Identifying Best Practices in Workforce Development

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- The 2015 Maxine Smith Fellows Class

Please accept my sincere gratitude for your support and guidance during this fellowship and in the development of my assignment.
Project Overview & Purpose

In the years since the Great Recession, the American economy has struggled to regain its economic pace, and more policymakers are turning to education to help meet the high demands of a skilled and educated workforce. According to the Georgetown Center on Education and the Workforce, by 2020, 65 percent of all American jobs will require some form of post-secondary degree or credential. Increasingly, businesses and policymakers are turning to colleges and universities to help fill these workforce gaps and educate the growing student body, predominately made up of historically underperforming student populations. This project will attempt to offer an overview of the changing role of colleges and universities and some successful place-based strategies being implemented to fill the needs of today’s workforce.

The Tennessee Board of Regents (TBR) Workforce Development Committee was formed with the responsibility for the oversight of TBR’s workforce initiatives. The Committee has developed a questionnaire to determine how each institution (six universities, 13 community colleges, and 27 technical colleges) interacts with business and industry. Based on the information gathered from each institution, a synopsis will be presented the Board of Regents. Best practices will be recommended to the Tennessee Board of Regents. The TBR Workforce Development Committee will ensure that their initiatives are parallel with TBR’s 2015-2025 Strategic Plan Key Priorities: Access, Student Success, Quality and Resourcefulness/Efficiency.
The Workforce Development Committee is made up seven TBR members, with Regent Danni B. Varlan serving as the chair:

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<td>Danni B. Varlan (Chair)</td>
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**Purpose of the Workforce Development Committee**

On Wednesday, May 27, 2015 the Workforce Development Committee met to outline the alignment and implantation process of TBR’s 2015-2025 Strategic Plan Key Priorities. Based on this meeting the following discussion points were created:

**Access**
1. Broaden opportunities for those who wish to develop their professional skills, enrich their lives and engage in the workforce of the future.
2. The TBR System will ensure that every prospective student has the opportunity to enroll in its universities, community colleges or colleges of applied technology.
3. Optimize gateways to higher learning through the effective use of technology, promotion of learning partnerships within TBR across the state, and the development of campus sites.

Workforce Development Committee support and leadership for Access Priorities
1. TN Promise and Reconnect have created opportunities for students to attend post-secondary schools and potential students have responded positively. The committee will focus on how we are providing opportunities through enrollment.
2. Reporting information to the committee should include the following:
   a. Number of students from the TN Promise, Reconnect and others that have enrolled.
   b. Number of students from the TN Promise, Reconnect and others that are on a waiting list
c. The area of study that students have enrolled and if there is a wait time for enrollment.
d. If there are no vacancies in the area of study that the student has applied for, what effort has been made to connect the student with another institution that has a vacancy
e. What efforts are being made to accommodate waiting list students and/or increase program access through partnerships with other institutions?
f. Plans and progress for creating access in popular areas for enrollment.

**Student Success**
1. Structure credential and degree programs so that students may successfully graduate in a timely and cost effective manner.
2. TBR will build and nurture partnerships with Tennessee secondary schools to enhance student preparedness and early college credit systems
3. Align degree pathways within and between TBR institutions

**Workforce Committee support and leadership for Student Success Priorities**
1. Report evidence of advising that informs students about opportunities for engagement in the workforce of the future. Report should include examples of how students are advised and aligned with workforce skills that provide genuine opportunities for work in their community/region/state.
2. Provide evidence to align certificate and degree pathways for student’s continued access and success
3. Report dual enrollment and provide information regarding programs that are being joined.

