



Republic of the Philippines
BATANGAS STATE UNIVERSITY
The National Engineering University

Alangilan Campus
Golden Country Homes, Alangilan, Batangas City, Philippines 4200
Tel Nos.: (+63 43) 425-0139 local 2103

E-mail Address: cit.alangilan@g.batstate-u.edu.ph | Website Address: <http://www.batstate-u.edu.ph>

College of Engineering Technology

CURRICULUM
Bachelor of Drafting Engineering Technology

CMO Reference No. 86, S. 2017; CMO Reference No. 13, S. 2023; CMO Reference No. 4, S. 2018;
CMO Reference No. 20, S. 2013; CMO Reference No. 39, S. 2021; CMO Reference No. 40, S. 2021
ABET-ETAC Criteria for Accrediting Engineering Technology Programs 2023-2024

Curriculum Description

The Drafting Engineering Technology program provides a range of disciplines and tools to enable students to express their unique abilities and ability levels. The program delivers students with hands-on experiences with developmentally appropriate activities that allow them to exercise creative design skills. This program helps the students to acquire a foundation in design and engineering courses by introducing them to engineering principles and mechanical and architectural drafting. Students will engage in hands-on projects, and internships to gain practical experience, ensuring they are well-prepared for the dynamic demands of the industry. This program caters students with many exciting opportunities for rewarding, entry-level employment and career advancement.

Additionally, the program aims to develop graduates with ethical behavior, integrity, social responsibility, effective communication, teamwork, and leadership skills, while also promoting lifelong learning to keep up with the ever-changing field of engineering technology. The program provides opportunities for further studies, research, certifications, as well as personal and professional development.

Program Educational Objectives

PEO 1	Title: Successful Professional Practice	
	Description: Successfully practice as drafting engineering technologists for the welfare of the society.	
	KPI 1	Graduates are involved in operations planning with contribution towards improving processes.
	KPI 2	Graduates are able to undertake technology activities in a way that contributes to sustainable development
	KPI 3	Graduates are actively involved in designing of new systems and processes and/or providing consultancy and advice to either internal or external customers.
PEO 2	Title: Ethics and Professionalism	
	Description: Demonstrate a high degree of ethics and professionalism at all time	
	KPI 1	Graduates have planned for effective project implementation through managing the planning, budgeting and organization of tasks, people, and resources.
	KPI 2	Graduates have managed teams and developed staff to meet changing technical and managerial needs.
	KPI 3	Graduates are developing or have started a company or partnership business.
	KPI 4	Graduates have managed continual quality improvement.



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PEO 3	Title: Technological Advancement	
	Description: Contribute to the technological advancement for the welfare of the humanity	
	KPI 1	Graduates have actively contributed to the development of new technologies, processes and/or methodologies or improvements in existing ones
	KPI 2	Graduates participated in research and development projects aimed at technological innovations
	KPI 3	Graduates have actively engaged with stakeholders including communities and end-users, to understand and address real-world challenges
	KPI 4	Graduates communicate and collaborate with interdisciplinary teams to ensure the societal impact of their technological contributions.

Institutional Graduate Attributes

- 1. Knowledge Competence** - Demonstrate a mastery of the fundamental knowledge and skills required for functioning effectively as a professional in the discipline, and an ability to integrate and apply them effectively to practice in the workplace.
- 2. Creativity and Innovation** - Experiment with new approaches, challenge existing knowledge boundaries and design novel solutions to solve problems.
- 3. Critical and Systems** - Identify, define, and deal with complex problems pertinent to the future professional practice or daily life through logical, analytical and critical thinking.
- 4. Communication** - Communicate effectively (both orally and in writing) with a wide range of audiences, across a range of professional and personal contexts, in English and Pilipino
- 5. Lifelong learning** – Identify own learning needs for professional or personal development; demonstrate an eagerness to take up opportunities for learning new things as well as the ability to learn effectively on their own.
- 6. Leadership, teamwork, and Interpersonal Skills** - Function effectively both as a leader and as a member of a team; motivate and lead a team to work towards goal; work collaboratively with other team members; as well as connect and interact socially and effectively with diverse culture.
- 7. Global Outlook** - Demonstrate an awareness and understanding of global issues and willingness to work, interact effectively and show sensitivity to cultural diversity.
- 8. Social and National Responsibility** - Demonstrate an awareness of their social and national responsibility; engage in activities that contribute to the betterment of the society; and behave ethically and responsibly in social, professional and work environments.



