
Guests: Gary Steffen, Manoochehr Zoghi

Call to order
The meeting was called to order at 12:00 p.m. by Presiding Officer Hosni Abu-Mulaweh.

Approval of the Minutes
The March 3, 2017 minutes were approved as written.

Report of Presiding Officer
Hosni introduced the dean to discuss the strategic plan and Gary Steffen to discuss the merger of CEIT and MCET.

Acceptance of the agenda
The agenda was accepted and approved.

Old Business

Committee Reports
- Curriculum – Chao Chen, Chair
  Dina Mansour-Cole presented nine curriculum documents, which were approved unanimously by the curriculum committee.

1. CEIT – Elective Change to ECET 36100 in B. S. Electrical Engineering Technology
2. CEIT – Information Technology Curriculum Changes 2017
3. CME – Pre-requisites Change for ME 54600 – CAD/CAM and Applications
4. CS – 5-Year Combined BS/MS Program in Computer Science
5. CS – Revised Prerequisites for CS and IST Courses
6. ECE – Update of Dual EE/CmpE Degree Requirement
7. ECE – Combined BS – EE and CmpE with MSE – SE Concentration
8. MCET – Revised Associates Degree Curriculum Mechanical Engineering Technology
9. MCET – New Materials Courses

- Educational Policy – David Momoh, Chair – no report
- Faculty Affairs – Barry Dupen, Chair – no report

New Business
- Dean Zoghi reviewed the timeline and what has taken place so far in preparing for a final review of the Strategic Plan in August. He will be meeting with the ETCS Industrial Advisory Board on May 2 to get their input. From now and throughout the summer the committee will be working on the following: updates to the draft, establishing benchmarking and metrics, 5-year target, how to finance the plan and align our resources and budget with the plan. Marketing will be working on the final document to be presented at the fall convocation, where we will identify champions who will make sure that the strategic plan is implemented. The Dean recommended a summer read – Little Bits by Peter Sims.
- Gary Steffen was told in December that MCET and CEIT would merge as a result of the USAP report. After discussion at many levels it was decided that they would be called the “School of Polytechnic”, residing in
ETCS. The college documentation does not have school in its structure and many documents will need to be changed. If approved by the Board of Trustees, as of fall 2018, the merged departments will be called the School of Poly:technics.

- Strategic Plan – David Cochran reiterated the dean’s message of developing a framework over the summer of how to implement the plan and get champions for the implementation of the plan. Hosni suggested the strategic plan should mention how it supports or relates to the IPFW 2020 plan. The signature areas on page 11 are a mixture of current and additional areas to be added.
- CME Promotion & Tenure document: The CME document was revised by the department, sent to the Senate for feedback, revisions made and then approved by the department on 3/20/17. Approved by the Assembly.

The general good and welfare of the College
Judy reminded everyone if you plan on attending the Spring Convocation luncheon on April 24, 2017 in Walb Classic ballroom you need to rsvp to her by April 10. Lunch begins at 11:30 and the meeting will begin at 12:00.

Adjournment
The meeting was adjourned at 12:28 p.m.

Next meeting
August 28, 2017 in ET 206 at 12 p.m.
PREAMBLE

For over 50 years, the College of Engineering, Technology and Computer Science (ETCS) at IPFW has been providing exceptional hands-on education for students with diverse backgrounds from Northeast Indiana and beyond. The unique features of ETCS comprise rigorous academic programs, small average class sizes, small student-faculty ratio, and senior design capstone projects which are typically sponsored by industry. These features, along with a vibrant campus, provide a student-centered learning environment where IPFW students collaborate on projects in and out of the classroom and are mentored by faculty. In addition, strong industry-based partnerships have enriched the educational experience of ETCS students through internship and co-op programs. Graduates of ETCS programs have been contributing to the economic development of the region in health-care, manufacturing, defense, biomedical fields, and much more. ETCS strives to become a premier college in Northeast Indiana and beyond. To that end, the college has embarked on an ambitious strategic plan to realize its vision. The following information details the path forward along with the innovative process used to design the strategic plan.