**Quality**
1. The TBR system must provide high quality academic and technical programs, faculty, services and facilities at all levels

**Workforce Committee support and leadership for Quality Priorities**
1. Students enrolled in professional and workforce development programs must be workforce ready. Business and industry professionals should be consulted in evaluating the readiness of our students on the job. Workforce providers (our schools) should be accountable and in close contact with industry professionals to ensure that our programs are training our students to fill the workforce requirements. How do we grade ourselves in this area?
2. The Workforce Committee would like to hear from regional business and industry professionals at regularly scheduled opportunities to receive their comments and concerns.
3. Reporting for the committee on quality priorities should include updates on new workforce relationships, job placements and information about requests that we are unable to fill for some reason. Industry needs, trends and updates should also be included.
Resourcefulness and Efficiency

1. Judicious use of resources
2. Alternative revenue enhancements
3. Business and community partnerships

Workforce Committee support and leadership for Resourcefulness and Efficiency Priorities

1. Share information about successful innovative business and community partnerships so that all institutions can learn from other’s successes.
2. Assess and promote alignment of workforce development activities across all TBR institutions.
Questionnaire

The Workforce Development Committee drafted a questionnaire to be disseminated amongst all TBR intuitions. The Committee expects to present highlighted key examples of how intuitions partner with business and industry on the local, regional, national level to the Board.

❖ **Advisory Groups:**
  1. Does someone from your institution have regular conversations with industry leaders about higher education and industry/business alignment?
  2. What is the structure?
  3. Give an example of an outcome (or outcomes) resulting from working with this group?

❖ **Course/Curriculum/Programs of Study Development:**
  1. Give examples of ways that courses or curricula have been established or revamped in response to specific conversations with business and industry about higher education and industry/business alignment.
  2. Who on your campus has responsibility for working with these groups on implementing changes?

❖ **Internships:**
  1. Give examples of ways that specific conversations with business and industry have resulted in the establishment of internship/co-op programs for students.

❖ **Research:**
  1. Give examples of ways in which faculty have conducted research and/or provided service to assist business and industry.

❖ **Scholarships:**
  1. Identify any business and industry partners who have established significant scholarships specifically for students at your institution and describe how the alignment resulted in the gifts.

❖ **Grants/Endowments/In Kind Gifts:**
  1. Identify any business and industry partners who have made significant contributions to the institution for specific programs or services.
Impact/Outcomes & Recommendations

The significance of being a labor-market-adaptive institution spreads further than the institution itself to the community and region it serves. Recently, progressive heads in education, business, and economic development have become progressively more attentive of the unused potential of universities, community and technical colleges to increase the trade and industry strength of their communities.

Based on the results from the questionnaire, many institutions have established relationships with: state /government agencies, chambers of commerce and economic development boards, to build their programs to mirror the needs and demands of the local workforce.

The following bullet points are lessons learned and recommendations for higher education intuitions:

- Partnerships are essential to ensure that colleges address the needs most important to the economic vitality of their communities.
- Forming strategic partnerships is essential to the development of market-responsive programs because such programs tend to be expensive. Traditional sources of college funding are not sufficient to fund such programs, and business and civic groups often lack the resources to build them without assistance.
- The labor-market-responsive college selects strategic priorities for its partnerships after thoughtful assessment and research.
- College staff members take an entrepreneurial, proactive, and creative stance toward operating partnerships.
- Partnerships are assessed, not simply by their bottom line, but rather by their potential for providing immediate benefits to the community and long-term opportunities for leveraging.
- Labor-market-responsive colleges embrace a continuous improvement philosophy and convey that commitment to partners and to the community.
- Enlightened self-interest is at the heart of successful partnerships—with the ideal being to identify win-win-win arrangements that benefit students, businesses, and the community at large.

To be fully effective, each TBR intuition must be cognizant of its own strengths and have the capacity to address the changing demands of students and employers, and where it needs to improve to be fully able to serve the community.

