Texas Institute
Of Applied Sciences

Texas Institute of Applied Sciences (TIAS)
Office of Academic Programs/Academic Affairs

# 2025-2026

## High School Academic Program

Texas Institute of Applied Sciences, LLC

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## Academic Programs (High School)

- Standard Secondary Program (4-year track)
  - A comprehensive four-year secondary academic program designed for structured progression and depth of study.
  - AAP (Advanced Academic Program) and ASTP (Advanced Science and Technology Program) Compatible
- Accelerated Secondary Program (1-year track)
  - An intensive one-year pathway designed for students with prior academic completion seeking formal secondary certification.
- Condensed Secondary Program (2-year track)
  - A structured two-year secondary program balancing academic rigor with accelerated progression.

*All secondary programs follow institutional academic standards and include ongoing assessment and academic supervision.

## Advanced Academic Programs

(Available Only to Standard Secondary Program Alumni)

- AAP Advanced Academics Program

The Advanced Academics Program (AAP) is designed for students seeking enhanced academic depth across the humanities, social sciences, and analytical disciplines.

- ASTP Advanced Science and Technology Program

The Advanced Science & Technology Program (ASTP) focuses on advanced scientific literacy, applied mathematics, and technological competence through structured coursework and project-based learning.

*Advanced Programs are supplemental academic pathways and do not constitute separate diplomas. Participation is subject to eligibility and academic standing. The Advanced Programs operate as a **progressive, transversal system** integrated into the Four-Year Secondary Program. Participation is phased and based on academic readiness.

## Carnegie Unit Framework

All TIAS  Secondary Programs, including advanced coursework, are structured around the Carnegie Unit, defined as:

One Carnegie unit= a minimum of 120 instructional hours of verified academic engagement, including but not limited to direct instruction, coursework, and academic activity

Graduation requirements for all secondary programs are fulfilled through the completion of the required number of Carnegie Units across main subject areas.

## Year-by-Year Academic Program

## Four Year Standard Program

Year 1 (Foundation Year)
Advanced Academic Programs: Not available

During the first year, students focus exclusively on foundational secondary studies. Advanced Programs are not offered at this stage to ensure appropriate academic and developmental readiness.

Year 2 (Exploratory Preparation Phase)
Advanced Academic Programs: Introductory and Optional

In the second year, students may elect to participate in optional introductory modules designed to prepare them for potential entry into advanced academic pathways. These modules are exploratory and do not constitute enrollment in an Advanced Program.

Year 3 (Assessment and Entry Phase)

Advanced Academic Programs: Available (Optional)

During the third year, students may undergo an internal assessment to determine eligibility and alignment with the Advanced Academics Program (AAP) or the Advanced Science & Technology Program (ASTP). Based on assessment outcomes and student interest, eligible students may enroll in one of the Advanced Programs.

Years 3-4 (Advanced Program Completion Phase and Graduation)

Students enrolled in an Advanced Program complete a structured sequence of advanced coursework culminating in a final project and an advanced thesis. This advanced thesis is completed in addition to the standard graduation requirements of the secondary program.

Within this framework, students may pursue one of the following Advanced Programs:

- **AAP  Advanced Academics Program**
- **ASTP  Advanced Science & Technology Program**

# Four Year Standard Secondary Program

Total Graduation Requirement: 24 Carnegie Units
Maximum Available Units: 40 Carnegie Units

## Program Scope

- Duration: **4 Academic Years**
- Total Graduation Requirement: **24 Carnegie Units**
- Maximum Available Units: **40 Carnegie Units**
- Advanced Academic Programs: **AAP and ASTP**
- Extended Elective Accumulation: **Available through the AAP or ASTP programs.**

Year 1 (Foundational Year)

| Subject | Number of Carnegie Units |
|---|---|
| English I | 1.0 |
| Mathematics I (Algebra I) | 1.0 |
| Science I (Physical Sciences) | 1.0 |
| World History | 1.0 |
| Foreign Language I | 1.0 |
| Physical Education and Health | 0.5 |
| Economics I | 0.5 |

