



## **TUSCARAWAS**

### **Tuscarawas Campus Faculty Council Meeting Minutes**

November 6, 2020 at 12.00 pm.

Microsoft Teams meeting

**Voting Members Present:** Lisa Brindley, Don Gerbig (FC Chair), David Graff, Amanda Hayes, Wensheng Kang, Beth Osikiewicz, Jeff Osikiewicz, Sankalp Sharma, Nicole Willey.

**Voting Members Absent:** Scott Keiller, Hongshan Li

**Administrator Present:** Dean Brad Bielski.

#### **Administrators Present:**

- I. Call to order:** Don Gerbig (FC Chair) called the meeting to order at 12.00 pm and initiated a roll call of FC members.
- II. Secretary/Treasurer Report:** The October Flower fund balance was \$1,245.71. Since the last meeting there have been withdrawals of \$62, leaving the current balance at \$1,183.71. Sankalp Sharma is accepting donations of \$20 or more for the academic year 2020-21 and can presently be paid in cash/check. If using a check please make your donation to: "Tuscarawas County University Foundation". The electronic donation system is currently being developed and the Secretary will inform the FC when it is ready to be used.
- III. Standing Committee and Faculty Reports:**
  - a. Academic Affairs –**
    - Kingsly Berlin (chair) reported that the committee had one new proposal, which was unanimously passed (see below).
    - Additionally, working on another charge to get classes that could be offered on our campus, which have a BIPOC (Black, Indigenous, People of Color) theme.
  - b. Academic Learning Commons:** No report
  - c. Community Engagement –** No report. But work is ongoing as reported by Nicole Willey.

- d. **Electronic Communications** – No report
- e. **Faculty Affairs** –
  - Beth Osikiewicz (chair) reported that the committee is working on trying to find a way to conduct electronic voting for FC members.
- f. **Student Affairs** –
  - Wilson Kang mentioned that a deadline (Friday, Nov 13, 5 pm) reminder was sent for the student colloquium.
  - He mentioned that several honors students will be presenting their research.
- g. **Diversity committee** – No report.
  - Beth Osikiewicz suggested that Nicole Willey’s diversity-related work (anti-racism book group) could be reported here.
  - Nicole reported that several meetings of the book group had already occurred.
- h. **Faculty Senate** – See attached report. (sent after the meeting)

**IV. RCFAC report** – See attached report.

- a. Don Gerbig reported that a Regional Campus Learning Center group is meeting to discuss sharing resources across campuses (i.e. writing center, tutoring etc.)
- b. Idea of having a shared schedule was floated and is still being worked upon.
- c. A pilot project to switch campus mail to US mail has been implemented.
- d. RCFAC will be determining representatives for the provost tenure and advisory boards in a couple of weeks.
- e. According to a student-survey results, Kent students have acknowledged that faculty are going “above and beyond” with their teaching.

**V. Dean Bielski’s Administrative Report**

- a. He congratulated the Engineering Technology program and Animation and Game Design for getting re-accredited and accredited, respectively.
- b. Nursing (Associate’s degree) had a successful result from the Ohio Board of Regents.
- c. Dean also mentioned that the student survey results for the Tuscarawas campus faculty were good. The survey results suggested that students are adapting well to technology-assisted instruction. Communication between faculty and students was also reported as not being an issue. However, there does seem to be some confusion among students about the definition of what is remote and what is not.
- d. Post-Thanksgiving info: Tuscarawas campus has the independence to decide operating logistics, but we are broadly conforming with general university protocols. The campus will remain open, but at a reduced capacity. Faculty will

be allowed to work in their office. However, students will not be on campus unless there are case-by-case exceptions. Administrative services such as the admissions office will continue to provide in-person and remote advising/recruiting. Campus tours will continue. However, there will not be food service after Thanksgiving and Performing Arts Center will be restored to its original state. Finally, once the semester ends the temperature in Founders hall will be lowered.

- e. COVID-19 update: The governor wants a community-level effort to decrease numbers.
- f. Upgrades to wireless hotspots: Going from 100 to 300 hotspots and the campus does not have to pay for them. Work has already begun.
- g. New hiring: No new positions, unless there is a critical need when someone leaves. Kent might approve a strategic hiring/replacement committee if the position is budget neutral.
- h. Trail: Work on trail has been completed. Approximate length: 2.5 miles.
- i. Alumni beer-tasting: Held on Tuesday (November 10) and the registration was \$8.
- j. Position searches: The Dean and Mariann Harding are on the search committee of VP for the regional campuses. An announcement will be made by the Provost once the committee finishes its work.

*\* In response to a question by Sankalp Sharma about Fall 2021 enrollment projections, Dean Bielski said:*

- That projections change rapidly since the enrollment cycles are different this year and it is difficult to determine the final enrollment until the semester is almost about to start.
- He also mentioned that anecdotal evidence suggests transfer applications have risen. It is unclear how many of these will end up enrolling.
- Finally, there is concern that universities such as Ohio State will lower admission-criteria to boost enrollment, which might lead to a reduction in students in the Kent State system.

## **VI. Unfinished Business**

None

## **VII. New Business**

Engineering Technology Program Revision. (Explained by Jill Chen)

- See proposal attached.
- Clarification questions were asked about the proposal and were adequately addressed.

FC vote taken on approving the revision (Hayes/Willey). Motion was approved (9 yes – 0 no).