Appendix Section three (3) responses display unique partnerships between agencies to identify and align local workforce trends have been presented.
References


https://www.tbr.edu/board/board-regents
Appendix

Middle Tennessee State University (MTSU) Response (Appendix A)

Advisory Groups:
Does someone from your institution have regular conversations with industry leaders about higher education and industry/business alignment?
Every college at MTSU has an advisory board composed of representatives of the businesses, industries, and public agencies associated with its degree programs. In addition to college-level advisory boards, a majority of departments also have one or more advisory boards specific to their degree programs. Finally, all faculty members are encouraged to develop and maintain individual relationships with business and industry colleagues and to pursue opportunities for collaboration that will bring benefit to the university, our students, and to our partners.

What is the structure?
A number of these collaborations take the form of official partnerships between the university and corporations or government agencies while others are maintained on an informal basis. College and departmental advisory boards meet on regularly on campus to provide advice, consider opportunities for collaboration, and to review curricula.

Give an example of an outcome (or outcomes) resulting from working with this group?
Examples include:

- Memorandum of Agreement between MTSU and the Tennessee Department of Environment and Conservation that lead to the development of degree pathways and the redesign of the university’s Environmental Sustainability and technology degree with a focus on water-resource management which provides graduates with the knowledge-base identified by industry to be ready to enter the work force in the water and wastewater industry.

- Creation of a Mechatronic Engineering degree in collaboration with Bridgestone and Nissan, and utilizing the Seimens advanced certification standards. Originally projected to enroll 50 full-time students after 5 years it is expected to exceed 200 majors by the beginning of its third year, making great strides to close the statewide shortfall in engineers in Tennessee.

- The development of our Unmanned Aircraft Systems program, initially in partnership with ISR Group, and now expanding into partnership with Farmspace Systems to focus on agricultural applications for remote sensing and operations utilizing unmanned aircraft.
Course/Curriculum/Programs of Study Development:

Give examples of ways that courses or curricula have been established or revamped in response to specific conversations with business and industry about higher education and industry/business alignment.

- The Concrete Industry degree program (detailed in the attached case study) is an example of a curriculum that was developed in collaboration with industry leaders to meet a need for advanced knowledge in response to changing technology and business models. Since its creation in 1996, this curriculum has been closely aligned with industry needs and MTSU continues to seek out and incorporate recommendations from our industry partners.

- The College of Basic and Applied Sciences worked closely with Siemens AG to develop the Mechatronics Engineering degree curriculum to ensure that graduates would be eligible for Seimen’s certification. The curriculum was also designed to meet the specific educational needs of industry partners Nissan and Bridgestone.

- In response to expressed needs from its business partners, the Jones College of Business entered into an exclusive arrangement with Dale Carnegie© Training of Tennessee to train JCOB faculty as Dale Carnegie© instructors and has revised its undergraduate Business curriculum to require all undergraduate majors to complete the Dale Carnegie© Course as part of their degree requirements. This relationship is unique in the entire country.

Who on your campus has responsibility for working with these groups on implementing changes?

In accordance with accrediting body requirements, all curriculum changes are initiated by faculty, within academic departments. Because of the university’s emphasis on development of partnerships and collaboration, our curriculum is undergoing continual evaluation and revision based upon best practices within the various business and industry sectors associated with our degree programs.

Internships:

Give examples of ways that specific conversations with business and industry have resulted in the establishment of internship/co-op programs for students.

The need for practical experience in the concrete industry, expressed by employers, lead to the development of a 400 clock hour internship as a requirement of the Concrete Industry Management degree. Matched with demand for skilled employees during the summer, this internship program has expanded to the point that CIM students complete paid internships throughout North American each year. One example of many in the Concrete Industry Management program is the partnership between CIM and Wirtgen America, a German paving company that is headquartered in Antioch, TN. Beginning with an offer from Wirtgen for a student to come to their location and do a brief presentation to staff members on the basics of concrete, Wirtgen decided to hire two interns with subsequent offers of full-time employment and an ongoing internship agreement with MTSU.
**Research:**

*Give examples of ways in which faculty have conducted research and/or provided service to assist business and industry.*

All full-time, tenure-track faculty members are expected to engage in research and scholarly activities. The overwhelming majority of faculty members elect to focus their efforts in applied research. That is, research with an immediate, practical application. Examples of applied research and service include:

- GIS data bases developed by the Geospatial Research Center (Department of Geosciences) for the Tennessee Historical Commission are consulted on line by planners and consultants working in the fields of environmental regulatory compliance and community development.

