

# PAPER

MANUFACTURERS ASSOCIATION  
OF SOUTH AFRICA (PAMSA)



# QUALIFICATIONS FOR A CAREER IN THE PULP AND PAPER INDUSTRY

## CONTACT INFO

*Pulp and Paper Centre of Excellence*

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# NATIONAL CERTIFICATE: VOCATIONAL (NCV) PROCESS PLANT OPERATION

PULP AND PAPERMAKING TECHNOLOGY

# PAPER

MANUFACTURERS ASSOCIATION  
OF SOUTH AFRICA (PAMSA)

## Umfolozhi TVET College

MR N.B SIKHAKANE: 073 016 0062  
njabulo.sikhkhane@umfolozi.edu.za

## Ekurhuleni East College

011-7306600

## DURATION:

3 Years - Full Time

## MINIMUM ADMISSION REQUIREMENTS:

- GRADE 9 with Maths and Science
- Preferably Grade 12 with Maths and Science

Module	Year	NQF Level
English	1	2
Maths	1	2
Life skills and computer literacy	1	2
Physical Science	1	2
Pulp & Papermaking Technology	1	2
Process Technology	1	2
Engineering Fundamentals	1	2
Maths	2	3
English	2	3
Life skills and computer literacy	2	3
Physical Science	2	3
Pulp & Papermaking Technology	2	3
Process Technology	2	3
Process Control	2	3
Maths	3	4
English	3	4
Life skills and computer literacy	3	4
Physical Science	3	4
Pulp & Papermaking Technology	3	4
Process Technology	3	4
Process Control	3	4

## WORK-BASED EXPERIENCE

12 months in a Pulp & Papermaking Operation

**Durban University of Technology**

031 - 3732218

**DURATION:**

3 Years - Full Time

### MINIMUM ADMISSION REQUIREMENTS:

Compulsory Subjects	SUBJECT CRITERIA		NCV
	HG	SG	
Mathematics	D	B	5 (Competent: 60-69%)
Physical Science	D	B	4 (Competent: 60-69%)
English	E	D	4 (Competent: 60-69%)

Module	Semester	NQF Level	Prerequisite
Mathematics A	1	5	
Chemistry A	1	5	
Cornerstone 101 (general module)	1	5	
Physics A	1	5	
Pulp and Paper Engineering Fundamentals A	1	5	
Technical Literacy	1	5	
Mathematics B	2	5	Mathematics A
Physics B	2	5	
Chemistry B	2	5	Chemistry A
Pulp and Paper Science 1	2	5	
Pulp and Paper Engineering Fundamentals B	2	5	Mathematics A; Chemistry A; Pulp and Paper Engineering Fundamentals A
Computer Applications	3	5	
Chemistry C	3	6	Chemistry A
Physics C	3	6	
Pulp and Paper Technology A	3	6	Pulp and Paper Science 1
Pulp and Paper Laboratory A	3	6	Pulp and Paper Science 1; Pulp and Paper Engineering Fundamentals B
Unit Operations A	3	6	Pulp and Paper Engineering Fundamentals B
Pulp and Paper Technology B	4	6	Pulp and Paper Science 1
Pulp and Paper Laboratory B	4	6	Pulp and Paper Science 1; Pulp and Paper Engineering Fundamentals B
Transfer Processes	4	6	Pulp and Paper Engineering Fundamentals B
Unit Operations B	4	6	Pulp and Paper Engineering Fundamentals B
Thermodynamics	4	6	Pulp and Paper Engineering Fundamentals B
Pulp and Paper technology C	5	6	Pulp and Paper Science 1
Pulp and Paper Laboratory C	5	6	Pulp and Paper Science 1; Pulp and Paper Engineering Fundamentals B
Principles of Management A	5	7	
Process Instrumentation and Control	5	6	Pulp and Paper Engineering Fundamentals B
Project Management	5	7	
Pulp and Paper Manufacturing (WIL)	6	6	Pulp and Paper Laboratory A, B and C

**WORK INTEGRATED LEARNING**

6 Months in a Pulp & Papermaking Operation

# DUT ADVANCED DIPLOMA

PULP AND PAPERMAKING TECHNOLOGY

# PAPER

MANUFACTURERS ASSOCIATION  
OF SOUTH AFRICA (PAMSA)

**Durban University of Technology**

031-3732218

**DURATION:**

2 Years - Part Time

**MINIMUM ADMISSION REQUIREMENTS:**

Preferably Applicants Employed in the Industry

Module	Semester	NQF Level	Pre Requisite
Fibre preparation A	1	7	Nil
Fibre preparation B	2	7	Nil
Paper manufacture A	1	7	Nil
Paper manufacture B	2	7	Nil
Operations research and statistics	3	7	Nil
Environmental Engineering	3	7	Nil
Process optimization project A	3	7	Nil
Operations and financial management	4	7	Nil
Process optimization project B	4	7	Process optimization project A
Pulp and Paper products and applications	4	7	Nil

### Durban University of Technology

031 - 3732218

### DURATION:

1 Years - Minimum experiential time  
2 Years - Minimum formal time

### MINIMUM ADMISSION REQUIREMENTS:

Compulsory Subjects	NSC RATING	NCV
Mathematics	4	5 (Competent: 60-69%)
Physical Science	4	4 (Competent: 60-69%)
English		4 (Competent: 50-69%)