**VIII. Announcements:**

None

**IX. Adjournment:** 12.44 pm

**The meeting minutes were approved by FC members on Monday, November 16, 2020.**

Respectfully submitted,

Sankalp Sharma

Tuscarawas Campus FC Secretary/Treasurer

Academic Affairs Committee

10/8/20

Electronic Meeting

Electronic Response from: Kingsly Berlin-chair, Sue Hoffman, Lovejoy Das, Tim Fritz, Mary Cameron, Christopher Totten, Nicole Willey

Agenda

1 proposal needed for review. Email sent 10/8/20 for members to review and respond by 10/15/20.

Members responded unanimously in support of the proposal with no questions or concerns.

1 proposal submitted by Jill Chen

1. BS-ENGT program revision proposal

- Changes in the proposal include:
- remove "2+2" from the concentration title of "2 + 2 Integrated Engineering Technology".
- replace ENGR 33031 PLC course with our new PLC course ENGT 33000 (to be effective f21)
- add ENGT 32006 Economics Decision Analysis to ENGT (revised from ENGT 22006) to concentration requirement of IET so it will have the same concentration required credit as other concentrations. The same course is added to other concentrations' elective pools.
- Remove Physic B from major requirement and add to all the concentrations' Additional Requirements other than concentration IET. Add Kent Core Science (3 credit) to concentration IET. (this change fits better for transfer students who has associate degrees only requiring Physics I such as Civil Engineering Tech. The change is not against ABET accreditation requirement)
- Move General Electives (14 credit) from concentration requirement of all the concentrations to major requirement since they are now made all the same among the 4 concentrations.
- Roadmap adjustments reflecting changes mentioned above.

Email sent 10/20/20 to Jill to submit proposal to FC.

# ENGINEERING TECHNOLOGY - B.S.

## College of Applied and Technical Studies

cats@kent.edu

www.kent.edu/cats

## Description

The Bachelor of Science degree in Engineering Technology focuses primarily on the applied aspects of science and engineering and prepares graduates for practice in that portion of the technological spectrum closest to product improvement, manufacturing, construction and engineering operational functions.

The Engineering Technology major comprises the following concentrations:

- The **2+2 Integrated Engineering Technology** concentration permits graduates from a variety of associate degree backgrounds to formulate a program of advanced study in upper-division technical courses, chosen with a faculty advisor, to gain additional technical depth or breadth.
- The **Computer Design, Animation and Game Design** concentration gives students the skills and academic knowledge necessary to enter the field of computer animation and the fast-growing field of game design. Drawings and illustrations are brought to life on digital video or film through the effective use of the latest software for capturing and animating hand-drawn or digitally created imagery. In addition, students experience creative possibilities as they explore artistic options and processes through experimental animation and modeling.  
Kent State is anticipating launching what formerly was the Computer Design, Animation, and Game Design Concentration as a new bachelor's degree, pending approval. Students interested in this concentration should contact the College of Applied and Technical Studies.
- The **Electrical/Electronics** concentration allows seamless articulation with technical associate degrees for students who wish to advance their careers in the electrical/electronic engineering field. Electrical engineers and technologists design, develop, test and supervise the manufacturing of electrical equipment, such as electric motors, radar and navigation systems, communications systems, and power generation equipment. Electronics engineers design and develop electronic equipment, such as broadcast and communications systems-from portable music players to global positioning systems (GPS).
- The **Green and Alternative Energy** concentration refers to energy sources that have no undesired consequences, for example, fossil fuels or nuclear energy. Alternative energy sources are renewable and are thought to be 'free' energy sources. They all have lower carbon emissions, compared to conventional energy sources. These include biomass energy, wind energy, solar energy, geothermal energy, and hydroelectric energy sources. Combined with the use of recycling, the use of clean alternative energies such as the home use of solar power systems will help ensure man's survival into the 21st century and beyond. By 2050, one-third of the world's energy will need to come from solar, wind, and other renewable resources, according to

British Petroleum and Royal Dutch Shell, two of the world's largest oil companies.

- The **Mechanical/Systems** concentration allows seamless articulation with technical associate degrees for students who wish to advance their careers in the mechanical or manufacturing field. Mechanical engineering technology is one of the broadest engineering disciplines. Mechanical engineers and technologists design, develop, build and test mechanical and thermal devices, including tools, engines and machines. Graduates of this program can expect to work mostly in engineering services, research and development, manufacturing industries, and the federal government.

## Fully Offered at:

- Kent Campus (Computer Design, Animation and Game Design concentration only)
- Tuscarawas Campus

## Admission Requirements

The university affirmatively strives to provide educational opportunities and access to students with varied backgrounds, those with special talents and adult students who graduated from high school three or more years ago.

**Freshman Students on the Kent Campus:** The freshman admission policy on the Kent Campus is selective. Admission decisions are based upon the following: cumulative grade point average, ACT and/or SAT scores, strength of high school college preparatory curriculum and grade trends. The Admissions Office at the Kent Campus may defer the admission of students who do not meet admissions criteria but who demonstrate areas of promise for successful college study. Deferred applicants may begin their college coursework at one of seven regional campuses of Kent State University. For more information on admissions, including additional requirements for some academic programs, visit the admissions website for new freshmen.

**Freshman Students on the Regional Campuses:** Kent State campuses at Ashtabula, East Liverpool, Geauga, Salem, Stark, Trumbull and Tuscarawas, as well as the Twinsburg Academic Center, have open enrollment admission for students who hold a high school diploma, GED or equivalent.

**English Language Proficiency Requirements for International Students:** All international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning a minimum 525 TOEFL score (71 on the Internet-based version), minimum 75 MELAB score, minimum 6.0 IELTS score, minimum 48 PTE score or minimum 100 DET score; or by completing the ESL level 112 Intensive Program. For more information on international admission, visit the Office of Global Education's admission website.

**Transfer, Transitioning and Former Students:** For more information about admission criteria for transfer, transitioning and former students, please visit the admissions website.