- Faculty in the department of Geosciences are working with Digital Harvest Inc. to develop a novel method to estimate sugar cane yield from close-range (UAS) aerial photographs.

- Faculty members in the Department of Sociology and Anthropology have a strong collaborative relationship with National HealthCare Corp. (NHC) and provide data analysis of in-house data, producing census and outcome reports on a quarterly basis.

- The MTSU Center for Organizational and Human Resource Effectiveness (COHRE) is actively engaged in numerous partnerships leading to significant outcomes and organizational change and improvement. (Recipients of COHRE services include the Tennessee Board of Regents, Tennessee Department of Human Resources Jack Daniels, Tenet healthcare Corporation, Davidson County Sheriff’s Office, Equal Employment Opportunity Commission, and United Way.)

**Scholarships:**

*Identify any business and industry partners who have established significant scholarships specifically for students at your institution and describe how the alignment resulted in the gifts.*

MTSU is proud of the many scholarships available to our students. Many are supported through direct contributions of our business and industry partners. Examples include:

- National Science Foundation (in collaboration with Tennessee Automobile Manufacturers Association, Nissan, Bridgestone, Siemens) to support future engineers - $614,172.
- SouthEast Bank -- $45,000
- BlueCross Blue Shield - $25,000
- Cumberland Risk Management - $19,500
- Knight Corporation - $15,000
- Gannett - $10,000
- IBPA - $10,000
- State Farm - $6500
- Georgia Ready Mix -- $6250
• Farm Credit Services -- $5000
• First Tennessee Bank -- $5000
• Metro Nashville Airport Authority - $4000
• NARAS - $4000
• Tennessee Farmers Cooperative - $3500
• Fiber Concreate Association -- $3000
• Concrete Supply Company -- $2500
• Pro2Serve - $2500

**Grants/Endowments/In Kind Gifts:**

*Identify any business and industry partners who have made significant contributions to the institution for specific programs or services.*

While it is difficult to distinguish between outright gifts, in-kind contributions, and matching gifts it is clearly evident that MTSU is the beneficiary of substantial industry support. For FY 14-15, MTSU received total gift support of $4.3 million dollars and gifts in kind of $1.183 million.

Of particular note in the Jones College of Business are the following:

- The Department of Computer Information Systems received a $1.5 million donation of software and licenses to support the department’s Business Intelligence and Analytics program from MicroStrategy.

- The Real Estate program received a $1.2 million donation of software and licenses from Argus.
An MTSU Case Study: Concrete Industry Management

The MTSU Concrete Industry Management (CIM) program is unique in its partnerships with industry, going all the way back to the initial development of the degree in 1996. Concrete industry professionals from across the US recognized the need for skilled workers within the industry that could move up into management, production, sales and operations and partnered with MTSU to develop a curriculum to meet those needs. CIM has maintained these close ties to the industry in the years since the degree program was created and as a result is a leader among academic programs that seek to align higher education and workforce development nationally.

Advisory Groups:
Does someone from your institution have regular conversations with industry leaders about higher education and industry/business alignment?
What is the structure?
Give an example of an outcome (or outcomes) resulting from working with this group?

CIM has continuous conversations with industry leaders through the National Steering Committee (NSC), Executive Advisory Committee and Patron’s Board. The National Steering Committee is made up of 18 national executives and meets three times per year with representatives from MTSU CIM. MTSU regularly interacts with the National Steering Committee’s Education, Research, Marketing and Long Range Planning committees. The NSC, in turn, markets MTSU’s CIM program to the industry. The NSC also conducts an auction each year at a national conference to raise money to supplement the four CIM programs in the U.S.. This year was the 10th annual auction and over $800,000 was raised, resulting in $145,000 being allocated to MTSU CIM for marketing, student travel, research, and laboratory needs within the department. To date the NSC has invested over $2 million dollars into the CIM program at MTSU.