Module	Semester	NQF Level	Pre Requisite
Chemistry I	1	1	5
Mathematics 1	1	1	5
Physics 1	1	1	5
Communication Skills 1	1	1	5
Computer Skills 1	1	1	5
Intro to Pulp & Paper Making	1	1	5
Quality Assurance and Statistics	1	2	5
Intro to Pulp & Paper Making	1	2	5
Physical Chemistry II	1	2	5
Pulp and Paper Technology 1	1	2	5
Chem Eng Technology II	1	2	5
Engineering Physics II	1	2	5
Pulp and Paper Chemistry II	1	2	5
Chem Eng Technology III (2 Modules)	2	3	
Chem Eng Tech 301 (Transfer Processes III)	2	3	6
Chem Eng Tech 302 (Unit Operation III)	2	3	6
Pulp and Paper Technology II	2	3	6
Pulp and Paper Chemistry III	2	3	6
Thermodynamics: Applied III	2	3	6
Pulp & Paper Technology III	2	4	6
Chemical Plant III (2 Modules)	2	4	
Chemical Plant III 301	2	4	6
Chemical Plant III 302	2	4	6
Management Skills 1	2	4	5
Process Control III (Only for students registered under NDPPT2)	2	4	6
Pulp and Paper Practice I	3	5	6
Pulp and Paper Practice II	3	5	6
Pulp and Paper Practice III	3	6	6

### WORK INTEGRATED LEARNING

12 Months in a Pulp & Papermaking Operation

### University of South Africa

Visit Unisa online  
Mr Zak Zwane: 0836087980  
Zak.Zwane@mondigroup.com

### DURATION:

3 Years

### MINIMUM ADMISSION REQUIREMENTS:

Compulsory Subjects	SC		NSC	NCV
	HG	SG	RATING	
Mathematics	D	B	4	5 (Competent: 60-69%)
Physical Science	D	B	4	4 (Competent: 60-69%)
English	D	B	4	4 (Competent: 60-69%)

Module	Semester	NQF Level	Prerequisite
Academic language and literacy	1	1	5
Ethical Information and Communication Technologies for Development Solutions	1	1	5
Chemistry I (Theory)	1	1	5
Chemistry I (Practical)	1	1	5
Pre-calculus Mathematics A (Engineering)	1	1	5
Physics IA (Theory)	1	2	5
Physics I (Practical)	1	2	5
Chemical Engineering Fundamentals IA	1	2	5
Pulp and Paper Science I	1	2	5
Mathematics I	1	2	5
Process Safety and Environmental Engineering	1	2	5
Chemical Engineering Fundamentals IIB	2	1	
Chemical Engineering Thermodynamics	2	1	
Transport Phenomena IA	2	1	6
Pulp and Paper Technology IA	2	1	6
Pulp and Paper Technology IIB	2	1	6
Separation Principles IA	2	2	6
Engineering Management I	2	2	6
Pulp and Paper Technology IIIC	2	2	
Pulp and Paper Practicals I	2	2	6
Mineral Processing Principles	2	2	6
Process Control	3		6
Workplace-based Learning I: Pulp and Paper	3		6
Workplace- based Learning II : Pulp and Paper	3		6

**WORK INTEGRATED LEARNING** 12 Months

### University of South Africa

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### DURATION:

3 Years

### MINIMUM ADMISSION REQUIREMENTS:

Compulsory Subjects	SC		NSC	NCV
	HG	SG	RATING	
Mathematics	D	B	4	5 (Competent: 60-69%)
Physical Science	D	B	4	4 (Competent: 60-69%)
English	D	B	4	4 (Competent: 60-69%)

Module	Semester	NQF Level	Prerequisite
Chemistry I (Theory)	1		5
Chemistry I (Practical)	1		5
Chemical Engineering Fundamentals I	1		5
Academic Language and Literacy in English	1		5
Ethical Information and Communication Technologies for Development Solutions	1		5
Physics I (Theory)			5
Physics I (Practical)	1		5
Introduction to Pulp and Paper Making I	1		5
Precalculus Mathematics A	1		5
Mathematics I (Engineering)	1		5
Chemical Engineering Technology II (Practical)	2		5
Chemical Engineering Fundamentals II	2		
Engineering Physics II (Theory)	2		
Engineering Physics II (Practical)	2		6
Physical Chemistry II (Theory)	2		6
Physical Chemistry II (Practical)	2		6
Pulp and Paper Chemistry II	2		6
Pulp and Paper Technology I	2		6
Pulp and Paper Practice I	2		6
Qualitative Techniques I	2		
Chemical Engineering Technology III (Module A) (Practical)	3		6
Chemical Plant III (Module A)	3		6
Engineering Management II (Module A)	3		
Pulp and Paper Technology II	3		6
Pulp And Paper Practice II	3		6
Transport Phenomena I	3		6

# UNISA NATIONAL DIPLOMA CONTINUED

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### DURATION:

3 Years

### MINIMUM ADMISSION REQUIREMENTS:

Compulsory Subjects	SC		NSC	NCV
	HG	SG	RATING	
Mathematics	D	B	4	5 (Competent: 60-69%)
Physical Science	D	B	4	4 (Competent: 60-69%)
English	D	B	4	4 (Competent: 60-69%)

Module	Semester	NQF Level	Pre Requisite
Chemical Engineering Technology III Module B (Practical)	4		6
Separation Principles I	4		6
Chemical Plant III (Module B)	4		
Engineering Management II (Module B)	4		6
Pulp and Paper Chemistry III	4		6
Pulp and Paper Technology III	4		
Pulp and Paper Practice III	4		
Thermodynamics (Applied III)	4		

### WORK INTEGRATED LEARNING

12 MONTHS