## Program Learning Outcomes

Graduates of this program will be able to:

1. Apply knowledge of mathematics, science and engineering to a various areas of the engineering technology fields.

- 2. Use modern engineering tools and techniques to design and test systems, components, or processes in response to user requirements particularly in the engineering technology field.
- 3. Identify, analyze, and solve broadly-defined engineering technology problems.
- 4. Function effectively as a member or leader on a multi-functional technical team.
- 5. Apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- 6. Understand professional engineering and ethical responsibilities.
- 7. Understand contemporary issues and the impact of engineering technology solutions in a global/social context and a respect for diversity.
- 8. Commit to quality, timeliness and continuous improvement.
- 9. Understand the need for and an ability to engage in self-directed continuing professional development and lifelong learning.

## University Requirements

All students in a bachelor's degree program at Kent State University must complete the following university requirements for graduation.

**NOTE:** University requirements may be fulfilled in this program by specific course requirements. Please see Program Requirements for details.

Destination Kent State: First Year Experience	1
Course is not required for students with 25 transfer credits, excluding College Credit Plus, or age 21+ at time of admission.	
Diversity Domestic/Global (DIVD/DIVG)	2 courses
Students must successfully complete one domestic and one global course, of which one must be from the Kent Core.	
Experiential Learning Requirement (ELR)	varies
Students must successfully complete one course or approved experience.	
Kent Core (see table below)	36-37
Writing-Intensive Course (WIC)	1 course
Students must earn a minimum C grade in the course.	
Upper-Division Requirement	39 (or 42)
Students must successfully complete 39 upper-division (numbered 30000 to 49999) credit hours to graduate. Students in a B.A. and/or B.S. degree in the College of Arts and Sciences must complete 42 upper-division credit hours.	
Total Credit Hour Requirement	120
Some bachelor's degrees require students to complete more than 120 credit hours.	

## Kent Core Requirements

Kent Core Composition (KCOMP)	6
Kent Core Mathematics and Critical Reasoning (KMCR)	3
Kent Core Humanities and Fine Arts (KHUM/KFA) (min one course each)	9
Kent Core Social Sciences (KSS) (must be from two disciplines)	6
Kent Core Basic Sciences (KBS/KLAB) (must include one laboratory)	6-7
Kent Core Additional (KADL)	6
<b>Total Credit Hours:</b>	<b>36-37</b>

## Program Requirements

### Major Requirements

Code	Title	Credit Hours
<b>Major Requirements (courses count in major GPA)</b>		
CS 10051	INTRODUCTION TO COMPUTER SCIENCE (KMCR)	3-4
or EERT 32003	TECHNICAL COMPUTING	
or IT 20001	C++ PROGRAMMING	
or IT 20011	JAVA PROGRAMMING	
EERT 21010	ENGINEERING AND PROFESSIONAL ETHICS	3
or ENGR 31010	ENGINEERING AND PROFESSIONAL ETHICS	
ENG 20002	INTRODUCTION TO TECHNICAL WRITING	3
or OTEC 26638	BUSINESS COMMUNICATIONS	
ENGR 31000	CULTURAL DYNAMICS TECHNOLOGY (DIVD) (WIC) <sup>1</sup>	2-3
or ENGR 33092	COOPERATIVE EDUCATION - PROFESSIONAL DEVELOPMENT (ELR) (WIC)	
ENGR 33363	MATERIALS SCIENCE AND TECHNOLOGY	3
ENGR 33700	QUALITY TECHNIQUES	3
ENGR 36620	PROJECT MANAGEMENT IN ENGINEERING AND TECHNOLOGY	3
ENGR 43080	INDUSTRIAL AND ENVIRONMENTAL SAFETY	3
TAS 47999	TECHNICAL AND APPLIED STUDIES CAPSTONE (ELR)	3

<b>Additional Requirements (courses do not count in major GPA)</b>		
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
MATH 11012	INTUITIVE CALCULUS (KMCR)	3
MATH 11022	TRIGONOMETRY (KMCR)	3
OTEC 26636	PROJECT MANAGEMENT FOR ADMINISTRATIVE PROFESSIONALS	1
Physics Elective A, choose from the following:		3-5
PHY 12201	TECHNICAL PHYSICS I (KBS) (KLAB)	
PHY 13001 & PHY 13021	GENERAL COLLEGE PHYSICS I (KBS) and GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	
Physics Elective B, choose from the following:		3-5
PHY 12202	TECHNICAL PHYSICS II (KBS) (KLAB)	
PHY 13002 & PHY 13022	GENERAL COLLEGE PHYSICS II (KBS) and GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	
PHY 13012 & PHY 13022	COLLEGE PHYSICS II (KBS) and GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	
UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Kent Core Composition		6
Kent Core Humanities and Fine Arts		9
Kent Core Social Sciences		3
<b>General Elective Concentrations</b>		<b>14</b>
Choose from the following:		56 <b>45</b>
2+2 Integrated Engineering Technology		
Computer Design, Animation and Game Design		
Electrical/Electronics		
Green and Alternative Energy		

## Mechanical/Systems

Minimum Total Credit Hours: 120

<sup>1</sup> A minimum C grade must be earned to fulfill the writing-intensive requirement.

