit: Yes
Students will choose dual-credit courses to complete their pathway. See the crosswalk. College credit hours earned through Alamo Colleges.

THE FOLLOWING COURSES ARE INTENDED FOR STUDENTS ENROLLED IN THE NURSE AIDE CAREER TRACK.

NURSE AIDE FOR HEALTHCARE DC

NURA 1401 - Nurse Aide for Health Care
Grade: 11
Credit .05
Corequisites: NURA 1407 Body Systems
College Credit: Yes
This course provides the knowledge, skills, and abilities essential to provide basic care to residents of long-term care facilities. Topics include residents' rights, communication, safety, observation, reporting, and assisting residents in maintaining basic comfort and safety. Emphasis on effective interaction with members of the health-care team, restorative services, mental health, and social services needs. Students have the potential to earn 4 college credit hours through St. Philip's College for NURA 1401. Students can take BIOL 2402 & 2402, A&P, or NURA 1407 - Body Systems, as a required corequisite for Nursing Aide.

HEALTH SCIENCE COURSE DESCRIPTIONS

These courses are for students pursuing the Health Science Pathway.

THE FOLLOWING COURSE IS INTENDED FOR STUDENTS ENROLLED IN THE NURSE AIDE CAREER TRACK.

BODY SYSTEMS DC

NURA 1407 - Body Systems
Grade: 11
Credit .05
Corequisites: NURA 1401 Nurse Aide for Health Care
College Credit: Yes
This course provides a basic study of the structures and functions of the human body. Students have the potential to earn four college credit hours through St. Philip's College for NURA 1407. Students have the option of taking BIOL 2402 & 2402 - Anatomy & Physiology to fulfill this core component needed for Body Systems.

NURSING ASSISTANT & PATIENT CARE CLINICAL DC

NURA 1460 - Nursing Assistant Patient Care
Grade: 11
Credit .05
Prerequisites: NURA 1401 Nurse Aide for Health Care and NURA 1407 Body Systems, or Biol 2401 & 2402.
Corequisites: NURA 1491 Special Topics In Nursing Assistant/Aide
College Credit: Yes
Students in the Nurse Aide track will experience a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Students have the potential to earn four college credit hours through St. Philip's College for NURU 1460.

CHEMISTRY DC A

CHEM 1405 - Introductory Chemistry I
Grades: 11-12
Credits: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
In this fall course, students gain an introduction to elementary inorganic chemistry, which is suitable for non-science majors and some students pursuing degrees in nursing. A laboratory is included that emphasizes inorganic chemistry. Students can earn four hours of college credit for CHEM 1405 through St. Philip's College.

MICROBIOLOGY DC

BIOL 2420 - Microbiology for Nursing and Allied Health Dual Credit
Grades: 11-12
Credit: 0.5
Prerequisites: CHEM 1405 or higher with a grade of C or better
College Credit: Yes
This course covers basic microbiology and immunology and is primarily directed at students who are pre-nursing majors. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health. Students can earn four hours of college credit for BIOL 2420 through St. Philip's College.

HEALTH SCIENCE COURSE DESCRIPTIONS

These courses are for students pursuing the Health Science Pathway.

PSYCHOLOGY DC

PSYC 2301 - General Psychology Dual Credit
Grades: 10-12
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
The course is taught on campus, and college credit for PSYC 2301 can be earned through St. Philip's. This course is a survey of major topics in psychology. Introduces the study of behavior and the factors that determine and affect behavior and mental processes. This course fulfills the Social and Behavioral Sciences foundational component area of the core. Students can earn three hours of college credit for PSYC 2301 through St. Philip's College.

PSYCHOLOGY - LIFESPAN DC

PSYC 2314 - Lifespan Growth and Development
Grades: 10-12
Credit: 0.5
Prerequisites: PSYC 2301
College Credit: Yes
The course is taught on campus, and college credit for PSYC 2314 can be earned through St. Philip's. This course is a study of the relationship of the physical, emotional, social, and mental factors of growth and development of the individual throughout the lifespan. This course fulfills the Social and Behavioral Sciences foundational component area of the core. Students can earn three hours of college credit for PSYC 2314 through St. Philip's College.

DUAL CREDIT COURSES FOR A.S. DEGREE COMPLETION

Grades: 9-12
Prerequisites: TSIA2 requirements
College Credit: Yes
Students will choose dual-credit courses to complete their pathway. See the crosswalk. College credit hours earned through Alamo Colleges.

PHILOSOPHY - ETHICS DC

PHIL 2306 - Introduction to Ethics
Grades: 10-12
Prerequisite: TSIA2 requirements
Credit: 0.5
College Credit: Yes
This is a one-semester online college course through St. Philip's. Students can earn college credit in PHIL 2306. This course examines classical and contemporary theories concerning the good life, human conduct in society, and moral and ethical standards. This course fulfills the Language, Philosophy, and Culture foundational component area of the core and is recommended for students pursuing the Health Science pathway. Students can earn three hours of college credit for PHIL 2306 through St. Philip's College.

PRACTICUM IN HEALTH SCIENCE

Grades: 11-12
Credit: 2 to 3
Prerequisites: Principles of Health Science, Health Science Theory, and Biology.
College Credit: No
The Practicum in Health Science course is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Health Science Career Cluster.

REAL ESTATE

The Real Estate program prepares you for a career helping individuals and businesses buy and sell real estate and serving as a sponsoring broker for sales, leasing, and property management. You'll be ready to pursue your real estate license or bring new skills to your current real estate career in roles such as real estate agent, real estate management, loan support, property management, and sales.

Real Estate

- **Level 1 Certificate**
- **Associate of Applied Science Degree**

Real Estate

The Real Estate program of study focuses on occupational and educational opportunities associated with financing, selling, and contracting real estate. This program of study includes management, economics, marketing, and financial principles of real estate evaluation. It also addresses commercial real estate, including lending, developing, brokering, and financing.

WORK-BASED LEARNING OPPORTUNITIES

Intern with a local real estate company or commercial realtor
Job shadow a property manager or local realtor
Conduct informational interviews with employees at a real estate investment company

Aligned Industry-Based Certifications

Real Estate, Level I Certificate

Real Estate Management, A.A.S.

COURSE SEQUENCE

PRINCIPLES OF BUSINESS, MARKETING & FINANCE DC
(Grade 9)

BUSINESS LAW DC
(Grade 10)

FINANCIAL ANALYSIS DC
(Grade 11)

FUNDAMENTALS OF REAL ESTATE DC
(Grade 11)

PRACTICUM OF BUSINIESS, MARKETING & FINANCE, EXTENDED DC
(Grade 12)

Real Estate, A.A.S. Degree

San Antonio College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English I (Honors)	English 2	**English 3 DC *ENGL 1301 & 1302, aligns with the degree**	English 4
Math	Algebra I	Algebra I or Geometry if Alg I was taken in MS	Geometry and/or Algebra II	**College Alg. Honors to DC *MATH 1314, aligns with the degree**	PreCalculus
Science		Biology	Chemistry, or Physics *OnRamps option	Physics *OnRamps option	Environmental Systems
Social Studies		World History	**Psychology DC - *PSYC 2301 & Texas Govt DC - *GOVT 2306, aligns with the degree**	US History *OnRamps option	**Federal Government & Economics DC *ECON 2301, aligns with the degree**
Fine Art		**Fine Art DC *ART 1301 or *MUSI 1306 & Speech DC *SPCH 1321, aligns with the degree**	Elective	Elective	Athletics/Elective
Physical Activity Elective		PE/ Athletics	Athletics/Elective	Athletics/Elective	**PRACTICUM in BUSINESS MANAGEMENT DC**, Fall *BUSG 2309 - Small Business Management & Spring *RELE 2380 - Cooperative Education Real Estate & Fall ***RELE 1200 - Contract Forms & Spring *RELE 1321 - Real Estate Marketing**
Foreign Language	Spanish I	Spanish I or II	Spanish II if needed	**FINANCIAL ANALYSIS DC**, **Fall *RELE 1319 Real Estate Finance** & Spring *BUSI 1307 Personal Finance	
Pathway		**PRINCIPLES of BUSINESS, MARKETING, & FINANCE DC**, Fall *BUSI 1301 - Business Principles, & Spring *BCIS 1305 - Business Computer Application	**FUNDAMENTALS of REAL ESTATE DC,** Fall *RELE 1406 Real Estate Principles & Spring *RELE 2301 Law of Agency	**BUSINESS LAW DC,** Fall *BUSI 2301 - Business Law 1 & Spring ***RELE 1311- Real Estate Law of Contracts**	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