PROCESS

The College launched the strategic planning process in Fall 2016. The process was designed to ensure input and collaboration from faculty and staff, current and past students, and industry partners. Planning took place over the course of November 2016 – July 2017. Key milestones are outlined below:

Strategic Planning Steering Committee: A faculty and staff committee consisting of representatives from each academic department and the Dean’s office was convened to develop the plan. The committee developed and managed the process for collecting input, reviewed and analyzed data and stakeholder input, and drafted the plan.

Strategic Planning Retreat: Faculty and Staff attended a retreat, where they participated in various activities designed to collect their feedback on college strengths, aspirations, challenges, and potential actions we could take to achieve our vision. Participants also reviewed the strategic planning process and timeline, which they were invited to share feedback on along with the draft mission, vision, and values.

Collective System Design: Steering Committee members participated in Collective System Design™, collaboratively and intentionally defining requirements and solutions in order to best meet the needs of our stakeholders. The resulting design augments the basis of the strategic plan, providing the framework for our approach.

Stakeholder Surveys: Input from key stakeholders was requested via an online survey from current students, alumni, adjunct faculty, and Industry Advisory Board members. Questions focused on our strengths, our challenges, and our opportunities. After being sorted and categorized, the data from each survey was used to inform our strategic initiatives and actions.

Open Forums: Dr. Manoochehr Zoghi, the Dean of ETCS College, held multiple informal gatherings of students aimed at seeking input from students and hear from them directly about their academic and college experience.
Input from Faculty and Staff: Each draft of the strategic plan was shared with the ETCS Assembly, the college’s faculty governance body and throughout the college, soliciting input from all internal faculty and staff.

Grand Challenge Scholars Program*: The National Academy of Engineering (NAE) Grand Challenge Scholars Program (GCSF) entails a combination of curricular and extra-curricular activities that is aimed to prepare the future generations of graduates who will be equipped to solve the grand challenges facing society in 21st century. The five pillars of GCSF comprise: (1) hands-on project or research experience related to a Grand Challenge, (2) interdisciplinary curriculum, (3) entrepreneurship, global dimension, and service learning. GSCP will be an integral part of the proposed strategic plan.

Final Review: Feedback from all key stakeholders was incorporated into the draft of the strategic plan and reviewed for final support in August 2017.
SECTION I – VISION, MISSION, CORE VALUES, IDENTITY

VISION
ETCS strives to be a transformative premier college of choice, providing a world-class engineering, polytechnic, computer science and leadership education through excellence in teaching and learning, research and innovation, and engagement and partnership.

MISSION
To provide comprehensive education that will prepare career-ready graduates for a variety of roles in engineering, polytechnic, computer science and leadership, serving the needs of Northeast Indiana and beyond.

CORE VALUES
We value:
- Community engagement
- Continuous improvement
- Creativity and innovation
- Discovery, integration and application of knowledge
- Diversity and inclusiveness
- High-Impact learning practices
- Integrity and professionalism
- Life-long learning and professional development
- Student-centered approach
- Supportive, collegial and collaborative relationships

IDENTITY
ETCS at IPFW is grounded in the principles of excellence through partnerships within the region (primarily through industry) and affiliation with Purdue, an internationally known university. Small class sizes and low student-to-faculty ratios provide personalized, hands-on, and enriching educational experiences comparable to prestigious private institutions at a public university price.
SECTION II – STRATEGIC FOCUS AREAS

The Strategic Planning Steering Committee employed the Collective System Design methodology to determine the necessary components for achieving the ETCS mission, vision, core values, and identity. The resulting design\(^1\) identifies that the current and continued success of the college requires an organizational approach that focuses on four pillars:

- Sustainability and improvement
- Value creation
- Cost and waste reduction
- Resource allocation and investment

The sustainability and advancement of the college are tied to the creation of an environment of continuous improvement. This environment is necessary to ensure the success of ETCS by growing and adapting to meet the changes and challenges of our students, faculty and staff, and the region. The design identifies that continuous improvement should be the foundation of how the college operates.

The opportunity to enhance ETCS and grow the college comes from the concept of value creation, or providing the best programs and outcomes for our stakeholders. The committee identified four strategic focus areas which were expanded to add detail to the strategic plan. Data collected from the retreat and stakeholder survey results were used to inform the development of initiatives and actions within each area.