## 2+2 Integrated Engineering Technology Concentration Requirements

Code	Title	Credit Hours
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## Concentration Requirements (courses count in major GPA)

ENGT 42003	LEAN MANUFACTURING, SIX SIGMA AND OPERATIONS TECHNOLOGY	3
<b>ENGT 32006</b>	<b>Economic Decision Analysis for ENGT</b>	<b>3</b>

Add Concentration Electives, choose from the following: 9 12

Animation Game Design (AGD) Upper-Division Electives (30000 or 40000 level)

Electrical/Electronic Engineering Technology (EERT) Upper-Division Electives (30000 or 40000 level)

Green and Alternative Energy (GAE) Upper-Division Electives (30000 or 40000 level)

Mechanical Engineering Technology (MERT) Upper-Division Electives (30000 or 40000 level)

Engineering (ENGR) Upper-Division Electives (30000 or 40000 level)

Applied Electives, choose from the following: <sup>1</sup> 27

ACTT 11000 ACCOUNTING I: FINANCIAL

BMRT 11000 INTRODUCTION TO BUSINESS

BMRT 11009 INTRODUCTION TO MANAGEMENT TECHNOLOGY

BMRT 21011 FUNDAMENTALS OF FINANCIAL MANAGEMENT

BMRT 21050 FUNDAMENTALS OF MARKETING TECHNOLOGY

IT 20011 JAVA PROGRAMMING

IT 21010 WORKGROUP PRODUCTIVITY SOFTWARE

IT 21092 COMPUTER PRACTICUM (ELR)

IT 21095 SPECIAL TOPICS IN INFORMATION TECHNOLOGY

OTEC 26638 BUSINESS COMMUNICATIONS

Animation Game Design (AGD) Electives

Electrical/Electronic Engineering Technology (EERT) Electives

Green and Alternate Energy (GAE) Electives

Mechanical Engineering Technology (MERT) Electives

Physics (PHY) Electives - approved by program director

## Additional Requirements (courses do not count in major GPA)

General Electives	14
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Minimum Total Credit Hours: 45 56

<sup>1</sup> Applied electives should be chosen from an approved associate degree or a declared minor or individualized specialization selected in consultation with an advisor. Students who have earned an associate degree will have 27 credits of technical coursework articulate to the bachelor's degree program and will not have to take the electives for a minor or individualized specialization.

## Computer Design, Animation and Game Design Concentration Requirements

Code	Title	Credit Hours
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## Concentration Requirements (courses count in major GPA)

CCI 46001	RESPONSIVE WEB DESIGN	3
or ENGR 33010	COMPUTER HARDWARE FOR ANIMATION	
or ENGR 34002	ADVANCED COMPUTER-AIDED DESIGN II	

EERT 22018 PC/NETWORK ENGINEERING AND TROUBLESHOOTING 1-3

or AGD 33095 SPECIAL TOPICS ANIMATION AND GAME DESIGN

or ENGR 33016 PC/NETWORK ENGINEERING AND TROUBLESHOOTING

or ENGR 33095 SPECIAL TOPICS: APPLIED SCIENCE AND TECHNOLOGY

AGD 34000 CHARACTER ANIMATION 3

AGD 34001 ANIMATION PROJECT 3

AGD 34003 ANIMATION THEORY 3

AGD 34005 ENVIRONMENTAL GAME DESIGN 3

AGD 43000 INTERACTIVE GAME DESIGN 3

AGD 43001 ANIMATION PRODUCTION AND VISUAL EFFECTS 3

AGD 43002 GRAPHICS DESIGN TECHNOLOGY 3

## Additional Requirements (courses do not count in major GPA)

ARTS 14001 DRAWING II 3

Kent Core Art History (ARTH) 3

Applied Electives, choose from the following: <sup>1</sup> 23

AGD 33095 SPECIAL TOPICS ANIMATION AND GAME DESIGN

ARTS 14000 DRAWING I

MERT 12000 ENGINEERING DRAWING

MERT 12001 COMPUTER-AIDED DESIGN

Animation Game Design (AGD) Elective

Other Electives approved by program director

Minimum Total Credit Hours: 56

<sup>1</sup> Applied courses should be chosen from an approved associate degree or a declared minor or individualized specialization selected in consultation with an advisor. Students who have earned an associate degree will have 23 credits of technical coursework articulate to the bachelor's degree program and will not have to take the electives for a minor or individualized specialization.

## Electrical/Electronics Concentration Requirements

Code	Title	Credit Hours
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## Concentration Requirements (courses count in major GPA)

ENGT 30000	ADVANCED MANUFACTURING	3
or ENGR 43700	COMPUTER-INTEGRATED MANUFACTURING	

ENGR 33031 PROGRAMMABLE LOGIC CONTROLLERS 3

Concentration Electives, choose from the following: **ENGT 33000 Introduction to PLC** 9

EERT 32005 INSTRUMENTATION

ENGT 42003 LEAN MANUFACTURING, SIX SIGMA AND OPERATIONS TECHNOLOGY

ENGR 31032 POWER TECHNOLOGY

ENGR 33016 PC/NETWORK ENGINEERING AND TROUBLESHOOTING

ENGR 33223 ELECTRONIC COMMUNICATION

ENGR 33225 INDUSTRIAL CONTROL SYSTEMS

ENGR 43220 ELECTRICAL MACHINERY

Add **ENGT 32006 Economic Decision Analysis for ENGT** 3



GAE 42002	ENERGY MANAGEMENT SYSTEMS	
GAE 32000	FUEL CELL TECHNOLOGY	
GAE 42004	ADVANCED FUEL CELL TECHNOLOGY	
Applied Electives, choose from the following: <sup>1</sup>		27
ENGR 33095	SPECIAL TOPICS: APPLIED SCIENCE AND TECHNOLOGY	
MERT 12000	ENGINEERING DRAWING	
Electrical/Electronic and Related Technologies (EERT) Electives		
Other Electives - approved by program director		
<b>Additional Requirements (courses do not count in major GPA)</b>		

<del>General Electives</del>	<del>14</del>
Minimum Total Credit Hours:	45 <del>56</del>

<sup>1</sup> Applied courses should be chosen from an approved associate degree or a declared minor or individualized specialization selected in consultation with an advisor. Students who have earned an associate degree will have 27 credits of technical coursework articulate to the bachelor's degree program and will not have to take the electives for a minor or individualized specialization.