**Year 1 Total: 6 Carnegie Units**

Year 2 (Development Year)

| Subject | Number of Carnegie Units |
|---|---|
| English II | 1.0 |

| | |
|---|---|
| Mathematics II (Geometry) | 1.0 |
| Science II (Biology) | 1.0 |
| U.S History I | 1.0 |
| Foreign Language II | 1.0 |
| Applied Studies/Elective | 0.5 |
| Economics II (Personal Finance) | 0.25 |
| Research Methodology | 0.25 |

**Year Total: 6 Carnegie Units**
**Cumulative: 12 Carnegie Units**

Year 3 (Advanced Year)

| Subject | Number of Carnegie Units |
|---|---|
| English III | 1.0 |
| Mathematics III (Algebra II) | 1.0 |
| Science III (Chemistry) | 1.0 |
| U.S History II (Government Structure) | 1.0 |
| Civic Studies | 0.5 |
| Academic Specialization (AAP or ASTP) | 1.5 |
| Economics III (Taxes) (Only for students not enrolled in AAP or ASTP) | 1.5 |

- Some coursework for students enrolled in the AAP or ASTP programs will not be counted using the Carnegie System.

**Year Total (With Advanced Academic Programs): 6.0 Carnegie Units**

**Year Total (Without Advanced Academic Programs): 6.0 Carnegie Units**
**Cumulative: 18 Carnegie Units**

Year 4 (Completion And Synthesis Year)

| Subject | Number of Carnegie Units |
|---|---|
| English IV | 1.0 |
| Advanced Mathematics (Applied Math) | 1.0 |
| Applied Science | 1.0 |
| Social Studies | 1.0 |
| Advanced Research Methodology | 0.25 |
| Art History | 0.25 |
| Academic Specialization (AAP or ASTP) | 1.0 |
| Graduation Project and Thesis | 1.5 |
| Social Impact Project (For non AAP or ASTP students) | 1.0 |

**Year Total: 6 Carnegie Units**
**Graduation Total: 24 Carnegie Units**

## Elective/Optative Credit Framework

Expanded elective (optative) credit accumulation is available exclusively to students enrolled in the Four-Year Secondary Program.

Condensed (Two-Year) and Accelerated (One-Year) pathways follow fixed elective limits and are not eligible for extended elective accumulation.

- Students in the Four-Year Program may accumulate **additional elective credits beyond the baseline requirement**

- The **maximum cumulative credit load**, including all core and elective coursework, is:

**Up to 40 Carnegie Units total**

| Year 1 | Electives |
|---|---|
| Foundational Focus | Limited |

| Year 2 | Electives |
|---|---|
| Introductory optatives permitted | Extended elective accumulation: **Limited** |

| Year 3 | Electives |
|---|---|
| Electives: **Expanded** | Academic specialization encouraged<br><br>Extended elective accumulation: **Available** |

| Year 4 | Electives |
|---|---|
| Electives: **Maximum** | **Advanced electives, capstone-linked coursework**<br><br>**Extended elective accumulation: Fully available** |

- Extended elective credits **do not replace** essential graduation requirements

- Accumulation beyond 24 units is noted on the transcript

- Completion of extended elective coursework may be recognized as an **academic distinction**, not a separate diploma
- A Student May be Enrolled in as many Advanced Electives as he choses, however balancing coursework and deliver quality work with passing grades is his responsibility.

# AAP Advanced Academics Program Course Catalog

**Advanced Literary Analysis & Composition**

- Duration: Full year
- Credit: 1.0 CU
- Requisites: English II completed
- Coursework:
    - Advanced literary texts
    - Analytical and comparative essays
    - Seminar discussion
- Final Project:
    - 4,000–5,000 word analytical research paper

**Ethics, Philosophy & Moral Reasoning**

- Duration: Semester
- Credit: **0.5 CU**
- Requisites: English II or approval by AAP Coordination.

