Shorty after 11:30, Chancellor Jim Henderson began the meeting and welcomed the board. He provided an update on the opening of the Advanced Manufacturing Technology Center and thanked everyone for coming. Roundtable introductions began and everyone introduced themselves.

Timmy Stanley made a motion to adopt and approve the meeting minutes from February 14, 2014. Ken Bryan seconded the motion. All approved with no opposition.

Lamont Lackman discussed and explained the enrollment numbers for the AAS in Industrial Technology in Automation and Controls, AAS in Industrial Technology in Graphics and the TCA in Manufacturing and Mechatronics.

In March 2015, we are expected to have an ATMAE Accreditation site visit here on campus. Assistant Dean of TEM, Megan Martin is coordinating this visit for our division. The packets and documentation are in progress for our areas of Industrial Technology and Oil and Gas Production Technology. As part of their visit the ATMAE group will want to meet with representatives of the advisory board to discuss the program. As soon as the dates are available we will send out invitations.

BPCC is a Siemens Partner School. The Siemens Mechatronics System Certification Program (SMSCP) is the internationally recognized workforce with qualifications in Mechatronic
Systems. There are 3 levels of Certifications and we currently have two certified instructors to teach in these areas. There are currently 13 students eligible to take the Level 1 exam in December 2014.

The curriculum was discussed, beginning with the modification to change TEED 150 to Fluid Power Systems. Timmy Stanley made a motion to accept the change to TEED 150. Ken Bryan seconded the motion. All approved with no opposition.

The curriculum and the program outcomes were briefly discussed for the AAS in Industrial Technology in Automation and Controls and AAS in Industrial Technology in Engineering Graphics.

Timmy Stanley made a motion to approve the learning outcomes for the AAS in Industrial Technology in Automation and Controls. Sandra Partain seconded the motion. All approved with no opposition.

Timmy Stanley made a motion to approve the learning outcomes for the AAS in Industrial Technology in Engineering Graphics. Eric Nelson seconded the motion. All approved with no opposition.

Timmy Stanley made a motion to approve the content and the length of the program for the AAS in Industrial Technology in Automation and Controls. Susan Evans seconded the motion. All approved with no opposition.

Timmy Stanley made a motion to approve the content and the length of the program for the AAS in Industrial Technology in Engineering Graphics. Ed Chopin seconded the motion. All approved with no opposition.

Keith Bryant discussed and the TAACCCT3 Grant and explained the AMMQC Career Pathways.

Ed Chopin discussed wanting to add a CTS for Graphics. Our students have been starting our AAS program and finding a job before they graduate. The board loved the idea. Ed agreed that he will begin creating a CTS plan for Graphics.

Sandra Partain expresses her appreciation of all attendees and their constant support. She announced the open house for the building will be November 5th. Meeting adjourned at 12:43 p.m.

Minutes submitted by: Jennifer Parish
Minutes approved by: Lamont Lackman
Industrial Technology Advisory Board Mtg.  September 26, 2014

11:30 a.m. Welcome – Chancellor Jim Henderson

11:35 a.m. Round Table Introductions

11:40 a.m. Adoption of last meeting minutes (forwarded by email prior to mtg.) – Timmy Stanley

11:45 a.m. Review of Industrial Technology Program
   Program Enrollment Outlook
   ATMAE Accreditation
   Siemens Certification Update
   Manufacturing and Mechatronics Concentration update

12:15 a.m. Course Outcome Review and Proposed Changes
   TEED 150 Pneumatics, shift content to fluid power systems – Lamont Lackman
   Vote on Current Course Outcomes

12:30 a.m. Advanced Manufacturing and Mechatronics Grant Update (TAACCCT3) – Keith Bryant

12:45 p.m. Closing Comments – Sandra Partain

1:00 p.m. Tour of Center for Advanced Manufacturing and Engineering Technology (new building)
### Industrial Technology Program (automation and graphics)

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
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<tr>
<td></td>
<td>Fall</td>
<td>Spring</td>
<td>Summer</td>
<td>Fall</td>
</tr>
<tr>
<td>Enrollment</td>
<td>20</td>
<td>26</td>
<td>35</td>
<td>51</td>
</tr>
<tr>
<td>AAS Graduates</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2012 total</td>
<td>6</td>
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### Industrial Technology Program (TCA in Manufacturing and Mechatronics)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spring</td>
</tr>
<tr>
<td>Enrollment</td>
<td>17</td>
</tr>
<tr>
<td>TCA Graduates</td>
<td>0</td>
</tr>
<tr>
<td>2014 total</td>
<td>67</td>
</tr>
</tbody>
</table>
ATMAE Accreditation Update