## Green and Alternative Energy Concentration Requirements

Code	Title	Credit Hours
<b>Concentration Requirements (courses count in major GPA)</b>		
GAE 32000	FUEL CELL TECHNOLOGY	3
GAE 42004	ADVANCED FUEL CELL TECHNOLOGY	3
Concentration Electives, choose from the following:		9
EERT 32005	INSTRUMENTATION	
ENGT 42003	LEAN MANUFACTURING, SIX SIGMA AND OPERATIONS TECHNOLOGY	
ENGT 30000	ADVANCED MANUFACTURING	
ENGR 31032	POWER TECHNOLOGY	
GAE 42002	ENERGY MANAGEMENT SYSTEMS	
or ENGR 42100	TRAINING TOPICS IN TECHNOLOGY	
MERT 42000	THERMODYNAMICS FOR ENGINEERING TECHNOLOGY	3
Applied Electives, choose from the following: <sup>1</sup>		27
Electrical/Electronic and Related Technologies (EERT) Electives		
Green and Alternate Energy (GAE) Electives		
Mechanical Engineering and Related Technologies (MERT) Electives		
Other Electives - approved by program director		
<b>Additional Requirements (courses do not count in major GPA)</b>		
<del>General Electives</del>	<del>14</del>	
Minimum Total Credit Hours:	45 <del>56</del>	

<sup>1</sup> Applied courses should be chosen from an approved associate degree or a declared minor or individualized specialization selected in consultation with an advisor. Students who have earned an associate degree will have 27 credits of technical coursework articulate to the bachelor's degree program and will not have to take the electives for a minor or individualized specialization.

## Mechanical/Systems Concentration Requirements

Code	Title	Credit Hours
<b>Concentration Requirements (courses count in major GPA)</b>		
MERT 32004	MACHINE DESIGN	3

or ENGR 33870	FACILITY DESIGN AND MATERIAL HANDLING	
ENGT 30000	ADVANCED MANUFACTURING	3
or ENGR 43700	COMPUTER-INTEGRATED MANUFACTURING	
Mechanical/Systems Concentration Electives, choose from the following:		9
EERT 32005	INSTRUMENTATION	
ENGT 42003	LEAN MANUFACTURING, SIX SIGMA AND OPERATIONS TECHNOLOGY	
ENGR 31032	POWER TECHNOLOGY	
ENGR 32101	POLYMERS I	
ENGR 33016	PC/NETWORK ENGINEERING AND TROUBLESHOOTING	
ENGR 33031	PROGRAMMABLE LOGIC CONTROLLERS	
ENGR 33225	INDUSTRIAL CONTROL SYSTEMS	
ENGR 43220	ELECTRICAL MACHINERY	
GAE 32000	FUEL CELL TECHNOLOGY	
GAE 42002	ENERGY MANAGEMENT SYSTEMS	
GAE 42004	ADVANCED FUEL CELL TECHNOLOGY	
MERT 34002	ADVANCED SOLID MODELING	
MERT 42000	THERMODYNAMICS FOR ENGINEERING TECHNOLOGY	
Applied Electives, choose from the following: <sup>1</sup>		27
EERT 22014	MICROPROCESSORS AND ROBOTICS	
Mechanical Engineering and Related Technologies (MERT) Electives		
<b>Additional Requirements (courses do not count in major GPA)</b>		

<del>General Electives</del>	<del>14</del>
Minimum Total Credit Hours:	45 <del>56</del>

<sup>1</sup> Applied courses should be chosen from an approved associate degree or a declared minor or individualized specialization selected in consultation with an advisor. Students who have earned an associate degree will have 27 credits of technical coursework articulate to the bachelor's degree program and will not have to take the electives for a minor or individualized specialization.

## Graduation Requirements

Minimum Major GPA	Minimum Overall GPA
2.000	2.000

- Students may declare more than one concentration in the Engineering Technology major, provided that there are minimum 18 credit hours of upper-division coursework in the subsequent concentration. These credit hours must be in one of the Engineering Technology disciplines of EERT, ENGR, MERT, CDAG, GAE. Students must also complete all of the other concentration requirements specific to each concentration, in addition to differentiating their major elective courses across the two concentrations. Students who declare the 2+2 Integrated Engineering Technology concentration may not elect any other concentration. Likewise, students who select any of the other Engineering Technology concentrations may not elect the 2+2 Integrated Engineering Technology concentration.
- Students electing a dual concentration must meet with an advisor to plan an individualized plan of study that meets these requirements before the dual concentration option will be approved for that student. Any changes made to the program of study also must

Add to Additional Requirements (Courses do not count in major GPA):

Physics Elective B, choose from the following: 3-5  
 PHY 12202 Tech. Physics II  
 PHY 13002 General College Physics II  
 & PHY 13022 General College Physics II Lab  
 PHY 13012 College Physics II  
 & PHY 13022 General College Physics II Lab

be approved by an advisor, or the student may not be allowed to graduate with this option.