- Coursework:
    - Ethical frameworks
    - Case study analysis
- Final Project:
    - Applied ethics case analysis paper

**Advanced Government, Law & Civic Institutions**

- Duration: 3 Weeks
- Credit: 0.5 CU
- Requisites: U.S. History completed or concurrent
- Coursework:
    - Constitutional analysis
    - Legal reasoning
- Final Project:
    - Policy or constitutional analysis paper

**Academic Research Methods**

- Duration: Semester
- Credit: 0.5 CU
- Requisites: English III (or concurrent)
- Coursework:
    - Research design

- Source evaluation

- Final Project:
  - Formal research proposal (1,500–2,000 words)

## AAP Capstone (Mandatory for AAP-enrolled Students)

**AAP Advanced Thesis (AAP Graduation Requirement)**

- Duration: Full year
- Credit: 1.5–2.0 CU
- Requisites:
  - Enrollment in AAP
  - Completion of Research Methodology (Non-AAP, Compulsory Class)
  - Advisor approval
- Coursework:
  - Independent humanities/social science research
  - Supervised drafts and reviews
- Final Project:
  - 6,000–8,000 word academic thesis
  - Written submission + oral defense

**Advanced Mathematics & Modeling**

- Duration: Full year
- Credit: **1.0 CU**
- Requisites: Algebra II completed
- Coursework:
    - Mathematical modeling
    - Applied problem sets
- Final Project:
    - Applied modeling project with report

**Programming I**

- Duration: Full year
- Credit: 1.0 CU
- Requisites: Algebra I completed
- Coursework:
    - Programming fundamentals
    - Weekly coding assignments
- Final Project:
    - Functional software application + documentation

**Statistics & Data Analysis**

- Duration: 3 Weeks
- Credit: 0.5 CU
- Requisites: Algebra II completed or concurrent
- Coursework:
    - Descriptive & inferential statistics
    - Data analysis labs
- Final Project:
    - Statistical analysis report on real dataset

**Engineering Design & Systems Thinking**

- Duration: Full year
- Credit: 1.0 CU
- Requisites: Physics completed or concurrent
- Coursework:
    - Engineering design methodology
    - Systems modeling
- Final Project:
    - Design portfolio + prototype/simulation

## ASTP Capstone (Mandatory for ASTP-Enrolled Students)

**ASTP Advanced Science & Technology Thesis (ASTP Graduation**

**Requirement)**

- **Duration: Full year**
- **Credit: 1.5–2.0 CU**
- **Requisites:**
  - **Enrollment in ASTP**
  - **Completion of Statistics or Programming**
  - **Advisor approval**
- **Coursework:**
  - **Independent scientific or technical research**
  - **Supervised applied development**
- **Final Project:**
  - **Technical research paper or applied system**
  - **Written documentation + presentation/defense**

# CREDIT LOAD SUMMARY (AAP / ASTP)

- Typical advanced coursework: **3.0–5.0 CU**
- Capstone + Thesis: **1.5–2.0 CU**
- Total advanced credit (typical): **4.5–7.0 CU**
- Recorded as **supplemental Carnegie Units** on transcript

## Two-Year Condensed Secondary Program

The Two-Year Condensed Secondary Program is designed for students with prior secondary-level academic preparation who seek to complete high school requirements through an accelerated but structured academic pathway.

This program follows the TIAS academic standards and the Carnegie Unit framework and does not include participation in Advanced Academic Programs (AAP or ASTP).