- Site Visit Expected March 2015
  - Industrial Technology
  - Oil and Gas Production Technology

- Packets and Documentation are in Progress

- Coordinated by Assistant Dean, Megan Martin
Siemens Mechatronics System Certification Program (SMSCP)

Internationally recognized workforce qualifications in Mechatronic Systems

• Three Levels of Certification
  • Level 1: Certified Mechatronic Systems Assistant (CTS and AAS Level)
  • Level 2: Certified Mechatronic Systems Associate (AAS Level)
  • Level 3: Certified Mechatronic Systems Professional (BS Level)

• Certified Instructors (BPCC currently has two)

• Unique Teaching Technique (System Approach Paradigm)

• Partner School Status Required to Administer the Program
  • Curriculum requirements
  • Hardware requirements
  • Certified Instructors

• 13 students eligible to take the Level I Exam in December 2014

Bossier Parish Community College is a Siemens Partner School (Oct2013)
New Technology Areas

- Manufacturing Processes
- Materials for Manufacturing
- Advanced Mechatronics
- Lean Manufacturing and Six Sigma
- Manufacturing Quality Assurance and Control
- ..........

Existing Strengths

- Electricity/Electronics
- Robotics
- Motor Controls
- Fluid Power Systems
- PLCs
- CAD/SolidWorks
- Mechatronics
- Instrumentation
- Safety

Manufacturing Related Programs

New Programs of Study to be Developed/Submitted

AAS – Industrial Technology
Mechatronics/Advanced Manufacturing (2 years)
(Fall 2015 start)

CTS – Mechatronics/Advanced Manufacturing (12 Month)
(Spring 2015 start)

TCA – Common Industrial Core Curriculum (1 Semester)
(March 2014 start)
DOL TAACCCT Round 3 Grant Update

September 24, 2014

• TAACCCT3 Grant Award and Focus

• AMMQ Road Map

• Progress to Plan
TAACCT3 Grant Award and Impact

TRADE ADJUSTMENT ASSISTANCE COMMUNITY COLLEGE AND CAREER TRAINING GRANT PROGRAM

Advanced Manufacturing, Mechatronics, and Quality Consortium (AMMQC)

- Bossier Parish Community College $3.5M
- North Central State College $2.9M
- Southwest Tennessee Community College $2.9M
- Mount Wachusett Community College $6.4M

(October 1, 2013 – September 30, 2017)

Primary AMMQC Team Goals – Work Ready ASAP!

- Develop Programs with multiple entry and exit points
- Develop and implement programs with nationally recognized credentials
- Develop 1 semester CTA, 1 yr. CTS & AAS programs with common core & regional strengths
- Improve visibility and Access to Training
AMMQC Road Map - Career Pathways

Chart 1: Manufacturing, Mechatronics, and Quality Career Pathway

Target Population Entry Point
- High school graduates whose technical, soft skills, and career readiness skills indicate gaps
- Not Work Ready

- High school graduates, college graduates, unemployed, and/or incumbent workers who are looking to move along the advanced manufacturing, mechatronics, and quality career ladder
- Work Ready

Career Pathway Certificate/Degree Program

IRT / AMFG 099

TCA - AMFG 100, 102, 104, 106

Career Pathway
- Team Assembler/Assembler
  Fabricator Shipping/Receiving (Entry Level Salary: $21,000-$28,000)

- Production Technician
  (Entry Level Salary: $28,000)

- Mechatronics Maintenance and Machine Technician
  (Entry Level Salary: $26,000)

- Quality & Metrology
  Quality Inspector
  (Entry Level Salary: $26,000-$36,000)

- Manufacturing/Mechatronics
  Manufacturing Technician, Machinist
  (Entry Salary: $36,000-$56,000)

- Quality & Metrology
  Quality Technician
  (Entry Salary: $35,000-$50,000)

- Siemens Mechatronics Level I & II
- NCER Maintenance Service and Repair Level I, II, & III
- Industrial Mechatronics
- Electrical Mechatronics
- Quality & Metrology
- CTS
- AAS
• AMMQC Road Map

How we will become a Center of Excellence for Advanced Manufacturing education:

