

# GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

## SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : **ME-302**

SUBJECT NAME : **PROCESSES IN MANUFACTURING**

FACULTY NAME : **GOURAV CHANDRA GOSWAMI**

DESIGNATION : **LECTURER MECHANICAL**

TOPIC	LECTURE / PRACTICAL CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
6.1 USE OF JIGS & FIXTURE	1	AUG			
6.2 PRINCIPAL OF LOCATION	1	AUG			
6.3 LOCATING DEVICES	2	AUG			
6.4 CLAMPING DEVICES	2	SEP			
6.5 TYPES OF JIGS	3	SEP			
6.6 FIXTURE FOR MILLING	2	SEP			
5.1 INJECTION MOULDING	2	SEP			
5.2 BLOW MOULDING	1	SEP			
5.3 COMPRESSIVE MOULDING	1	OCT			
4 METALLIC COATING PROCESSES	4	OCT			
1.1 FORGING	6	OCT/NOV			
1.2 ROLLING	3	NOV			
1.3 PRESS FORMING	4	NOV/DEC			
1.4 EXTRUSION	1	DEC			
1.5 DRAWING	1	DEC			
2.1 METAL CUTTING	6	DEC/JAN			
2.2 BROACHING MACHINES	4	JAN			
2.3 GEAR MANUFACTURING PROCESSES	1	JAN			
2.4 GEAR FINISHING METHODS	1	JAN			
2.5 EXTERNAL THREAD CUTTING PROCESSES	2	FEB			
3.1 MECHANICAL PROCESSES	2	FEB			
3.2 ELECTRO CHEMICAL PROCESSES	2	FEB			
3.3 ELECTRICAL DISCHARGE MACHINING	4	FEB/MAR			
3.4 LASER BEAM MACHINING	1	MAR			

3.5 ELECTRO BEAM MACHINING	1	MAR			
3.6 PLASMA ARC MACHINING	2	MAR			
PRACTICALS--(30 CLASSES)					
1 FORGING OPERATION BY POWER HAMMER	2	AUG			
2 STUDY OF USM	3	SEP			
3 EXERCISE ON BUFFING	3	SEP/OCT			
4 EXERCISE ON LAPPING	3	OCT/NOV			
5 EXERCISE ON SUPER FINISHING	3	NOV			
6 EXERCISE ON ELECTROPLATING	3	DEC/JAN			
8 DESIGN OF DRILLING JIG.	3	JAN			
9 DESIGN OF ONE MILLING FIXTURE	3	FEB			
7 ENGINE CYLINDER HONING BY HONING MACHINE WITH INDUSTRIAL VISIT	3	FEB/MAR			
10 DEMONSTRATION OF NEWER MACHINING PROCESS/PLASTIC PROCESS BY INDUSTRIAL VISIT	4	MAR/APR			
TOTAL	90				

# GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

## SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : **ME-304**

SUBJECT NAME : **CNC MACHINES & AUTOMATION**

FACULTY NAME : **GOURAV CHANDRA GOSWAMI**

DESIGNATION : **LECTURER MECHANICAL**

TOPIC	LECTURE / PRACTICAL CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
1.1 NC MACHINES	0.5	AUG			
1.2 CNC MACHINES	0.5	AUG			
1.3 DNC MACHINES	0.5	AUG			
1.4 ADVANTAGES OF NC MACHINES	0.5	AUG			
1.5 DIFF.BETWEEN NC & SPM	1	AUG			
1.6 ADVANTAGE & DISADVANTAGES OF NC MACHINES	1	AUG			
1.7 APPLICATION OF CNC MACHINES	1	SEP			
2.1 COMPONENT OF NC SYSTEM	1	SEP			
2.2 INPUT MEDIUMS	1	SEP			
2.3 NC CODINGS	1	SEP			
2.4 MACHINE CONTROL UNIT	1	SEP			
2.5 SUB UNIT OF MCU	1	SEP			
2.6 MACHINE TOOLS	1	SEP			
2.7 NUMERICAL CONTROL PROCEDURE	2	SEP			
3.1 CLASSIFICATION	1	OCT			
3.2 FEED BACK DEVICES	1	OCT			
3.3 CLASSIFICATION BASED ON MOTION CONTROL SYSTEM	1	OCT			
3.4 INTERPOLATORS	1	OCT			
3.5 CLASSIFICATION BASED ON CIRCUIT TECHNOLOGY	1	OCT			
3.6 NC COORDINATE SYSTEM	1	OCT			
3.7 AXIS IDENTIFICATION	1	OCT			
4.1 INTRODUCTION	0.5	OCT			
4.2 MACHINE STRUCTURE	0.5	OCT			
4.3 SLIDEWAYS	0.5	NOV			

4.4 SPINDLE	0.5	NOV			
4.5 DRIVE SYSTEM	0.5	NOV			
4.6 MOTION TRANSMISSION	0.5	NOV			
4.7 LOCATION OF TRANSDUCER	1	NOV			
4.8 SWARF REMOVAL	1	NOV			
4.9 SAFETY AND GAURDING	1	NOV			
5.1 TOOLING FOR CNC INTRODUCTION	1	NOV			
5.2 CUTTING TOOLS FOR CNC MACHINES	3	NOV/DEC			
5.3 CUTTING TOOL MATERIAL FOR CNC MACHINES	1	DEC			
5.4 AUTOMATIC TOOL CHANGER ATC	1	DEC			
5.5 WORK HOLDING DEVICES	1	DEC			
6.1 FUNDAMENTALS OF PART PROGRAMMING, NC WORDS	1	DEC			
6.2 PROGRAMMING FORMATS	2	JAN			
6.3 PART PROG. FOR POINT TO POINT, STRAIGHT LINE.	3	JAN			
6.4 PART PROG. FOR LATHE DRILLING MILLING	2	JAN			
7.1 STANDARISED FIXED CYCLES	1	JAN			
7.2 NON STANDARISED FIXED CYCLES	2	JAN/FEB			
8.1 CAPP, GEOMETRY STATEMENT	1	FEB			
8.2 MOTION STATEMENT	1	FEB			
8.3 POST PROESSOR STATEMENT	1	FEB			
8.4 AUXILARY STATEMENT	1	FEB			
9.1 ROBOTICS, INTRODUCTION	0.5	FEB			
9.2 ADVANTAGES OF ROBOTS	0.5	FEB			
9.3 ROBOT TERMINOLOGY	1	FEB			
9.4 MAJOR FEATURES OF ROBOT	2	FEB/MAR			
9.5 TYPES OF ROBOT	2	MAR			
9.6 APPLICATIONS OF ROBOTS	1	MAR			
10.1 AUTOMATION, MACHINE CENTRE	1	MAR			
10.2 COMPUTER INTREGATED MANUFACTURING	1	MAR			
10.3 FLEXIBLE MANUFACTURING SYSTEM	1	MAR			
10.4 GROUP TECHNOLOGY	1	MAR			
10.5 COMPUTER PROCESS PLANNING	1	MAR			
PRACTICALS---(30					
1 JOBS ON CNC MACHINES TURNING	13	NOV			
2 DIFF. CNC MACHINE PROGRA	13	MAR			
3 INDUSTRIAL VISIT	4	MAR/APR			
TOTAL	90				