

# THE SCIENCE ACADEMY OF SOUTH TEXAS



## Four-Year Course Sequence 2015- 2016

9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade
English I Pre-AP	English II Pre-AP	#English III AP	■#English IV AP
Algebra I Pre-AP or Geometry Pre-AP	Geometry Pre-AP Algebra II Pre-AP ■Pre-Calculus Pre-AP	Algebra II Pre-AP ■Pre-Calculus Pre-AP ■#Calculus I AP	■Pre-Calculus Pre-AP ■#Calculus I AP ■#Calculus II AP ■#Statistics AP
Integrated Physics & Chemistry Pre-AP	Chemistry I Pre-AP	Physics I Pre-AP #Physics II AP #Chemistry II AP ■#Biology II AP	Physics I Pre-AP #Physics II AP #Physics III AP #Chemistry II AP ■#Biology II AP
Biology I Pre-AP	Environmental Systems Pre-AP or Biotechnology	#Environmental Science AP Biotechnical Engineering (Environmental Sustainability)	#Environmental Science AP
World History Pre-AP	World Geography CP	#U.S. History CP or AP	#U.S. Government AP & #Economics AP
*Computer Science & Engineering Software	Spanish I CP or #Spanish II CP or AP	#Spanish II CP or AP or ■Spanish III Pre-AP	■Spanish III Pre-AP or #Spanish IV AP or Spanish V Pre-AP or Elective
		Physical Ed. & Health (Semester Courses)	
*Introduction to Engineering Design (IED) <b>STEM Endorsement</b>	*Digital Electronics (DE)	*Principles of Engineering (POE)	Engineering Design & Development *Computer Integrated Manufacturing (CIM) * Aerospace Engineering (AE) *Civil Engineering & Architecture (CEA)
*Introduction to Engineering Design <b>Multidisciplinary Endorsement</b>	*Digital Electronics (DE)	Adv. Year Book I & II, AP Spanish IV/Spanish V, AP Psychology, Sociology, Aerobic Activity, Art AP, Art Drawing, Computer Science AP (Computer Science Applications PLTW Pilot), Advance Mathematics, Advance Science	
Research/Technical Writing (Semester course)	Art, Level I	Professional Communication (Semester Course)	Physical Education (Semester Course)
Foundation Personal Fitness (Semester Course)		SAT / ACT Prep (Semester Course)	Elective (Semester Course)

**FOUNDATION COURSES:** 4 ELA: English I, II, III, & IV; 3 MATH: Algebra, Geometry & Algebra II; 3 SOCIAL STUDIES - World History, US History, Government & Economics; 3 SCIENCE - Biology, IPC & Chemistry; 2 FOREIGN LANGUAGES – Spanish 1 & 2; 1 FINE ARTS – Art 1; 1 PHYSICAL EDUCATION – Foundations of Pers. Fit & Ind. Team Sports 9 ELECTIVES – Introduction to Engineering, Digital Electronics, Speech/Health, PE/SAT, World Geography, Spanish 3, Environmental Systems or Environmental Science AP, Independent Studies

# Advanced Placement Course

■Dual Enrollment Course

\*Project Lead the Way Course

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**STEM Endorsement** - Courses required: Six (6) courses in STEM area. Completion of the foundation requirements, required courses include: Algebra II, Chemistry, and Physics. Additionally five (5) courses must be completed from the following options: A) Computer Science & Engineering Software, Introduction to Engineering, Digital Electronics, Principles of Engineering, Civil Engineering & Architecture, Aerospace Engineering, Engineering Design & Development and/or any Advanced Mathematics or Science course. B) Five (5) mathematics courses; C) Five (5) science courses. We are in the process of Digital Electronics (DE) functioning as Mathematics and Engineering credit; Principles of Engineering (POE) and Engineering Design and Development (EDD) also functioning as a Science and Engineering credit.

**Multidisciplinary Endorsement** - Courses required: Six (6) in the Multidisciplinary area. Required courses include: Chemistry, Physics and Algebra II. Additionally five (5) courses must be completed from the following options: Spanish IV, Advanced Journalism I & II, Art II or AP, Computer Science & Engineering Software, Computer Science II AP (Computer Science Applications PLTW Pilot), Psychology AP or Dual, Sociology, Aerobic Activity and/or any Advanced Mathematics or Science course.

**Arts & Humanities Endorsement** - Courses required: Completion of the foundation requirements. Courses to complete the Arts & Humanities Endorsement: A) World History, World Geography, United States History, Government, Economics, and/or B) Spanish I, Spanish II, Spanish III, Spanish IV and Spanish V

- English, Math, Science, and Social Studies courses are required each of the four years
- Calculus I AP is required prior to or concurrently with Statistics AP
- Physics Pre-AP is required prior to or concurrently with Biology II AP, Chemistry II AP or Environmental Science AP
- If the required grade level's Engineering CTE course is full, the student will be placed in his/her second choice
- Science Academy will permit a student to choose, at any time, to earn an endorsement other than the endorsement the student previously indicated with parent consent.

**#Advanced Placement preparation is available in:** English III, English IV, Calculus I (AB), Calculus II (BC), Statistics, Chemistry II, Biology II, Physics II, Physics III, Environmental Science, U.S. History, U.S. Government, Economics, Art II, Computer Science II, Spanish II, Spanish IV, and Psychology.

**■Dual Enrollment course at Science Academy are:** Biology II, Calculus I, Calculus II, Calculus III (option to receive credit at STC only during Spring semester of Cal II SciTech course), College Algebra, English IV, Pre-Calculus, Psychology, Spanish III, and Statistics. These courses earn a student both high school and college credit. Dual Enrollment teachers have a Master's degree in the area of study. Courses transfer to any public university in Texas.

**\*Transcripted college credit is available through the Rochester Institute of Technology for:** Introduction to Engineering Design, Computer Science Engineering Software, Digital Electronics, Principles of Engineering, Biotechnical Engineering, Aerospace Engineering, Computer Integrated Manufacturing, and Civil Engineering and Architecture. The credit is based upon the scores from an end of course exam and college and the submission of the RIT application. There is no fee to take university EOC exams, but a \$200 filing fee with the university is required for each qualifying course the student requests be transcripted credit(s) through the university system.

●**Elective courses** from Home High Schools will be accepted and credit will be awarded within Science Academy's four-year course sequence. Below is a list of these courses: ●P.E. Equivalent: Boys Athletics, Cross Country, Dance, Golf, Band, ROTC, Soccer, Sports 1, Tennis, Swimming, etc. ●CATE Elective Credit: BCIS, Business Fundamentals, Communication Graphics, etc. ●Fine Arts: Music, Theatre Arts, Choir, Orchestra, etc. ●Foreign Language Elective Credit: French, Hindi, Chinese, etc. (three years of the same foreign language must be completed to receive Academic Acknowledgement) ●Mathematics Elective Credit: Math Lab, Math Enrichment, Math Models, etc. ●Medical Elective Credit: Principles of Biomed, Medical Terminology, etc. ●Speech Elective Credit: Debate ●English Language Arts Elective Credit: Reading I and II ●Technology Applications Elective Credit: Multi Media, Business Information Management, etc.