Dual credit course content includes college content standards that extend beyond the scope of the high school course curriculum. College course content cannot be fully controlled by Ingram ISD. College courses often discuss issues using multiple viewpoints represented in our diverse world, some of which may not align with the student's viewpoint. We encourage you to talk to your students about their studies and help them process the multiple views presented. Prerequisites for some advanced classes, require a "C" or better, see a counselor for information. * Denotes a possible college credit class

Colors represents the path for Level 1 Certificate to Degree Completion

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

REAL ESTATE COURSE DESCRIPTIONS

These courses are for students pursuing the Real Estate pathway; core classes required for the degree are listed under the Core 42 course description.

PRINCIPLES OF BUSINESS, MARKETING & FINANCE DC

BUSI 1301 - Business Principles
BCIS 1305 - Business Computer Applications
Grade: 9
Credit: 1
Prerequisites: TSIA2
College Credit: Yes

Students are introduced to Business Principles and Principles of Marketing. In the fall, students will take BUSI 1301, which is an introduction to the role of business in modern society. Includes an overview of business operations, analysis of the specialized fields within the business organization, and development of a business vocabulary. In the spring, students will take BUCI 1305, which gives students an understanding of computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. Students can earn three hours of college credit for BUSI 1301 and three hours of college credit for BUCI 1305 from San Antonio College.

FUNDAMENTALS OF REAL ESTATE DC

RELE 1406 - Real Estate Principles
RELE 2301 - Law of Agency
Grade: 10
Credit: 1
Prerequisites: TSIA2, Law of Agency Prerequisites: RELE 1406 or concurrent enrollment in RELE 1406
College Credit: Yes

The fall semester course, RELE 1406, is an overview of licensing as a broker or salesperson. Includes ethics of practice as a license holder, titles to and conveyance of real estate, legal descriptions, deeds, encumbrances, and liens, distinctions between personal and real property, appraisal, finance and regulations, closing procedures, and real estate mathematics. Covers at least three hours of classroom instruction on federal, state, and local laws relating to housing, discrimination, housing credit discrimination, and community reinvestment. Fulfills the 60-hour requirement for a salesperson license. In the spring, students take RELE 2301, which is a study of the law of agency, including principal-agent and master-servant relationships, the authority of an agent, the termination of an agent's authority, the fiduciary and other duties of an agent, employment law, deceptive trade practices, listing or buying procedures, and the disclosure of an agency. Students can earn four hours of college credit for RELE 1406 and three hours of college credit in the spring for RELE 2301 from San Antonio College.

BUSINESS LAW DC

BUSI 2301 - Business Law 1
RELE 1311 - Real Estate Law of Contracts
Grade: 11
Credit: 1
Prerequisites: TSIA2
College Credit: Yes

In the fall, Business Law studies the principles of law, which form the legal framework for business activity, with the course BUSI 2301. In the spring, students examine the elements of a contract, offer, and acceptance, statute of frauds, specific performance and remedies for breach, unauthorized practice of law, commission rules relating to the use of adopted forms, and owner disclosure requirements in RELE 1311. Students can earn three hours of college credit for BUSI 2301 and three hours of college credit for RELE 1311 from San Antonio, Alamo College.

REAL ESTATE COURSE DESCRIPTIONS

These courses are for students pursuing the Real Estate pathway; core classes required for the degree are listed under the Core 42 course description.

FINANCIAL ANALYSIS DC

RELE 1319 - Real Estate Finance
BUSI 1307 - Personal Finance
Grade: 11
Credit: 1
Prerequisites: TSIA2, RELE 1406
College Credit: Yes

Fall RELE 1319 consists of an overview of monetary systems, primary and secondary money markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative financial instruments, equal credit opportunity laws affecting mortgage lending, and the state housing agency. In the spring course, BUSI 1307 students gain knowledge of personal and family accounts, budgets and budgetary control, bank accounts, charge accounts, borrowing, investing, insurance, standards of living, renting or home ownership, and wills and trust plans. Students can earn 3 hours of college credit for RELE 1319 and three hours of college credit in the spring for BUSI 1307 from San Antonio College.

PRACTICUM OF BUSINESS, MARKETING & FINANCE, EXTENDED DC

FALL
BUSG 2309 - Small Business Management
RELE 1200 - Contract Forms
SPRING
RELE 2380 - Cooperative Education Real Estate
RELE 1321 - Real Estate Marketing
Grade: 12
Credit: 1
Prerequisites: TSIA2, RELE 1406
College Credit: Yes

In BUSG 2309, students gain an understanding of the complexities of starting and operating a small business, including facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues. Students will also take RELE 1321, which delves into Promulgated Contract Forms, and shall include, but is not limited to, unauthorized practice of law, broker-lawyer committee, current promulgated and approved forms, commission rules governing use forms, and case studies involving the use of forms. The spring semester consists of RELE 2380, an examination of career-related activities encountered in the student's area of specialization, offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Students will also take RELE 1321, where they will complete a study of real estate professionalism and ethics; characteristics of successful salespersons; time management; psychology of marketing; listing procedures; advertising; negotiation and closing financing; and the Deceptive Trade Practices Act. Students can earn five hours of college credit for BURG 2309 & RELE 1200 and six hours of college credit in the spring for RELE 2380 & RELE 1321 from San Antonio College.

TRANSPORTATION, DISTRIBUTION, & LOGISTICS

Transportation, Distribution, and Logistics career cluster focuses on planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes transportation infrastructure planning and management, logistics services, and mobile equipment and facility maintenance. The Distribution, Logistics, and Warehousing program of study focuses on educational and occupational opportunities associated with business planning and management aspects of distribution, logistics, and warehousing.

- Transportation Management Occupation Skills Award
- Warehouse Management Level I Certificate
- Logistics Management Level I Certificate
- Supply Chain Management Level II Certificate
- Associate of Applied Science in Logistics and Supply Chain Management

Transportation, Distribution, & Logistics

Logistics and Supply Chain Management students learn how to ensure products are efficiently delivered to the right location on time and guide decisions about transportation and stock control. They oversee and coordinate procurement agents, buyers, or purchasing agents while managing the company's most complex purchases. They draft effective inventory plans that detail quantity specifications for products and equipment. They conduct scientific analyses to evaluate the quality of raw materials, in-process materials, and finished goods, ensuring compliance. This program of study includes an exploration of the history, laws, regulations, and common practices used in the logistics of warehousing and distribution systems.

WORK-BASED LEARNING OPPORTUNITIES

Intern at a fulfillment center to learn about planning and distribution of goods
Shadow an operations manager at a local company's warehouse to learn about the people and technology resources necessary to implement an operations plan.
Join the Transportation Association, Supply Chain Association, or Freight Forwarder

ALIGNED CERTIFICATIONS - DEGREE

Transportation Management Occupation Skills Award,
Warehouse Management Level I,
Logistics Management Level I,
Supply Chain Management Level II
Certificates
Logistics and Supply Chain Management, A.A.S.