MTSU CIM has an Executive Advisory Committee made up of 12 members. This group represents executives from across the Southeast who have companies that impact our program at a regional level. CIM also has a Patron’s board made up of local industry leaders and many alumni. This board raises local funds for the department and makes donations, both of time and materials. Most recently, the Patron’s board has agreed to match the National Steering Committee’s contributions to the incoming freshmen scholarship fund. The Patron’s group is also actively fundraising to support the construction of a new CIM building on campus.
Course/Curriculum/Programs of Study Development:
Give examples of ways that courses or curricula have been established or revamped in response to specific conversations with business and industry about higher education and industry/business alignment. Who on your campus has responsibility for working with these groups on implementing changes?

The entire curriculum was based upon input of industry professionals when it was initially developed in 1996. CIM continues to revise and update the curriculum, including revision of existing courses and creation of new courses, based upon feedback from both industry professionals and alumni in the industry. Examples of recent curricular changes made as a result of interactions between the CIM Department Chair, program faculty, the Marketing & Recruiting Coordinator, and industry representatives include the addition of a new computer class as a CIM elective; conversion of an elective course (Advanced Mix Design) to a requirement; and the addition of a hands-on component to each CIM class.

Internships:
Give examples of ways that specific conversations with business and industry have resulted in the establishment of internship/co-op programs for students.
CIM is somewhat unique in that its requirement that all students complete a 400 hour internship as a requirement for graduation is matched by an overwhelming need in the industry for trained workers as summer interns. In 2014-15, students were offered 79 internship opportunities, including 36 employers who traveled to MTSU to interview candidates for summer internships. Currently, 21 CIM students are working internships this summer, many out of state and all being paid by the employer. Just one specific example of many is the partnership between the CIM department and Wirtgen America, a German paving company that is headquartered in Antioch, TN. Wirtgen first reached out in 2013 to offer the opportunity for a student to come to their location and do a brief presentation to staff members on the basics of concrete. Wirtgen subsequently decided to hire an intern for Summer 2014 and came on campus to conduct interviews resulting in two students hired to work out of their Antioch location. Wirtgen’s experience with the interns was so successful that they made offers of full-time employment to both students and then returned to interview additional internship candidates for summer 2015.

Research:
Give examples of ways in which faculty have conducted research and/or provided service to assist business and industry.
Concrete is the 2nd most used material in the world next to water and the MTSU CIM program has become a center for all things related to concrete education and research, receiving weekly phone calls asking for concrete expertise in multiple research areas. The CIM program has received over $3 million in externally funded grants since 2001 and consistently produces research in the areas of bridge decks; paving; aggregates; lightweight concrete; fiber reinforced concrete; construction tolerances; pervious concrete; interior floors and recycled byproducts.
Scholarships:
Identify any business and industry partners who have established significant scholarships specifically for students at your institution and describe how the alignment resulted in the gifts.
Concrete Industry Management currently offers 27 scholarships specifically for majors. Seven are sponsored directly by companies in the industry, six are sponsored by national organizations and another 11 are funded by state associations. Many of these scholarships have been in place since the program was developed 20 years and is another example of the dedication of the industry. For example, BASF, the largest chemical company in the world, offers a $5,000/year scholarship to a CIM student for all four years in the program. Most recently, the industry made a 2-year commitment to gift $100,000 to new first-time freshmen or transfer majors.

Grants/Endowments/In Kind Gifts:
Identify any business and industry partners who have made significant contributions to the institution for specific programs or services.
The Patron’s Board, composed of local industry leaders and alumni, make ongoing contributions of time and materials to the CIM department. These donations make it possible for the university to continue to deliver state of the art instruction with materials and equipment integral to building sciences.

