From:	Smith, Randy
To:	Furterer, Sandy
Cc:	Sutherland, Sue; Reed, Katie; Smith, Randy; Griffiths, Rob; Greenbaum, Rob; Duffy, Lisa; Hunt, Ryan; Quinzon-Bonello, Rosario; Tomasko, David
Subject:	Proposal to revise the Bachelor of Science in Engineering Technology (BSET) Program
Date:	Friday, July 18, 2025 2:52:55 PM
Attachments:	image001.png

Sandy:

The proposal from the College of Engineering to revise the Bachelor of Science in Engineering Technology (BSET) program was approved by the Council on Academic Affairs at its meeting on July 17, 2025. Thank you for attending the meeting to respond to questions/comments.

No additional level of internal review/approval is necessary. This action will be included in the Council's next Annual Activities Report to the University Senate (July 2025).

The Office of the University Registrar will work with you on any implementation issues.

Please keep a copy of this message for your file on the proposal and I will do the same for the file in the Office of Academic Affairs.

If you have any questions please contact the Chair of the Council, Professor Sue Sutherland (.43), or me.

I wish you success with this important program development.

Randy

THE OHIO STATE UNIVERSITY

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Memo

To: Randy Smith, Vice Provost for Academic Programs
From: Rosie Quinzon-Bonello, Assistant Dean for Curriculum and Assessment
Date: April 21, 2025
Re: BSc Engineering Technology Program Revision

Attached is a proposal to revise the BSc in Engineering Technology program. Revisions include:

- course changes (already approved by CCAA)
  - ENGRTEC 4400 – removal of lab (This is a correction. Lab format never implemented.)
  - ENGRTEC 2300, 3900 – prerequisite changes to facilitate enrollment
- removal of required course ENGR 2100 (2cr)
- addition of new required course ENGRTEC 2200 (2cr)
- addition of an elective course (optional) ENGRTEC 3200 (2cr)

There is no change to the overall number of credit hours required for the degree, and the implementation date desired is Autumn 2025. A transition plan has been provided.

This proposal was presented to CCAA on April 21, 2025, and unanimously approved.

Yours sincerely,

Rosie Quinzon-Bonello

THE OHIO STATE UNIVERSITY

To: CCAA Committee

From: Dr. Sandy Furterer, BSET Curriculum Director

Subject: BSET Program Changes

The curriculum committee, CDAC, for the Bachelor's of Science in Engineering Technology has approved the following program changes for the BSET program on 3/17/2025. We would like the following to be effective Autumn 2025:

i. Changed the ENGRTEC 4400 course to all lecture – Removed lab.
Rationale: To better align to course schedules, and allow discussions to be aligned with lectures, and still allow for flipped classroom pedagogy.

ii. Course Change - Added Math 1152 as a prerequisite for ENGRTEC 2300, 3900
Rationale: incorporate 1152 since we are adding it as a terminal math course

iii. Allow Math 1152 as the terminal math course
Rationale: Many of our students take 1152 when they start in engineering disciplines and then transfer to Engineering Technology.

iv. Removal of required ENGRTEC 2100 *Introduction to Robotics with Vision*
Replacement with of ENGRTEC 2200 *Introduction to Robotics: Basic Operations & Programming*. This course will not be open to student with credit for ENGRTEC 2100.
Rationale: Re-aligning course objectives and materials to enable transfer credit for the 2200 course. Many students who take a robotics course in high school, technical schools or community colleges will have most of the robotics material, other than the Vision material. Re-aligning course material to remove Vision, add some additional basic operations and programming material to enable transfer credit.

v. Add an elective (not required) course ENGRTEC 3200 *Advanced Robotics 2D and Collaborative Operation and Programming* (prereqs 2100 or 2200).
Rationale: Re-aligning course objectives and materials to enable transfer credit for the 2200 course. Adding cobots materials and moving Vision material to 3200.

Transition plan for 2100 changing to 2200, and adding 3200:

There is no overall impact to the minimum credit hour change. 2200 is 2-credit hour course replacing 2100 which is also a 2-credit hour course. The 3200 is an optional elective as 2-credit hours. If a student already took 2100, they can take the 3200 as an optional elective. If a student has not taken 2100, they can take the 2200 going forward. We will teach the 2200 course if it is approved for AU2025, if it is not, we will teach the 2100 course. We plan to teach the 3200 optional elective in Spring 2026, which any students who have taken the 2100 or 2200 course as a pre-requisite can take the 3200. This should not have a negative effect on the BSET students and will not delay any students' progress towards graduation.