## Program Scope

- Duration: **2 Academic Years**
- Total Graduation Requirement: **24 Carnegie Units**
- Maximum Available Units: **24 Carnegie Units**
- Advanced Academic Programs: **Not available**
- Extended Elective Accumulation: **Not available**

Year 1 (Introductory Year)

| Subject | Number of Carnegie Units |
|---|---|
| English (Integrated I-II) | 2.0 |
| Mathematics (Integrated I-II) | 2.0 |
| Science (Integrated I-II) | 2.0 |
| World and U.S History (Integrated) | 2.0 |
| Foreign Language (Accelerated) | 2.0 |
| Economics I | 2.0 |

**Year Total: 12 Carnegie Units**

Year 2 (Graduation)

| Subject | Number of Carnegie Units |
|---|---|
| English (Completion) | 2.0 |

| | |
|---|---|
| Mathematics (Completion) | 2.0 |
| Science  (Completion) | 2.0 |
| U.S Government and Civics | 1.0 |
| Foreign Language (Accelerated) | 2.0 |
| Economics II (Personal Finance and Taxes) | 0.5 |
| Research Methodology | 0.5 |
| Graduation Project and Thesis | 2.0 |

**Year Total: 12 Carnegie Units**

**Cumulative Total: 24 Carnegie Units.**

**Graduation Requirement: 24 Carnegie Units**

**Program Notes**

- All coursework is mandatory and credit-dense
- No advanced specialization tracks are offered
- Graduation Project & Thesis is required for completion
- Electives are limited to program structure
- No credit beyond 24 Carnegie Units may be accumulated

## One-Year Accelerated Secondary Program

The One-Year Accelerated Secondary Program is intended for students with substantial prior secondary coursework who seek formal completion of high school requirements within a single academic year.

Admission to this program is subject to transcript review and academic readiness assessment.

This program does not include participation in Advanced Academic Programs (AAP or ASTP).

## Program Scope

- Duration: **1 Academic Year**
- Total Graduation Requirement: **24 Carnegie Units**
- Maximum Available Units: **24 Carnegie Units**
- Advanced Academic Programs: **Not available**
- Extended Elective Accumulation: **Not available**

Year 1 (Highly Intensive)

| Subject | Number of Carnegie Units |
|---|---|
| English (I.C) | 4.0 |
| Mathematics (I.C) | 4.0 |
| Science (I.C) | 4.0 |
| Foreign Language | 3.0 |
| Research Methodology | 2.5 |
| Economics (I.C) | 0.5 |
| Graduation Project and Thesis | 2.0 |

**Year Total: 24 Carnegie Units**

**Graduation Requirement: 24 Carnegie Units**

# Academic Flowcharts w/Carnegie Unit Breakdown

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## TIAS One-Year Accelerated Secondary Program
## Academic Flowchart (24 Carnegie Units)

**Single Academic Year — Highly Intensive**

- English (Integrated Completion) — 4.0 CU
- Mathematics (Integrated Completion) — 4.0 CU
- Science (Integrated Completion) — 4.0 CU
- Social Studies (Integrated Completion) — 4.0 CU
- Foreign Language / Applied Studies — 3.0 CU
- Research Methodology — 2.5 CU
- Economics (Integrated Completion) — 0.5 CU
- Graduation Project & Thesis — 2.0 CU
- Total: 24.0 Carnegie Units

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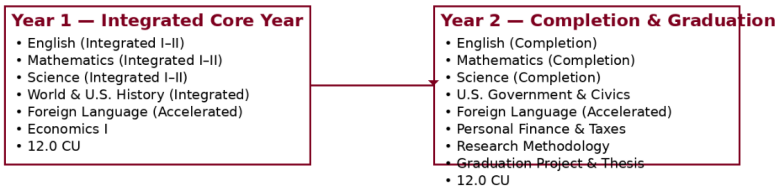
## TIAS Two-Year Condensed Secondary Program
## Academic Flowchart (24 Carnegie Units)

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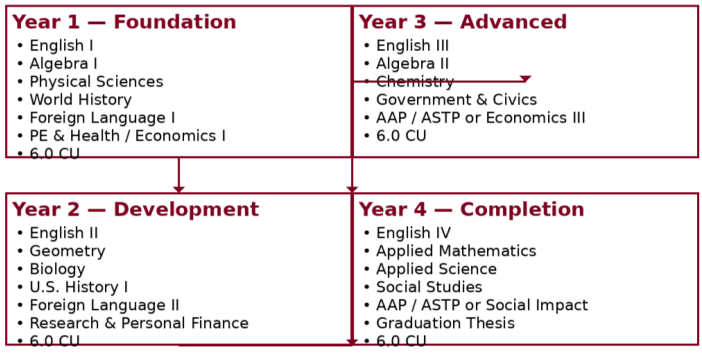
## TIAS Four-Year Standard Secondary Program
## Academic Flowchart (24 Carnegie Units)

