

**BACHELOR OF TECHNOLOGY WITH EDUCATION (MECHANICAL ENGINEERING)**  
**WITH HONOURS**  
**PROGRAMME STRUCTURE (SHPJH)**  
**INTAKE 2024/2025**

**YEAR 1**
**Semester 1**

SHPP1002	Educational Philosophy	2
SHPP1022	Teacher Professionalism	2
SHPE1002	Basic Engineering Drawing	2
SHPE1012	Basic Trade	2
SHPE1033	Workshop Safety and Management	3
SSCM1803	Engineering Mathematics	3
ULRS1182	Appreciation of Ethnic and Civilisations	2
UHLB1112 (MUET 1-3)	*English Communication Skills	2 (HL)
<b>TOTAL</b>		<b>16</b>

**Semester 2**

SHPP1012	Educational Psychology	2
SHPP1042	Educational Technology	2
SHPP2002	Fundamental of Pedagogy	2
SHPE1022	Engineering Drawing 1	2
SEEU1003	Basic of Electrical Engineering	3
SEMU1212	Statics	2
ULRS1032	Integrity and Anti-Corruption	2
XXXX1--3	Free Elective	3
<b>TOTAL</b>		<b>18</b>

**YEAR 2**
**Semester 1**

SHPP1032	Telecommunication and Computer Network	2
SHPE2022	Fundamental of Technical and Vocational Education	2
SHPE2032	Basic Invention	2
SHPE2112	Computer Assisted Engineering Drawing	2
SHPE2122	Basic Welding and Metal Fabrication	2
SEMU2112	Mechanic of Solid	2
SEMU2712	Basic Production Technology	2
UHLB2122	Academic Communication Skills	2
ULRS1022	Philosophy and Current Issues	2
<b>TOTAL</b>		<b>18</b>

**Semester 2**

SHPP2032	Measuring and Evaluation in Education	2
SHPP2882	Co-curriculum Management, Sport and Games	2
SHPE---2	Elective 1	2
SHPE---2	Elective 2	2
SHPE2012	Teaching Methods in Technical and Vocational Education	2
SHPE2622	Industrial Design	2
SEMU2212	Dynamics	2
ULRF2XX2	Co-Curriculum Service Learning Elective (CCSL)	2
<b>TOTAL</b>		<b>16</b>

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**YEAR 3**
**Semester 1**

SHPP3042	Research Method in Education	2
SHPE3022	Industry and Technical and Vocational Education	2
SHPA2001	Microteaching	1
SHPE---2	Elective 3	2
SHPE---2	Elective 4	2
SEMU2412	Thermodynamics	2
UHLB3132	Professional Communication Skills 2	2
ULRS3032	Entrepreneurship and Innovation	2
UHLX1112	Foreign Language Electives	2
<b>TOTAL</b>		<b>17</b>

**Semester 2**

SHPA3008	Teaching Practice	8
<b>TOTAL</b>		<b>8</b>

**Short Semester**

SHPA3113*	Industrial Training	3 (HL)
<b>TOTAL</b>		<b>3</b>

**YEAR 4**
**Semester 1**

SHPP4062	Educational Sociology	2
SHPU4902	Undergraduate Project I	2
SHPL4403	Invention	3
SHPE4173	Assessment and Measurement Based on Job Competency	3
SHPE4612	Basic Pneumatic and Hydraulics	2
SEMU3612	Material Science	2
SEMU3812	Industrial Engineering	2
<b>TOTAL</b>		<b>16</b>

**Semester 2**

SHPP4502	Guidance and Counselling	2
SHPP4043	Teacher Development	3
SHPU4904	Undergraduate Project II	4
SHPE3512	Basic Robotics and Mechatronic	2
SHPE---2	Elective 5	2
SEMU2312	Fluid Mechanics	2
<b>TOTAL</b>		<b>15</b>

Total Credit = 127

Counted Credit = 124

## A. Elective Courses (SHPJH)

Choose 5 elective courses only based on the minor = **10 credit**

	FREE ELECTIVE	Credit
SHPE ---2	Elective 1 (Welding/Machining/Refrigeration and Air Conditioning/Automotive)	2
SHPE ---2	Elective 2 (Welding/Machining/Refrigeration and Air Conditioning/Automotive)	2
SHPE ---2	Elective 3 (Welding/Machining/Refrigeration and Air Conditioning/Automotive)	2
SHPE ---2	Elective 4 (Welding/Machining/Refrigeration and Air Conditioning/Automotive)	2
SHPE ---2	Elective 5 (Welding/Machining/Refrigeration and Air Conditioning/Automotive)	2

<b>Minor in Welding</b>		
SHPE1212	Metal Fabrication Practices	2
SHPE2292	Welding Inspection	2
SHPE2322	TIG Welding	2
SHPE2342	MIG Welding	2
SHPE3212	Arc Welding	2
SHPE3222	Gas Welding	2
SHPE4632	Maintenance of Welding Equipment	2
SHPL2402	Computer Aided Design	2

<b>Minor in Machining</b>		
SHPE1132	Metal Machining – Lathe Operations	2
SHPE1452	Metal Machining – Milling Operations	2
SHPE2142	Metal Machining – Grinding Operations	2
SHPE2232	CNC Machining	2
SHPE2252	Machine Drawing	2
SHPE4712	Machines and Equipment Maintenance	2
SHPE4732	Jig Manufacturing	2
SHPL2402	Computer Aided Design	2

<b>Minor in Refrigeration and Air Conditioning</b>		
SHPE1142	Refrigeration and Air Conditioning Technology	2
SHPE1212	Metal Fabrication Practices	2
SHPE1242	Refrigeration and Air Conditioning Equipment Service	2
SHPE2242	Domestic Practices Refrigeration and Air Conditioning	2
SHPL2402	Computer Aided Design	2
SHPE2432	Automotive Cooling Systems	2
SHPE2442	Industrial Air Conditioning	2
SHPE3252	Geometrical Drawings for Refrigeration and Air Conditioning	2

<b>Minor in Automotive</b>		
SHPE1342	Automotive 1: Petrol Engine	2
SHPE1432	Automotive 2: Diesel Engine	2
SHPE2222	Motorcycle and Small Engine Maintenance	2
SHPE2432	Automotive Cooling Systems	2
SHPE3142	Automotive Electrical and Electronic Systems	2
SHPE3262	Geometric Drawings for Automotive	2
SHPE3542	Petrol and Diesel Engine Maintenance	2
SHPL2402	Computer Aided Design	2

Prepared By:



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Date : 19 August 2024

Approved By ;



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