The strategic focus areas are:

1.0: Improve student success
Enhance the use of high-impact practices to support students from recruitment to post-graduation success, including advising, learning, and career readiness.

2.0: Develop research opportunities and innovation
Bolster the research capacity of the college by creating infrastructure and support for funding, collaborating and recognizing published and patented research. Stimulate entrepreneurship mindset, innovation, and design thinking.

3.0: Improve engagement
Expand and strengthen partnerships with alumni, regional partnerships and industry, creating enhanced opportunities for student-faculty projects that promote experiential learning and applied research and impact regional economic development efforts.

4.0: Enhance diversity

\(^1\) The full details of the Collective System Design process and results (including the ETCS design map) are included in Appendix B.
Foster a diverse population throughout the college and support and harness the diversity for student success, research and innovation, and engagement.

The remaining two pillars of cost and waste reduction and resource allocation and investment, while of critical importance, are only significant if the prior pillars are in place. Since achievement of cost and investment constraints relies on the administrative management of the college, the latter two pillars will be addressed in the implementation of the strategic plan in our daily operations.
Section II – Strategic Initiatives for Focus Area 1.0
Improve Student Success

**Initiative 1.1:** Increase use of high-impact, evidence-based practices to improve student success

*Action 1.1.1:* Identify root causes of student failure, and develop solutions to address them

*Action 1.1.2:* Offer applied mathematics classes in ETCS, in collaboration with the Mathematics Department

*Action 1.1.3:* Improve advising through the hiring of dedicated professional advisors, and ensuring that each student has an assigned advisor throughout the duration of his/her education

*Action 1.1.4:* Improve the tutoring services (quality, availability, depth) and consider providing on-line tutoring

**Initiative 1.2:** Improve infrastructure

*Action 1.2.1:* Obtain funding to build and improve laboratories and prepare plans for a new ETCS building

*Action 1.2.2:* Expand classroom and laboratory space and transform existing ones into collaborative learning environment

*Action 1.2.3:* Fully staff academic programs (≤ 30 students per FT faculty in each program)

**Initiative 1.3:** Increase use of high-impact, evidence-based practices to improve teaching and learning

*Action 1.3.1:* Identify best teaching practices within ETCS; share via faculty-led seminars

*Action 1.3.2:* Reward teaching excellence in the P&T process

**Initiative 1.4:** Enhance partnerships outside the university

*Action 1.4.1:* Actively recruit qualified students from local schools

*Action 1.4.2:* Establish articulation agreements with community colleges in neighboring states

*Action 1.4.3:* Collaborate with local schools to improve readiness for ETCS programs

*Action 1.4.4:* Encourage faculty collaboration with industry by rewarding this work in the P&T process

*Action 1.4.5:* Actively seek funding from local industry for laboratory equipment purchases and upgrades.
Section II – Strategic Initiatives for Focus Area 2.0
Develop Research Opportunities

Initiative 2.1: Encourage faculty scholarship and creative work

Action 2.1.1: Promote cross-disciplinary research collaboration and scholarly activities
Action 2.1.2: Reward faculty for research
Action 2.1.3: Assist faculty by providing seed grants and release (assigned) time

Initiative 2.2: Establish relationships for research collaboration

Action 2.2.1: Foster faculty collaboration on interdisciplinary projects
Action 2.2.2: Coordinate research partnerships within ETCS
Action 2.2.3: Engage students in research opportunities
Action 2.2.4: Identify emerging technologies and areas of growth

Initiative 2.3: Publish and patent research

Action 2.3.1: Develop and enhance research proposal writing capability for faculty and staff
Action 2.3.2: Develop and enhance research proposal writing capability for students
Action 2.3.3: Provide tools and knowledge for enhanced research development
Action 2.3.4: Encourage undergraduate and graduate students to publish research from course projects and/or poster presentations
Section II – Strategic Initiatives for Focus Area 3.0
Improve Engagement

Initiative 3.1: Provide effective marketing of ETCS programs
   Action 3.1.1: Provide funding for an ETCS marketing person
   Action 3.1.2: Make ETCS marketing a priority
   Action 3.1.3: Designate a program for marketing focus each semester
   Action 3.1.4: Request a designated person in Development for ETCS