## Roadmaps

- 2+2 Integrated Engineering Technology Concentration
  - Computer Design, Animation, and Game Design Concentration
  - Electrical/Electronics Concentration
  - Green and Alternative Energy Concentration
  - Mechanical/Systems Concentration
-

Replace with ENGT 32006 Economic Decision Analysis in Engineering Technology

## 2+2 INTEGRATED ENGINEERING TECHNOLOGY CONCENTRATION

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Semester One	move to S6	Credits
EERT 21010	ENGINEERING AND PROFESSIONAL ETHICS	3
or	or ENGINEERING AND PROFESSIONAL ETHICS	
ENGR 31010	ETHICS	
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Applied Electives		6
Kent Core Requirement		3
Credit Hours		13
Semester Two		
MATH 11022	TRIGONOMETRY (KMCR)	3
Applied Electives		9
Kent Core Requirement		3
Credit Hours		15
Semester Three		
MATH 11012	INTUITIVE CALCULUS (KMCR)	3
Applied Electives		6
Physics Elective A		3-5
Kent Core Requirement		3
Credit Hours		15
Semester Four		
ENG 20002	INTRODUCTION TO TECHNICAL WRITING	3
or	or BUSINESS COMMUNICATIONS	
OTEC 26638		
Applied Electives		6
Physics Elective B		3-5
Kent Core Requirement		6
Credit Hours		15
Semester Five		
CS 10051	INTRODUCTION TO COMPUTER SCIENCE (KMCR)	3-4
or	or TECHNICAL COMPUTING	
EERT 32003	or C++ PROGRAMMING	
or IT 20001	or JAVA PROGRAMMING	
or IT 20011		
ENGR 33700	QUALITY TECHNIQUES	3
ENGT 42003	LEAN MANUFACTURING, SIX SIGMA AND OPERATIONS TECHNOLOGY	3
Concentration Electives		3
Kent Core Requirement		3
Credit Hours		15
Semester Six		
OTEC 26636	PROJECT MANAGEMENT FOR ADMINISTRATIVE PROFESSIONALS	1
ENGR 33363	MATERIALS SCIENCE AND TECHNOLOGY	3
ENGR 36620	PROJECT MANAGEMENT IN ENGINEERING AND TECHNOLOGY	3
Kent Core Requirement		3
General Electives		4
Credit Hours		17
Semester Seven		
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
ENGR 43080	INDUSTRIAL AND ENVIRONMENTAL SAFETY	3

<del>Concentration Elective</del>		3
General Elective		6
Credit Hours		15
<b>Semester Eight</b>		
ENGR 31000 or ENGR 33092	CULTURAL DYNAMICS TECHNOLOGY (DIVD) (WIC) or COOPERATIVE EDUCATION - PROFESSIONAL DEVELOPMENT (ELR) (WIC)	2-3
TAS 47999	TECHNICAL AND APPLIED STUDIES CAPSTONE (ELR)	3
Concentration Electives		6
General Elective		4
Credit Hours		15
Minimum Total Credit Hours:		120

## Computer Design, Animation and Game Design Concentration

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Semester One		Credits
CS 10051	INTRODUCTION TO COMPUTER SCIENCE (KMCR)	3-4
or	or TECHNICAL COMPUTING	
EERT 32003	or C++ PROGRAMMING	
or IT 20001	or JAVA PROGRAMMING	
or IT 20011		
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Applied Electives		9
Credit Hours		16
Semester Two		
ENG 20002	INTRODUCTION TO TECHNICAL WRITING	3
or	or BUSINESS COMMUNICATIONS	
OTEC 26638		
Applied Electives		7
Kent Core Requirement		3
Kent Core Requirement		3
Credit Hours		16
Semester Three		
EERT 21010	ENGINEERING AND PROFESSIONAL ETHICS	3
or	or ENGINEERING AND PROFESSIONAL	
ENGR 31010	ETHICS	
Applied Electives		6
Kent Core Requirement		3
Kent Core Requirement		3
Credit Hours		15
Semester Four		
Applied Electives		12
Kent Core Requirement		3
Credit Hours		15
Semester Five		
CCI 46001	RESPONSIVE WEB DESIGN	3
or	or COMPUTER HARDWARE FOR ANIMATION	
ENGR 33010	or ADVANCED COMPUTER-AIDED DESIGN II	
or		
ENGR 34002		
AGD 34000	CHARACTER ANIMATION	3
AGD 34003	ANIMATION THEORY	3

MATH 11022	TRIGONOMETRY (KMCR)	3
Kent Core Requirement		3
Credit Hours		15
<b>Semester Six</b>		
ARTS 14001	DRAWING II	3
AGD 34001	ANIMATION PROJECT	3
AGD 34005	ENVIRONMENTAL GAME DESIGN	3
AGD 43002	GRAPHICS DESIGN TECHNOLOGY	3
Kent Core Requirement		3
Credit Hours		15
<b>Semester Seven</b>		
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
AGD 43000	INTERACTIVE GAME DESIGN	3
AGD 43001	ANIMATION PRODUCTION AND VISUAL EFFECTS	3
ENGR 31000	CULTURAL DYNAMICS TECHNOLOGY (DIVD)	1-3
or	(WIC)	
ENGR 33092	or COOPERATIVE EDUCATION - PROFESSIONAL DEVELOPMENT (ELR) (WIC)	
Kent Core Requirement		3
Credit Hours		13
<b>Semester Eight</b>		
AGD 33095	SPECIAL TOPICS ANIMATION AND GAME DESIGN	1-3
or		
EERT 22018	or PC/NETWORK ENGINEERING AND TROUBLESHOOTING	
or		
ENGR 33016	or PC/NETWORK ENGINEERING AND TROUBLESHOOTING	
or		
ENGR 33095	or SPECIAL TOPICS: APPLIED SCIENCE AND TECHNOLOGY	
OTEC 26636	PROJECT MANAGEMENT FOR ADMINISTRATIVE PROFESSIONALS	1
TAS 47999	TECHNICAL AND APPLIED STUDIES CAPSTONE (ELR)	3
ENGR 36620	PROJECT MANAGEMENT IN ENGINEERING AND TECHNOLOGY	3
Kent Core Requirement		3
General Electives		4
Credit Hours		15
Minimum Total Credit Hours:		120



