**BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK**

**DEPARTMENT OF MECHANICAL ENGINEERING**



**LESSON PLAN**

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| SUBJECT: Manufacturing Technology | ACCADEMIC SESSION: 2022-23 |
| FACULTY: MR. S.P.B.B BHATTA | SEMESTER: 4th |
|  | SEC: B |

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| Sd/- |
| HOD (MechEngg.) |

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| **Discipline:****Mechanical Engineering** | **Semester: 4rd B** | **Name of the teaching faculty:****S.P.B.B Bhatta** |
| **Subject:****Manufacturing Technology** | **No. of Days/ per week class allotted: 04periods per week****Mon-2 period, wed-1 period,Thu-1 period)** | **Semester From Date: 15-02-2023 To Date: 22-05-2023****No. of weeks: 15 weeks** |
| **Week** | **Class Day** | **No of period available** | **Theory Topics** |
| 1ST | 15/02/2023 | 1 | 1.CUTTING TOOL Types of tools1.1Composition of various tool material1.2 Physical properties & uses of tool materials |
| 16/02/2023 | 1 | 2. Cutting toolsTypes of cutting tools |
| 2nd | 20/02/2023 | 2 | 2.1 Cutting action of various tools such as Hacksaw blades,chisel,Dies,reamers2.2 Turning tool geometry and purpose of tool angles |
| 22/02/2023 | 1 | 2.2 Turning tool geometry and purpose of tool angles |
| 23/02/2023 | 1 | 2.2 Turning tool geometry and purpose of tool angles |
| 3rd | 27/02/2023 | 2 | 2.1 Cutting action of various tools such as Hacksaw blades,chisel,Dies,reamers |
| 01/03/2023 | 1 | 2.2 Turning tool geometry and purpose of tool angles |
| 02/03/2023 | 1 | 2.3 Machining process parameter(speed, feed,depth of cut)2.4 Coolants and lubricants in machining process |
| 4th | 06/03/2023 | 2 | 3.Lathe machine3.1 Construction & working of lathe machine. |
| 09/03/2023 | 1 | 3.1Major components of lathe machine3.1.1 operation carried out in lathe machine |
| 5th | 13/03/2023 | 2 | 3.1.1 operation carried out in lathe machine Machining paramerter. |
| 15/03/2023 | 1 | 3.1.2 safety measures during machining  |
| 16/03/2023 | 1 | 3.2 Major components of Capstan lathe 3.2 Difference with respect to engine lathe. |
| 6th | 20/03/2023 | 2 | 3.3 Turret LatheDifference with respect to capstan lathe  |
| 22/03/2023 | 1 | 3.4 Draw he tooling layout for preparation of a hexagon bolt & bush  |
| 23/03/2023 | 1 | 4.Shaper machine4.1 Potential application areas of shaper machine |
| 7th | 27/03/2023 | 2 | 4.2 Major components &their function of shaper machine4.3Explain the automatic table feed mechanism |
| 29/03/2023 | 1 | 4 Explain the construction & working of tool head. |
| 8th | 03/04/2023 | 2 | 4.3Explain the automatic table feed mechanism |
| 05/04/2023 | 1 | 4 Explain the construction& working of tool head. |
| 06/04/2023 | 1 | 4.5 Explain the quick return mechanism |
| 9TH | 10/04/2023 | 12 | 4.6 State the specification of shaper machine |
| 12/04/2023 | 1 | Class Test 1 |
| 13/04/2023 | 1 | 5.1 Application area of a planer and its difference with respect to shaper |
| 10TH | 17/04/2023 | 2 | 5.2 Major components and their functions |
| 19/04/2023 | 1 | 5.3 The table drive mechanism  |
| 20/04/2023 | 1 | 5.4 Working of tool and tool support  |
| 11TH | 24/04/2023 | 2 | 5.5 Clamping of work through sketch. |
| 26/04/2023 | 1 | 5.5 Clamping of work through sketch. |
| 27/04/2023 | 1 | Milling Machine 6.1 Types of milling machine and operations performed by them and also same for CNC milling machine |
| 12TH | 01/05/2023 | 2 | 6.1 Types of milling machine and operations performed by them and also same for CNC milling machine6.2 Explain work holding attachment  |
| 03/05/2023 | 1 | 6.3 Construction & working of simple dividing head,  |
| 04/05/2023 | 1 | 6.4 Procedure of simple indexing |
| 13TH | 08/05/2023 | 2 | 6.5 Illustration of different indexing methods  |
| 10/05/2023 | 1 | Slotter Machine 7.1 Major components and their function7.1 Major components and their function |
| 11/05/2023 | 1 | 7.2 Construction and working of slotter machine7.3 Tools used in slotterSlotter Machine8.1 Significance of grinding operations8.2 Manufacturing of grinding wheels8.4 Specification of grinding wheels with example Working of Cylindrical Grinder |
| 14TH | 15/05/2023 | 2 | 9.Internal Machining operations Classification of drilling machines9.1 Working of Bench drilling machine9.1 Pillar drilling machineRadial drilling machine  |
| 17/05/2023 | 1 | 9.2 Boring Basic Principle of Boring Different between Boring and drilling9.3 Broaching Types of Broaching(pull type, push type) Advantages of Broaching and applications |
| 18/05/2023 | 1 | 10 Surface finish, lapping 10.1 Definition of Surface finish10.2 Description of lapping& explain their specific cutting.Radial drilling machine |
| 15TH | 22/05/2023 | 2 | Internal Assesment |