COURSE SEQUENCE

PRINCIPLES of DISTRIBUTION DC
(Grade 9)

CONCEPTS OF DISTRIBUTIONS & LOGISTICS TECHNOLOGY DC
(Grade 10)

MANAGEMENT OF TRANSPORTATION SYSTEMS DC
(Grade 10)

LOGISTICS ENGINEERING DC
(Grade 11)

DISTRIBUTION & LOGISTICS DC
(Grade 11)

INDEPENDENT MATH DC
(Grades 12)

PRACTICUM OF DISTRIBUTION & LOGISTICS DC
(Grade 12)

Logistics & Supply Chain Management, A.A.S. Degree

Palo Alto, Alamo College

Required Classes	Possible 8th Grade courses	9th Grade	10th Grade	11th Grade	12th Grade
English		English 1 (Honors)	English 2 (Honors)	English 3 DC *ENGL 1301 & 1302 aligns with the degree	English 4
Math	Algebra 1	Algebra 1 or Geometry if Alg I was taken in MS	Geometry and/or Algebra 2	Algebra 2 or Precalculus	Independent Math DC Fall: *Math 1324 Math for Business & *Acct 2301 Principles of Financial Accounting
Science		Biology	Chemistry, or Physics *OnRamps option	Physics *OnRamps option	Environmental Systems
Social Studies		World History	Elective	US History *OnRamps option	Federal Government & Economics *ECON 2301 aligns with the degree
Fine Art & Elective		Creative Art DC: Art Appreciation, *ART 1301 or Music Appreciation,*MUSI 1306 & Speech DC, *SPCH 1321, aligns with the degree	Spanish 2 if needed	Elective	Elective
Physical Activity Elective		PE/ Athletics	Athletics/Elective	Athletics/Elective	Athletics/Elective
Foreign Language	Spanish 1	Spanish 1or 2	**MANAGEMENT of TRANSPORTATON SYSTEMS DC**, Fall *LMGT 1325 Warehouse & Distribution Center Management & Spring *BMGT 1301 Supervision	**LOGISTICS ENGINEERING DC,** Fall *BMGT 1313 Principles of Purchasing & Spring *MRKG 1311 Principles of Marketing	**PRACTICUM of DISTRIBUTION & LOGISTICS DC,** Fall *BUSI 2301 Business Law 1 & Spring *BMGT 1307 Team Building Fall *LMGT 1349 Materials Requirement Planning & Spring *LMGT 2388 Internship
Pathway		**PRINCIPLES of DISTRIBUTION & LOGISTICS DC**, Fall *LMGT 1319 Intro to Business Logistics & Spring *LMGT 1323 Domestic & International Transportation Management	**CONCEPTS of DISTRIBUTION & LOGISTICS DC,** Fall *ITSC 1309 Integrated Software App & Spring *BMGT **1344 Negotiations & Conflict Management**	DISTRIBUTION & LOGISTICS DC, Fall *LMGT 1340 Contemporary Logistical Issues & Spring *BMGT 1331 Production and Operations Management	

COURSES ARE SUBJECT TO CHANGE BASED ON THE CORE 42, CURRICULUM, TEA PROGRAM CHANGES, AND A.A.S. DEGREE REQUIREMENTS. COLLEGE READINESS STANDARDS MUST BE MET FOR ENROLLMENT INTO CORE DUAL CREDIT CLASSES.

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Colors represents the path for Level Certificates to Degree Completion

Ingram ISD and Alamo College limit the number of dual credit classes to those needed for completion of the singular pathway chosen by the student.

LOGISTICS & SUPPLY CHAIN MANAGEMENT COURSE DESCRIPTIONS

These courses are for students pursuing the Logistics & Supply Chain Management pathway, core classes required for the degree are listed under the Core 42 course description.

PRINCIPLES of DISTRIBUTION & LOGISTICS DC

LMGT 1319 - Introduction to Business Logistics &
LMGT 1323 - Domestic and International Transportation Management
Grade: 9
Credit: 1
Prerequisites: TSIA2
College Credit: Yes
The fall course, LMGT 1319, gives students a systems approach to managing activities associated with traffic, transportation, inventory management and control, warehousing, packaging, order processing, and materials handling. In the spring course, LMGT 1323, students get an overview of the principles and practices of transportation and its role in the distribution process. Emphasis on the physical transportation systems involved in the United States, as well as on global distribution systems. Topics include carrier responsibilities and services, freight classifications, rates, tariffs, and public policy and regulations. Also includes logistical geography and the development of skills to solve logistical transportation problems and issues. Students can earn three hours of college credit for LMGT 1319 and three hours of college credit for LMGT 1323 from Palo Alto College.

CONCEPTS OF DISTRIBUTIONS & LOGISTICS TECHNOLOGY DC

I**TSC 1309** - Integrated Software Applications
BMGT 1344 - Negotiations and Conflict Management
Grade: 10
Credit: 1
Prerequisites: TSIA2
College Credit: Yes
The fall course, ITSC 1309, is an integration of applications from popular business productivity software suites. Instruction in embedding data, linking, and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Basic computer skills are required. The spring semester course, BMGT 1344, explores the theories that aid in the diagnosis of interpersonal and intergroup conflict. The role of a manager is negotiator, intermediary, and problem-solver. Students can earn three hours of college credit for ITSC 1309 and three hours of college credit for BMGT 1344 from Palo Alto College.

MANAGEMENT OF TRANSPORTATION SYSTEMS DC

LMGT 1325 - Warehouse and Distribution Center Management
BMGT 1301 - Supervision
Grade: 10
Credit: 1
Prerequisites: TSIA2
College Credit: Yes
The fall course, LMGT 1325, focuses on physical distribution and total supply chain management. Includes warehouse operations management, hardware and software operations, bar codes, organizational effectiveness, just-in-time manufacturing, continuous replenishment, and third-party. The spring course, BMGT 1301, provides a study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined. Students can earn three hours of college credit for LMGT 1325 and three hours of college credit for BMGT 1301 from Palo Alto College.

LOGISTICS & SUPPLY CHAIN MANAGEMENT COURSE DESCRIPTIONS

These courses are for students pursuing the Logistics & Supply Chain Management pathway. Core classes required for the degree are listed under the Core 42 course description.

LOGISTICS ENGINEERING DC
BMGT 1313 - Principles of Purchasing
MRKG 1311 - Principles of Marketing
Grade: 11
Credit: 1
Prerequisites: TSIA2, LMGT 1319
College Credit: Yes
The fall course, BMGT 1313, explores the purchasing process as it relates to such topics as inventory control, price determination, vendor selection, negotiation techniques, and ethical issues. The focus of the course will be on the role and function of purchasing in the Logistics and Supply Chain Management process. In the spring course, MRKG 1311, students will gain an introduction to marketing functions; an identification of consumer and organizational needs; an explanation of economic, psychological, sociological, and global issues; and a description and analysis of the importance of marketing research. Students can earn three hours of college credit for BMGT 1313 and three hours of college credit for MRKG 1311 from Palo Alto College.

DISTRIBUTION & LOGISTICS DC
Grade: 11
Credit: 1
LMGT 1340 - Contemporary Logistics Issues
BMGT 1331 - Production and Operations Management
Prerequisites: TSIA2
College Credit: Yes
In the fall course, LMGT 1340, students study an exploration of relevant and changing topics in the logistics management field. This includes group projects, interaction with local industry, class lectures, and case studies. The spring course, BMGT 1331, investigates the fundamentals of techniques used in the practice of production and operations management and includes location, design, and resource allocation. Students can earn three hours of college credit for LMGT 1340 and three hours of college credit for BMGT 1331 from Palo Alto College.

INDEPENDENT MATH DC
MATH 1324 - Mathematics for Business & Social Sciences
ACCT 2301 - Principles of Financial Accounting
Grade: 12
Credit: 1
Prerequisites: Meet the TSI2A college-readiness standard for Mathematics or equivalent.
College Credit: Yes
In the fall, independent math consists of MATH 1324, which addresses the application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. The spring course, ACCT 2301, provides an introduction to the fundamental concepts of financial accounting as prescribed by U.S. generally accepted accounting principles as applied to transactions and events that affect business organizations. Students will examine the procedures and systems to accumulate, analyze, measure, and record financial transactions. Students will use recorded financial information to prepare a balance sheet, income statement, statement of cash flows, and statement of shareholders' equity to communicate the business entity's results of operations and financial position to users of financial information who are external to the company. Students will study the nature of assets, liabilities, and owners' equity while learning to use reported financial information for purposes of making decisions about the company. Students will be exposed to International Financial Reporting Standards. Students can earn three hours of college credit for MATH 1324 and three hours of college credit for ACCT 2301 from Palo Alto College.