Replace with ENGT 33000 Introduction to PLC

## Electrical/Electronics Engineering Technology Concentration

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Semester One		Credits
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Applied Electives		7
Kent Core Requirement		3
Credit Hours		14
Semester Two		Credits
ENG 20002	INTRODUCTION TO TECHNICAL WRITING or BUSINESS COMMUNICATIONS	3
or OTEC 26638		
MATH 11012	INTUITIVE CALCULUS (KMCR)	3
MATH 11022	TRIGONOMETRY (KMCR)	3
Applied Electives		4
Kent Core Requirement		3
Credit Hours		16
Semester Three		Credits
Physics Elective A		3-5
Applied Electives		10
Kent Core Requirement		3
Credit Hours		16
Semester Four		Credits
Physics Elective B		3-5
Applied Electives		6
Kent Core Requirement		3
Credit Hours		13
Semester Five		Credits
CS 10051	INTRODUCTION TO COMPUTER SCIENCE (KMCR)	3-4
or EERT 32003 or IT 20001 or IT 20011		or TECHNICAL COMPUTING or C++ PROGRAMMING or JAVA PROGRAMMING
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
ENGT 30000	ADVANCED MANUFACTURING	3
or ENGR 43700		or COMPUTER-INTEGRATED MANUFACTURING
ENGR 33700	QUALITY TECHNIQUES	3
OTEC 26636	PROJECT MANAGEMENT FOR ADMINISTRATIVE PROFESSIONALS	1
Concentration Elective		3
Credit Hours		16
Semester Six		Credits
ENGR 33363	MATERIALS SCIENCE AND TECHNOLOGY	3
ENGR 36620	PROJECT MANAGEMENT IN ENGINEERING AND TECHNOLOGY	3
Concentration Elective		3
Kent Core Requirement		3
General Elective		3
Credit Hours		15
Semester Seven		Credits
EERT 21010	ENGINEERING AND PROFESSIONAL ETHICS	3
or ENGR 31010		or ENGINEERING AND PROFESSIONAL ETHICS

<del>ENGR 33031</del>	<del>PROGRAMMABLE LOGIC CONTROLLERS</del>	3
Kent Core Requirement		3
General Elective		7
Credit Hours		16
Semester Eight		Credits
ENGR 31000	CULTURAL DYNAMICS TECHNOLOGY (DIVD)	2-3
or ENGR 33092		(WIC) or COOPERATIVE EDUCATION - PROFESSIONAL DEVELOPMENT (ELR) (WIC)
ENGR 43080	INDUSTRIAL AND ENVIRONMENTAL SAFETY	3
TAS 47999	TECHNICAL AND APPLIED STUDIES CAPSTONE (ELR)	3
Concentration Elective		3
General Elective		2-3
Credit Hours		14
Minimum Total Credit Hours:		120

## Green and Alternative Energy Concentration

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Semester One		Credits
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Applied Electives		7
Kent Core Requirement		3
Credit Hours		14
Semester Two		Credits
MATH 11012	INTUITIVE CALCULUS (KMCR)	3
MATH 11022	TRIGONOMETRY (KMCR)	3
Applied Electives		6
Kent Core Requirement		3
Credit Hours		15
Semester Three		Credits
EERT 21010 or ENGR 31010	ENGINEERING AND PROFESSIONAL ETHICS or ENGINEERING AND PROFESSIONAL ETHICS	3
Physics Elective A		3-5
Applied Electives		6
Kent Core Requirement		3
Credit Hours		15
Semester Four		Credits
ENG 20002 or OTEC 26638	INTRODUCTION TO TECHNICAL WRITING or BUSINESS COMMUNICATIONS	3
Physics Elective B		3-5
Applied Electives		8
Credit Hours		15
Semester Five		Credits
CS 10051 or EERT 32003 or IT 20001 or IT 20011	INTRODUCTION TO COMPUTER SCIENCE (KMCR) or TECHNICAL COMPUTING or C++ PROGRAMMING or JAVA PROGRAMMING	3-4
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
ENGR 33700	QUALITY TECHNIQUES	3
! GAE 32000	FUEL CELL TECHNOLOGY	3
OTEC 26636	PROJECT MANAGEMENT FOR ADMINISTRATIVE PROFESSIONALS	1
Concentration Elective		3
Credit Hours		16
Semester Six		Credits
ENGR 33363	MATERIALS SCIENCE AND TECHNOLOGY	3
ENGR 36620	PROJECT MANAGEMENT IN ENGINEERING AND TECHNOLOGY	3
Kent Core Requirement		3
General Elective		6
Credit Hours		15
Semester Seven		Credits
! GAE 42004	ADVANCED FUEL CELL TECHNOLOGY	3
Concentration Elective		3
Kent Core Requirement		3

General Elective		Credit Hours
Semester Eight		7-8
ENGR 31000 or ENGR 33092	CULTURAL DYNAMICS TECHNOLOGY (DIVD) (WIC) or COOPERATIVE EDUCATION - PROFESSIONAL DEVELOPMENT (ELR) (WIC)	2-3
ENGR 43080	INDUSTRIAL AND ENVIRONMENTAL SAFETY	3
TAS 47999	TECHNICAL AND APPLIED STUDIES CAPSTONE (ELR)	3
Concentration Elective		3
Kent Core Elective		3
Credit Hours		14
Minimum Total Credit Hours:		120