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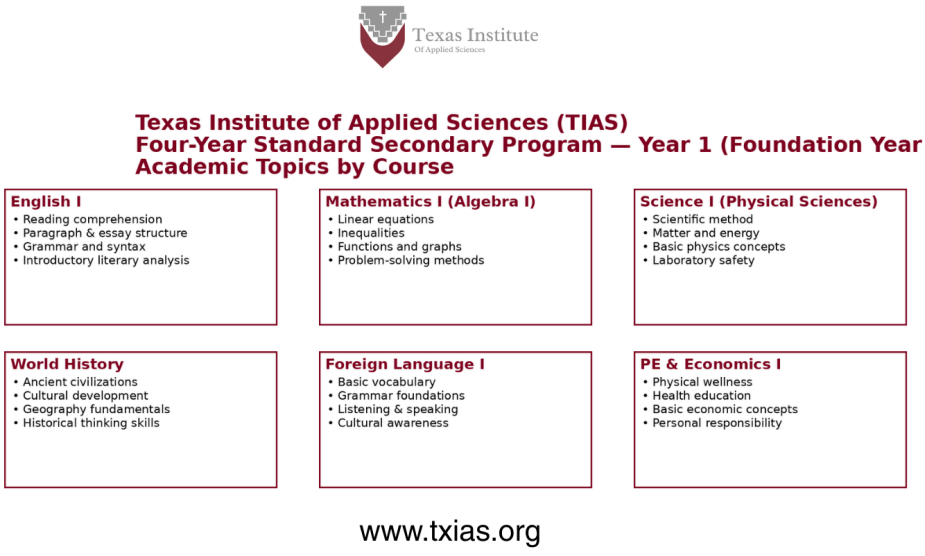
# Academic Contents Flowchart Per Year and Course

# Four-Year Program




**(Year 1, Foundation Year Academic Contents)**

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**Texas Institute of Applied Sciences (TIAS)**
**Four-Year Standard Secondary Program — Year 2 (Development Year)**
**Academic Topics by Course**

**English II**
- Analytical reading
- Structured academic writing
- Literary genres & themes
- Argumentative essays

**Mathematics II (Geometry)**
- Euclidean geometry
- Proofs and logic
- Trigonometric basics
- Geometric problem-solving

**Science II (Biology)**
- Cell biology
- Genetics fundamentals
- Evolution and ecosystems
- Laboratory investigations

**U.S. History I**
- Colonial foundations
- Constitutional development
- 19th-century expansion
- Historical source analysis

**Foreign Language II**
- Expanded vocabulary
- Complex grammar structures
- Reading comprehension
- Cultural analysis

**Research Methodology & Personal**
- Academic research basics
- Source evaluation
- Budgeting and credit
- Financial decision-making

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**(Year 2, Development Year Academic Contents)**

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**Texas Institute of Applied Sciences (TIAS)**
**Four-Year Standard Secondary Program — Year 3 (Advanced Year)**
**Academic Topics by Course**

**English III**
- Advanced literary analysis
- Research-based writing
- Rhetorical strategies
- Analytical essays

**Mathematics III (Algebra II)**
- Polynomial functions
- Quadratic & exponential models
- Systems of equations
- Mathematical reasoning

**Science III (Chemistry)**
- Atomic structure
- Chemical reactions
- Stoichiometry
- Laboratory experimentation

**U.S. History II (Government Structure)**
- Federalism and separation of powers
- Constitutional interpretation
- Public institutions
- Civic responsibility