LOGISTICS & SUPPLY CHAIN MANAGEMENT COURSE DESCRIPTIONS

These courses are for students pursuing the Logistics & Supply Chain Management pathway. Core classes required for the degree are listed under the Core 42 course description.

PRACTICUM OF DISTRIBUTION & LOGISTICS DC

Fall

BUSI 2301 - Business Law I

LMGT 1349 - Materials Requirement Planning

Spring

BMGT 1307 - Team Building

LMGT 2388 - Internship: Logistics and Materials Management

Grade: 12

Credit: 2

Prerequisites: TSIA2, MATH 1314 College Algebra (Recommended), Completion of all formal coursework for the AAS Degree or Departmental Approval

C**ollege Credit:** Yes

Students concluding the Logistics pathway will take two courses in the fall and spring semesters. In the fall semester, students take BUSI 2301, which looks at the principles of law that form the legal framework for business activity. Also taken in the fall semester is LMGT 1349, which is a study of materials requirement planning that includes net change versus regenerative systems, lot sizing, and the time-sharing of dependent demand. In the spring, students will take BMGT 1307, which explores the principles of building and sustaining teams in organizations. This includes team dynamics, process improvement, trust and collaboration, conflict resolution, and the role of the individual in the team. Students conclude the spring semester with the course LMGT 2388, which is a work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. A learning plan is developed by the college and the employer. Students can earn six hours of college credit for BUSI 2301 & LMGT 1349 and six hours of college credit for BMGT 1307 & LMGT 2388 from Palo Alto College.

GENERAL COURSE DESCRIPTIONS

ENGLISH COURSE DESCRIPTIONS

ENGLISH 1 HONORS
Grade: 9
Credit: 1
Prerequisite: none
College Credit: No
This course emphasizes collegiate preparation in the five areas of ELA proficiency established by the TEKS: reading, writing, research, listening and speaking, and oral/written conventions. Increased writing proficiency and the development of literary analysis skills in preparation for future collegiate work are the primary focus. Coursework is built around close observation and analysis, evidence-based writing, higher-order questioning, and academic conversations. Students will participate in advanced independent reading throughout the year in world literature from various literary periods. Students will begin preparing for the ELA portion of college entrance exams, including the PSAT, the ACT, and the TSI. Students will also prepare for the state End-of-Course assessment required for graduation.

ENGLISH 1
Grade: 9
Credits: 1
Prerequisite: none
College Credit: No
This course will focus on the five curricular strands of ELA proficiency established by the TEKS: reading, writing, research, listening and speaking, and oral/written conventions. Students will read and understand a variety of literary and informational texts. They will write and compose a variety of written texts with a clear, controlling idea, coherent organization, and sufficient detail. In this course, there is a strong focus on expository writing skills. Students will listen and respond to the ideas of others while contributing their ideas in conversations and groups. Students will learn how to use the oral and written conventions of the English language in speaking and writing. Students will also prepare for the state End-of-Course assessment requirement for graduation, in addition to the TSI and other college entrance examinations.

ENGLISH 2 HONORS
Grade: 10
Credit: 1
Prerequisite: English 1
College Credit: No
This course emphasizes increased collegiate preparation in five areas of ELA proficiency established by the TEKS: reading, writing, research, listening, speaking, and oral/written conventions. Further development of writing proficiency and the advanced development of literary analysis skills in preparation for future collegiate work. Coursework is built around close observation and analysis, evidence-based writing, higher-order questioning, and academic conversations. Students will participate in advanced independent reading throughout the year on world literature from various literary periods. Students will continue preparing for the ELA portion of college entrance exams, including the PSAT, the ACT, and the TSI. Students will also prepare for the state End-of-Course assessment required for graduation.

ENGLISH 2
Grade: 10
Credit: 1
Prerequisite: English I
College Credit: No
In this course, students will expand and deepen their knowledge and skill levels from English I in the five curricular strands of ELA proficiency established by the TEKS: reading, writing, research, listening, speaking, and oral/written conventions. Students will write and compose a variety of written texts with a focus on Persuasive writing. Students will also prepare for the state End-of-Course assessment requirement for graduation, in addition to the TSI and other college entrance exams.

ENGLISH COURSE DESCRIPTIONS

ENGLISH 3 DC A

ENGL 1301 - Composition I
Grades: 11-12
Prerequisite: TSIA2 requirement
Credit: 0.5
College Credit: Yes
English 3 is a high school graduation requirement. The fall semester is an intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus on writing the academic essay as a vehicle for learning, communicating, and critical analysis. The spring semester is an Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions. The course is taught on campus, and students can earn three hours of college credit for ENGL 1301 through St. Philip's College.

ENGLISH 3 DC B

ENGL 1301 - Composition II
Grades: 11-12
Prerequisite: TSIA2 requirement
Credit: 0.5
College Credit: Yes
Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions. The course is taught on campus, and students can earn three hours of college credit for ENGL 1302 through St. Philip's College.

ENGLISH 3

Grade: 11
Credit: 1
Prerequisite: English 2
College Credit: No
This course expands on the five curricular strands of ELA proficiency established by the TEKS: reading, writing, research, listening and speaking, and oral/written conventions. Students will become familiar with the use of the MLA research handbook to plan and generate a research paper with parenthetical documentation and a works cited list. A survey of literature will stress the major authors, periods, forms, and works in American literature, as well as the history and major features of American dialects. College readiness skills are emphasized in preparation for college entrance assessments such as the ACT.

ENGLISH 4 DC

ENGL 2322 - British Literature I: Anglo-Saxon through Neoclassical
Grade: 12
Prerequisite: ENGL 1301 or its equivalent with a “C” or better and ENGL 1302
Credit: 0.5
College Credit: Yes
This course is for students who are interested in British Literature. Students will explore the development of British literature from the Anglo-Saxon period to the Eighteenth Century. Students will study works of prose, poetry, drama, and fiction in historical, linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions. The course is taught on campus, and students can earn three hours of college credit for ENGL 2322 through St. Philip's College.

ENGLISH COURSE DESCRIPTIONS

ENGLISH 4 DC B

ENGL 2323 - British Literature II: Anglo-Saxon through Neoclassical

Grade: 12

Prerequisite: ENGL 1301 or its equivalent with a “C” or better and ENGL 1302

Credit: 0.5

College Credit: Yes

This course continues the student’s survey of the development of British literature from the Romantic period to the present. Students will study works of prose, poetry, drama, and fiction with their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Students who already received credit in the Lang/Philosophy core should only take this course if it is part of their field of study or major or if they plan to use it as elective hours for an Associate of Arts degree. The course is taught on campus, and students can earn three hours of college credit for ENGL 2323 through St. Philip's College.

ENGLISH 4

Grade: 12

Prerequisite: English 3

Credit: 1

College Credit: No

This course continues to deepen the knowledge and complexity of the five curricular strands of ELA proficiency established by the TEKS: reading, writing, research, listening and speaking, and oral/written conventions. Students will write for a variety of purposes and audiences. The focus will be on the use of rhetorical and linguistic choices as well as critical analysis of literature. This course meets the advanced English requirement for high school graduation.

MATHMATICS COURSE DESCRIPTIONS

ALGEBRA 1
Grades: 8-9
Credits: 1
Prerequisites: successful completion of 8th-grade math
College Credit: No
This course serves as the foundation for all subsequent mathematics courses. Students will study linear, quadratic, and exponential functions and their related transformations, equations, and associated solutions. Students will connect functions, analyze statistical relationships, and explore and collect data in both real-world situations and mathematical representations. In addition, students will study polynomials, radical expressions, sequences, and laws of exponents. Students will also prepare for the state End-of-Course assessment required for graduation.