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Curriculum Components

Courses			Units	Total
Math and Sciences Courses				19 units
1	MathET140	Comprehensive Math (Algebra, Trigonometry, Analytic Geometry)	0	
2	MATH101	Differential Calculus	4	
3	MATH102	Integral Calculus	4	
4	AI 102	Probability and Statistics for AI	3	
5	SciET141	Chemistry	4	
6	PHY101	Physics for BET	4	
Applied Courses				32 units
1	AI 103	Machine Learning and Neural Networks	3	
2	CpET140	Computer Programming	3	
3	BET141	Production Drawing	3	
4	BET142	Computer Aided Design	2	
5	BET143	Occupational Health and Industrial Safety Management	3	
6	BET 241	Materials Selection & Testing	3	
7	BET 341	Quality Control and Assurance	3	
8	BET 342	Technopreneurship for BET	3	
9	BET344	Engineering Technology Ethics	3	
10	BET 345	Industrial Operation & Management Practices	3	
11	BET 346	Engineering Technology Management	3	
Professional Courses				67 units
1	DET 141	National Building Code	3	
2	DET 142	Introduction to Design	4	
3	DET 143	Technical Drafting	4	
4	DET 144	Plumbing and Sanitary	4	
5	DET 145	Basic Electrical Wiring	3	
6	DET 241	Architectural Drafting 1	4	
7	DET 242	Computer Aided Drafting 1	2	
8	DET 243	Architectural Drafting 2	3	
9	DET 244	Basic Construction Estimating and Costing	2	
10	DET 245	Outdoor Sketching	2	
11	DET 341	Machine Elements Drafting	3	
12	DET 342	Structural Drafting	4	
13	DET 343	Modern Manufacturing 1	3	
14	DET 344	Computer Aided Drafting 2	2	
15	DET 345	Basic Commercial Arts and Desktop Publishing	2	
16	DET 346	Modern Manufacturing 2	2	
17	BET343	Technology Capstone Project 1	2	
18	BET 347	Technology Capstone Project 2	3	
19	BET441	Supervised Industrial Training 1	3	
20	BET442	Supervised Industrial Training 2	6	
Required General Education				24 units
1	GEd 101	Understanding the Self	3	
2	GEd 102	Mathematics in the Modern World	3	
3	GEd 104	The Contemporary World	3	
4	GEd 105	Readings in Philippine History	3	



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5	GEEd 106	Purposive Communication	3	
6	GEEd 107	Ethics	3	
7	GEEd 108	Art Appreciation	3	
8	GEEd 109	Science, Technology, and Society	3	
Mandated Courses				3 units
1	GEEd 103	Life and Works of Rizal	3	
General Education Electives				9 units
1	AI 101	Linear Algebra	3	
2	GAD101	Gender and Society	3	
3	ES101	Environmental Science	3	
4	Litr102	Asean Literature	0	
PATHFit & NSTP				14 units
1	PATHFit 1	Movement Competency Training	2	
2	PATHFit 2	Exercise-based Fitness Activities	2	
3	PATHFit 3	Choice of Dance, Sports, Martial Arts, Group Exercise, Outdoor, and Adventure Activities 1	2	
4	PATHFit 4	Choice of Dance, Sports, Martial Arts, Group Exercise, Outdoor, and Adventure Activities 2	2	
5	NSTP 111	National Service Training Program 1	3	
6	NSTP 121	National Service Training Program 2	3	
Grand Total				167 units

SUMMARY	
Courses	Number of Units
Math and Sciences Courses	19
Applied Courses	32
Professional Courses	66
Required General Education	24
Mandated Courses	3
General Education Electives	9
PATHFit & NSTP	14
TOTAL	167



College of Engineering Technology

PROGRAM OF STUDY

FIRST YEAR						
FIRST SEMESTER						
Course Code	Course Title	Lec	Lab	Credit Units	Pre-requisite(s)	Co-requisite(s)
DET 141	National Building Code	3	0	3		
DET 142	Introduction to Design	2	3	3		
GEd 101	Understanding the Self	3	0	3		
GEd 102	Mathematics in the Modern World	3	0	3		
SciET141	Chemistry	3	3	4		
BET141	Production Drawing	1	6	3		
MathET140	Comprehensive Math (Algebra, Trigonometry, Analytic Geometry)	3	0	0		
PATHFit 1	Movement Competency Training	2	0	2		
NSTP 111	National Service Training Program 1	3	0	3		
	Total	23	12	24		