**Civic Studies**
- Civic participation
- Rights and responsibilities
- Political systems
- Public policy analysis

**Academic Specialization (AAP / AS**
- Advanced pathway orientation
- Disciplinary assessment
- Introductory advanced coursework
- Program eligibility preparation

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**(Year 3, Advanced Year Academic Contents)**

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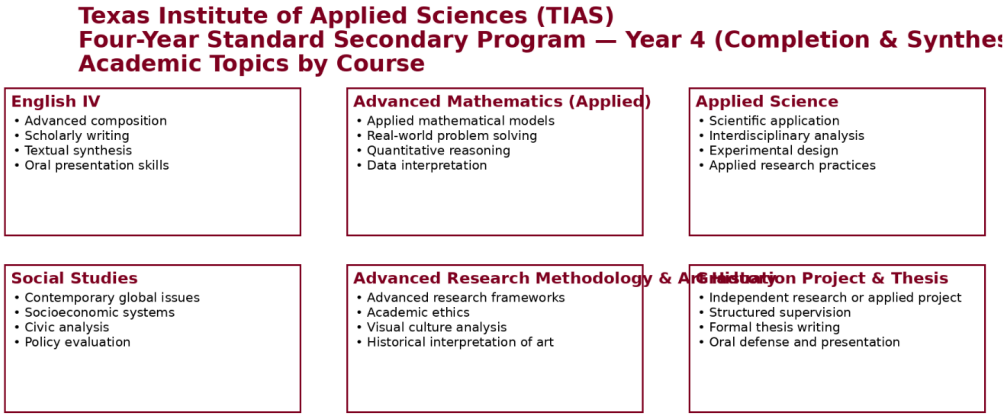


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(Year 4, Completion and Synthesis Year Academic Contents)

# Two-Year Program

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## Texas Institute of Applied Sciences (TIAS)
## Two-Year Condensed Secondary Program — Year 1 (Integrated Core Yea
## Academic Topics by Course

**English (Integrated I–II)**
- Advanced reading comprehension
- Analytical and argumentative writing
- Grammar consolidation
- Literary analysis across periods

**Mathematics (Integrated I–II)**
- Algebraic foundations
- Geometric reasoning
- Functions and graphs
- Problem-solving strategies

**Science (Integrated I–II)**
- Scientific method
- Biology fundamentals
- Physical science principles
- Laboratory analysis

**World & U.S. History (Integrated)**
- World civilizations overview
- U.S. historical foundations
- Historical causation
- Primary source analysis

**Foreign Language (Accelerated)**
- Rapid vocabulary expansion
- Grammar immersion
- Reading and listening fluency
- Cultural literacy

**Economics I**
- Economic systems
- Microeconomic principles
- Supply and demand
- Personal economic decision-making

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**(Year 1, Integrated Year Academic Contents)**

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## Texas Institute of Applied Sciences (TIAS)
## Two-Year Condensed Secondary Program — Year 2 (Graduation Year)
## Academic Topics by Course

**English (Completion)**
- Advanced composition
- Research-based writing
- Textual synthesis
- Formal academic style

**Mathematics (Completion)**
- Algebraic modeling
- Quantitative reasoning
- Applied problem solving
- Mathematical communication

**Science (Completion)**
- Applied scientific inquiry
- Experimental design
- Data interpretation
- Scientific reporting

**U.S. Government & Civics**
- Constitutional principles
- Federal and state systems
- Civic participation
- Public policy analysis

**Foreign Language (Accelerated)**
- Advanced grammar usage
- Reading fluency
- Written expression
- Cultural analysis

**Research Methodology, Economics**
- Advanced research methods
- Personal finance and taxation
- Independent graduation project
- Formal thesis writing & defense

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**(Year 2, Graduation Year Academic Contents)**

# One-Year Program

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**Texas Institute of Applied Sciences (TIAS)**
**One-Year Accelerated Secondary Program — Intensive Completion Year**
**Academic Topics by Course**

**English (Integrated Completion)**
- Advanced reading comprehension
- Analytical & argumentative writing
- Research-based composition
- Formal academic style

