

# **DRONACHARYA**

## **College of Engineering**

Khentawas, Farrukh Nagar, Gurugram, Haryana  
Approved by: All India Council for Technical Education (AICTE), New Delhi  
Affiliated to: Gurugram University, Gurugram

### **DEPARTMENT OF ROBOTICS AND AUTOMATION ENGINEERING**

**ACADEMIC YEAR 2023-24**

**SEMESTER Vth**

#### **COMPUTER AIDED DESIGN & MANUFACTURING (PCC-ME -301G)**

<b>Course Outcome(CO)</b>	<b>DetailsofCourseOutcomes</b>
<b>(CO1)</b>	Demonstrate the knowledge of Computer Aided design and Additive Manufacturing
<b>(CO2)</b>	Able to understand the concept of wireframe modeling, surface modeling and solid modeling
<b>(CO3)</b>	Able to understand the method of manufacturing of liquid based, powder based and solid based techniques

#### **INDUSTRIAL AUTOMATION & ROBOTICS (PCC-RA-303G)**

<b>Course Outcome(CO)</b>	<b>DetailsofCourseOutcomes</b>
<b>(CO1)</b>	Students will demonstrate knowledge of the relationship between mechanical structures of industrial robots and their operational workspace characteristics
<b>(CO2)</b>	Students will demonstrate an ability to apply spatial transformation to obtain forward kinematics equation of robot manipulators.
<b>(CO3)</b>	Students will demonstrate an ability to solve inverse kinematics of simple robot manipulators.
<b>(CO4)</b>	Students will demonstrate an ability to obtain the Jacobian matrix and use it to identify singularities.

## DIGITAL ELECTRONICS (ESC-CSE-205G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understand the knowledge of operations of microprocessor.
(CO2)	Understand the assembly language programming using concepts like assembler directives, procedures, macros, software interrupts
(CO3)	Acquire knowledge about basic concepts of serial communication in 8086
(CO4)	Learn about the concept of Interrupts and interfacing details of 8086.

## KINEMATICS OF MACHINE (PCC-ME -307G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	To understand about the applications of mechanism and machines
(CO2)	To understand about the basics Cams and Friction
(CO3)	Students get familiarity about power transmitted with Belts and pulleys and also Gears and Gear Trains
(CO4)	Students having familiarization with calculate Kinematics Analysis of Plane Mechanisms
(CO5)	Students would be able to know the Kinematics synthesis of Mechanisms.

## DATA STRUCTURES & ALGORITHMS (PCC-CSE-203G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	At the end of the course, the student shall be able to: 1. For a given algorithm student will able to analyze the algorithms to determine the time and computation complexity and justify the correctness
(CO2)	For a given Search problem (Linear Search and Binary Search) student will able to implement it.
(CO3)	For a given problem of Stacks, Queues and linked list student will able to implement it and analyze the same to determine the time and computation complexity
(CO4)	Student will able to write an algorithm Selection Sort, Bubble Sort, Insertion Sort, Quick Sort, Merge Sort, Heap Sort and compare their performance in term of Space and Time complexity.
(CO5)	Student will able to implement Graph search and traversal algorithms and determine the time and computation complexity.

## **ECONOMICS FOR ENGINEERS (HSMC -01G)**

<b>CourseOutcome(CO)</b>	<b>DetailsofCourseOutcomes</b>
<b>(CO1)</b>	The students will able to understand the basic concept of economics.
<b>(CO2)</b>	The student will able to understand the concept of production and cost.
<b>(CO3)</b>	The student will able to understand the concept of market.
<b>(CO4)</b>	The student will able to understand the concept of privatization, globalization and banks.

## **FINANCIAL ACCOUNTING (HSMC -03G)**

<b>CourseOutcome(CO)</b>	<b>DetailsofCourseOutcomes</b>
<b>(CO1)</b>	define bookkeeping and accounting
<b>(CO2)</b>	explain the general purposes and functions of accounting
<b>(CO3)</b>	explain the differences between management and financial accounting
<b>(CO4)</b>	describe the main elements of financial accounting information – assets, liabilities, revenue and expenses
<b>(CO5)</b>	identify the main financial statements and their purposes.