

# Building Effective Industry and Post-Secondary Partnerships

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## Context of Change

- Rapidly Growing District – Facilities Needs (Bond)
- Small Learning Community Commitment
- Fiscal Constraints – Accelerated Schedule (3x3)
- Needs Assessment Inventory - OHI
- College Prep Focus
- Long Range Strategic Plans - LTISD 2006-2011
- Career Clusters – National & State Initiative

## Vision – “Re”Visioned

- College Prep: P-16 for all
  - 3 + 4 year institute
  - 3 + 2
  - 3 + 2 + 2
  - 3 + Workforce entry

## Institute Building

- Identification of Needs
  - Student Interest
  - Parent & Community Needs / Input
  - Workforce Data

## INSTITUTES OF STUDY



## Developing the Framework – *Institutes of Study*

- Foundation Course of Study
- Career Exploration Emphasis
- Post Secondary Preparation
  - Work Based Learning Programs
  - AP/Dual Credit Coursework
  - Articulated Courses – Tech Prep
  - Internships / Field Experience / Mentorship
  - Certifications / Licensures
- Selective Course of Study
- Corresponding Career Clusters

Lake Travis High School Institutes of Study		
Institute of Humanities, Technology & Communications	Math, Engineering & Architecture Institute	Institute of Fine Arts
<b>Foundation Course of Study</b>		
Math/English/Science/Soc St B/D/M, BCIS, Computer Science Second Language Physical Education/Health Fine Arts	Math/English/Science/Soc St BCIS, B/D/M, Computer Science Second Language Physical Education/Health Fine Arts	Math/English/Science/Soc St BCIS, B/D/M, Computer Science Second Language Physical Education/Health Fine Arts
<b>LTHS Career Exploration Emphasis</b>		
AP Computer Science 1-3 Communications Applications Creative Writing/Journalism Intro to Criminal Justice Criminal Law Crimes in America Debate, Oral History, Competitive Spk Film Production/ Screenwriting Graphic Design Humanities* Newspaper/Yearbook Technology Assistant Web Mastering	Introduction to Engineering Design Principles of Engineering Digital Electronics* Civil Engineering & Architecture* Engineering Design & Devpt* AP Calculus AB AP Calculus BC AP Computer Science 2,3 AP Statistics AP Physics B AP Physics C	Art 1-4 Band Choir Chorale Dance 1-4 Dance Team Debate 1-3 Jazz Ensemble Journalism Newspaper Orchestra Theatre Arts Yearbook
<b>Post-Secondary Preparation: Certifications, Licensures, College Credit, Work-Based Learning, Internships</b>		
AP College Credit Field Work, Internship* College Credit, Object Oriented Programming (Computer Science), Criminal Justice, Criminal Law, Crime in America	AP College Credit Job Shadowing Engineering Internship Program College Credit, Object Oriented Programming (Comp Sci), Engineering Coursework (credits per college)	AP College Credit Internship Opportunities* Dual Credit Coursework
<b>Selective Course of Study Recommendations</b>		
AP English 3 AP English 4	AP Computer Science 1-3 AP Calculus AB/BC, Physics	AP English 3, 4 Creative Writing / Journalism
<b>Corresponding Career Clusters</b>		
<ul style="list-style-type: none"> <li>• Arts, A/V Technology &amp; Comm</li> <li>• Government &amp; Public Admin.</li> <li>• Information Technology</li> <li>• Law, Public Safety, Corrections &amp; Security</li> <li>• Science, Tech, Engin., &amp; Math</li> </ul>	<ul style="list-style-type: none"> <li>• Architecture &amp; Construction</li> <li>• Manufacturing</li> <li>• Science, Technology, Engineering &amp; Mathematics</li> </ul>	<ul style="list-style-type: none"> <li>• Arts, A/V Technology &amp; Communication</li> </ul>