• YOU - a strong employer base to guide the development of the programs
• Leverage the strengths of our existing Industrial Technology programs
• Develop online lab animation/simulation courses for improved student access
• Develop a portable testing and training laboratory to service remote locations
• Build in work-readiness skills and team success-oriented learning opportunities
• Focus on recruiting and retraining TAA, veteran, underemployed, underserved, and long-term unemployed
• Progress to Plan

**New Programs of Study being Developed/Submitted**

AAS – Industrial Technology with a concentration in
*Advanced Manufacturing & Mechatronics (2 years)*
*(Spring 2015)*

CTS – *Advanced Manufacturing & Mechatronics (12 Month)*
*(Approved by SACS May 2014)*

TCA – *Advanced Manufacturing & Mechatronics (1 Semester)*
*(Started March 2014)*

**New Technology Areas**
- Manufacturing Processes
- Materials for Manufacturing
- Advanced Mechatronics
- Lean Manufacturing and Six Sigma
- Manufacturing Quality Assurance and Control
  - ...........

**Existing Strengths**
- Electricity/Electronics
- Robotics
- Motor Controls
- Fluid Power Systems
- PLCs
- CAD/SolidWorks
- Mechatronics
- Instrumentation
- Safety
Success Stories:

- 72 Total Students served by the TCA Program
- Strong Industry Partner Support
- Program Recognition
- New Training Opportunities
• 1st TCA AMFG Graduates
  – 1st cohort, 17 students graduated this Summer 2014. To date, 9 students have been hired by employers, 5 remaining students have been called back for follow up interviews. 3 students are continuing their education.
• Current AMFG Students
  – 2\textsuperscript{nd} cohort, 30 students in the final 2 courses of the training and will complete October 8, 2014.
  
  – 3\textsuperscript{rd} cohort, 23 students in the initial 2 courses of their training and will complete December 8, 2014
  
  – Both cohorts will graduate December 2014
  50+ Job Ready Candidates!
• **Improving Quality of Instruction**

  Lamont Lackman completed Siemens Level II

  Tim Stevenson completed OSHA – 10

  Keith Bryant completed Siemens Level I

  Consortium / Grant Team attended the HiTec Technical Education Conference

  Measure Performance – MSSC Certified Production Tech Testing
Team Changes

**Executive Committee** – Dean Sandra Partain replaced Dean Laura Goadrich

**Career Coach / Student Services** – Megan Martin promoted to Assistant Dean TEM

**Asst. Director** – Jennifer Lawrence assumed Career Coach / Student Services Navigator

**Accountant** – Loretta Salvatore added Data Records Manager

**Workforce Board Recruiter** – Niesha McCoy added Job Development Coach
• What’s next?

  – Continue to visit Industry partners
  – Gather feedback from Employers and New Hires
  – Placing graduates
  – Filling the pipeline
Associate of Applied Science in Industrial Technology (Automation and Controls Concentration)

The Associate of Applied Science in Industrial Technology with Concentration in Automation and Controls provides the graduate the opportunity to work as industrial electronic technicians in the growing Automation and Controls industry.

Learning Outcomes:

A. Provide industrial electronic technicians in the Automation and Controls industry.

B. Provide technicians capable of interacting with engineers, architects, and other technical professionals.

C. Provide a means by which students currently employed in related fields can improve their knowledge and skills in technology, stay abreast with the ever-increasing demands industry, and increase their opportunities for professional growth and advancement.

D. Provide graduates with diverse skills necessary to fill highly-specialized vacancies in industry, manufacturing, construction, and engineering.

Required courses for Associate of Applied Science in Industrial Technology with Concentration in Automation and Controls

First Semester

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH: Options *</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101: Composition and Rhetoric I</td>
<td>3</td>
</tr>
<tr>
<td>TEED 101: Basic Electricity and Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>OGPT 101: Introduction to the Exploration and Production of Oil and Gas</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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Second Semester

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH: Options *</td>
<td>3</td>
</tr>
<tr>
<td>TEED 102: Semiconductor Electronics and Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>TEED 143: Introductory Computer Drafting</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 110: Principles of Speech</td>
<td>3</td>
</tr>
<tr>
<td>TEED 201: Basic Digital Electronics</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>
First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEED 206</td>
<td>Electronics Equipment and Repair</td>
<td>3</td>
</tr>
<tr>
<td>PHSC 105</td>
<td>Elemental Physics</td>
<td>3</td>
</tr>
<tr>
<td>or PHYS 201</td>
<td>General Physics I</td>
<td></td>
</tr>
<tr>
<td>TEED 202</td>
<td>Microprocessors and Lab</td>
<td>3</td>
</tr>
<tr>
<td>TEED 260</td>
<td>Mechatronics</td>
<td>4</td>
</tr>
<tr>
<td>TEED 210</td>
<td>Robotic Control Systems</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17</td>
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</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>TEED 150</td>
<td>Pneumatics</td>
<td>3</td>
</tr>
<tr>
<td>or TEED 153</td>
<td>Hydr/Fluid Dyn w/lab</td>
<td></td>
</tr>
<tr>
<td>TEED 208</td>
<td>Programmable Logic Controllers</td>
<td>4</td>
</tr>
<tr>
<td>TEED 252</td>
<td>Electric Motor Controls and Lab</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