FIRST YEAR						
SECOND SEMESTER						
Course Code	Course Title	Lec	Lab	Credit Units	Pre-requisite(s)	Co-requisite(s)
DET 143	Technical Drafting	2	6	3	BET 141	
DET 144	Plumbing and Sanitary	2	3	3		
DET 145	Basic Electrical Wiring	2	3	3		
MATH101	Differential Calculus	4	0	4	MathET140	
PHY101	Physics for BET	3	3	4	MathET140	
BET142	Computer Aided Design	1	3	2	BET141	
PATHFit 2	Exercise-based Fitness Activities	2	0	2	PATHFit 1	
NSTP 121	National Service Training Program 2	3	0	3	NSTP 111	
	Total	19	18	24		

FIRST YEAR						
MIDTERM SEMESTER						
Course Code	Course Title	Lec	Lab	Credit Units	Pre-requisite(s)	Co-requisite(s)
GEd 103	Life and Works of Rizal	3	0	3		
GEd 104	The Contemporary World	3	0	3		
BET 143	Occupational Health and Industrial Safety Management	3	0	3		
	Total	9	0	9		



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SECOND YEAR						
FIRST SEMESTER						
Course Code	Course Title	Lec	Lab	Credit Units	Pre-requisite(s)	Co-requisite(s)
DET 241	Architectural Drafting 1	2	6	3	DET 143	
DET 242	Computer Aided Drafting 1	2	3	3	DET 143	
AI 101	Linear Algebra with AI	3	0	3		
GE d 105	Readings in Philippine History	3	0	3		
MATH102	Integral Calculus	4	0	4	MATH101	
CpET140	Computer Programming	2	3	3		
PATHFit 3	Choice of Dance, Sports, Martial Arts, Group Exercise, Outdoor, and Adventure Activities 1	2	0	2	PATHFit 1 & 2	
	Total	18	12	21		

SECOND YEAR						
SECOND SEMESTER						
Course Code	Course Title	Lec	Lab	Credit Units	Pre-requisite(s)	Co-requisite(s)
DET 243	Architectural Drafting 2	2	6	3	DET 241	
DET 244	Basic Construction Estimating and Costing	3	0	3	DET 241	
DET 245	Outdoor Sketching	2	3	3	DET 142	
GAD101	Gender and Society	3	0	3		
BET 241	Materials Selection & Testing	3	0	3		
GE d 106	Purposive Communication	3	0	3		
AI 102	Probability and Statistics for AI	3	0	3	MATH 102	
PATHFit 4	Choice of Dance, Sports, Martial Arts, Group Exercise, Outdoor, and Adventure Activities 2	2	0	2	PATHFit 1 & 2	
	Total	21	9	23		



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THIRD YEAR						
FIRST SEMESTER						
Course Code	Course Title	Lec	Lab	Credit Units	Pre-requisite(s)	Co-requisite(s)
AI 103	Machine Learning and Neural Networks	2	3	3	AI 101, AI 102, CpET 140	
DET 341	Machine Elements Drafting	2	3	3	DET 143	
DET 342	Structural Drafting	2	3	3	DET 243	
DET 343	Modern Manufacturing 1	2	3	3	DET 242	
GEd 107	Ethics	3	0	3		
GEd 108	Art Appreciation	3	0	3		
BET 341	Quality Control and Assurance	3	0	3		
BET 342	Technopreneurship for BET	3	0	3		
BET 343	Technology Capstone Project 1	2	3	3	DET 243, DET 244	
	Total	22	15	27		

THIRD YEAR						
SECOND SEMESTER						
Course Code	Course Title	Lec	Lab	Credit Units	Pre-requisite(s)	Co-requisite(s)
DET 344	Computer Aided Drafting 2	2	3	3	DET 242	
DET 345	Basic Commercial Arts and Desktop Publishing	2	3	3	DET 142	
DET 346	Modern Manufacturing 2	2	3	3	DET 343	
GEd 109	Science, Technology and Society	3	0	3		
ES 101	Environmental Science	3	0	3		
BET 344	Engineering Technology Ethics	3	0	3		
BET 345	Industrial Operation & Management Practices	3	0	3		
BET 346	Engineering Technology Management	3	0	3		
BET 347	Technology Capstone Project 2	2	3	3	BET343	
DET 344	Computer Aided Drafting 2	2	3	3	DET 242	
	Total	23	12	27		



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FOURTH YEAR						
FIRST SEMESTER						
Course Code	Course Title	Lec	Lab	Credit Units	Pre-requisite(s)	Co-requisite(s)
BET 441	Supervised Industrial Training 1	0	540	6	BET347	
	Total	0	540	6		

FOURTH YEAR						
SECOND SEMESTER						
Course Code	Course Title	Lec	Lab	Credit Units	Pre-requisite(s)	Co-requisite(s)
BET 442	Supervised Industrial Training 2	0	540	6	BET 441	
	Total	0	540	6		