

4TH SEM 10.03.2022-10.06.2022(SUMMER)

LESSON PLAN

MANUFACTURING TECHNOLOGY

ER. M.B.BISWABANDITA

(AUTOMOBILE ENGG. DEPT)

B.O.S.E.,CUTTACK

AUTOMOBILE ENGINEERING DEPARTMENT

VISSION:

To develop competent, disciplined imaginative Automobile engineers, equipped with core competency and technical skills useful to the learning / teaching community and the industrial fraternity.

MISSION:

M1:To provide with operational and technical inputs to get innovative and research ideas in the field of automotive engineering.

M2: To give inputs for higher education with management qualities for the betterment of the society.

M3:Skilling with modern engineering tools necessary to meet and solve engineering problems.

PROGRAM EDUCATIONAL OBJECTIVES

PEO1: To provide technical skills to diagnose and apply the concept of automotive system

PEO2: To prepare to design, fabricate and innovate in automobile sector to face the industrial challenges.

PEO3: To inculcate with good communication skills, ethics and entrepreneurship skills to play the key role in automotive industry.

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| Discipline:- Automobile Engg. | Semester :- 4TH | Name of the teaching faculty :- M.B.BISWABANDITA |
| Subject Name :- MANUFACTURING TECHNOLOGY | No. Of Days/Week Class Allotted :- 04 Periods/Week (MONDAY, Wednesday, Friday,Saterday– 1 Period Each) | Semester from Date - 10/03/2022 To Date - 10/06/2022 No.of Weeks:14 |
| Week | Class Day | Theory topics |
| 1 st | 11.3.2022 | Introduction class(syllabus discussion) |
| | 12.3.2022 | CH-1 Introduction to tool material |
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| 2 nd | 14.3.2022 | Composition of various tool materials |
| | 16.3.2022 | Physical properties & uses of such tool materials |
| | 18.3.2022 | CH-2 Cutting tools(Introduction &types) |
| | 19.3.2022 | Cutting action of various cutting tools(chisel,hack saw blade, dies& reamer) |
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| 3 rd | 21.3.2022 | Turning tool geometry & purpose of tool angle |
| | 23.3.2022 | Machining process |
| | 25.3.2022 | M/C process parameters(speed,feed&depth of cut) |
| | 26.3.2022 | Purpose of coolant &lubricant in M/C |
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| 4 th | 28.3.2022 | CH-3Lathe Machine(Major components of lathe &their function) |
| | 30.3.2022 | Operation carried out in lathe(turning,thread cutting, tapper turning,) |
| | 1.04.2022 | Tapper turning, internal M/Parting off,facing,knurling) |
| | 2.04.2022 | Capstan lathe:-difference with respect to engine lathe |
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| 5 th | 4.04.2022 | Major components & their function |
| | 6.04.2022 | Define multiple tool holder, Differentiate turret lathe with respect to capstan lathe |

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| | 8.04.2022 | Major components and their function |
| | 9.04.2022 | Draw the tooling layout for preparation of a hexagonal bolt & bush |
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| 6 th | 11.4.2022 | CH-4 Shaper (Potential application area of a shaper M/C) |
| | 13.4.2022 | Major components & their function |
| | 16.4.2022 | Explain the automatic table feed mechanism |
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| 7 th | 18.4.2022 | Explain the construction & working of tool head |
| | 20.4.2022 | Explain the quick return mechanism through neat sketch |
| | 22.4.2022 | State the specification of a shaping machine. |
| | 23.4.2022 | CLASS TEST |
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| 8 th | 25.4.2022 | CH-5 Planning M/C Application area of planar and its difference with respect to shaper. |
| | 27.4.2022 | Major components and their functions . |
| | 29.4.2022 | The table drive mechanism. |
| | 30.4.2022 | Working of tool and tools support. |
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| 9 th | 2.05.2022 | Clamping of work through sketch. |
| | 4.05.2022 | CH-6 milling machine (types milling machines and operation perform by them. |
| | 6.05.2022 | Explain work holding attachment. |
| | 7.05.2022 | Construction and working of simple dividing, universal dividing head. |
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| 10 th | 9.05.2022 | Procedure of simple and compound indexing. |
| | 11.05.2022 | Illustration of different indexing method. |
| | 13.05.2022 | CLASS TEST. |
| | 14.05.2022 | CH-7 Slotter – major components and their function. |
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| 11 th | 18.05.2022 | Construction & working of slotter machine. |
| | 20.05.2022 | Tools used in slotter. |
| | 21.05.2022 | Ch -8 Grinding (significance of grinding operation. |

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| 12 th | 23.05.2022 | Manufacturing of grinding wheels. |
| | 25.05.2022 | Criteria for selecting of grinding wheels. |
| | 27.05.2022 | Specification of grinding wheels with example. |
| | 28.05.2022 | CH-9 Internal machine operation (Classification of drilling machine. |
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| 13 th | 01.06.2022 | Basic boring principle,Difference between boring and drilling. |
| | 03.06.2022 | Types of broaching, advantage and application of it. |
| | 04.06.2022 | Ch-10 Surface finish ,lapping |
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| 14 th | 06.06.2022 | Class Test. |
| | 08.06.2022 | Description Of lapping and explain their specific cutting. |
| | 10.06.2022 | REVISION |