GEOMETRY HONORS
Grades: 9-10
Prerequisite: Algebra 1
Credit: 1
College Credit: No
In this advanced course, students will connect previous knowledge from Algebra I to concepts related to the coordinate plane and transformational geometry. Students will strengthen and extend their mathematical reasoning skills through the development of proofs in geometric contexts. In addition, students will make formal constructions using a straightedge and a compass. Students will deepen their proportional reasoning skills and analysis of patterns to identify geometric properties, along with their knowledge of two and three-dimensional figures. In addition, students in this course will be prepared for advanced math coursework in dual credit or OnRamps.

GEOMETRY
Grades: 9-10
Prerequisite: Algebra 1
Credit: 1
College Credit: No
In this course, students will connect previous knowledge from Algebra I to concepts related to the coordinate plane and transformational geometry. Students will strengthen their mathematical reasoning skills through the development of proofs in geometric contexts. In addition, students will make formal constructions using a straightedge and a compass. Students will deepen their proportional reasoning skills and analysis of patterns to identify geometric properties, as well as their knowledge of two and three-dimensional figures. Exposure to topics in probability and statistics will also be covered.

ALGEBRA 2 HONORS to DC
MATH 1314 - College Algebra
Grades: 10-12
Credit: 1
Prerequisite: Algebra 1, TSIA2 Math
College Credit: Yes
This is a full-year high school math credit. This is an advanced, fast-paced Algebra II course that will condense the curriculum in the fall semester to prepare for College Algebra. Students gain an in-depth study and applications of polynomial, rational, radical, exponential, and logarithmic functions and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included. This course fulfills the three hours of mathcore college credit for the Applied Associates degree in Cybersecurity, Associate's of Arts, or Associate's of Science degree plans. The course is taught on campus, and students can earn four hours of college credit for MATH 1413 through St. Philip's College.

MATHMATICS COURSE DESCRIPTIONS

ALGEBRA 2
Grades: 10-11
Credit: 1
Prerequisite: Successful completion of Algebra 1
College Credit: No
This course will broaden students' knowledge of quadratic functions, exponential functions, and systems of equations. Students will study logarithmic, square root, cubic, cube root, absolute value, rational functions, and their related equations. Students will connect functions to their inverses and associated equations and solutions in both mathematical and real-world situations using both paper and pencil and technology. Students will extend their knowledge of data analysis and numeric and algebraic methods. Algebra II is a required prerequisite for a fourth-year math course.

PRECALCULUS HONORS to DC
MATH 2412 - Precalculus
Grades: 11-12
Credit: 1
Prerequisite: Geometry, Algebra II, and MATH 1414 or MATH 1314
College Credit: Yes
The fall semester of this course will cover the high school TEKS needed for success in college Pre-Calculus. This approaches topics from a functional point of view is designed to strengthen and enhance conceptual understanding and mathematical reasoning used when modeling and solving mathematical and real-world problems. Precalculus is the preparation for calculus. This course is recommended for students who wish to pursue a 4-year degree after high school, plan on taking Calculus, and require 6 hours of mathcore for their degree plan. This is a full-year 4th-level high school math credit. The spring semester fulfills an elective requirement for the 60-hour general Associate of Arts and Associate of Science degree plans. The course is taught on campus, and students can earn four hours of college credit for MATH 2412 through St. Philip's College.

PRECALCULUS
Grades: 11-12
Credit: 1
Prerequisite: Geometry, Algebra II
College Credit: No
This course approaches topics from a functional point of view and is designed to strengthen and enhance conceptual understanding and mathematical reasoning used when modeling and solving mathematical and real-world problems.

CALCULUS HONORS to DC
MATH 2413 - Calculus I
Grade: 12
Prerequisite: Math 2412 with a grade of "C" or better
Credit: 1
College Credit: Yes
This is an advanced mathematics course. The course studies the limits and continuity, the Fundamental Theorem of Calculus, the definition of the derivative of a function and techniques of differentiation, applications of the derivative to maximizing or minimizing a function, the chain rule, the mean value theorem, and rate of change problems, curve sketching, definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to the calculation of areas. The spring semester fulfills an elective requirement for the 60-hour general Associate of Arts and Associate of Science degree plans. The course is taught on campus, and students can earn four hours of college credit for MATH 2413 through St. Philip's College.

MATHMATICS COURSE DESCRIPTIONS

STATISTICS HONORS to DC

MATH 1342 - Elementary Statistical Methods
Grades: 11-12
Credit: 1
Prerequisite: Algebra I & TSIA2
College Credit: Yes
This is a full-year high school math credit. This is an advanced STATS course that will condense the curriculum in the fall semester to prepare for MATH 1342 - Elementary Statistical Methods for students who meet the TSIA2 requirements. The course consists of the collection, analysis, presentation, and interpretation of data and probability. The analysis includes descriptive statistics, correlation and regression, confidence intervals, and hypothesis testing. The use of appropriate technology is recommended. This course fulfills the Mathematics foundational component area of the core. The course is taught on campus, and students can earn three hours of college credit for MATH 1342 through St. Philip's College.

SCIENCE COURSE DESCRIPTIONS

BIOLOGY

Grade: 9
Credits: 1
Prerequisites: none
College Credit: No
Biology is the study of life. This course includes the study of the structures and functions of cells and viruses, metabolism and energy transformations in living organisms, a comparative survey of life processes, diversity of life, nucleic acids and genetics, and the interdependence of organisms and their environment. Investigations emphasize process skill development and safe manipulation of laboratory apparatus and materials in the field and laboratory. Students will also prepare for the state End-of-Course assessment required for graduation.

CHEMISTRY OnRAMPS

Grades: 9-11
Credit: 1
Prerequisites: Algebra I
College Credit: Yes
This is a full-year dual-enrollment course through the University of Texas. At the end of the year, you will have the option of accepting or declining the college credit. OnRamps courses are monitored and facilitated by high school teachers, but with a curriculum provided by the professors from UT. You will receive a separate high school grade for high school assignments and a separate college grade for college assignments. This course is aligned with CHEM 1311 & CHEM 1111, is part of the Texas 42 college credit core, and will qualify as the 3-hour credit requirement for any general Associate of Arts or Science degree plans. This course may also qualify as an elective course for both degree plans if you have already received college credit in another science course. Students must have at least one chemistry or physics course for high school graduation. Throughout the course, students learn to think like scientists by exploring the underlying theoretical foundations. College credit is awarded through the University of Texas.

CHEMISTRY

Grades: 9-11
Credit: 1
Prerequisite: Algebra I
College Credit: No
In this course, students will conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem-solving. Students study a variety of topics that include characteristics of matter, the use of the Periodic Table, the development of the atomic theory and chemical bonding, chemical stoichiometry, gas laws, solution chemistry, thermochemistry, and nuclear chemistry. Students will investigate and apply critical thinking skills to understand how chemistry is an integral part of our daily lives.

SCIENCE COURSE DESCRIPTIONS

PHYSICS OnRAMPS

Grades: 11-12
Credit: 1
Prerequisite: Chemistry, Algebra II
College Credit: Yes
This is a full-year dual-enrollment course through the University of Texas OnRamps program. At the end of the year, you will have the option of accepting or declining the college credit. OnRamps courses are monitored and facilitated by high school teachers but with a curriculum provided by the professors from UT. You will receive a separate high school grade for high school assignments and a separate college grade for college assignments. This course is aligned with PHYS 1301 and the lab PHYS 1101, is part of the 42 Texas college core, and will qualify as the 3-hour credit requirement for any general Associate of Arts or Science degree plans. This course may also qualify as an elective course for both degree plans if you have already received college credit in another science course. Proficiency in algebra and geometry is assumed. Students will practice problem-solving and analyzing physical situations involving motion, force, energy, rotations, heat, oscillations, waves, and sound. They will explore concepts in small groups, develop ideas, and explain them. The course lays the groundwork for college majors, including engineering, physics, chemistry, or mathematics. College credit is awarded through the University of Texas.

