

## Government Polytechnic Umri Kurukshetra

### Lesson Plan

Name of the Faculty : Deepak Rohilla

Department : Computer Engineering

Semester/ Subject : 3rd/ Programming in C

Lesson Plan Duration: 16 weeks (from September, 2022 to Jan, 2023)

| Week             | Lect day | Theory Topic (Including assignment / test) | Practical   |
|------------------|----------|--|---|
| 1 <sup>st</sup>  | 1        | Steps in development of a program          | Programming exercises on executing and editing a C program.                   |
|                  | 2        | Flow charts,                               |   |
|                  | 3        | Algorithm development                      |   |
| 2 <sup>nd</sup>  | 4        | Programme Debugging                        | Programming exercises on defining variables and assigning values to variables |
|                  | 5        | I/O statements                             |   |
|                  | 6        | Constants, variables                       |   |
| 3 <sup>rd</sup>  | 7        | assign statements                          | Programming exercises on arithmetic and relational operators                  |
|                  | 8        | data types                                 |   |
|                  | 9        | Operators and Expression                   |   |
| 4 <sup>th</sup>  | 10       | Operators and Expression                   | Programming exercises on arithmetic expressions and their evaluation.         |
|                  | 11       | Unformatted and Formatted IOS              |   |
|                  | 12       | Data Type Casting                          |   |
| 5 <sup>th</sup>  | 13       | Introduction to Control Structures         | Programming exercises using if statement.                                     |
|                  | 14       | Decision making with IF – statement        |   |
|                  | 15       | IF – Else                                  |   |
| 6 <sup>th</sup>  | 16       | Nested IF                                  | Programming exercises using if – Else.  |
|                  | 17       | While and do-while,                        |   |
|                  | 18       | for loop                                   |   |
| 7 <sup>th</sup>  | 19       | Break. Continue, goto                      | Programming exercises on do – while, statement.                               |
|                  | 20       | switch statements                          |   |
|                  | 21       | Introduction to pointers                   |   |
| 8 <sup>th</sup>  | 22       | Address operator and pointers              | Simple programs using pointers.   |
|                  | 23       | Declaring pointers                         |   |
|                  | 24       | Initializing Pointers                      |   |
| 9 <sup>th</sup>  | 25       | Single pointer,                            | Simple programs using functions   |
|                  | 26       | Introduction to functions                  |   |
|                  | 27       | Global and Local Variables                 |   |
| 10 <sup>th</sup> | 28       | Function Declaration                       | Simple programs using functions   |
|                  | 29       | Standard functions                         |   |
|                  | 30       | Parameters and Parameter Passing           |   |
| 11 <sup>th</sup> | 31       | Call - by value/reference                  | Programs on one-dimensional array.  |
|                  | 32       | Introduction to Arrays                     |   |
|                  | 33       | Array Declaration, Length of array         |   |
| 12 <sup>th</sup> | 34       | Single Array.                              | Programs on two-dimensional array.  |
|                  | 35       | Multidimensional Array                     |   |
|                  | 36       | Arrays of characters                       |   |

|                  |    |   |   |
|------------------|----|---|---|
| 13 <sup>th</sup> | 37 | Introduction of Strings                     | Programs for putting two strings together.                    |
|                  | 38 | String declaration and definition           |   |
|                  | 39 | String Related function i.e. strlen, strcpy |   |
| 14 <sup>th</sup> | 40 | String Related function i.e. strcmp         | Programs for comparing two strings.                           |
|                  | 41 | Passing an array to function                |   |
|                  | 42 | Pointers to an array and strings.           |   |
| 15 <sup>th</sup> | 43 | Pointers to an strings.                     | Simple programs using structures Simple programs using union. |
|                  | 44 | Declaration of structures                   |   |
|                  | 45 | Accessing structure members                 |   |
| 16 <sup>th</sup> | 46 | Structure Initialization                    |   |
|                  | 47 | Pointer to a structures,                    |   |
|                  | 48 | Unions                                      |   |