Other: Meeting the workforce needs of industry
The alumni of the CIM program at MTSU have developed such a reputation in the industry that employers have given us feedback that hiring a new MTSU CIM graduate is like hiring a college graduate with 3-5 years of concrete experience already. The investment in training is minimal for the company and they know they will be able to retain this student because they are already passionate about concrete production and construction. As a result, employers seek out MTSU graduates resulting in over 7 job offers per graduate, the third highest starting salary for all majors on campus, and 100% job placement for program graduates.
Advisory Groups:

Does someone from your institution have regular conversations with industry leaders about higher education and industry/business alignment?

Yes. Several division deans and campus directors, Director and Assistant Director of Workforce Development, program faculty, and Director of Career Services have regular conversations with industry leaders.

What is the structure?

Below are some examples:

1. David Welch, Associate Professor in Computer Information Systems, is a member of the IT Skills Panel and the Nashville Technology Council. He participates in quarterly meetings with the IT Skills Panel to discuss IT job opportunities.

2. Dr. Reginald Gardner, Dean of Computer & Engineering Technologies, is also a member of the IT Skills Panel; a member of the Middle TN Workforce Investment Board; and a member of the Urban League of Middle Tennessee. He is regularly in conversations with industry leaders and other leaders of these organizations on filling the pipeline with qualified professionals from the community college. These activities involve both degree-seeking and non-degree seeking training and development.

3. Dr. Cindy Waller, Director of Nursing, is a member of the Healthcare Skills Panel. She is also a member of the Vanderbilt University School of Nursing Alumnae Board and is currently the President. She meets regularly with the nursing managers and nursing educators for both Saint Thomas Health Services and Centennial Medical Center. The nursing program has been intimately involved with several community organizations in the Middle Tennessee area and has supported those organizations through health screenings.

4. Jennie Stribling, Director of Humphreys County Campus, and Dr. Joey Leonard, Assistant Professor in Industrial Process Control Technology (IPCT), conduct regular conversations and bi-annual meetings with their advisory board, The Mid-West Tennessee Industrial Alliance. This Alliance is currently ten members strong and includes the following industries: E.I. DuPont de Nemours, TVA Cumberland City, TVA New Johnsonville, Hood Industries, Matheson Tri-Gas, Erachem-Comilog, Rockwood Lithium, Occidental Chemical Corporation, Accurate Energetic Systems, and Arkema Chemical.

5. Karen Stevenson, Dean of Business and Applied Arts, and her faculty schedule two advisory meetings each academic year to speak with industry leaders about industry needs, trends, and employment opportunities.

Give an example of an outcome (or outcomes) resulting from working with this group?

Example 2 above: Nashville State is a strategic and fiscal agent of the Labor Education Alignment Program (LEAP Grant) which was awarded to the Nashville Technology Council (NTC). The LEAP Grant was awarded to NTC in February 2015. Execution of the detailed
activities listed in the LEAP Grant will occur over two years. During the first 90 days, NTC has begun work on developing an Information Technology portal to house information on businesses with personnel shortages; an inventory of knowledge, skills, and abilities of viable IT students from the community college; and documentation from the Middle TN Workforce Investment Board, Nashville Chamber of Commerce; and other agencies to fill the talent pipeline with qualified IT professionals.

Example 5 above: The Healthcare/IT Medical Management Technical Certificate was developed with feedback from healthcare professionals. This certificate was approved in 2013.

Course/Curriculum/Programs of Study Development:

Give examples of ways that courses or curricula have been established or revamped in response to specific conversations with business and industry about higher education and industry/business alignment.

Example 2 above: Nashville State has established a Technical Certificate in Mechatronics. This program will be run: a) at the Ft. Campbell Military base to provide marketable skills in engineering technology to military personnel as they are discharged for military service; b) at Kenwood High School in Clarksville, TN for offering dual credit to high school students; and c) at the Nashville State Main Campus and Southeast Campus for students interested in engineering technology degrees. Gail Phillips, Director of Workforce Development, Marc Starrett, Assistant Director of Workforce Development, and Dr. Gardner share responsibility for working with these groups.