PHYSICS

Grades: 9-12
Credit: 1
Prerequisite: Algebra I is suggested as a prerequisite or corequisite.
College Credit: No
Students will study a variety of topics that include laws of motion, changes within physical systems and conservation of energy and momentum, forces, thermodynamics, characteristics and behavior of waves, and atomic, nuclear, and quantum physics. Students will conduct laboratory and field investigations, work collaboratively within groups, and make informed decisions using critical thinking and scientific problem-solving.

ENVIRONMENTAL SYSTEMS

Grades: 11-12
Credit: 1
Recommended Prerequisites: Biology, Chemistry
College Credit: No
Students study a variety of topics that include biotic and abiotic factors in habitats, ecosystems, and biomes, interrelationships among resources and an environmental system, sources and flow of energy through an environmental system, the relationship between carrying capacity and changes in the relationship between carrying capacity and changes in populations and ecosystems, and changes in environments. This course is designed to be a 4th science credit for high school graduation.

BIOLOGY DC A

BIOL 1406 - Biology for Science Majors or SCIENCE MAJORS I
Grades: 10-12
Credit: 0.5
Prerequisites: Biology, TSIA2 requirements
College Credit: Yes
This course will cover the biology topics of BIOL 1406-Biology for Science Majors I. The course will focus on the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. You will study the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of physiology, genetics, ecology, and the scientific method are also included. Laboratory activities will reinforce the Lecture topics. This course fulfills the Life and Physical Sciences foundational component area of the core. This course is recommended for students who are pursuing degrees in the area of life science, healthcare, or other STEM-related fields. This course can count towards the four required high school science credits needed for high school graduation. The course is taught on campus, and students can earn four hours of college credit for BIOL 1406 through St. Philip's College.

SCIENCE COURSE DESCRIPTIONS

BIOLOGY DC B

BIOL 1407 - Biology for Science Majors or SCIENCE MAJORS II
Grades: 10-12
Credit: 0.5
Prerequisites: BIOL 1406 with a grade of “C” or better.
College Credit: Yes
This course will cover the biology topics of BIOL 1406-Biology for Science Majors II. The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. Laboratory activities will reinforce the Lecture topics. This course fulfills the Life and Physical Sciences foundational component area of the core. This course can count towards the four required high school science credits needed for high school graduation. The course is taught on campus, and students can earn four hours of college credit for BIOL 1407 through St. Philip's College.

ANATOMY & PHYSIOLOGY DC A

BIOL 2401 - Anatomy and Physiology I
Grades: 10-12
Credit: 0.5
Prerequisites: Biology and one Chemistry science credit, TSIA2 requirements
College Credit: Yes
This course can count towards the four required high school science credits needed for high school graduation. Anatomy and Physiology I is the first part of a two-course sequence. It is a study of the structure and function of the human body, including cells, tissues, and organs of the following systems: integumentary, skeletal, muscular, nervous, and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides a hands-on learning experience for the exploration of human system components and basic physiology. This course fulfills the Life and Physical Sciences foundational component area of the core. The course is taught on campus and is a lab-oriented class that teaches proper dissection techniques as well as various physiological phenomena, and is recommended for students interested in medically related careers. Students can earn four hours of college credit for BIOL 2401 through St. Philip's College.

ANATOMY & PHYSIOLOGY DC B

BIOL 2402 - Anatomy and Physiology II
Grades: 11-12
Credit: 0.5
Prerequisites: BIOL 2401 with a grade of “C” or better.
College Credit: Yes
This course can count towards the four required high school science credits needed for high school graduation. Anatomy and Physiology II is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides a hands-on learning experience for the exploration of human system components and basic physiology. This course fulfills the Life and Physical Sciences foundational component area of the core. The course is taught on campus, and is a lab-oriented class that teaches proper dissection techniques as well as various physiological phenomena, and is recommended for students interested in medically related careers. Students can earn four hours of college credit for BIOL 2402 through St. Philip's College.

SCIENCE COURSE DESCRIPTIONS

CHEMISTRY DC A

CHEM 1411 - General Chemistry I
Grades: 11-12
Credits: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
This course covers the fundamental principles of inorganic chemistry: general chemical principles, fundamental laws and theories, including but not limited to modern atomic theory, chemical bonding, states of matter, solutions, stoichiometry, thermochemistry, and gas laws. The course content provides a foundation for work in advanced chemistry and related sciences, and as such is aimed at science majors. This course is math-intensive (MI). The prospective student needs to have a good working knowledge of the use of scientific notation, including the use of a calculator, exponential and logarithmic functions, significant figures, dimensional analysis, and solving simple linear equations. Students can earn four college credits for CHEM 1411 through St. Philip's College.

CHEMISTRY DC B

CHEM 1412 - General Chemistry II
Grades: 11-12
Credits: 0.5
Prerequisites: Credit for CHEM 1411 or (CHEM 1311 and CHEM 1111) with a grade of “C” or better.
College Credit: Yes
This course is a continuation of CHEM 1411, including kinetics, molecular and ionic equilibria, elementary thermodynamics, electrochemistry, nuclear chemistry, and other topics. CHEM 1412 is equivalent to a combination of CHEM 1112 and CHEM 1312. This course fulfills the Life and Physical Sciences foundational component area of the core. Students can earn four hours of college credit for CHEM 1412 through St. Philip's College.

MICROBIOLOGY DC

BIOL 2420 - Microbiology for Nursing and Allied Health Dual Credit
Grades: 11-12
Credit: 0.5
Prerequisites: CHEM 1405 or higher with a grade of C or better
College Credit: Yes
This course covers basic microbiology and immunology and is primarily directed at students who are pre-nursing majors. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health. Students can earn four hours of college credit for BIOL 2420 through St. Philip's College.

SOCIAL STUDIES COURSE DESCRIPTIONS

WORLD HISTORY HONOR to DC

Spring: HIST 2321 or 2322 - World Civilizations I or II
Grades: 9-10
Credit: 1
Prerequisites: TSIA2 Requirements
College Credit: Yes
This honors course prepares the student for the online class in the spring. The fall course examines significant events and contributions from the prehistory period and early civilizations to the present day, as well as the development of Eastern and Western cultures. Historical content focuses on geographic regions, major civilizations, economic and political systems, and how human history has taken shape over the last several thousand years. The spring course is a survey of the social, political, economic, cultural, religious, and intellectual history of the world from the emergence of human cultures through the 15th century. In the spring, students will take either HIST 2321 or 2322. Students can earn three hours of college credit for either HIST 2321 or HIST 2322 through St. Philip's College.

WORLD HISTORY DC A

HIST 2321 - World Civilizations I DC
Grades: 10-12
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
This course is a survey of the social, political, economic, cultural, religious, and intellectual history of the world from the emergence of human cultures through the 15th century. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania, and their global interactions over time. Themes include the emergence of early societies, the rise of civilizations, the development of political and legal systems, religion and philosophy, economic systems, and trans-regional networks of exchange. The course emphasizes the development, interaction, and impact of global exchange. Students can earn three hours of college credit for HIST 2321 through St. Philip's College.

WORLD HISTORY DC B

HIST 2322 - World Civilizations II DC
Grades: 10-12
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
This course is a survey of the social, political, economic, cultural, religious, and intellectual history of the world from the 15th century to the present. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania, and their global interactions over time. Themes include maritime exploration and transoceanic empires, nation/state formation and industrialization, imperialism, global conflicts and resolutions, and global economic integration. The course emphasizes the development, interaction, and impact of global exchange. Students can earn three hours of college credit for HIST 2322 through St. Philip's College.

SOCIAL STUDIES COURSE DESCRIPTIONS

WORLD HISTORY
Grades: 9-10
Credits: 1
Prerequisites: none
College Credit: No
This course is the study of the significant events and contributions from the prehistory period and early civilizations to the present day, as well as the development of Eastern and Western cultures. Historical content focuses on geographic regions, major civilizations, economic and political systems, and how human history has taken shape over the last several thousand years.