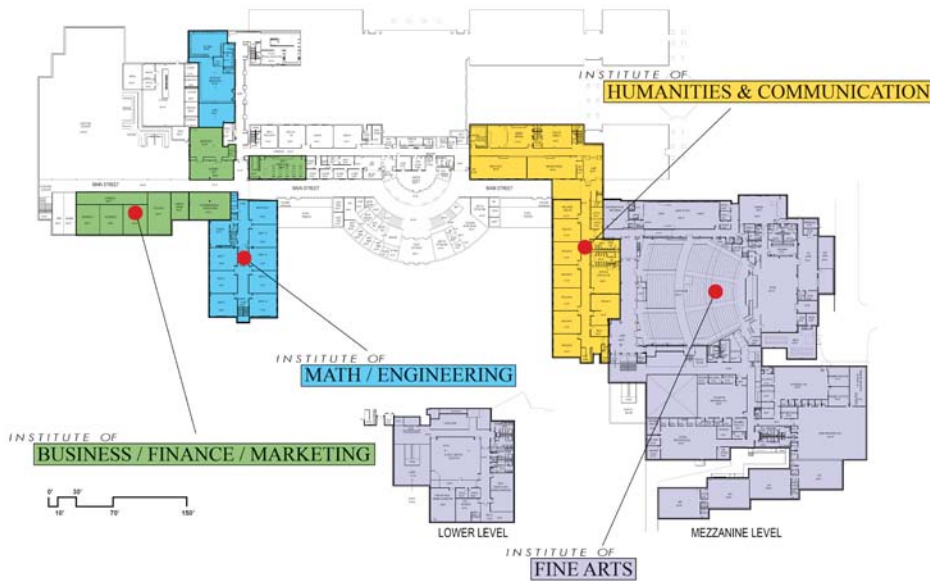
\*Courses recommended for approval for 2007-08 and beyond.

## Building Depth - *Coherent Sequences*

- Several strands of coursework exist within each institute. The coherent sequences lay out a path of depth for students to take.

## Creating the Culture – *High School Design*

- Reconstruction centered on Institutes through overall layout: Entry into math wing is via Engineering Institute; Advanced Sciences has “showcase lab” at entry; Technology Institute has internet café; Business/Marketing includes dynamic school store.



## Partnership Development

- Siemens Engineering Academy
- High School of Business w/MarkEd

## Goal for Each Institute:

- Higher Education Institution Partnership
- Industry Partnership
- Community Partnerships – Internship/Field Experience

## Partnership Development

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### Siemens & ACTE Engineering Academy Initiative

- Foster the Engineering Institute into an integrated, cohort-based academy
  - Moving past “Intro to This” / “Intro to That” into a commitment of depth of study
- Integrate engineering curriculum into other content areas
  - Engineering Development Team
    - English, Science, Social Studies, Math, Computer Science, Counselor, HS Assoc Principal, District Admin
      - Integrated Curriculum
      - Recruitment ~ “A Night at the Institutes”
      - Marketing ~ WEP & MEP
      - Middle School Initiatives (Gateway, Summer Camp)
- Professional Development: Teacher Externship to Siemens
  - Development team travels to Siemen’s HQ in Chicago
  - Looking for opportunities to incorporate engineering into curriculum
- Partner with post-secondary institutions to align engineering coursework
  - Representation from UT and ACC on our Advisory Board
  - Working to articulate High School courses for College Credit

### Develop Advisory Boards with Industry & Post-Secondary Representatives

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- Representation of close to 30 business, community, university reps
  - Post-Secondary: ACTE, E3 Alliance, ACC, UT
  - Industry Partnerships: IBM, Clear Cube, Freescale, National Instruments, Siemens
  - Parents / Staff / Students
- Purpose & Objective:
  - Where is it that we want our graduates to be?
  - How can we as an advisory board help with that goal?
  - What will you personally commit to move this forward?

