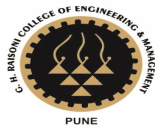
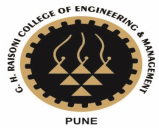


**Course wise Teaching Plan for Session : Summer 2019****Course : MANUFACTURING PROCESS - I****Faculty : himadri.majumder@raisoni.net - HIMADRI MAJUMDER**

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Machining parameters: Introduction to machining. Introduction to cutting tool.	03/12/2018	BMEL207	C
1	2	Lathe: Introduction, type, construction of simple lathe.	04/12/2018	BMEL207	C
1	3	Mechanism and attachments for various operations in lathe	04/12/2018	BMEL207	C
1	4	Properties, Nomenclature and tools geometry of single point cutting tool.	10/12/2018	BMEL207	C
1	5	Machine specifications	11/12/2018	BMEL207	C
1	6	Basis for selection of cutting speed, feed and depth of cut	11/12/2018	BMEL207	C
1	7	Classification of tool, HSS, Carbide tool. Coated tools, Diamond coated tool, Coolant materials. Multi-point cutting tool. Advanced cutting tools.	17/12/2018	BMEL207	C
1	8	Time estimation for turning operations such as facing, step turning, taper turning, threading, knurling	18/12/2018	BMEL207	C
1	9	Numerical on Machining time.	18/12/2018	BMEL207	C
2	10	Drilling: Introduction, tools for drilling, classification of drills. Twist drill, drill size and specifications. Carbide tipped drills	24/12/2018	BMEL207	C
2	11	Drilling machine operations, Reaming: Introduction, description of reamers, types of reaming operations.	01/01/2019	BMEL207	C
2	12	Time estimation for drilling	01/01/2019	BMEL207	C
2	13	Type of drilling machines-portable drilling machine, bench drilling machine, upright drilling machine, radial drilling machine, universal drilling machine, multi spindle drilling machine.	07/01/2019	BMEL207	C
2	14	Boring: Introduction, types of boring machine, horizontal boring machine, vertical boring machine, jig boring machine, micro boring, boring operations.	08/01/2019	BMEL207	C
2	15	Broaching: Introduction, types of broaches, nomenclature of broaches and type of broaching machine.	08/01/2019	BMEL207	C

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Unit	Topic Code	Topic Covered	Date	Course	Section
3	16	Casting process: Introduction, Pattern making: Type, material used, pattern making allowances, colour code.	14/01/2019	BMEL207	C
3	17	Gating design: Elements of gating system, pouring time, riser design.	15/01/2019	BMEL207	C
3	18	Melting furnace types, electric furnace, induction furnace, cupola: Construction and operation, cleaning, inspection and casting defects.	15/01/2019	BMEL207	C
3	19	Core making: Types, core material and its properties. Recent development in pattern making.	21/01/2019	BMEL207	C
3	20	Recent trends in melting. Foundry mechanism: Special casting processes such as Investment casting, Centrifugal casting.	22/01/2019	BMEL207	C
3	21	Shell moulding, co-moulding, slush casting, Die-casting.	22/01/2019	BMEL207	C
3	22	Moulding: Types of sand mould, mouldings and composition, moulding sand properties, moulding machines.	28/01/2019	BMEL207	C
3	23	Automation in foundry operations.	29/01/2019	BMEL207	C
4	24	Forging: Types, process parameters. Analysis of open die forging (Numerical).	29/01/2019	BMEL207	C
4	25	Hot and cold working: Concepts and comparative study, friction and lubrication in metal forming.	04/02/2019	BMEL207	C
4	26	Extrusion: Types, process parameter, Extrusion die. Drawing: Wire drawing and its analysis (Numerical).	05/02/2019	BMEL207	C
4	27	Sheet metal working: Types of sheet metal operations. Types of dies and punches.	05/02/2019	BMEL207	C
4	28	Rolling: Types of rolling mills, power required per roll for simple single pass two rollers (Numerical).	11/02/2019	BMEL207	C
4	29	Die design for Progressive and Drawing die.	12/02/2019	BMEL207	C
4	30	Clearance analysis, blank size determination (Numerical).	12/02/2019	BMEL207	C
5	31	Joining process: Introduction of welding, soldering, brazing processes.	25/02/2019	BMEL207	C



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Unit	Topic Code	Topic Covered	Date	Course	Section
5	32	Submerged arc welding, stud welding,	26/02/2019	BMEL207	C
5	33	Resistance welding: Theory, Spot, Seam and projection weld process and Gas welding processes.	26/02/2019	BMEL207	C
5	34	Types of welding: Arc welding, MIG, SMAW, GTAW, FCAW.	04/03/2019	BMEL207	C
5	35	Defects in various joints and their remedies. Inspection of welding joints.	05/03/2019	BMEL207	C
5	36	Electrodes, Weld ability of metals, Welding equipment of fixtures.	05/03/2019	BMEL207	C
6	37	Grinding operations, grinding wheel, specifications and selection.	18/03/2019	BMEL207	C
6	38	Cylindrical and Centre less grinding operation, surface grinding, tool and cutter grinding.	01/04/2019	BMEL207	C