U.S. HISTORY DC A
HIST 1302 - United States History 2
Grade: 11
Credit: 1
Prerequisites: TSIA2 Requirements
College Credit: Yes
This is an online college course for students who are fulfilling the American History foundational required components of the core. In the fall, students take HIST 1302 and prepare for the state End-of-Course assessment required for graduation. HIST 1302 is a survey of the social, political, economic, cultural, and intellectual history of the United States from the Civil War/Reconstruction era to the present. This course examines industrialization, immigration, world wars, the Great Depression, the Cold War, and post-Cold War eras. Themes that may be addressed include American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy. Students can earn three hours of college credit for HIST 1302 from St. Philip's College.

U.S. HISTORY B
HIST 1301- United States History 1
Grade: 11
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
In the spring, students continue to examine the social, political, economic, cultural, and intellectual history of the United States from the pre-Columbian era to the Civil War/Reconstruction period. This course includes the study of pre-Columbian, colonial, revolutionary, early national, slavery and sectionalism, and the Civil War/Reconstruction eras. Themes that may be addressed include American settlement and diversity, American culture, religion, civil and human rights, technological change, economic change, immigration and migration, and the creation of the federal government. Students can earn three hours of college credit for HIST 1301 from St. Philip's College.

SOCIAL STUDIES COURSE DESCRIPTIONS

U.S. HISTORY OnRamps

Grade: 11
Credit: 1
Prerequisites: English I and English II (or concurrent enrollment)
College Credit: Yes
US History is a high school graduation requirement. Students must pass the corresponding End-Of-Course for graduation. This is a full-year dual-enrollment course through the University of Texas. At the end of the year, you will have the option of accepting or declining the college credit. OnRamps courses are monitored and facilitated by high school teachers, but with a curriculum provided by the professors from UT. Students will receive a separate high school grade for high school assignments and a separate college grade for college assignments. During the fall semester, students can earn credit in HIST 1301 and HIST 1302 in the spring. This course can complete the required six college credit hours of the American History component of the Texas 42 college credit core for any Associate's degree. This course surveys from the colonial beginnings through the Civil War for the fall semester. In the spring semester, this course studies the post-Civil War era to the end of the 20th century. Exams include essay questions that require students to craft well-written narratives and arguments that set events in a historical context, engage the complexity of cause and consequence, and make connections that reveal the dynamic of change over time. Using lectures, primary and secondary readings, videos, maps, and other graphics, students work both independently and collaboratively to develop critical thinking skills to evaluate the historical record. College credit is awarded through the University of Texas.

U.S. HISTORY

Grade: 11
Credit: 1
Prerequisites: none
College Credit: No
US History is a requirement for high school graduation. Students must pass the corresponding End-Of-Course for graduation. This course is the study of United States History since Reconstruction. Historical content focuses on the political, economic, and social events during this period. Students use critical-thinking skills to explain and apply different methods that historians use to interpret the past. Students will also prepare for the state End-of-Course assessment required for graduation.

FEDERAL GOVERNMENT DC

GOVT 2305 - Federal Government
Grade: 12
Credit: 0.5
Prerequisites: TSAI2 Requirements
College Credit: Yes
The US Government course is a high school graduation requirement. This course is a one-semester dual enrollment course. Students can earn college credit for GOVT 2305 Federal Government. Students who take this course will have a proctored class period on campus. This course explores the origin and development of the U.S. Constitution, the structure and powers of the national government, including the legislative, executive, and judicial branches, federalism, political participation, the national election process, public policy, civil liberties, and civil rights. This course fulfills the Government/Political Science foundational component area of the core. Students can earn three hours of college credit for GOVT 2305 from St. Philip's College.

SOCIAL STUDIES COURSE DESCRIPTIONS

FEDERAL GOVERNMENT

Grade: 12
Credit: 0.5
Prerequisites: none
College Credit: No
This course focuses on the study of the structure and function of the three branches of government, the development of political behaviors and philosophies, and decision-making in civic affairs. Students are expected to examine current governmental issues and events through group and individual activities.

ECONOMICS DC

Econ 2301 - Principles of Macroeconomics
Grade: 12
Credit: 0.5
Prerequisites: TSIA2 Requirements
College Credit: Yes
Economics is a high school graduation requirement. This is a one-semester dual enrollment course. Students can earn college credit for ECON 2301. Students who take this course will have a proctored class period on campus. This course consists of an analysis of the economy, including measurement and determination of Aggregate Demand and Aggregate Supply, national income, inflation, and unemployment. Other topics include international trade, economic growth, business cycles, fiscal policy, and monetary policy. This course fulfills the Social and Behavioral Sciences foundational component area of the core. Students can earn three hours of college credit for ECON 2301 from St. Philip's College.

ECONOMICS

Grades: 11-12
Credit: 0.5
Prerequisites: none
College Credit: Yes
This course focuses on the basic principles concerning the production, consumption, and distribution of goods and services (the problem of scarcity) in the United States and a comparison with those in other countries around the world. Students analyze the interaction of supply, demand, and price. Students will investigate the concepts of specialization and international trade, economic growth, key economic measurements, and monetary and fiscal policy. Students will study the roles of the Federal Reserve System and other financial institutions, government, and businesses in a free enterprise system. The course also incorporates instruction in personal financial literacy. Students apply critical-thinking skills using economic concepts to evaluate the costs and benefits of economic issues.

ELECTIVE COURSE DESCRIPTIONS

ART I to ART APPRECIATION DC

Grades: 9-12
Credit: 1
Prerequisites: TSIA2
College Credit: Yes
This course is designed for students who wish to pursue art for all four years. Art I is a prerequisite for all other art courses. Students examine natural and man-made objects and explore the art elements of line, value, texture, color, form, and space. Students apply the principles of design, pattern, contrast, emphasis, balance, proportion, harmony, rhythm, and movement in developing and creating original artworks using various media and techniques in a general, structured, step-by-step manner. Artworks of master artists (traditional and contemporary) as well as fellow students, are studied to allow students to grow in their appreciation of art and to develop evaluation skills. The spring semester consists of Art Appreciation. Students can receive three hours of college credit for ART 1301 from St. Philip's College.

ART II, III, IV

Grades: 10-12
Credit: 1
Prerequisites: Art I
College Credit: No
Students will advance to a higher level of understanding and skill development in the two-dimensional and three-dimensional areas. Art II emphasizes strong composition, more representation skills, and greater expressive exploration. The focus is on art history, recognizing works and artists from different periods of art history and world cultures. Art III - IV students are expected to present their points of view while creating unique works for portfolios and exhibitions. Students are required to maintain a working sketchbook/journal in addition to their class work. Students will enter their work in competitions and exhibitions. Individualized interests are encouraged.

BAND I, II, III, IV

Grades: 9-12
Credit: 1
Prerequisites: None
Corequisite: Marching Band Level I and II
College Credit: No
This course is designed for the student who has developed some proficiency in performance skills. Tone production, technical facility, and musicianship are taught as each relates to performance. Emphasis is placed on individual and ensemble performance skills. The band is involved in numerous performances and competitions throughout the year. Participation in the Marching Band is a requirement of this course.

MARCHING BAND I AND II FALL

Grades: 9-12
Credit: 0.5 Physical Education Substitution
Prerequisites: Middle school band or experience with an instrument.
Corequisite: Concert Band
College Credit: No
Students who are also enrolled in an athletics course will receive credit for the first level of music instead of a Physical Education substitution.

ELECTIVE COURSE DESCRIPTIONS

JAZZ BAND I, II, III, IV
Grades: 9-12
Credit: 1
Prerequisites: None required.
Corequisite: Band
College Credit: No
The focus of this course is the exploration of styles and rhythms utilized in American jazz through performance. Students learn improvisational techniques. Students must be enrolled in another regular band class to enroll in a jazz ensemble. Students will participate in numerous performances throughout the year.