## **Objectives & Activities of an Advisory Committee**

- Analyze course content to meet the changing needs of the businesses & industries
- Evaluate the physical condition of facilities and technology of program equipment
- Assist in maintaining and improving instructional and learning experiences
- Assist in determining job opportunities
- Assist in promoting career education in the school and community
- Assist in providing current workforce information
- Advise on the development of short- and long-range plans for school-to-work education
- Assist in providing evaluations and recommendations
- Provide district with written recommendations

## **Partnership Ideas ~ How You Can Help...**

- Assess emerging occupations and employer needs
- Schedule content area expert visits to observe and/or co-conduct lessons
- Provide unique education and training experiences for students: Job shadowing, student internship, site visit, etc.
- Assist students with obtaining employment
- Offer facilities for teacher/student site visit, field trip
- Volunteer as a guest speaker / Arrange for guest speakers
- Sponsor student contests – poster, logo, etc.
- Participate in efforts to provide scholarships and awards for outstanding student performance
- Acquisition of technology, equipment, etc.
- Student recruitment
- Judge student projects
- Evaluate engineering equipment, labs, technology, etc.
- Determine skills needed and job expectations
- Support recruiting projects (t-shirts, summer camps)
- Advise on education needs (both HS and College)
- Promote awareness of the program
- Provide teacher training
- Mentor and support students

## **Critical Beginnings**

- Getting the Word Out
- Invitation / First Interactions
- Recruiting the Right People
  - ~ Teachers
  - ~ Counselor
  - ~ Post-Secondary
  - ~ Industry

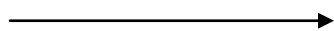
- ~ Principal
- ~ Central Office
- ~ Parents
- ~ Students
- ~ Community

### The First Steps...

- Needs Assessment (What do you think...)
- Overview of Program
- Purpose of Advisory Boards
- Goals & Objectives

### The Meetings

- Prepare in Advance (prep time)
- Solicit Input for Agenda
- Effective Facilitator (results-oriented)
- Student Presence
- Plan for Engaging Work
- Communication & Follow-Up



**Get Involved!**  
 If you (or someone you know) is interested in getting involved in the Institute of Math, Engineering & Architecture, let us know!

**Guest Lecture Series:** (If the guest presenter is someone other than you, please include their contact info)  
 Topic/Suggestion(s) \_\_\_\_\_  
 Dates Available (3:00-3:45pm at LTHS)  
 \_\_\_ March 20 \_\_\_ March 27 \_\_\_ April 3 \_\_\_ April 10 \_\_\_ April 17 \_\_\_ April 24

**Classroom Visits:** (If you would rather come in and work with students during class, please describe below)  
 Topic/Project Suggestion \_\_\_\_\_  
 Dates/Times Available \_\_\_\_\_

**Summer Opportunities:** (describe below any opportunities that might be available to LTHS students)  
 Job-Shadowing \_\_\_\_\_  
 Internships \_\_\_\_\_  
 Site Visits \_\_\_\_\_

**Other Thoughts/Suggestions:** (what else can we do to better enhance our programs and partnerships)  
 \_\_\_\_\_

**Contact Information:**  
 Name: \_\_\_\_\_ Email: \_\_\_\_\_  
 Organization: \_\_\_\_\_ Title: \_\_\_\_\_  
 Is there someone else we should contact in your organization??  
 \_\_\_\_\_

Engineering Advisory Board - February 26, 2008

### Little Things Make a BIG Difference...

- Food
- Setting (clean classroom / free of distraction)
- Seating (try mixing it up)
- Name Tags
- Sign In Sheets
- Learning Names
- Starting on Time

### Big Things That Make a BIG Difference...

- Money – It’s not about the money
- People – Remember the P-Scale
- Engage – Not Show & Tell
- Time – Honor it. Be Prepared.
- Communication – Can’t have too much
- Kids – It’s about the kids. Get them w/kids.
- Recognition – Find ways to say thanks!

## 2009-10 Advisory Board Goals

- Job-Shadowing to Internships
- Shift Leadership to Advisory Members
- Provide Recommendations for New Course Offerings
- Provide Counsel to Senior Projects
- Adjust Structure of Meetings

## Partnership Development ~ Articulation Agreements

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- Current Business Articulations are through ACC:
  - BCIS
  - BIMM
  - Marketing
  - Computer Science
- Several Ag Articulations through ACC & Other Colleges/Universities
- Engineering ~ 2007-2008 Articulations:
  - Digital Electronics @ ACC
- Engineering ~ 2008-2009 Articulations:
  - **ACC:** Digital Electronics & Principles of Engineering
  - **Texas State:** Intro to Engineering Design & Digital Electronics
  - **Texas Tech:** Intro to Engineering Design & Principles of Engineering & Digital Electronics

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