Initiative 3.2: Establish more active alumni outreach
   Action 3.2.1: Designate an alumni coordinator at the college level with release time
   Action 3.2.2: Maintain an up to date database of all alumni and send frequent emails to update on current status of graduates and college
   Action 3.2.3: Send annual department newsletters
   Action 3.2.4: Create an alumni section on each department website

Initiative 3.3: Encourage more educational interaction with industry
   Action 3.3.1: Invite experts in their field for in-class discussions
   Action 3.3.2: Provide the infrastructure for more field trips
   Action 3.3.3: Highlight faculty involvement with TAP
   Action 3.3.4: Encourage faculty work with industry

Initiative 3.4: Encourage industry-academia projects
   Action 3.4.1: Highlight faculty involvement with TAP (Technical Assistance Program), IN-Mac (Indiana Manufacturing Competitiveness) and TAA (Technical Assistance Agreement)
   Action 3.4.2: Enhance infrastructure (staff, facilities, resources, curriculum/programs) to facilitate faculty-student-industry projects
Section II – Strategic Initiatives for Focus Area 4.0
Enhance Diversity

Initiative 4.1: Improve gender, racial, and ethnic diversity
   Action 4.1.1: Recruit and support women and under-represented students
   Action 4.1.2: Recruit and develop women and under-represented faculty and staff
   Action 4.1.3: Develop international relationships

Initiative 4.2: Support the needs of our existing ETCS community
   Action 4.2.1: Develop diversity safe-zones
   Action 4.2.2: Remove language barriers and improve communication
   Action 4.2.3: Support work-family-life balance for ETCS community

Initiative 4.3: Use diversity to enhance student success, research opportunities and engagement
   Action 4.3.1: Establish international educational opportunities and collaborations
   Action 4.3.2: Encourage and support faculty to add diversity into course content
   Action 4.3.3: Encourage diverse educational and research partnerships outside of ETCS
SECTION III – STRATEGIC GOALS

The ETCS strategic goals will focus on the implementation of the actions from Section II, including the implementation timeline and the evaluation metrics. The Strategic Planning Steering Committee is still collecting data on best practices and benchmarking comparable institutions of higher learning. Hence the strategic goals will be included in a later draft of the ETCS Strategic Plan.
SECTION IV – ETCS THRUST (SIGNATURE) AREAS

The signature/thrust areas of ETCS represent synthesis of faculty and administrative priorities, most pressing concerns/needs of the region, industry's distinctiveness in the region, areas of research excellence and educational innovation. Following is the list of signature areas:

- Advanced materials and manufacturing
- Bioengineering
- Information analytics, visualization and cybersecurity
- Systems engineering
- Wireless communication
- Innovation, entrepreneurship and design thinking

The preceding signature areas will play a transformational role in enhancing the economic development and prosperity of our region, will generate considerable cross-disciplinary collaboration, and will foster partnership between academe, industry, and government.
SECTION V – STRATEGY IMPLEMENTATION PLAN AND GOVERNANCE

A vital part of accomplishing the goals and enabling actions of the strategic plan is the successful implementation process. According to Wharton emeritus management professor, Lawrence G. Hrebiniak, who just published the second edition of his book entitled: Making Strategy Work, it is essential for organizations to create a culture of execution. Hrebiniak asserts: “By creating and reinforcing behaviors and performance programs that affect the very essence of how organizations act and compete, i.e. their culture.” We have devised a robust execution plan in relation to ETCS strategic goals alongside tactics and enabling actions to accomplish these goals. It is important to realize that the strategy implementation plan will necessitate active participation and cooperation of all stakeholders, cornerstone of which will be integrity, trust, accountability, transparency, and shared governance.
APPENDIX A – COMMITTEE AND BOARD MEMBERS

Strategic Planning Steering Committee Members

Harold Broberg  
Professor of Computer, Electrical and Information Technology

Barry Dupen  
Associate Professor of Mechanical Engineering Technology

Joseph McKenna  
Business Manager for the College of Engineering, Technology and Computer Science

Jennifer Oxtoby  
Senior Research Associate for the IPFW Center of Excellence in Systems Engineering

Jason Barnes  
Associate Director of the IPFW Center of Excellence in Systems Engineering