THEATRE ARTS I
Grades: 9-12
Credit: 1
Prerequisites: none
College Credit: No
This course fulfills the high school fine arts credit for graduation. This course is intended to be a general introduction to the fundamentals of basic theater production techniques. Students are introduced to acting, directing, makeup application, technical work, and costuming. Theater history is an important component of this course, leading to an appreciation of the theater. Students are required to attend a live theater performance during the school year.

THEATRE ARTS II, III, IV
Grades: 10-12
Credit: 1
Prerequisites: Theatre Arts I
College Credit: No
These courses are designed for students who are serious and have a passion for theater arts. Students in these courses will advance their knowledge and skills through application. Students may write plays and study advanced acting/characterization, the aspects of critiquing, auditioning, and costuming. Students will also learn technical skills in lighting, sound, set design, and construction.

ELECTIVE COURSE DESCRIPTIONS

SPANISH I
Grades: 8-11
Credit: 1
Prerequisites: none
College Credit: No
The goal of the study of the beginning levels of modern languages is communicative competence in authentic, real-world situations. Students in this course will develop novice-mid to novice-high proficiency in speaking, listening, reading, and writing on topics dealing with people, places, and events they are likely to encounter in everyday life. The cultural products, practices, and perspectives of the target culture(s) are integrated into all aspects of the course.

SPANISH II
Grades: 9-12
Credit: 1
Prerequisites: Spanish I
College Credit: No
Level II provides opportunities for students to further develop their proficiency in speaking, listening, reading, and writing on real-world topics. At this level, students go beyond their personal lives and begin exploring topics related to the community and the world at large as they progress toward a novice-high to intermediate-low proficiency level. The cultural products, practices, and perspectives of the target culture(s) are integrated into all aspects of the course.

ATHLETICS & PHYSICAL EDUCATION COURSE DESCRIPTIONS

Purpose of Athletic Participation:

The purpose of the Ingram Athletic Program is to provide student-athletes an arena in which they can elevate their academic goals, instill a strong work ethic, and provide character development. We give opportunities for the students in our Athletic Program to increase their fitness levels and learn lifelong health development. Through teamwork training and leadership opportunities, students will work to instill a sense of selfless commitment and work together towards achieving goals.

High School Level Athletics:

Fall—Volleyball, Football, Cross Country, Tennis
Winter—Basketball
S**pring**– Baseball, Softball, Golf, Track, Tennis
Grades: 9-12
Credit: 1 per grade level
Prerequisites: none
College Credit: No

Students who participate in competitive athletics must adhere to the UIL requirements for participation. This includes no-pass, no-play rules, student-athlete transfer rules, and physicals.

Athletic Course Enrollment Requirements:

All Athletes must complete a Physical Packet, which includes the Ingram ISD code of conduct, alcohol and drug testing procedures, and our quitting policies/procedures. These packets are available in May of each school year. Ingram ISD offers opportunities for physicals in the spring at a minimal cost (including transportation). Packets are available to new students at registration and are available on the district Athletic website. Student-athletes must have a signature from the Athletic Director's Office/Designee to make an athletic course selection. Students may not drop athletics in the middle of the semester. Schedule changes will only be available for the first two weeks of each semester. If a student can no longer participate in the selected sport, they may be moved to the off-season workout program.

Athletic Workout Gear:

Athletic workout gear is available for purchase in the spring and throughout the summer through the BSN company's online store. Information regarding the purchase of workout clothing can be found on the District athletic website.

Course Credit:

Athletics counts as one substitution credit for physical education. Students are not allowed to have more than four substitution credits for physical education. Students may not take two athletic periods in the same year or be enrolled in a physical education course while enrolled in athletics. Students who enroll in an athletics course and the Marching Band may not receive a substitution in physical education in both courses.

Physical Education (PE) Individual Sports

Grades: 9-12
Credit: 1
Prerequisites: none
College Credit: No

This course is offered for students who do not wish to participate in competitive athletics. Students are required to have 1 credit in physical education (or a substitute) for graduation. This course is not repeatable for credit.

ADDITIONAL ELECTIVES COURSE DESCRIPTIONS

AVID I
Grade: 9
Credit: 1
Prerequisites: none
College Credit: No
In this ninth-grade AVID elective course, students will work on academic, personal, and communication goals, adjusting to the high school setting. Students will learn and practice goal setting and time management. There is an emphasis on analytical writing, focusing on personal goals and thesis writing. Students will work in collaborative settings, learning how to participate in congenial discussions and use sources to support their ideas and opinions. Students will prepare for and participate in college entrance and placement exams while refining study skills and test-taking, note-taking, and research techniques. Students will increase involvement in their school and community and take an active role in field trips, guest speaker preparations, and presentations. College research will include financial options and building their knowledge of colleges and careers of interest.

AVID II
Grade: 10
Credit: 1
Prerequisites: AVID I
College Credit: No
During the tenth-grade AVID elective course, students will refine the AVID strategies to meet their independent needs and learning styles. Students will continue to refine and adjust their academic learning plans and goals. As students increase the rigorous course load and school/community involvement, they will refine their time management and study skills accordingly. Students will expand their writing portfolio to include analyzing prompts, supporting arguments and claims, character analysis, and detailed reflections. Students will also analyze various documents, participate in collaborative discussions, and develop leadership skills in those settings. Students will expand their vocabulary use, continuing to prepare for college entrance exams and preparation. Text analysis will focus on specific strategies to understand complex texts. Lastly, students will narrow down their colleges and careers of interest based on personal interests and goals.

AVID III
Grade: 11
Credit: 1
Prerequisites: AVID II
College Credit: No
The 11th-grade AVID elective course emphasizes rhetorical reading, analytical writing, collaborative discussion strategies, tutorial inquiry study groups, preparation for college entrance and placement exams, college study skills and test-taking strategies, note-taking, and research. The course is the first part of a two-year seminar course that focuses on writing and critical thinking expected of first and second-year college students. In addition to the academic focus of the AVID seminar, there are college-bound activities, methodologies, and tasks that should be undertaken during the junior year to support students as they apply to four-year universities and confirm their postsecondary plans.

AVID IV
Grade: 12
Credit: 1
Prerequisites: AVID III
College Credit: No
The 12th-grade AVID elective course emphasizes rhetorical reading, analytical writing, collaborative discussion strategies, tutorial inquiry study groups, preparation for college entrance and placement exams, college study skills and test-taking strategies, note-taking, and research. The course is the second part of a two-year seminar course that focuses on writing and critical thinking expected of first- and second-year college students. In addition to the academic focus of the AVID senior seminar, there are college-bound activities, methodologies, and tasks that should be achieved during the senior year that support students as they apply to four-year universities and confirm their postsecondary plans.

ADDITIONAL ELECTIVES COURSE DESCRIPTIONS

COLLEGE LAB
Grades: 10-12
Credit: 1 (Local)
Prerequisites: The student should be taking 9 academic hours.
College Credit: No
Students in the College Lab use their time to complete dual credit class work while on campus. This is a local credit and does not count toward the 26 credits needed to graduate. To be considered for College Lab, students must be taking nine or more academic college hours.

YEARBOOK I, II, III, IV
Grades: 9-12
Credit: 1
Prerequisites: none
College Credit: No
Students in this course will learn to communicate in a variety of forms, such as print, digital, or online media, for a variety of audiences and purposes. Students are expected to plan, draft, and complete written and/or visual communications regularly, carefully examining their copy for clarity, engaging language, and the correct use of the conventions and mechanics of written English. Students are expected to become analytical consumers of media and technology to enhance their communication skills. Students will apply journalistic ethics and standards. Students will develop digital photography skills and acquire knowledge in the use of photo editing programs.

STUDENT AIDE
Grades: 11-12
Credit: 1 (Local)
Prerequisites: Staff Approval
College Credit: No
This course is available for students to assist and provide support for teachers, office staff, and the athletic staff. This course does not count towards credits for graduation.