Example 4 above: Specific changes in the curriculum have occurred three times over the past nine years of the program existence to include:

- Addition of Maintenance Technology concentration.
- Addition of Accelerated Cohort program. This option is currently available in the PTEC concentration. The accelerated cohort allows student to complete a two year associates degree in ten months.
- Implementation of National Center for Construction Education and Research curriculum into each concentration.
- Implementation of an apprentice program through E.I. DuPont.

Example 5 above: Two Healthcare Management (HCM) courses, HCM 2250 Survey of Coding and HCM 2750 Electronic Healthcare Apps, were created as a result of input from the Advisory Committee and the need for these courses for certifications after graduation. Students can sit for the Certified Health Technology Specialist (CHTS) and the CompTIA Healthcare IT Technician certifications.

Who on your campus has responsibility for working with these groups on implementing changes?

The program faculty, division deans, campus directors, Career Services Office staff, and Workforce Development Office staff work together in implementing the changes.
Internships:

Give examples of ways that specific conversations with business and industry have resulted in the establishment of internship/co-op programs for students.

- Recent and new IT Internship program with Community Health Systems (HCM) this summer.
- Recent partnership with Claris Networks that has already resulted in one of our students being hired full time in Technology.
- Recent conversation with a local attorney about a co-op opportunity for a student in Paralegal Studies.
- The Computer-Aided Design faculty and Nashville State Career Center worked with Kirkland's in December 2014 to place five students in an internship program. The students' performance met expectations and resulted in one student being offered a full-time position.
- The Computer Technology and Computer Networking Technology division coordinates approximately 5-7 internships every semester. One of the primary companies is the Information Technology Department for the State of Tennessee.

Research:

Give examples of ways in which faculty have conducted research and/or provided service to assist business and industry.

A service learning project was developed and integrated into the COM 2220-Practicum/Graphic Design class to introduce students to the practical application of real-life scenarios—creating/branding logos for nonprofit organizations. An example would be a logo design developed by students for Lovie's Legacy, an outside organization that teaches children to respect and take care of animals.

Scholarships:

Identify any business and industry partners who have established significant scholarships specifically for students at your institution and describe how the alignment resulted in the gifts.

The partnership that the NSCC Foundation has with Nissan best reflects our involvement with business and industry in the area of scholarships. Below are the specifics:

- Nissan provides $50,000 each year for scholarships for students in Computer Information Systems or Electrical Engineering Technology programs.
- Eight recipients receive $2500 per semester and may receive the award for a maximum of 4 semesters.
- The scholarship is merit based.
- We are currently in the third year of the program.
• Ten students benefitted from the program in the first two years with a graduation rate of 90% (The tenth student was still enrolled at the college and had completed 51 credit hours with a 3.6 GPA. However, the Nissan program is structured around completion in 4 semesters.)
• The average GPA for the initial group of students receiving the scholarship was 3.83.
• The students must agree to meet with Nissan and allow us to provide their contact information to Nissan.
• The new recipients that received the scholarship in fall 2015 were taken to the Nissan assembly facility in Smyrna to meet with Nissan recruiters and tour the plant. Each student was given an opportunity to work with a mentor at Nissan and information about how to apply for an internship.

While the scholarship is funded by the Nissan Foundation, they nonetheless are interested in having the opportunity to hire Nissan scholars once they graduate.

Grants/Endowments/In Kind Gifts:

Identify any business and industry partners who have made significant contributions to the institution for specific programs or services.

Example 4 above: The IPCT program has received over $200,000 dollars in equipment donations from the local alliance and currently enjoys a $1,500 yearly donation from Occidental Chemical Corporation.
Advisory Groups:
Does someone from your institution have regular conversations with industry leaders about higher education and industry/business alignment?