John Licato  
Assistant Professor of Computer Science

Paresh Mishra  
Assistant Professor of Organizational Leadership

Manoochehr Zoghi  
Dean

David Cochran  
Associate Professor of Engineering and Director of the IPFW Center of Excellence in Systems Engineering

Kim McDonald  
Professor of Organizational Leadership and Associate Dean

Donald Mueller  
Associate Professor of Civil and Mechanical Engineering

Chairs and Directors Listing

David Cochran  
Director, IPFW Center of Excellence in Systems Engineering

Todor Cookley  
Director, IPFW Center of Excellence in Wireless Technology

Abdullah Ergulu  
Chair, Electrical and Computer Engineering

Beomjin Kim  
Chair, Department of Computer Science and Director of IPFW Center of Excellence in Information Analytics and Visualization

Kim McDonald  
Associate Dean and Interim Chair of the Department of Organizational Leadership

Hosni Abu-Mulaweh  
Director of Graduate Programs and Chair of Faculty Assembly

Gary Steffen  
Chair, Departments of Computer, Electrical & Information Technology and Manufacturing & Construction Engineering Technology

Nashwan Younis  
Chair, Department of Civil and Mechanical Engineering

Manoochehr Zoghi  
Dean
Advisory Board Members

TBD
APPENDIX B – COLLECTIVE SYSTEM DESIGN FOR ETCS

The Strategic Planning Steering Committee collaborated to create the depicted system design map of how the ETCS Strategic Plan is proposed to achieve the mission, vision, core values, and identity. Due to the path dependencies highlighted in the design process, the map illustrates that value creation should drive the cost and resource investments for the college. Similarly, Continuous Improvement is required to sustain the Strategic Plan for its planned lifespan.

The Strategic Focus Areas of this plan are related to Level 3 of the design, while the planned initiatives are at Level 4 and actions are at Level 5.

The approach of Collective System Design is to gain organizational agreement and understanding of the design purpose before implementing programs, procedures, or resources. To accomplish this common understanding, Collective System Design uses a language to separate requirements (R) from solutions (S). Each solution may have further requirements which are iteratively developed. Evaluating the success of the design is achieved by adding measures on the achievement of individual requirements (Rm).

The Collective System Design process also evaluates the risk and dependencies within the design. Analysis of the chosen solutions can determine the order of importance of requirements or the implementation sequence of solutions by adding diagonal relationships within the design. Relationships that produce loops highlight very risky designs that have high costs and long implementation times. The result of this analysis is referred to as a System Design Map.
PROCEDURE FOR PROMOTION AND TENURE (P&T)

Final draft approved 20 March 2017

Preamble

The Department of Civil and Mechanical Engineering (CME) was formed on 01 July 2015 as a result of restructuring the former Department of Engineering. This document is adopted from the former Department of Engineering Procedure for Promotion and Tenure (approved by engineering faculty 5 February 2004). It was originally approved by the CME faculty on 07 December 2015. Modifications suggested by the Faculty Affairs Committee of the IPFW Senate were incorporated into this document.

Policies that govern tenure, promotion, or promotion and tenure at Indiana University-Purdue University Fort Wayne (IPFW) are detailed in relevant IPFW Senate documents. These documents are available at the Office of Academic Affairs (OAA) and the OAA website.

The purpose of this document is to delineate the procedure that the CME department expects the P&T process to follow.

1. Procedures followed by the department P&T committee shall be based upon: Fort Wayne Senate documents; College of Engineering, Technology, and Computer Science (ETCS) assembly documents; OAA Memorandums; and recommendations by the campus promotion and tenure subcommittee.

2. All tenured faculty members, excluding the department chair, who are not being considered for promotion during the year are eligible to serve on the departmental P&T committee. The minimum size of the committee and all subcommittees shall be three (3). If fewer than three are eligible and willing to serve, the department submits a list of candidates to the dean of the college who appoints.

3. Any faculty member holding a joint appointment will be considered a member of the department from which his/her own promotion/tenure process will originate.

4. All full-time, tenured faculty members who are not serving on the committee/subcommittee and tenure-track faculty members, of the department shall have the opportunity to review and comment on each case for promotion and/or tenure. This feedback does not become part of the case.
5. A majority of members of the committee must possess the same or higher rank as to which the candidate aspires.