See revised program of study.

Sandy Furterer, PhD, MBA
Professor of Practice
The Ohio State University
Dept. of Integrated Systems Engineering
Curriculum Director, Engineering Technology Program
Furterer.6@osu.edu

THE OHIO STATE UNIVERSITY

Bachelor of Science
Engineering Technology

Students in this major will complete a minimum of 120.5 hours outlined as follows.

General Education Requirements		
Requirement	**Course Options**	**Hours**
GE Launch Seminar	GenEd 1201	1
Foundations: Writing and Information Literacy [a]	*Student Choice*	3
Foundations: Mathematical & Quantitative Reasoning/Data Analysis [a]	*Student Choice**	0-5
Foundations: Literary, Visual and Performing Arts- Prefer ENGR 1300s [a]	*Student Choice*	3
Foundations: Historical & Cultural Studies [a]	*Student Choice*	3
Foundations: Natural Science [a]	*Student Choice**	0-5
Foundations: Social & Behavioral Sciences [a]	*Student Choice*	3
Foundations: Race, Ethnic and Gender Diversity [a]	*Student Choice*	3
Theme: Citizenship for a Diverse & Just World [b]	*Student Choice*	4
Theme: Student Choice [b]	*Student Choice*	4
GE Reflection	GenEd 4001	1
	Total	**25-35**

College / Degree Requirements [a, b]		
Requirement	**Course Options**	**Hours**
MATH 1154/1155, (Math & Quantitative Reasoning / Data Analysis)		8
PHYSICS 1250* (Nat Sci)		5
ENGR 1181.0x, 1182.0x		4
Gen Ed 1201		1
	Total	**18**

General Education	25-35
College / Degree	18
Major Core	53.5
Required Non-Major General	24
Optional Elective	0-2
Minimum Total Credit Hours for Degree	**120.5**

Major Coursework [a, b]		
Course	**Title**	**Hours**
Major Core		
ENGRTEC 1200	Introduction to Engineering Technolgy	1
ENGRTEC 1500	Manufacturing Processes 1	3
ENGRTEC 1600	Engineering Graphics	3
ENGRTEC 2200	Introduction to Robotics: Basic Operations & Programming	2
ENGRTEC 2300	Electric Circuits	3
ENGRTEC 2500	Manufacturing Processes 2	2
ENGRTEC 3100	Materials Science with Engineering Technology Applications	0.5
ENGRTEC 3600	Technology Structures and Applications for Controls	3
ENGRTEC 3700	Mechanical Processes	3
ENGRTEC 3800	Project Management for Engineering Technology	3
ENGRTEC 3900	Controls PLC1	3
ENGRTEC 4200	Industrial Automation - Controls PLC2	3
ENGRTEC 4250	Lean Six Sigma Foundations	3
ENGRTEC 4300	Facility Layout and Integration	3
ENGRTEC 4400	Leadership and Management change	3
ENGRTEC 4500	- Intelligent Manufacturing and Automation	3
ENGRTEC 4600	Power and Drives	3
ENGRTEC 4700	Networks, Security, & Safety Applications	3
ENGRTEC 4900	ENGRTEC Capstone 1	3
ENGRTEC 4910	ENGRTEC Capstone 2	3
	Total	**53.5**
Required Non-Major General Courses		
CSE 2111*	Modeling and Problem Solving with Spreadsheets and Databases	3
ISE 2040	Engineering Economics	2
STATS 3440	Statistics in Quality	3
CSE 1222	Introduction to Computer Programming in C++ for Engineers and Scientists	3
MATSCEN 2010	Introduction to Engineering Materials	3
BUSOBA 3230	Introduction to Operations Management: Improving Competitiveness in Organizations	3
PHYSICS 1231	Physics for Enginering Technology: Electricity and Magnetism	3
CHEM 1250	General Chemistry for Engineers	4
	Total	**24**
Optional (not required) Elective		
ENGRTEC 3200	Advanced Robotics: 2D Vision and Collaborative Operation & Programming	2

Furterer, Sandy
Deleted: 2023

Furterer, Sandy
Deleted: Introduction to Robotics with Vision

Furterer, Sandy
Deleted: ENGRTEC 2100

Quinzon-Bonello, Rosario
Deleted: Required Technical / Directed / Targeted Electives; Career Courses

Quinzon-Bonello, Rosario
Deleted: Technical Electives

Quinzon-Bonello, Rosario
Deleted: General Education