**Mathematics (Integrated Completion)**
- Algebraic modeling
- Functions and systems
- Quantitative reasoning
- Applied problem solving

**Science (Integrated Completion)**
- Scientific inquiry
- Experimental design
- Data analysis
- Scientific reporting

**Foreign Language & Economics (Integrated)**
- Functional language fluency
- Reading & written expression
- Personal finance
- Taxation and economic systems

**Research Methodology & Graduation Thesis**
- Advanced research frameworks
- Source evaluation
- Independent graduation project
- Formal thesis & oral defense

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## (Year 1, Intensive Completion Year Academic Contents)

## Institutional Academic Oversight and Quality Assurance

All academic programs offered by the Texas Institute of Applied Sciences (TIAS) operate under the supervision of the Office of Academic Programs / Academic Affairs. Academic content, assessment standards, graduation requirements, and instructional methodologies are subject to periodic internal review to ensure consistency, rigor, and alignment with institutional objectives.

TIAS reserves the right to revise course content, instructional methods, assessment formats, and program structure in response to academic evaluation, pedagogical advancement, or institutional needs, provided that graduation requirements and earned Carnegie Units are not retroactively affected.

## Assessment, Evaluation, and Academic Integrity

Student performance is evaluated through a combination of coursework, examinations, projects, real-life integral application of his learning, research submissions, and supervised academic activity. Academic integrity is a fundamental requirement of all TIAS programs.

Plagiarism, academic dishonesty, falsification of records, or misconduct related to assessments or graduation projects may result in disciplinary action, including course failure or program dismissal, or any other sanctions determined by the Academic Integrity Policy.

Graduation eligibility is contingent upon the satisfactory completion of all required coursework, Carnegie Units, and program-specific graduation requirements.

## Graduation Credentials and Records

Upon successful completion of an applicable Secondary Program, TIAS issues an institutional Certificate of Completion and an official academic transcript detailing completed coursework, Carnegie Units earned, and academic distinctions where applicable, valid under educational and professional frameworks.

Advanced Academic Programs (AAP and ASTP), where completed, are recorded as supplemental academic distinctions and do not constitute separate diplomas.

TIAS maintains permanent academic records in accordance with internal record-keeping policies for security and verification assurance purposes.

# Program Eligibility and Admission Discretion

Admission to any TIAS program is subject to transcript review, academic readiness assessment, other accepted forms of evaluation or placement and institutional discretion.

Enrollment in the One-Year Accelerated and Two-Year Condensed Secondary Programs requires prior secondary-level academic preparation. Admission to Advanced Academic Programs (AAP and ASTP) is limited to eligible students enrolled in the Four-Year Standard Secondary Program and is subject to internal assessment and approval.

TIAS reserves the right to deny, defer, or revoke enrollment based on academic readiness, conduct, or failure to meet institutional standards.

# Institutional Status and Disclosure

Texas Institute of Applied Sciences (TIAS) is a private educational institution operating under Texas Institute of Applied Sciences, LLC. TIAS is not a public school and does not claim accreditation unless explicitly stated in official institutional communications.

This academic catalog describes institutional programs, standards, and graduation requirements as defined internally by TIAS and does not constitute a guarantee of credit transfer, recognition, or equivalency by external educational institutions, agencies, or authorities.

# Catalog Validity and Amendments

This academic catalog applies to the **2025–2026 academic year** and remains in effect unless amended by the Office of Academic Programs / Academic Affairs.

TIAS reserves the right to issue updated editions of this catalog. Continued enrollment constitutes acknowledgment of and agreement to institutional policies and academic requirements as outlined herein.

# Conclusion

The Texas Institute of Applied Sciences is committed to providing structured, rigorous, and intellectually serious secondary education pathways designed to

meet diverse academic needs. Through its Standard, Condensed, and Accelerated Secondary Programs, TIAS offers flexible yet disciplined academic models centered on mastery, research competence, and responsible academic progression.

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