Yes. Our Director regularly converses with local industry about their needs, and our ability to develop specific training to produce desired outcomes for their needs. Specifically, one partnership that formed from our Director’s initial conversations with local industry which has positively affected our College and allowed our Machine Tool Technology programs to flourish while expanding training is our partnership with local metalforming industries.

What is the structure?
Our Machine Tool Technology programs developed a partnership with the local chapter of the Precision Metalforming Association, PMA, to coordinate training workers with the skills that our local metalforming industries desire. TCAT Hartsville is now an educational member of the Middle Tennessee PMA; our instructors attend local PMA meetings; PMA industry members sit on our advisory committee.

Give an example of an outcome (or outcomes) resulting from working with this group?
PMA industries need workers that possess tool and die as well as press operator skills. Our partnership produced a subset of training within our Machine Tool Technology programs: the Tool and Die Specialist diploma program with the Press Operator certificate exit point. Tangibly, PMA members donated in-kind equipment, items with a total approximate $190,000 fair market value, allowing TCAT Hartsville to provide the training PMA industries sought. Intangibly, PMA members donated their time, expertise and ideas for further networking opportunities within the industry. As well, TCAT Hartsville students are receiving PMA Educational Foundation scholarships; TCAT Hartsville’s student placement opportunities have increased; internship/co-op opportunities have increased; and our College now has a Society of Manufacturing Engineers, SME, chapter thanks to the encouragement and assistance from our local industry partners.

Course/Curriculum/Programs of Study Development:
Give examples of ways that courses or curricula have been established or revamped in response to specific conversations with business and industry about higher education and industry/business alignment.

As aforementioned, our partnership with the local metalforming industry produced a subset of training within our Machine Tool Technology programs: the Tool and Die Specialist diploma program with an exit point Press Operator certificate. This additional training more closely aligned our instruction with our partners’ training needs.
Who on your campus has responsibility for working with these groups on implementing changes?
Ultimately the responsibility lies with our Director; however, Mr. Randy Ragland, our Machine Tool Technology instructor has been the liaison between our college and our partners in the PMA. Mr. Ragland has been and continues to be an invaluable asset in constructing and maintaining this beneficial partnership with local metalforming industries. Mr. Ragland implements any necessary changes within our Machine Tool Technology programs that benefit our students and local industry.

**Internships:**
Give examples of ways that specific conversations with business and industry have resulted in the establishment of internship/co-op programs for students.
Co-op opportunities had not existed for our Machine Tool Technology students within the facilities of these local metalforming industries. Initially, our conversations with local industry involved their workers studying part-time in our day or night Machine Tool Technology programs. However, our partnership has increasingly led to numerous PMA partners utilizing TCAT Hartsville students in co-op programs.

**Research:**
Give examples of ways in which faculty have conducted research and/or provided service to assist business and industry.
Regularly our PMA partners request that our Machine Tool Technology programs assist with projects; we have requalified sensitive control process equipment, trained die maintenance; and assisted with several apprenticeship programs with our partners.

**Scholarships:**
Identify any business and industry partners who have established significant scholarships specifically for students at your institution and describe how the alignment resulted in the gifts.
Because of our alignment with our local metalforming industries, the partnership expanded with TCAT Hartsville becoming an educational member of the Middle Tennessee Precision Metalforming Association; this PMA membership allows TCAT Hartsville students to be eligible for PMA scholarships. Several TCAT Hartsville students have been awarded $750 PMA scholarships.

**Grants/Endowments/In Kind Gifts:**
Identify any business and industry partners who have made significant contributions to the institution for specific programs or services.
Orchid International donated a P2 Minster 75-ton press and attachments with a fair market value of $140,000; press controls were donated by Link Systems with a fair market value of nearly $50,000. TCAT Hartsville has also been awarded a PMA Educational grant for supplies and consumables in the amount of $1,000.