Total Credit Hours 63

*Math Options: Select (either MATH 129 or MATH 112) and (either MATH 101 or MATH 102)

For transfer to a four-year institution, students are strongly advised to take MATH 102 instead of MATH 101. Students must seek the assistance of their advisor to determine the appropriate mathematics course.

Students must demonstrate competency in computer literacy and speech in TEED 143 during the course of the degree program as integrated into the curriculum plan.

Back to Technology, Engineering, and Mathematics Division
Associate of Applied Science in Industrial Technology (Engineering Graphics Concentration)

The Associate of Applied Science in Industrial Technology with Concentration in Engineering Graphics provides the graduate with the skills needed to enter the broad field of engineering graphics. The degree prepares individuals to function as entry level graphics specialists, and includes instruction on types of views, line and dimensioning standards, and spatial relationships of surfaces as typically used in engineering, industry, and architecture. The curriculum emphasizes 2-D and 3-D techniques, as well as computer software programs used in industry.

**Learning Outcomes:**

Recipients of the Associate of Applied Science in Industrial Technology Engineering Graphics Concentration will have demonstrated:

A. mastery of engineering graphics knowledge and techniques typically used in industry;

B. the ability to interact with engineers, architects, and other technical professionals in the field;

C. knowledge and skills in technology, staying abreast with the ever-increasing demands of industry, and opportunities for professional growth and advancement; and

D. skills necessary to fill highly-specialized vacancies in industry, manufacturing, construction, and engineering.

**Required courses for Associate of Applied Science in Industrial Technology with Concentration in Engineering Graphics**

**FRESHMAN YEAR**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 129: Applied Technical Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 112: Trigonometry</td>
<td></td>
</tr>
<tr>
<td>ENGL 101: Composition and Rhetoric I</td>
<td>3</td>
</tr>
<tr>
<td>TEED 140: Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>TEED 143: Introductory</td>
<td>3</td>
</tr>
<tr>
<td>TEED 101: Basic Electricity and Laboratory</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 101: Applied Algebra for College Students</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 102: College Algebra</td>
<td></td>
</tr>
<tr>
<td>TEED 102: Semiconductor Electronics and Laboratory</td>
<td>4</td>
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</table>
## Sophomore Year

### First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHSC 105</td>
<td>Elemental Physics</td>
<td>3</td>
</tr>
<tr>
<td>or PHYS 201</td>
<td>General Physics I</td>
<td>3</td>
</tr>
<tr>
<td>TEED 160</td>
<td>3D Computer Drafting</td>
<td>3</td>
</tr>
<tr>
<td>TEED 161</td>
<td>SolidWorks 3D</td>
<td>3</td>
</tr>
<tr>
<td>TEED 171</td>
<td>Graphics Modeling I</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 110</td>
<td>Principles of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours:** 15

### Second Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>TEED 150</td>
<td>Pneumatics</td>
<td>3</td>
</tr>
<tr>
<td>or TEED 153</td>
<td>Hydraulics/Fluid Dynamics with Lab</td>
<td>3</td>
</tr>
<tr>
<td>TEED 158</td>
<td>Computer Drafting Applications &amp; Lab</td>
<td>4</td>
</tr>
<tr>
<td>TEED 172</td>
<td>Graphics Modeling II</td>
<td>3</td>
</tr>
<tr>
<td>TEED 280</td>
<td>Engineering Graphics Internship</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours:** 16

**Total Credit Hours:** 63

* For transfer to a four-year institution, students are strongly advised to take MATH 102 instead of MATH 101. Students must seek the assistance of their advisor to determine the appropriate mathematics course.

*Students must demonstrate competency in computer literacy during the course of the degree program as integrated into the curriculum plan.*

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http://bpcc.edu/catalog/current/technologyengineeringmathematics/aas-industrialtechnology-engineeringgraphics.html