GPTC BAS PROGRAM DEVELOPMENT
CASE STUDY

National Science Foundation
Advanced Technological Education
B.E.S.T. Center Winter Workshop 2013
BAS Program Development

June, 2007
B.L. hired at GPTC as Air Conditioning Instructor with goal of creating new, innovative programs, starting with Commercial Refrigeration – Began work immediately on commercial refrigeration program research & outline

Challenges to surmount:
- Position filled was for AC instructor only
- Stated goal of writing new programs, but there wasn’t space and no guarantee
- Teach a full slate of AC courses while writing program proposals in spare time
- Motivating others to use technology & at least one class was online (very difficult)
BAS Program Development

November, 2007

“Vision for the Future” meeting with President, VPs, Deans, and Division Chair in an attempt to gain support across collegiate administration & align goals

June, 2007

Challenges to surmount:
• Gain trust from administration in our ability to deliver – previous RS Andrews project helped in this
• Show administration the industry support
• Show uniqueness and bragging rights
• Show the pathway to implementation

Show that it would integrate well.
Vision for the Future
Moving Forward

➤ Existing Program Strength (Discussed earlier) Students / Enhancements / Placement

➤ Addition of Commercial Ref. & Controls Programs

➤ Continued Progress as Commercial Refrigeration & Controls Programs Develop

➤ Employment of New Teaching Technologies

➤ Additional Space Requirements

➤ Additional Instructors & Advisory Committee Members

➤ Capital Improvements

➤ Corporate Partnerships / Donations
Slide from “Vision for the Future” meeting

Commercial Refrigeration

- Submission Complete – Diploma / Degree
- Only Program in GA – Very Few in SouthEast
- Strong Interest / Strong Demand
  - Existing Students
  - Graduates
  - Industry
- Huge Demand for Qualified Technicians
  - Supermarkets / Vendors / Food Service / Etc
- Estimated 125,000 technician shortfall by 2010
- Planning Stage – Space Layout / Curriculum
Slide from “Vision for the Future” meeting

Control Systems

- Working on Submission – Diploma / Degree
- Meeting with Industry Leaders
  - Attempting to Employ Existing Models
- Only Program in GA – None Regionally
- Strong Interest / Strong Demand
  - Existing Students
  - Graduates
  - Industry
- Huge Demand for Qualified Technicians
  - Any Building of Size has Controls Systems
  - HVAC / Lighting / Fire Alarm / Intrusion / Video Surveillance
- Integration of Multiple Building Systems is Driving Demand for Highly Skilled Technicians in Controls
- Skills are Highly Technical – Starting Salaries Very High
Slide from “Vision for the Future” meeting

Diploma / Degree Paths

ACT 100
ACT 101
ACT 102
ACT 103
ACT 104
ACT 105
ACT 106

Controls Diploma
Refrigeration Diploma
HVAC Diploma

Controls Degree
Refrigeration Degree
HVAC Degree
Commercial Refrigeration (CR) Advisory Board established

Timing of CR industry board formation:
- After BAS approval by TCSG
- After laboratory space identified
- After course outlines were developed
- After establishing vision for program
- Prior to laboratory build-out
- Prior to courses being taught

CR advisory board assisted greatly in motivating administration to take action (see Ernie Thayer letter to President in pdf packet)
BAS Program Development

Fall, 2007

We received approval from administrators to proceed with development of commercial refrigeration program, conducted research and developed a proposal which was approved by the college programmatic review committee, and it was then sent on to the TCSG system of GA where it was approved.

Key elements in TCSG approval:
- Minimal State of GA dollars needed
- Built with large % of existing courses
- Market analysis demonstrating need
- Industry support
- Student interest / potential for growth
- Qualified faculty to teach
- Allocated space for instruction
BAS Program Development

Summer, 2008

We researched the need for a Building Automation Systems program, developed a proposal, and gained approval from the college review committee, submitted it to the state and subsequently gained approval from the TCSG system of GA.

Key elements in TCSG approval:
- Minimal State of GA dollars needed
- Built with large % of existing courses
- Market analysis demonstrating need
- Industry support
- Student interest / potential for growth
- Qualified faculty to teach
- Allocated space for instruction
BAS Program Development

Challenges to attaining space:
- Business case relating to student #’s
- Coordinating industry donations to coincide with space availability
- Developing a plan for build-out
- Institutional politics
12/29/08 – Ready for new floor
1/5/09 – New floor is down
2/20/09 – Cases arrive
2/20/09 – Refrigeration Rack
Lab 3/9/09 – Moving cases
3/18/09 – Walk-Ins assembled
5/12/09 – Cases in place
5/19/09 – BAS Tables Arrive
5/27/09 – Tables shaping up
8/19/09 – BAS equipment arriving
9/12/09 – Pulling control cables
9/12/09 – Terminating controls
BAS Program Development

February, 2009
Building Automation Systems Advisory Board established

Timing of BAS industry board formation:
• After BAS approval by TCSG
• After laboratory space identified
• After course outlines were developed
• After establishing vision for program
• Prior to laboratory build-out
• Prior to courses being taught

1st meeting minutes (pdf packet)
BAS Program Development

Spring, 2009

Green Technologies Academy Technical Certificate proposal & subsequent approval by the TCSG system
At this stage, excitement across the college was growing, and we coupled this with industry support to develop a student / industry culture with Building Technologies Club.
BAS Program Development

- September, 2009: Grand Opening Celebration with administrators, 40 industry partner companies.
BAS Program Development

Awarded 3 Federal Stimulus Grants for Energy Conservation Measures & Renovations
BAS Program Development

Quarter to Semester conversion & BAS program approved by TCSG for rev. 2.
More courses incorporated directly into BAS course headings.
# BAS Program Map from Quarter to Semester

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<tr>
<th>Quarter</th>
<th>Semester</th>
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<tr>
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<td>College Algebra (3)</td>
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BAS Program Development

September, 2012

Participation in NSF ATE BEST Center to disseminate BAS program