## Mechanical/Systems Concentration

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Semester One		Credits
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Applied Electives		7
Kent Core Requirement		3
Credit Hours		14
Semester Two		Credits
MATH 11012	INTUITIVE CALCULUS (KMCR)	3
MATH 11022	TRIGONOMETRY (KMCR)	3
Applied Electives		6
Kent Core Requirement		3
Credit Hours		15
Semester Three		Credits
ENG 20002 or OTEC 26638	INTRODUCTION TO TECHNICAL WRITING or BUSINESS COMMUNICATIONS	3
Physics Elective A		3-5
Applied Electives		9
Credit Hours		15
Semester Four		Credits
EERT 21010 or ENGR 31010	ENGINEERING AND PROFESSIONAL ETHICS or ENGINEERING AND PROFESSIONAL ETHICS	3
Physics Elective B		3-5
Applied Electives		5
Kent Core Requirement		3
Credit Hours		15
Semester Five		Credits
CS 10051 or EERT 32003 or IT 20001 or IT 20011	INTRODUCTION TO COMPUTER SCIENCE (KMCR) or TECHNICAL COMPUTING or C++ PROGRAMMING or JAVA PROGRAMMING	3-4
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
ENGT 30000 or ENGR 43700	ADVANCED MANUFACTURING or COMPUTER-INTEGRATED MANUFACTURING	3
OTEC 26636	PROJECT MANAGEMENT FOR ADMINISTRATIVE PROFESSIONALS	1
Concentration Elective		3
Credit Hours		13
Semester Six		Credits
ENGR 36620	PROJECT MANAGEMENT IN ENGINEERING AND TECHNOLOGY	3
ENGR 33363	MATERIALS SCIENCE AND TECHNOLOGY	3
Concentration Electives		6
Kent Core Requirement		3
Credit Hours		15
Semester Seven		Credits
ENGR 33700	QUALITY TECHNIQUES	3
MERT 32004 or ENGR 33870	MACHINE DESIGN or FACILITY DESIGN AND MATERIAL HANDLING	3

Kent Core Requirement		3
General Elective		7
Credit Hours		16
Semester Eight		Credits
ENGR 31000 or ENGR 33092	CULTURAL DYNAMICS TECHNOLOGY (DIVD) (WIC) or COOPERATIVE EDUCATION - PROFESSIONAL DEVELOPMENT (ELR) (WIC)	2-3
ENGR 43080	INDUSTRIAL AND ENVIRONMENTAL SAFETY	3
! TAS 47999	TECHNICAL AND APPLIED STUDIES CAPSTONE (ELR)	3
Kent Core Requirement		3
General Elective		6
Credit Hours		17
Minimum Total Credit Hours:		120



## Faculty Senate Report for the 11/09/20 Senate meeting

Dear all here are some highlights of yesterday's Senate meeting:

1. Dr. Melody Tankersley was officially announced to be our new Provost.
2. President Diacon's remarks focused on the impact of COVID-19 on our university
  - a. President Diacon said that the university as a whole continues facing challenges a decline in enrollment. That while this decline is double digit at this time, shows to be consistent with what is being observed nationally and statewide. Senior high school Students are hesitating to apply because they don't have a clear idea of what next fall will look like. Parents are limiting campus visits due to the pandemic.
  - b. State funding is still a challenge. While the budget is being discussed, there is however no deal with the state of Ohio as to what to expect in terms of budget which causes uncertainties.
  - c. Considering the continuous decline in enrollment, uncertainties of the state budget, and if current challenges persist, the university will focus on its core mission and the President will keep pushing to maintain activities that foster access to higher education and engineering and persistence.
  - d. Student loan default rate has gone down, but we still need to bring it below 5%. It is currently about 11%. A student loan default applies when a student drops out without attaining a degree which is a problem.
  - e. Due to the current climate, we need to ask the following: what do we need to stop doing? We need to rethink how we do things. Some of our project may go on standby. Do we need really need a new parking garage right now which is scheduled to cost about \$23 million? Halting that project will allow us to save those roughly \$23 million. Do we need another separation plan and what would be the terms of that separation plan?
  - f. Finally, President Diacon mentioned that we need to celebrate the tremendous work done by the College of Public Health. KSU was ranked the 4<sup>th</sup> best employer in the state of Ohio. Also, KSU was ranked as the most LGBTQ favorable institution across the state.
3. The University Council on Technology offered its report to the senate saying that there were three contenders for the Learning Management System and that out of the three, Canvas was selected and sent to the Board of trustees for approval. Blackboard was discarded as a viable option because the version that we are currently using is phasing out and not supported anymore. Furthermore, the new version, Blackboard Ultra is not only different from what we are currently using and but it also prices 10% more than Canvas. At the right time, Faculty will be invited to join early to evaluate Canvas. At this time, the contract negotiation is ongoing with Canvas. To alleviate double charges during the transition period, Canvas will subsidize the cost for 9 months. The University Council on Technology reported also on a new grading option called Gradescope. That grading option will be used for both online and in-class examination. Gradescope will not replace Scantron.
4. The Faculty Senate Retreat took place one Friday Nov 6 from 12-1:30 pm. Dr. Amoaba Gooden Interim VP for the Division of Equity and Inclusion was the invited speaker. During the retreat that I attended, she talked about institutional racism and specifically on equity as KSU. She talked about the current state of things with regard to equity and she also talked about what is being done to create a sentiment of equity for our students, faculty and staff. She allowed some participants who are involved in the anti-racism task force to share with the senate what is being done in some subcommittees.

If anyone has any question, please direct them to [jengohan@kent.edu](mailto:jengohan@kent.edu)

Thanks,

Dr. Jean Engohang-Ndong, Senator  
KSU Tusc Rep.