6. When there is a candidate for tenure and/or promotion to the rank of professor, a subcommittee of the departmental P&T committee shall be formed. The membership of the departmental P&T subcommittee shall be formed as follows:
   a) When there are three or more professors within the departmental P&T committee, then the subcommittee shall consist of all professors.
   b) When there are two professors, then the subcommittee shall consist of the two professors and one elected tenured associate professor.
   c) When fewer than two professors are serving on the departmental P&T committee, the procedure within Item (2) shall be followed to complete the subcommittee.

7. a) Whenever possible, the majority of the departmental P&T committee/subcommittee shall be from the same program as the candidate.
   b) If necessary, committee/subcommittee members shall be elected from the respective programs.

8. To ensure consistency, the functions and the responsibilities of the candidate, the department chair, and the P&T departmental committee/subcommittee are outlined in detail below. The following procedures are for cases to be considered for tenure, promotion to any rank, and promotion and tenure.

The Candidate

1. The candidate must inform the department chair, in writing, of his/her decision of submitting a case by the last Friday in February.

2. The dossier shall be prepared according to IPFW guidelines and recommendations listed in the senate documents, office of the academic affairs memorandums, and recommendations by the campus promotion and tenure subcommittee.

3. The candidate must identify the version of the Promotion and Tenure Criteria to be used, as permitted by the departmental policy.

4. The dossier and supporting documents must be uploaded to the file-sharing website designated by the OAA by 5 p.m. on the Tuesday of the week prior to the start of fall semester classes. It is essential that the final dossier and supporting documents be uploaded by the due date. In the event of technical difficulties, the department chair may adjust the date as needed.

5. Updates can be added to the case, such as notification that an article submitted for publication has been accepted or an anticipated award has been received. No new
information can be added.

6. The candidate may respond in writing to recommendations at all levels. Written responses must be submitted within seven (7) calendar days of the date of recommendation. The candidate’s response proceeds with the case.

**The Department Chair**

1. The department chair shall announce the candidacy of a faculty member by the first Friday in March.

2. If a subcommittee is needed for a case for promotion to professor, the department chair shall conduct an election to form the departmental subcommittee. All tenured and tenure-track faculty are eligible to vote. The subcommittee must be formed and announced by the last Friday of April.

3. The department chair shall designate a committee member to convene the departmental P&T committee.

4. After receiving the P&T committee’s/subcommittee’s recommendation and completing his/her own assessment of the case, the department chair shall communicate his/her recommendation to the candidate and the dean of the school. A copy of the recommendation and statements of reasons shall be uploaded to the file-sharing website designated by the OAA.

5. The department chair must recuse himself/herself if there is a conflict of interest. The dean decides if the chair recuses.

**The Promotion and Tenure Department Committee/Subcommittee**

1. The department chair designee shall call the first meeting. The first meeting must take place by Friday of the week prior to the start of fall semester classes.

2. In the first meeting, the committee chair shall be elected from among committee members with the highest represented academic rank.

3. A committee member cannot miss any meeting without valid excuse and must be physically present at the time of voting. A committee member who missed more than 25% of the meetings shall not vote.

4. The committee shall meet to evaluate the case based on the corresponding department criterion for promotion and/or tenure.

5. Any updates submitted by the candidate shall be considered and mentioned in the
committee's recommendation letter.

6. The deliberation of the committee shall be strictly confidential. Within the confidential discussion of the committee, each member's vote on the case shall be openly declared. A simple majority vote in favor of promotion or tenure shall be interpreted as constituting a positive recommendation.

7. When a case is considered for both promotion and tenure, the case for promotion shall be considered first. A positive recommendation for promotion is also a positive recommendation for tenure. In the event of negative recommendation for promotion, the case for tenure shall be considered separately. No abstentions, proxies, or absentee ballots are permitted for voting.

8. The committee must make written recommendations to the department chair. At the same time, a copy of the recommendation letter and minority opinion, if any, must also be distributed by the committee's chair, to the candidate, and committee/subcommittee members. This process must be completed within seven working days after the committee/subcommittee completes its deliberation of the case and at least one week before the case's due to the next level.

9. A committee member must recuse himself/herself if there is a conflict of interest. Committee members decide if a member should recuse.